

ANIMO

OptiBean OptiBean XL
Model 2011



Feel like a barista.

service book



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FOREWORD

Purpose of this document

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

- By **authorised trained service personnel** is meant: 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 accessing the service menu.

It is recommended not to 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 at the front of this booklet or with the subjects concerned.

EN

Pictograms and symbols



NOTE

General instructions for: WARNING, CAUTION or NOTE.



CAUTION !

Warning of possible serious damage to the device or bodily harm



WARNING

Warning of electricity and / or current danger



WARNING

Warning of electrostatic discharge (ESD) to electronics.



WARNING

Warning for serious crushing injury

1. INTRODUCTION OPTIBEAN

Explanation OptiBean type designation:

| Designation | Meaning | Description | Cup volume | Dispensing Hight cup | Thermos jug |
|-------------|------------------|-------------------------------------|------------|----------------------|-------------|
| 1e digit | Number canisters | 1 - 3 | | | |
| - | standard brewer | 6,5-9,5 gram | 50-150ml | 60-115mm | 167mm |
| XL | XL brewer | 9,5-13,4 gram | 150-230ml | 60-115mm | 167mm |
| H&C | Hot&Cold | prepared for cabinet with cool unit | | | |



OptiBean

- 1
- 2
- 3
- 2 H&C
- 3 H&C



OptiBean
Hot & Cold

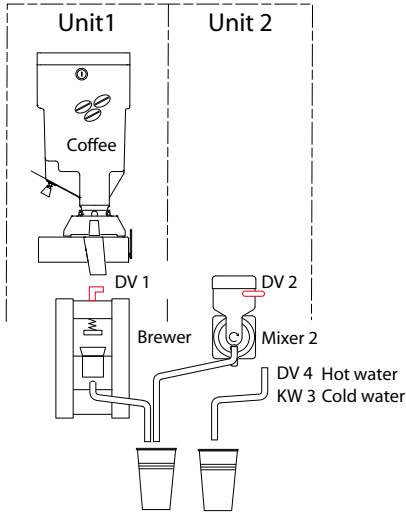


- 2 XL
- 3 XL
- 2 XL H&C
- 3 XL H&C



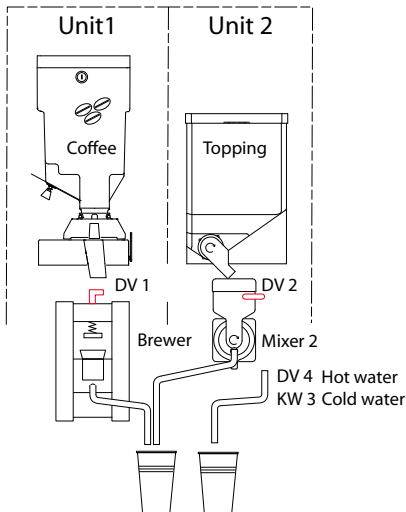
1.1 Principles of operation

OptiBean 1

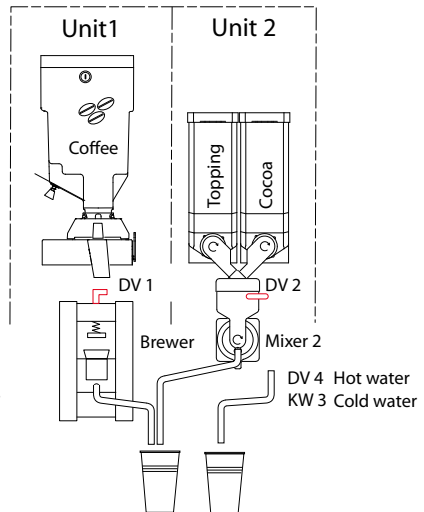


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OptiBean 2 (XL)


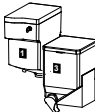



OptiBean 3 (XL)



1.2 Model code

The OptiBean models are standard executed according below canister configuration.

| OptiBean (XL) | Model code | | Canister configurations | | | |
|---------------|---|--------------|-------------------------|--------------|----------------|--------------|
| | Std. | XL | 1 | | 3 | 4 |
| 1 |  | 2B BA | - | Coffee beans | | |
| 2 |  | 2B 1A | 2B 1L | Coffee beans | Topping | |
| | | 2B 3A | 2B 3L | | Cocoa | |
| | | 2B 4A | 2B 4L | | Tea | |
| | | | | | | |
| 3 |  | 2B 2A | 2B 2L | Coffee beans | Topping | Cocoa |
| | | 2B5A | 2B5L | | Topping | Sugar |
| | | 2B6A | 2B6L | | Topping | Tea |
| | | 2B7A | 2B7L | | Tea | Cocoa |
| | | 2B8A | 2B8L | | Tea | Sugar |
| | | 2B9A | 2B9L | | Topping | Coffee inst. |
| | | 2BAA | 2BAL | | Topping | Decaf inst. |

Button settings

Download here an overview of the standard-and optional recipes:
<http://www.animo.nl/en/downloads/service-documentation>

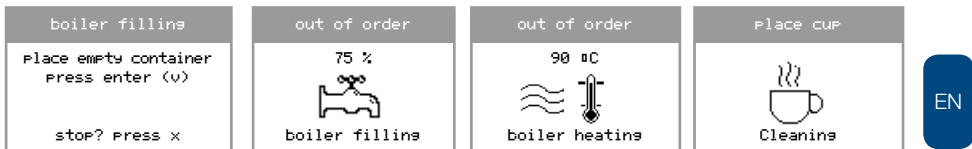
Enter the web site address in your web browser and your can download the relevant technical documentation without requiring a login code.

2. FIRST MENU SETTINGS AFTER INSTALLATION

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

Switch ON the machine

- Follow the instructions on the display



Operatormenu (Page 46)

- 1.1 Clock *Time* (set)
- 1.7 PIN-code *Date* (set)
2 - 2 - 2 - 2 - 2 (PIN-Code)

Service menu (Page 49)

- 2.4 Settings *Language* (set)
- 2.6 Service boiler *Service moment*
Cups (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 amount of cups into the menu so the signal [Service Boiler] appears on the display.



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 |

- 2.2 *Button settings* <Recipe name> (set)

Every machine contains pre-programmed basic recipes. Each key can be changed, if required. Which recipes are factory-set can be found in recipes settings document which can be downloaded.

See <http://www.animo.nl/en/downloads/service-documentation>

The same table also indicates which additional recipes in the software are available.

See chapter 2.1 How to program a recipe

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

The Coffee(bean) setting is the real grinding time from the grinder in seconds.

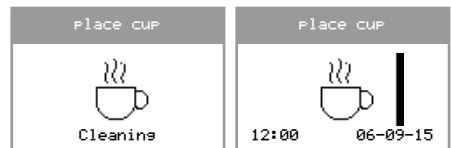
This setting is not linked to the cup volume setting.

The Topping and Cocoa setting is a dispensing time in seconds for a 100ml drink.

When increasing the cup volume the Topping and/or Cocoa dispensing will be automatically proportional increased (not visible in the display).

See chapter 2.2 How do you correct a recipe?

- *Run the cleaning program (without cleaning tablet) to reset the cleaning message*



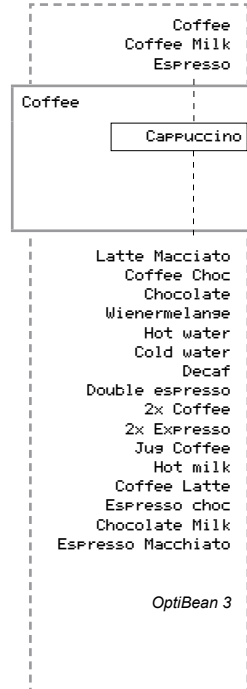
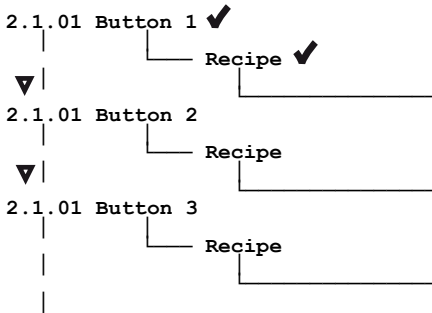
Shut down

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

2.1 How to program a recipe?

Every machine contains pre-programmed basic recipes. Each key can be changed, if required. In below example button 1 will be change from **coffee** into **capuccino**.

2.2 Button settings



1. Navigate to above mentioned service menu item.
2. Go to Button 1 - Recipe and confirm (v).
The 1st line in de display shows the programmed recipe.
The 2nd line in the display shows the first recipe from a hole range (see dotted frame) of pre-programmed and extra recipes.
3. Scrol with the navigation buttons though the range untill the desirable recipe and confirm 2x (v)



Which recipes are factory-set can be found in recipes settings document which can be downloaded. See <http://www.animo.nl/en/downloads/service-documentation/>

2.2 How do you correct a recipe?

Easy way to check the dispensed drink- volume and taste without leaving the menu!

2.1 Quick recipe pro ✓

2.1.01 Coffee (recipe) ✓

Coffee
Coffee beans (ingredient) **START**

2.1.04 Cappuccino (recipe)

Cappuccino
Cup volume
Cup volume 120ml **START**

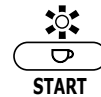
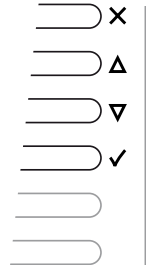
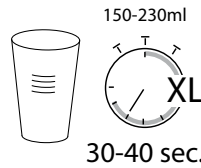
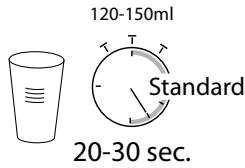
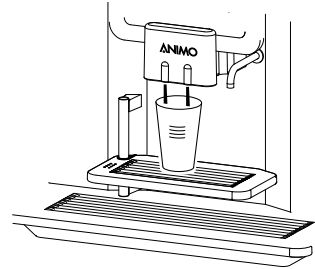
Cappuccino
Koffie (ingredient)
Koffie 1,45s. **START**

Cappuccino
Topping (ingredient)
Topping 2,50s. **START**

2.1.07 Chocolate (recipe)

Chocolate
Cup volume
Cup volume 120ml **START**

Chocolate
Cocoa (ingredient)
Cocoa 3,00s. **START**



1. Navigate to above service menu item
2. Change one or more settings and confirm (v), (START led blinks).
3. Place a empty cup under the outlet and press the START button. Your drink is made.



When the Cup volume (menu parameter) is increased, instant products Topping and Chocolate will be automatically proportional increased. **The coffee however will not automatically increased!**

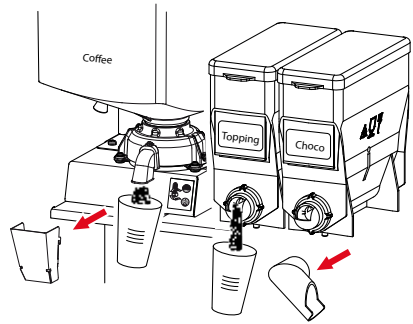
If the optimum settings are found for the first coffee button copy the set grinder time for all the coffee drinks; Coffee Milk, Espresso, Cappuccino, Latte Macchiato, etc.

2.3 How do you measure the weight of an ingredient only?

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

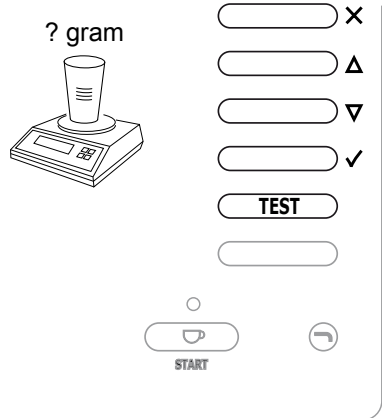
i It is strongly recommended to check the coffee measurement using a set of mini scales. These are simple to order via the Internet.

- 2.1 Quick recipe pro ✓
 - 2.1.01 Coffee (drink) ✓
 - ▼ Coffee Coffee beans (ingredient) TEST
 - 2.1.04 Cappuccino (drink)
 - ▼ Cappuccino Coffee beans (ingredient) TEST
 - ▼ Cappuccino Topping (ingredient) TEST



EN

1. Navigate to above service menu item
2. Hold a empty cup under the outlet.
3. Press the TEST button, only the chosen ingredient will be dispensed.
4. Measure the weight of the ingredient*



*Coffee
 Standard espresso group: min. 6,5 - max. 9,0 g.
 XL espresso group: min. 9,5 - max. 12,5 g

2.4 Adjustment rules

2.4.1 Espresso group

The OptiBean can be executed with following espresso group:

Standard espresso group

- A good cup of coffee (lungo) can be made With 7.5 - 8 grams (0,26 - 0,28 ounce) of coffee.
- Suitable for a maximum of 9.0 g (0,32 ounce) 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 gr (0,44 ounce) ground coffee (1 cup of coffee).
- Suitable to brew a double cup of espresso (2x 70ml) or double cup coffee (2 x 115ml) in one single cycle.
- Not suitable to brew a double cup of coffee > 115ml in one cycle.



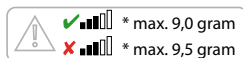
(imp)

Standard

min. 6,5 - max. 9,5* gram

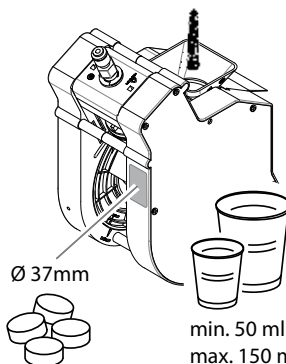
(0,23 oz)

(0,34 oz)



(0,32 oz)

(0,34 oz)

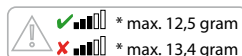


XL

min. 9,5 - max 13,4* gram

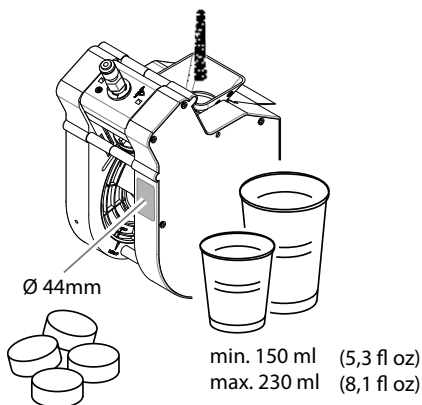
(0,34 oz)

(0,47 oz)



(0,44 oz)

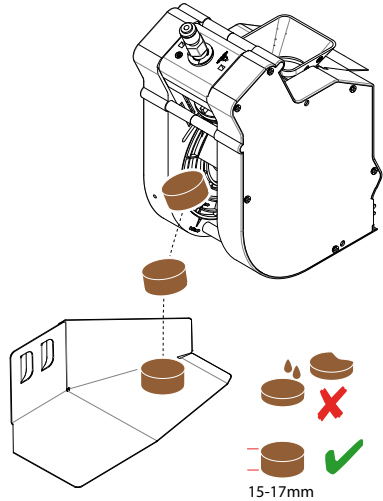
(0,47 oz)



2.4.2 Coffee Waste (puck)

- It is very important how the compressed puck looks like when it is thrown out of the brewer.

A too wet puck falling apart is a sign too little coffee is being dispensed and / or the coffee grind is too coarse 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 15-17mm thick.
- It is normal that a small amount of water leaves the brewer when it opens.



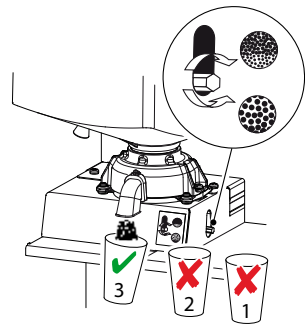
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2.4.3 Coffee grinder

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

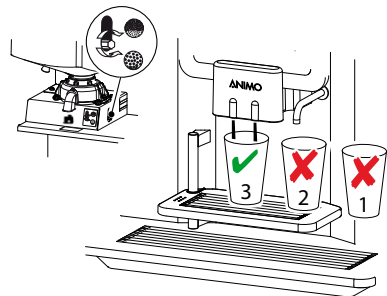
- Cup volume (menu setting)
 - Amount ground coffee (menu setting)
 - Ground coffee coarse or fine (grinder adjustment)
- When the coffee grinder is set coarser, the volume of the grind increases.
 - When the coffee grinder is set finer, the volume of the grind decreases.
 - Only adjust the grinder finer when the grinder is running! Adjustment from fine to coarse can be done when the grinder is stationary.
 - Only adjust the grind setting in steps of 1/4 turn.

Note: only the 3rd cup of coffee is 100% made with the changed grind fineness! (do not measure the first 2 cups).



Run in period 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.).



i We recommend to re-adjust (finer) the grinder after this period.

2.5 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)

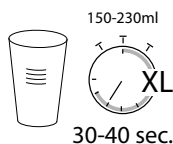
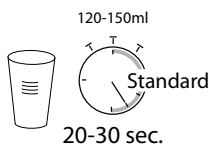
Always start with adjusting a **Coffee** (usually button 1). First make a couple of coffee without changing the settings and measure the brewing time of this cup of coffee.

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

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

- grind
- coffee dosage

Adjust the grinder in such away that a good cup of coffee is made in accordance with 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 is not much more to be set 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 shorter than 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.) its 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 created more resistance and a longer brewing time.



2.1 Quick recipe pro

2.1.03 Espresso (drink)

Espresso
Coffee beans (ingredient)

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, Latte Macchiato.

2.1 Quick recipe pro

2.1.04 Cappuccino (drink)

- Cappuccino
- Coffee beans (ingredient)

- Latte Macchiato
- Topping (ingredient)



i When the Cup volume (menu parameter) is increased, instant products Topping will be automatically proportional increased.

Chocolate / Chocolate + Milk

2.1 Quick recipe pro

2.1.05 Chocolate (drink)

- Chocolate
- Cocoa (ingredient)

2.1.06 Chocolate Milk (drink)

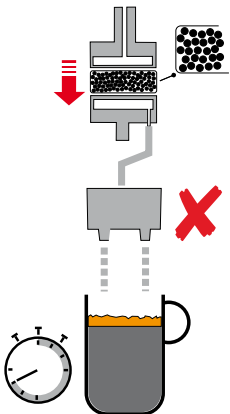
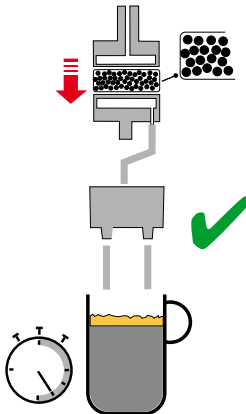
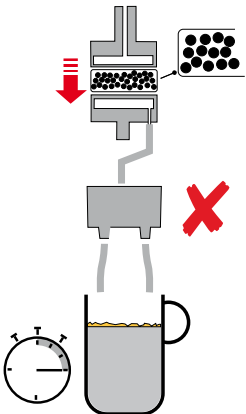
- Chocolate Milk
- Cocoa (ingredient)

- Chocolate Milk
- Topping (ingredient)



i When the Cup volume (menu parameter) is increased, instant products Topping and Chocolate will be automatically proportional increased.

2.6 Adjustment tips

| Cream layer too low | Cream layer perfect | Cream layer missing or too light |
|--|---|---|
| <ul style="list-style-type: none"> - Grind too fine - Bitter - Preparation too long - Too much ground dosing - Coffee drips from splitter <p>The coffee is ground too fine, or the dispensed coffee is too high. The extraction is too extreme due to a too long contact time. (to many bitter substances).</p>  <p>Advice: set the coffee grinder coarser (adjustment anti-clockwise). Also shorten the coffee dosing by 0.1 sec.</p> <p>Note! When setting the grinder coarser there is a risk of excess measurement (coffee volume/ weight increases) as a result of which the espresso group can jam (Error E7).</p> | <ul style="list-style-type: none"> - The right grind - Perfect coffee taste - The right preparation time - The right coffee measurement - 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"> - Grind too coarse - Weak - Preparation too short - To low ground coffee dosing - Coffee sprays bent outwards <p>The ground coffee is too coarse for reaching a good extraction. The coffee will be under-extracted. Little or no cream layer.</p>  <p>Advice: set the coffee grinder finer (adjustment clockwise). Adjust the grind setting only in steps of a maximum 1/4 turn each time. Only the 3rd cup of coffee is 100% made with the changed grind fineness! (do not measure the first 2).</p> |

2.7 Advanced recipe settings

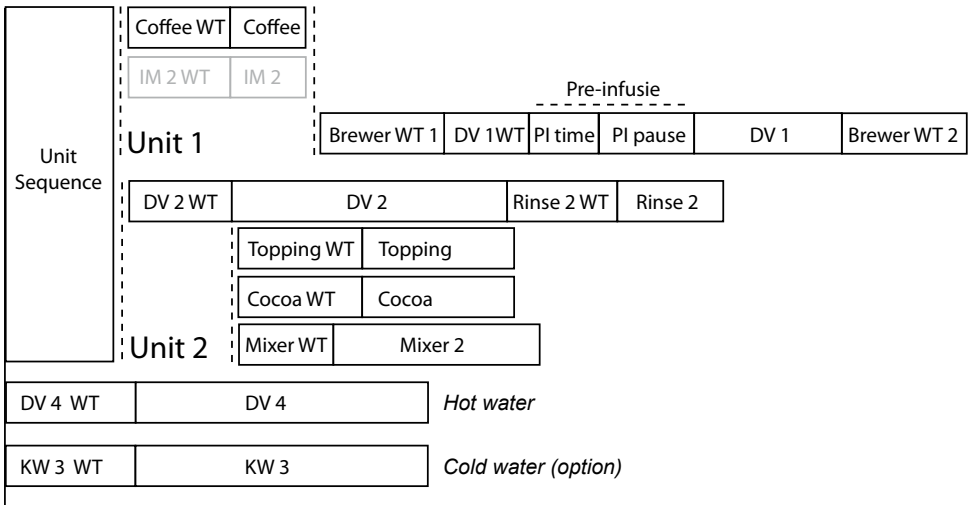
Before changing the advanced recipe settings (service menu 2.3) you should first know how the various parts such as valves, coffee grinder, ingredient motors and mixers work together, see Section 2.8 Time line recipe settings.

Keep to the following guidelines:

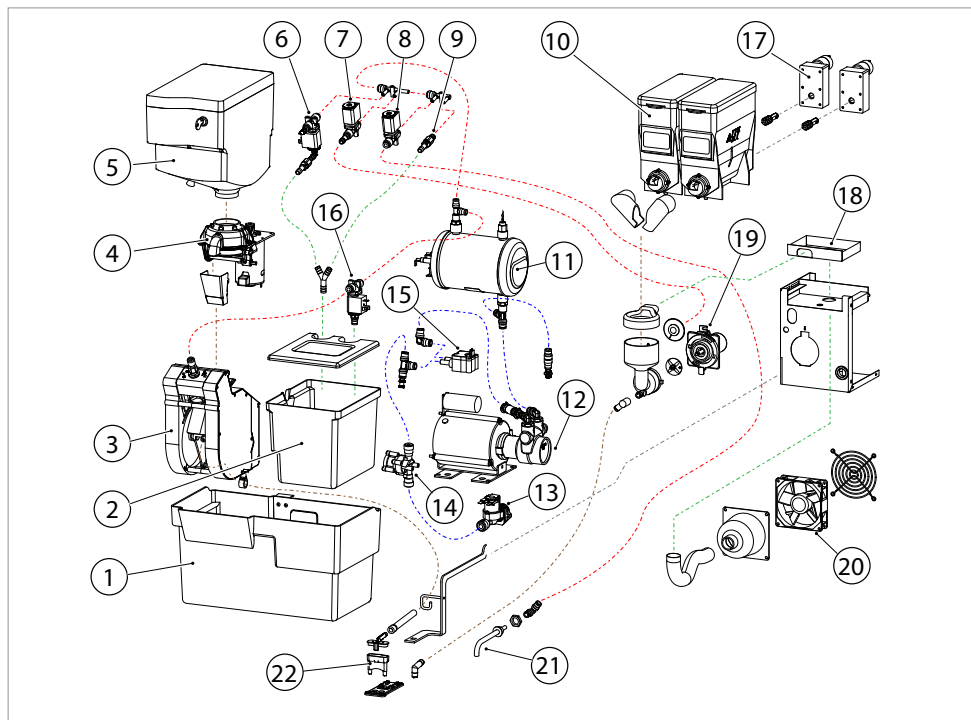
- Unit sequence means: Coffee with milk: Unit 1-2 first coffee (unit 1) then milk (unit 2).
Cappuccino and/or Latte macchiato: Unit 2-1 first milk (unit 2) then espresso (unit 1).
- Ingredient dispensing times are set in seconds (steps of 0.01 sec.)
- All parameters (water and ingredients such as topping and cocoa) 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 (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 after the mixers is almost empty a small amount of hot water is dispensed to the mixer so that it is 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! Example: set parameter DV2 = 100 ml, Rinse 2 = 8 ml --> Programme carries out action as follows: DV2 = 92 ml, Rinse 2 = 8 ml



2.8 Time line recipe settings



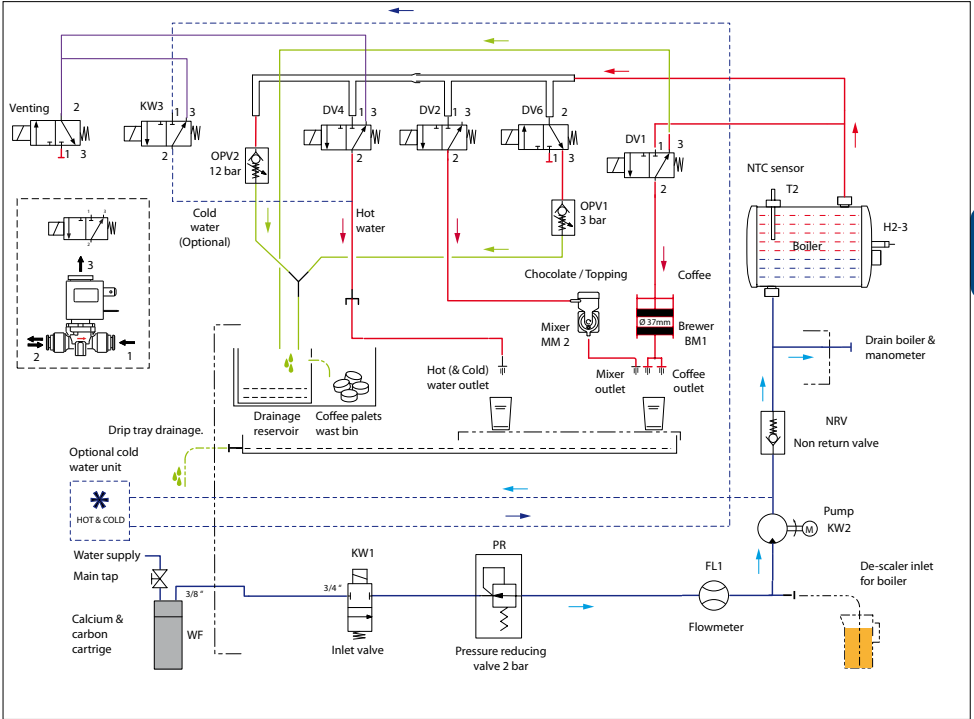
3. PRINCIPLES OF OPERATION



| Item | | Description |
|------|------|-----------------------------------|
| 1. | | Coffee waste bin |
| 2. | | Drainage reservoir |
| 3. | BM1 | Espresso group |
| 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 |

3.1 Water management



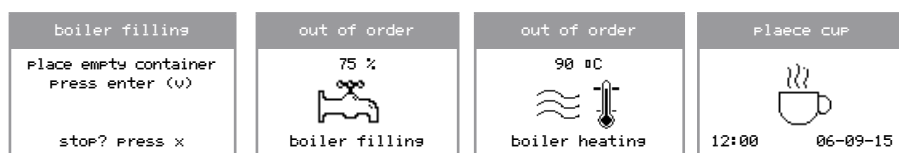
EN

| 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 the machine on using the ON/OFF switch. The display illuminates with the text; 'Position drip tray and press start'. The inlet valve [KW1] opens, the water flows via the Pressure reducer [PR], Flow meter [FL1], Pump [KW2] to the Pressure boiler [H2-3], which is filled. Inlet valve [KW1] closes when Flow meter [FL1] has measured 1.3L. The excess water (approx. 0.2 litres) flows via Pressure relief valve [DV1] to the coffee outlet and drip tray. When the boiler has reached 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 must be 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 following the instructions on the display. To drain the boiler, an Ø 8 mm drain hose must be connected to the boiler supply. To do this, remove the rear 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 valve [DV6] which is switched as an NO 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 approx. 7.5 g coffee (9.5 g OptiBean XL) into the espresso group, which then turns to the set position (brew). Inlet valve [KW1], coffee valve [DV1] and expansion valve [DV6] are activated. Note; the expansion valve [DV6] is connected as an NO valve (normally open). Once activated, the pressure relief valve [OPV1] is closed, as a result of which it is possible to increase the pressure to 10 bar while the coffee is 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 turns to the start position [fill], the coffee residue (pellet) is ejected into the waste bin.

3.1.5 Chocolate preparation

For preparing instant, only the water pressure is used.

When a chocolate is chosen, inlet valve [KW1] and 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 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 thereafter the pressure boiler is brought back up to the operating pressure of 3 bar by the pump.

EN

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.


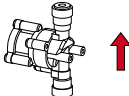

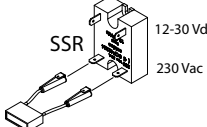
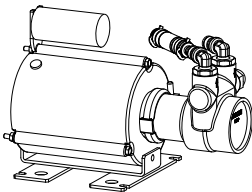
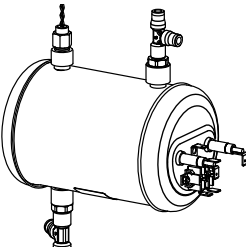
When hot water is chosen, inlet valve [KW1] and hot water valve [DV4] open. The pressure in the mains water supply is reduced to 2 bar by the pressure reducer [PR] and flows via the pressure boiler [H2-3] and hot water valve [DV4] to the water outlet. After the flow meter [FL1] has measured the set amount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

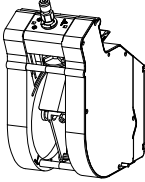

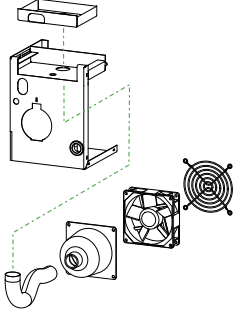
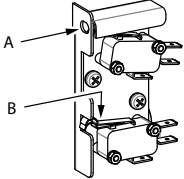
When cold water is chosen, inlet valve [KW1] and cold water valve [KW3] opens, and the 'venting' valve closes. The pressure in the mains water supply is reduced to 2 bar by the pressure reducer [PR] and flows via the external cooler unit and cold water valve [KW3] to the water outlet. After the flow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

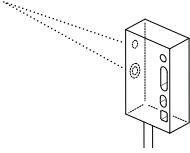
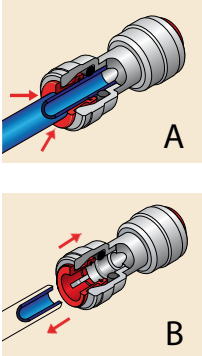

3.2 Componenten

| 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 for the flow direction!</p> |  |
| <p>Flow meter FL [1000531] Measures the supplied quantity of water using rotating magnets and a bi-polar Hall sensor. Pay attention for the flow direction!</p> |  |
| <p>Solid State Relais (SSR) [02799] The heating element is controlled by a solid state relay. Pay attention for the polarity of the 24Vdc side!</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 Temperature sensor [1000740] Screw thread M12x1 / material AISI 316L / 100 kΩ/25°C Boil-dry protection [1000736] Activation temperature 135°C / 2 pole / manual reset</p> |  |

| Component | Image |
|--|-------|
| <p align="center">Brewer valve DV1 [1000699]</p> <p>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> | |
| <p align="center">Expansion water valve DV6 [1000699] Pressure relief valve 3 bar [1000734]</p> <p>This valve is switched as an NO valve. When the coil is not energised, the supply to the 3 bar pressure relief valve is open. When coffee is being made, this valve closes off the 3 bar pressure relief valve so that pump can increase the pressure to 10 bar. After the coffee has been made, this valve opens again and the excess water pressure is fed to the drainage reservoir.</p> | |
| <p align="center">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 at 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 drains.</p> | |
| <p align="center">Hot water valve DV 4 [1000699]</p> <p>Supplies the hot water outlet 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 at 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 drains.</p> | |
| <p align="center">Pressure relief valve 12 bar [1000735]</p> <p>Over-pressure protection for the boiler.</p> | |
| <p align="center">Coffee grinder [1000665]</p> <p>The coffee grinder grinds the beans and fills the brewer with a precisely measured quantity of coffee.</p> <p align="center">See Section 3.5 Grinder of operation</p> | |

EN

| Component | Image |
|--|---|
| <p style="text-align: center;">Espresso group [1000088]</p> <p>The brewer is filled with ground coffee from the coffee grinder.</p> <p>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;">Ingredient and mixer system</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 measuring valve DV2. The instant product and the water are mixed together by the mixer impeller driven by the mixer motor running at 10,700 rpm. The drink flows via the drink outlet into the beaker.</p> |  |
| <p style="text-align: center;">Water vapour drain system</p> <p>Most of the water vapour given off 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 water vapour getting into the canister outlet and the ingredient becoming moist.</p> |  |
| <p style="text-align: center;">Door switches</p> <p>There are two door switches on the inside of the right side wall. Switch A is activated when the door is closed, and switches the machine off when the door is opened.</p> <p>Switch B is operated when the door lock is locked and switches the hot water valve DV4 when the lock is opened.</p> |  |

| Component | Image |
|--|---|
| <p style="text-align: center;">Cup detection sensor [1003231]</p> <p>Reflection infrared sensor. This sensor can optionally build in the machine door. This sensor checks whether there is a cup / mug positioned under the (correct) spout.</p> <p style="text-align: center;">See chapter 3.3 Cup detection for operation.</p> |  |
| <p style="text-align: center;">Quick release coupling</p> <p>In this machine various components are used that have quick release couplings.</p> <p>To remove the Teflon hose from this connection, the outer ring [A] must be pushed in first to release the hose [B].</p> <p>This outer ring does not have to be pushed in when inserting the hose.</p> |  |
| <p style="text-align: center;">Telfon® pressure hose</p> <p>High quality Teflon pressure hose is used in this machine.</p> <p>Never shorten this hose with side cutters. This will deform the hose and when it is inserted into the quick release connection it can damage the internal o-ring, resulting in leaks.</p> <p>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> |  |

EN

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 in use and will prevent you from wasting freshly brewed coffee or tea.



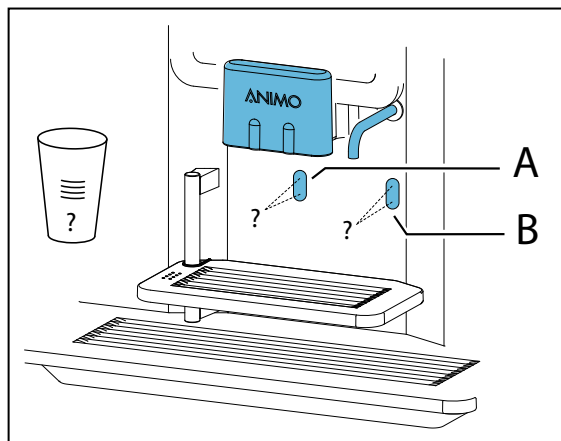
WARNING

- Keep the sensor windows free of dirt.
- Don't reach below the drink spouts when a drink is prepared.



Caution

- the cup detection sensors are standard activated.
- run the rinsing program with a closed door.
- when placing a cup the machine awakes itself from the energy safe mode



A: Cup detection for coffee, cappuccino, chocolate spout.

B: Cup detection for tea water spout

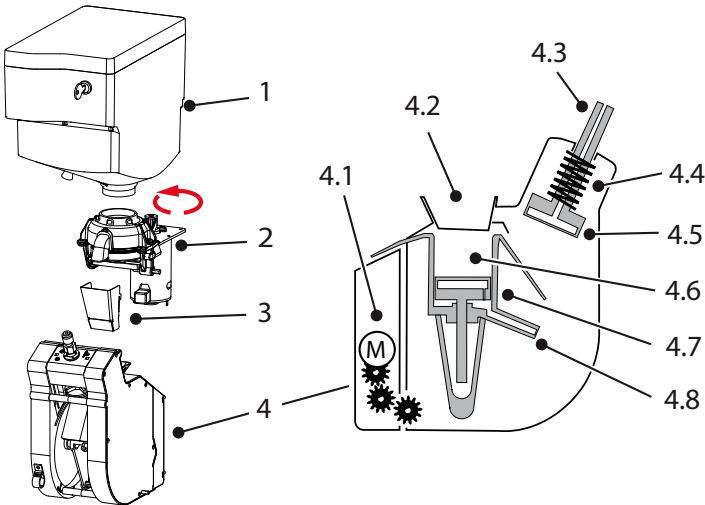
3.4 Espresso group

The espresso group consists of a drive unit [4.1] and an espresso unit [4].

The DC motor [4.1] in the drive unit drives the espresso unit.

The upper [4.5] and lower piston [4.7] are moved up and down by the drive wheels located in the side walls. Their operation is explained in detail in the next chapter.

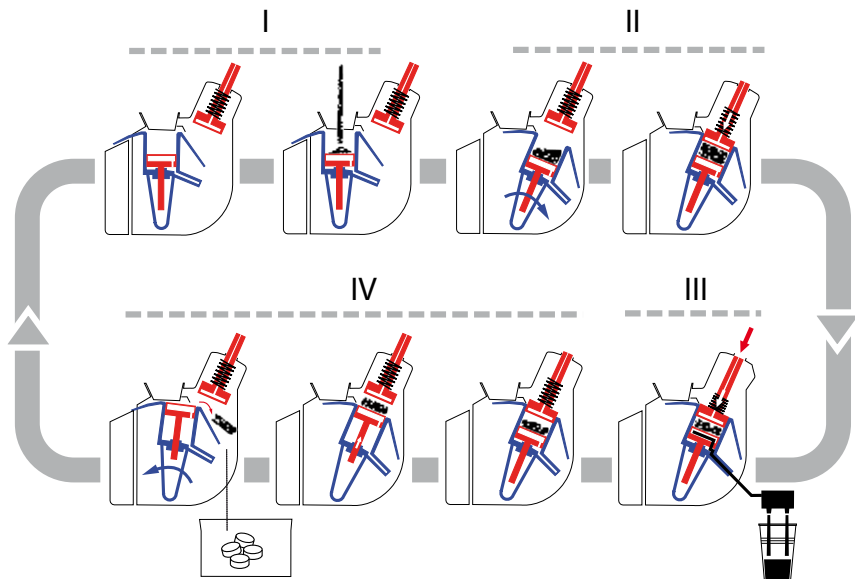
| Major components | Technical data | Material |
|--------------------|-----------------------------|-----------------|
| 1. Bean canister | Content 1.5 kg | PC |
| 2. Coffee grinder | See 3.5 Coffee grinder | |
| 3. Coffee guide | | stainless steel |
| 4. Espresso group | | |
| 4.1 Drive unit | DC motor 24Vdc | |
| 4.2 Filler opening | | |
| 4.3 Water supply | 4 mm quick release coupling | |
| 4.4 Spring | | stainless steel |
| 4.5 Upper piston | 315 µm bore | stainless steel |
| 4.6 Brewer chamber | Ø 37mm Standard / Ø 44mm XL | |
| 4.7 Lower piston | 150 µm bore | stainless steel |
| 4.8 Coffee outlet | | |



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 3.4.3) located in the drive unit.

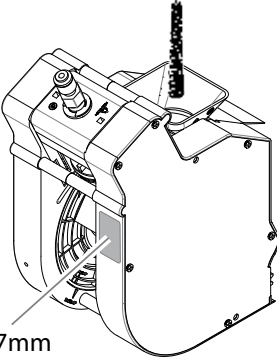

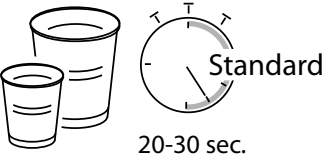
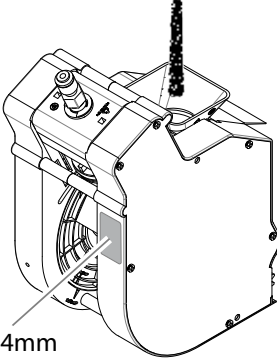

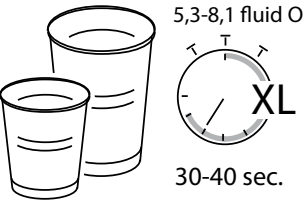
| Position | Action | Switch position | 2 | 1 |
|-----------|--------------|--|---|---|
| I | Start / fill | Idle position of the espresso group. Ground coffee is measured into the brewer chamber | 0 | 0 |
| II | Compact | The espresso group moves to the brew position. The upper piston compacts the ground coffee. | 0 | 1 |
| III | Brew | A very small quantity of low pressure 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, an error E24 brewer error occurs | 1 | 0 |



3.4.2 Espresso brewer spec's

From year 2013 the OptiBean can be executed with following brewers:

EN

| Standard brewer | XL Brewer |
|--|---|
| <p>min. 6,5 - max. 9,5* gram min. 0,23 - max. 0,35* Ounces</p>  <p>Ø 37mm</p>  <p>120-150ml 1,8-15,3 fluid Ounces</p>  <p>Standard 20-30 sec.</p> <p>min. 50 - max. 150 ml</p> <div data-bbox="162 1268 453 1340"> * max. 9,0 gram * max. 9,5 gram </div> <p>min. 1,8 fl oz - max. 5,3 fl oz</p> <div data-bbox="162 1428 476 1500"> * max. 0,32 Ounces * max. 0,34 Ounces </div> | <p>min. 9,5 - max 13,4* gram min. 0,34 - max 0,47* Ounces</p>  <p>Ø 44mm</p>  <p>150-230ml 5,3-8,1 fluid Ounc</p>  <p>XL 30-40 sec.</p> <p>min. 150 - max. 230 ml</p> <div data-bbox="632 1268 924 1340"> * max. 12,5 gram * max. 13,4 gram </div> <p>min. 5,3 - max. 8,1 fl oz</p> <div data-bbox="632 1428 946 1500"> * max. 0,44 Ounces * max. 0,47 Ounces </div> |

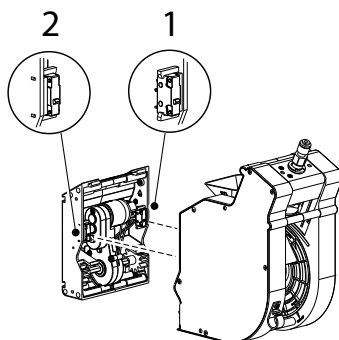
3.4.3 Position switches

When the machine is switched on, the software checks the espresso group by running it through a complete cycle.

In the drive unit there are two micro switches that check the position of the espresso group.

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

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



3.4.4 Dismantling

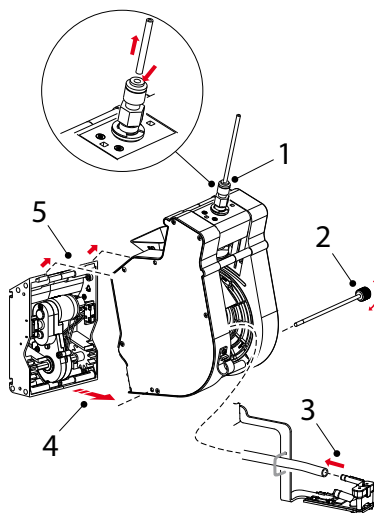
Espresso group

The espresso group can easily be disconnected from the drive unit

1. Switch the machine off.
2. Remove the water supply hose [1] from the espresso group.
3. Unscrew the locking pin [2].
4. Remove the hose leading to the coffee splitter [3].
5. Move the bottom part forwards [3] and lift the espresso group [4] off 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.

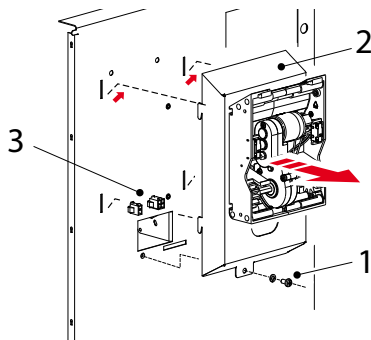
7. After the espresso group is placed back, the group will initialize automatically when the machine switched on.



Drive unit


The drive unit can simply taken out

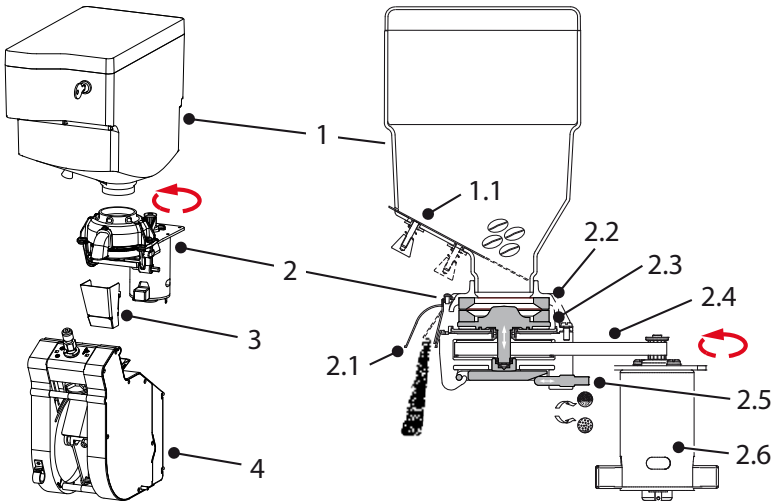
1. Remove the mounting screw [1] on the underside of the motor plate [2].
2. Lift the motor plate [2] and remove it from the rear wall.
3. Disconnect the connectors [3] from the drive unit.



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 grind fineness can be set with an adjustment screw [2.5]. When the screw is turned clockwise, the distance from the upper grinding disk reduces; anti-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 | 230Vdc | |
| 3. Coffee guide | | stainless steel |
| 4. Espresso group | See Section 3.4 | |



3.5.1 Basic adjustment

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



WARNING

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



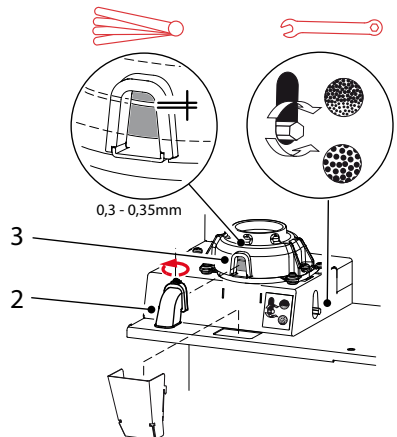
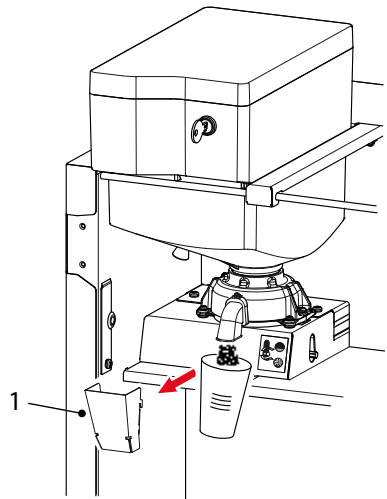
WARNING

- If there is a sound of two stones rubbing against each other, make the grind coarser.
- The grinding disks must never come into contact with one another.
- The grind fineness and grind capacity depends 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.

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

5. Unscrew the black plastic coffee outlet [2] on the grinder.
6. Set the distance between the grinding disks [3] so that a 0.30 / 0.35 mm feeler gauge fits between them.
7. After adjusting the grind fineness, carefully check the operation of the brewer, see Section 2.0 Adjust the grind fineness as necessary!



3.5.2 Service life


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

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

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

3.5.3 Run in period 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 re-adjust (finer) the grinder after this period.

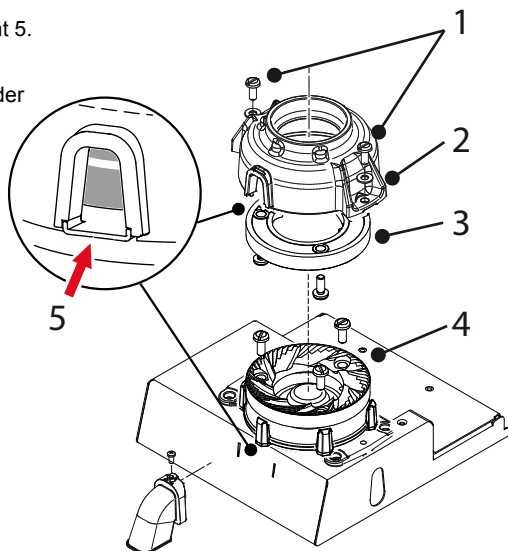
 We recommend to re-adjust (finer) the grinder after this period.



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3.5.4 Replacing grinding disks

1. Follow chapter 3.5.1 Basic adjustment till point 5.
2. Switch the machine off.
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 disks in reverse order.
7. Position the lower plastic sealing disc [5] so it shuts the bottom of the grinder spout.



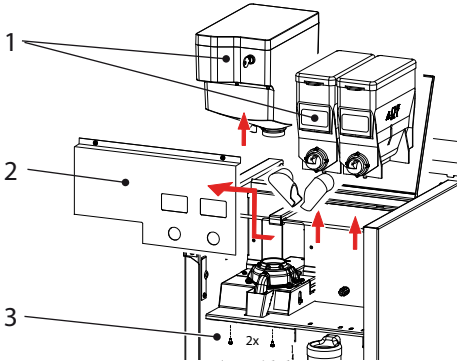
WARNING

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

3.5.5 Replacement drive belt

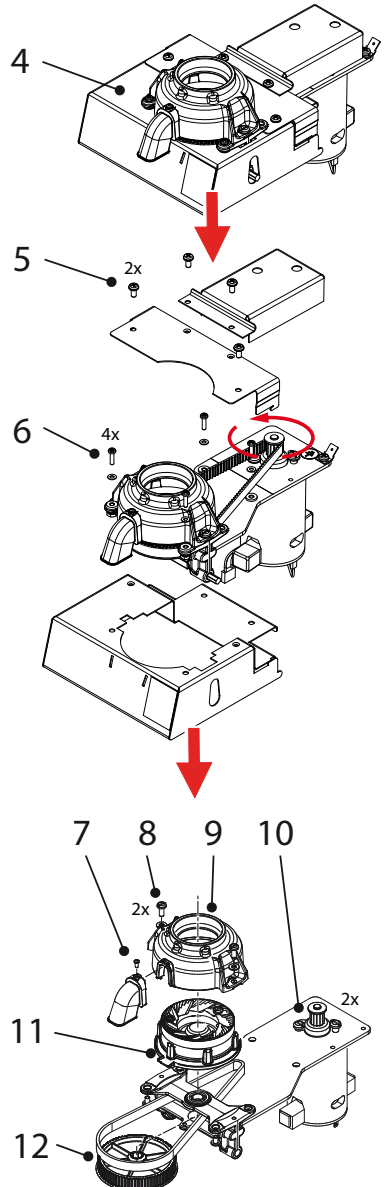
Coffee grinder housing disassembly

1. Remove the bean- and 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 rear wall).
3. Remove the two screws [3] on the underside 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 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 re-tighten the motor screw [10].



3.5.6 Cleaning

Depending on the fineness of the grind and the intensity of use, coffee residue collects in the grinder housing and on the grinding disks (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?

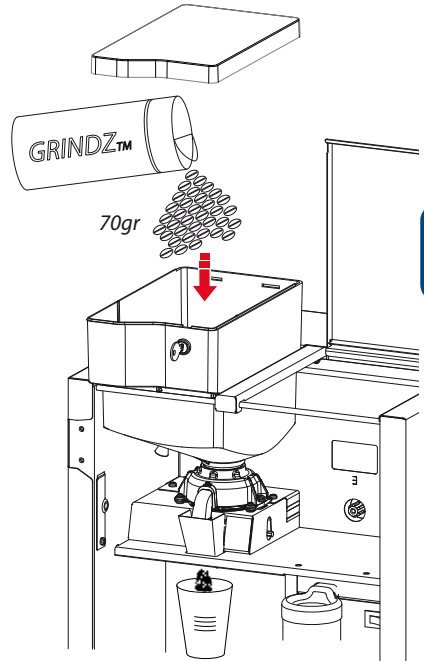
GRINDZ™ consists of 100% biological, natural materials (including grain, starch) and is absolutely harmless for the health. It binds the coffee oil and cleans the grinder housing and grinding disks by friction. If small residual particles mix into the follow-up shots, this does not affect the extraction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

i Tip; go to the service menu: **2.7 Hardware test / Outputs / IM1**. Press 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 GRINDZ™ (2x content of the cover) in the bean canister.
6. Grind the GRINDZ™ with the grinder and collect the ground product.
7. Grind approx. 6 shots of coffee to 'flush' the GRINDZ™ residue out of the grinder housing.

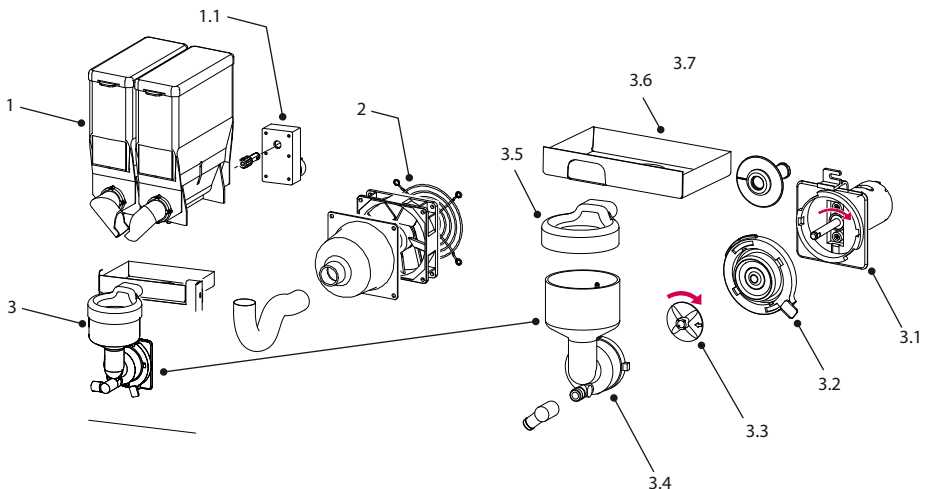


3.6 Instant group

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 10.700 rpm . The drink flows via the drink outlet into the cup.

Most of the water vapour given off during the mixing is collected by the vapour 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 water vapour getting into the canister outlet and the ingredient becoming moist.

| Major components | Art. no. | Technical data |
|--------------------------|----------|--------------------|
| 1. Instant canister | | |
| 1.1 Ingredient motor | 02906 | 24Vdc / 130 RPM |
| 2. Extraction System | | |
| 3. Mixer group serie 247 | | |
| 3.1 Mixer motor | 03252 | 24Vdc / 10.700 RPM |
| 3.2 Mounting ring cpl | 03253 | |
| 3.3 Mixer rotor | 03254 | |
| 3.4 Mixer bowl | 1002144 | |
| 3.5 Extraction ring | 03257 | |
| 3.6 Extraction drawer | 1001052 | |
| 3.7 Water inlet adapter | 02247 | |



3.6.1 Ventilation mixer group

The fan on the rear side 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:

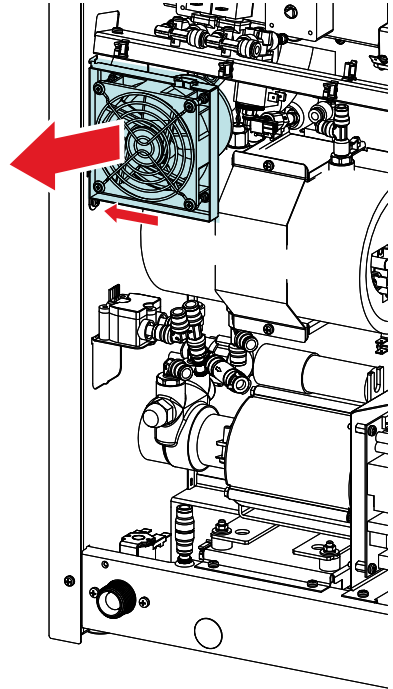
2.4 Settings

2.4.05 Ventilator

Fan time

Fan speed 1

Fan speed 2

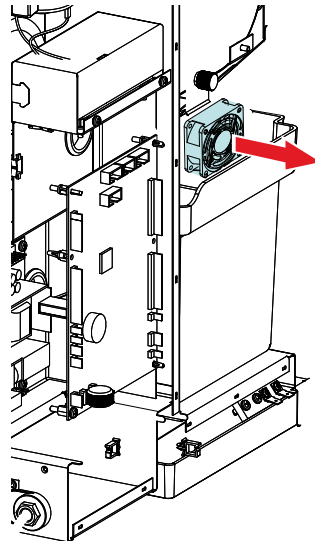


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3.6.2 Ventilation waste bin

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

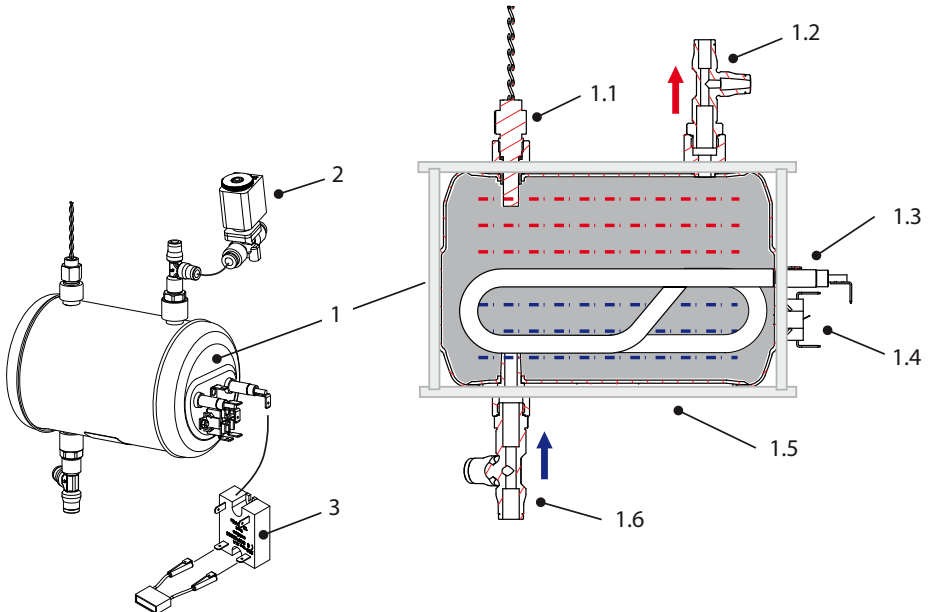
The fan runs as long as the machine is switched on.



3.7 Boiler system

Turn on the device using the ON/OFF switch. The display will light up. If the boiler [1] is empty (first installation or after running the shut down menu) the commissioning menu will automatically starts and will guides you trough the filling up sequence. If the boiler is filled the heating element [1.3] will be switched on by the solid state rails (SSR) [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 a overpressure of 13 Bar (1,3MPa) constructed for working pressures of 10 bar (1,0 MPa).

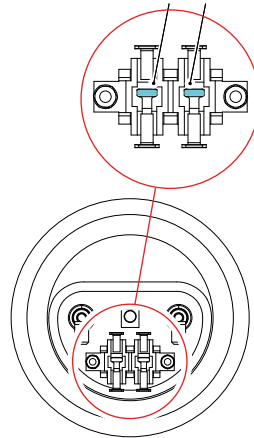
| Major parts | Technical data | Art.No. | Material |
|------------------------------|----------------------------|---------|----------|
| 1. Boiler system | 1,1 Litre | 1000530 | st.st. |
| 1.1 Temperature sensor NTC | 100 kΩ/25°C / M12x1 | 1000740 | st.st. |
| 1.2 Boiler outlet | G1/4" x Ø 6mm (2x) | | st.st. |
| 1.3 Boiler & heating element | 230V 1800W / art.nr. | 1000530 | st.st. |
| 1.4 Dry boil protection | 230V 16A / art.nr. | 1000736 | st.st. |
| 1.5 Insulation | | | PEC |
| 1.6 Boiler inlet | G1/4" x Ø 8mm (2x) | | st.st. |
| 2. Dispensing valve (3 way) | See 3.7.1 Dispensing valve | 1000699 | |
| 3. Solid State Relay (SSR) | 12-30Vdc / ~230V 16A | 02799 | |



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 both heating connection from the electric mains. Reset is only possible after de boiler has cooled down and both contacts are manually reset by hand.

Reset



WARNING

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

If the dry boiler protection [1.4] is activated a Error 21 shall appear on the display after 6 minutes.

The reason from activating the protection can be caused by air in the waters main which is transported to the boiler, or an other malfunction of the heating system

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 trough the wall of the boiler.

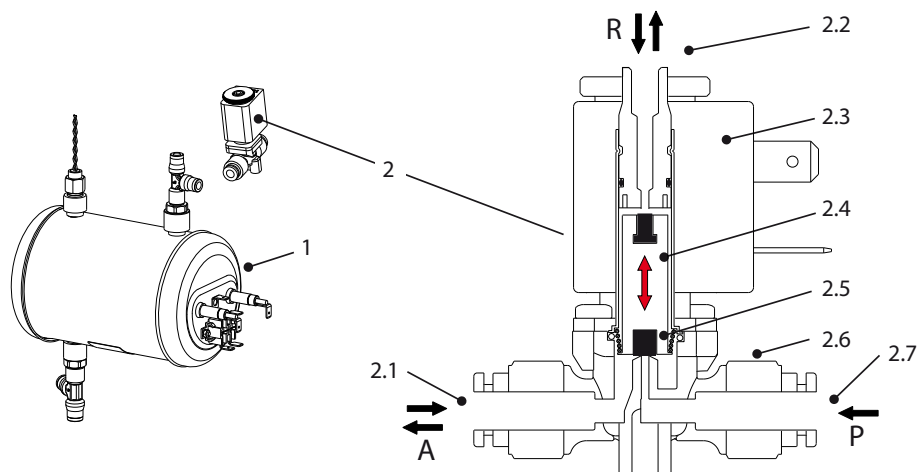
The heating element always switches off when the maximum boiler temperature of 105°C is reached, a E6 error will appear on the display.

3.7.1 Dispensing valves

The dispensing valves [2] used in the OptiBean are all the same and are so called 3-way valves. Brewer valve DV1, mixer valve DV2 and hot water valve DV4 are used as N.C. valve (Normally Closed). 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 hotwater outlet always runs empty. During a drink selection one of the dispensing valves [DV] is ACTIVATED and opens. Outlet R [2.2] closes and pressurised water flow from connection P to A.

The (expansion) dispensing valve DV6 is build-in as a N.O. valve (Normally Open). 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 6mm push fit | |
| 2.2 Aeration (R) | M5 | |
| 2.3 Coil | 24Vdc - 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 6mm 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 depressurise the boiler system.

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

1. Activate the shut down menu in the service menu **2.14 Installation / Shut down** and following the instructions on the display.
2. For just releasing the pressure in the boiler it is not necessary to disconnect the supply hose. Press enter (v)

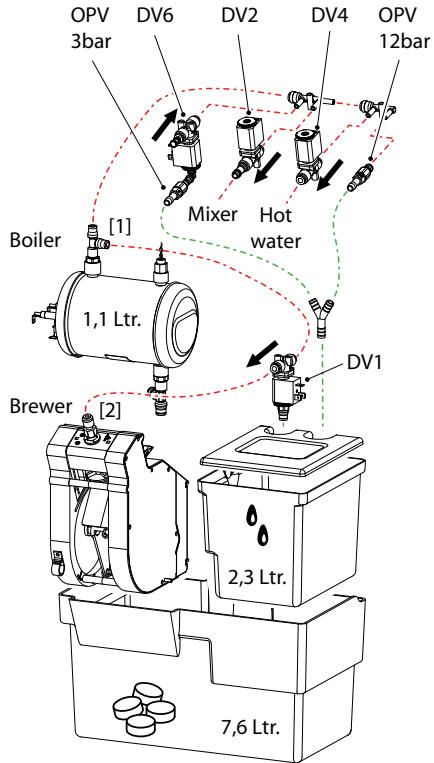
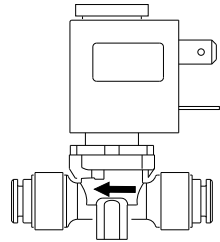


3. Stop the process, the boiler is now depressurised.

Dispensing valves DV2, DV4 and DV6 can be reached by removing the back.

Dispensing valve DV1 can be reached by removing the right side cover. 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 in place.



Rest water per recipe:

- Coffee abt. 16 ml
- Cappuccino abt. 21 ml
- Hot water abt. 5 ml

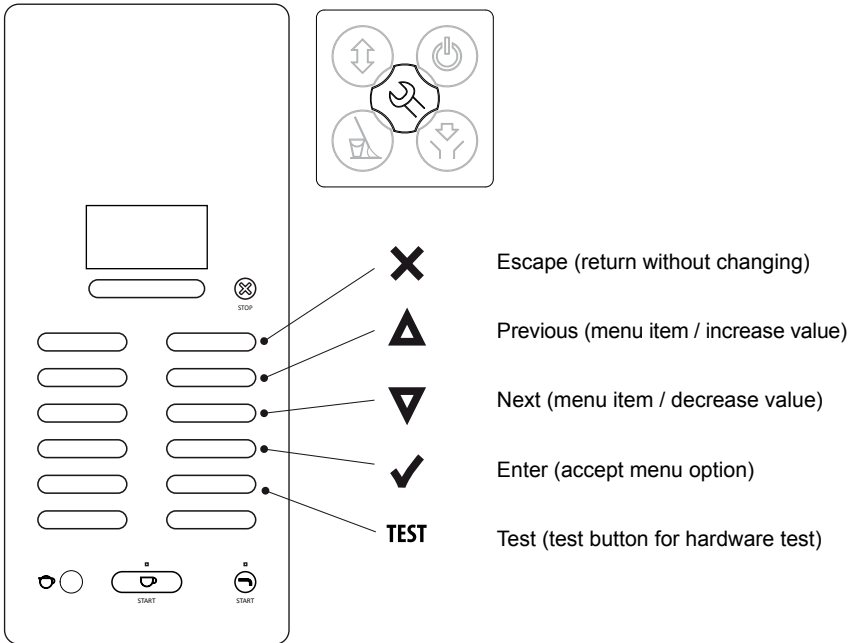
4. MENU STRUCTURE

4.1 The operator / service menu

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

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

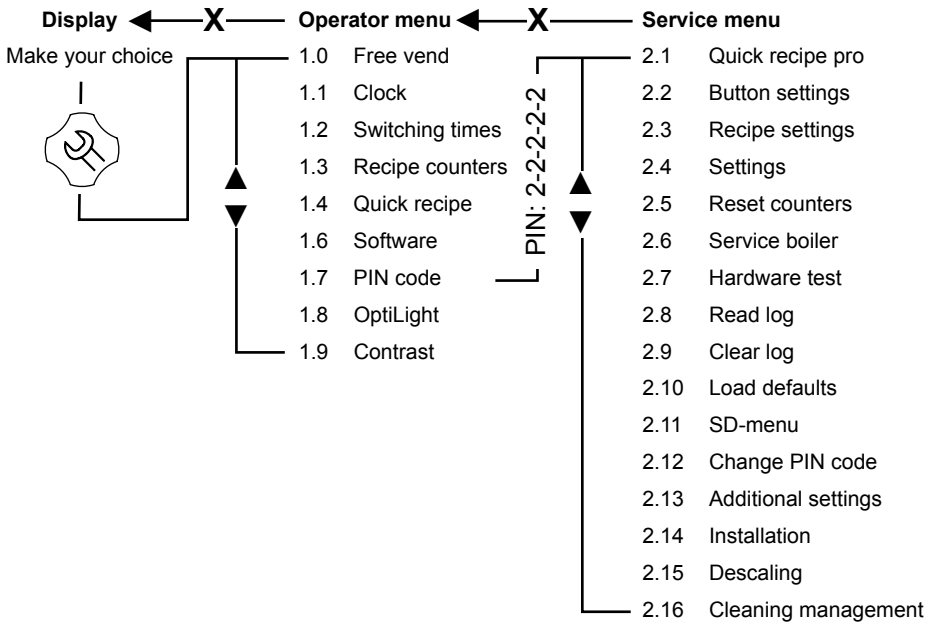
This chapter describes the various settings that can be changed by **trained, authorised service personnel**. How you gain access to the **service menu** is described below. Once in the service menu, the control panel has the following functions:



- Menu items are connected to each other in a 'loop'.
- Exit the Operator menu; press the X key 1x.
- Exit the Service menu; press the X key 2x.
- After exiting the service menu, a long peep signal follows as a sign that changed settings are being stored in the memory.
- If the service menu has to be opened again within 5 minutes, the machine will not ask for a PIN code again.

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Menu overview:



The operator and service menu of the OptiBean is constructed almost the same as the OptiVend, OptiVend NG, OptiFresh and OptiFresh NG machines.

4.2 The operator menu

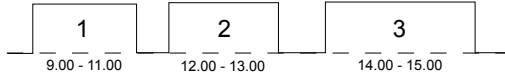
| Operator menu | | | | | | |
|---------------------|------------------|---------------|------------------|----------|---|--|
| Main item | Sub-item | | Range | Set | Description | |
| 1.0 Free vend | | | yes-no | yes | Set the machine for free or paid vending. | |
| 1.1 Clock | Time | | HH:MM | | Set the clock to the correct local time. | |
| | Date | | DD-MM-YYYY | | Set the clock to the correct local date. | |
| 1.2 Switching times | Mo-Fri | Mo-Fri1 | Machine stand-by | On time | Stand-by: blocks keys and switches off. Set the time (max. 3 timers) when the machine must be in operation. When the timer switches the machine off it automatically goes into stand-by and/or energy mode (if activated). | |
| | | Mo-Fri 2 | | Off time | | |
| | | Mo-Fri 3 | | | | |
| | sat | sat 1 | Stand-by | On time | | |
| | | sat 2 | | Off time | | |
| | | sat 3 | | | | |
| | sun | sun 1 | Stand-by | On time | | |
| | | sun 2 | | Off time | | |
| | | sun 3 | | | | |
| | Energy save mode | Active | yes-no | yes | | |
| | | Time | 15-240 min. | 30 min. | | |
| | | LCD | yes-no | yes | | |
| | | OptiLight | 0-100% | 15% | | |
| Boiler temp. | | off / 60-80°C | off | | | |

Example:

Three switching times set

Machine automatically switches from Stand-by to ON at 9 am. At 11am back to Stand-by, etc., etc.

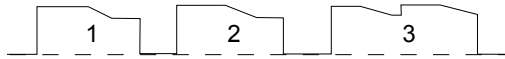
During stand-by the key panel is switched off and the boiler temperature drops to the set stand-by temperature (menu 2.4 Settings / Stand-by temp / off - 60-80°C (by default the stand-by temp is set to 'off')



Three switching times set & Energy save mode activated.

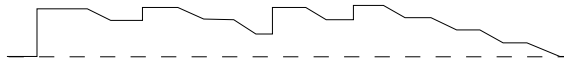
When the machine is ON and it is not in use, it switches to power save after 30 min.

The boiler temperature decreases by 5°C every 30 minutes. If a product is chosen after 2 hours, the machine springs back into life. In this way, less energy is used if the machine is switched on but is used little or if someone forgot to switch it off.

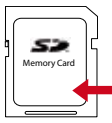


Energy save mode activated (no switching times set)

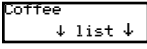
If there is no dispensing, the machine switches to power save after 30 min. The boiler temperature decreases by 5°C every 30 minutes. If a product is chosen after 2 hours, the machine springs back into life. In this way, less energy is used if the machine is switched on but is used little or if someone forgot to switch it off.



EN

| Operator menu continued... | | | | | |
|----------------------------|---|------------|-----------|---|---|
| Main item | Sub-item | | Range | Set | Description |
| 1.3 Recipe counters | Recipe 1 | Total | cups | | Total count per recipe (from free till jugs). |
| | | Free | cups | | Number of drinks <u>free</u> |
| | Recipe 12 | Paid price | cups | | Number of drinks <u>paid</u> <u>price</u> |
| | | | | | |
| | | | | | |
| | Jug | cups | | Number of drinks dispensed in jug | |
| | Recipes total | See above | cups | | Total count for all recipes with the same subdivision as above |
| | service counters | Rinse | | | Rinse programme counter |
| | | Clean | | | Cleaning programme counter |
| | Reset counters | | | | Reset all counters if activated |
| Save counters |  | | | Copy your counter readings to an SD card - Place an SD memory card in the 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. See the example on page 45 Error messages: SD card error: lock function on SD card ON No SD card present: no SD card inserted | |
| 1.4 Quick recipe | Recipe name 1 | Cup volume | 25-350 ml | 120 ml | Here you can easily set the volume and strength of coffee, milk, sugar, cocoa yourself for each recipe (drink key). Only the ingredients for the recipe concerned are visible. |
| | | Coffee (1) | -5 / +5% | 0% | |
| | Topping (3) | -5 / +5% | 0% | | |
| | Recipe name 12 | Cocoa (4) | -5 / +5% | 0% | |
| 1.6 Software | Software | | | | Software version Vx.xx.xxx Model file *.MDD Recipe file *.RCD Language file *.TLF Software version ANILCD Vx.xx.xxx |
| | Hardware | | | | Main board Rev 1 Interface board Rev 0 |
| 1.7 PIN-code | | | 2-2-2-2-2 | | Pin code is press the 2 key 5x |
| 1.8 OptiLight | Red | | 0-100% | 0% | Set your LED lighting colour yourself by setting the colours red, green and blue. |
| | Green | | 0-100% | 0% | |
| | Blue | | 0-100% | 100% | When Random is set, the LED mood lighting cycles through the whole colour spectrum at the set time. 0= off |
| | Random | | 0-60 min. | 10 min. | |
| 1.9 Contrast | | | 0-100% | 25% | Set the contrast of the LCD display |
| 1.10 Cup sensors | Cup sensor left | | yes-no | | yes; cup sensor active no; cup sensor not active |
| | Cup sensor middle | | yes-no | | |
| | Cup sensor right | | yes-no | | |

4.3 The service menu

| Service menu | | | | | |
|----------------------|---|---------------|---|--------|--|
| Main item | Sub-item | Item | Bereik | Set | Beschrijving |
| 2.1 Quick recipe pro | <Recipe name> 1 <Recipe name> 12 | Cup volume | 25-350 ml | 120ml | Here you can easily set the volume and strength of coffee, milk, sugar, cocoa yourself for each recipe (drink key). Only the ingredient for the recipe concerned is visible. |
| | | Coffee (1) | 0,0 - 5,00 s | | |
| | | Topping (3) | 0,0 - 5,00 s | | |
| | | Cocoa (4) | 0,0 - 5,00 s | | |
| 2.2 Button settings | Button 1 Button 12 | Recipe |  | | Change any recipe buttons here that standard factory settings. All settings that correspond to selected recipes are automatically loaded. See chapter 2.1 How to program a recipe? |
| | | Recipe active | Yes/no | Yes | Use this to place the product concerned out of service. |
| | | Price | | | |
| | | Price | 0,05-2,00 | 0,10 | For paid dispensing a <u>price</u> can be set here for each product button. |
| | | | | | |
| | | Kopvolume | 25-350 ml | 120ml | Set the desired cup volume here. When the Cup volume (menu parameter) is increased, instant products Topping and Chocolate will be automatically proportional increased. The coffee however will not automatically increased! |
| | | Multicup | 0-10 | 0 | Set the number of cups that should be dispensed when the key switch is in the jug setting. |
| | | Key switch | 0-1-2-3-4 | | Set the required operation of the key switch. See table 2 |
| | | Push & Hold | Yes-No | No | If set to yes; when this key is held the dispensing of the hot/cold* water starts and stops when it is released. Use this option only with DV 4 and KW3 in combination with a hot/cold* water recipe key. * Cold water is optional |
| | | Drip 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-infusie | ja-nee | ja | Pre-infusion for optimum espresso extraction. Pre-infusion is the advance 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. | | |

EN

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

Key switch

| Software menu parameter | | | | Key switch | |
|-------------------------|----------|-----------|--------------------------|--------------|----------|
| Key switch | Multicup | Free vend | Payment system G13 / MDB | ⏻ (off) | ⏻ (on) |
| 0 | 0 | Yes | n.a. | free cup | free cup |
| | | No | Yes | paid cup | free cup |
| | | No | No | free cup | free cup |
| | >1 | Yes | n.a. | free jug | free jug |
| | | Yes | Yes | paid jug | free jug |
| | | No | No | free jug | free jug |
| 1 | 0 | Yes | n.a. | free cup | free cup |
| | | No | Yes | paid cup | free cup |
| | | No | No | free cup | free cup |
| | >1 | Yes | n.a. | free cup | paid jug |
| | | Yes | Yes | paid cup | paid jug |
| | | No | No | free cup | free jug |
| 2 | 0 | Yes | n.a. | not possible | free cup |
| | | No | Yes | not possible | free cup |
| | | No | No | not possible | free cup |
| | >1 | Yes | n.a. | not possible | free jug |
| | | Yes | Yes | not possible | paid jug |
| | | No | No | not possible | free jug |
| 3 | 0 | Yes | n.a. | free cup | free cup |
| | | No | Yes | paid cup | free cup |
| | | No | No | free cup | free cup |
| | >1 | Yes | n.a. | free cup | free jug |
| | | Yes | Yes | paid cup | free jug |
| | | No | No | free cup | free jug |
| 4 | 0 | Yes | n.a. | free cup | free cup |
| | | No | Yes | paid cup | free cup |
| | | No | No | free cup | free cup |
| | ">1 (2)" | Yes | n.a. | free jug | free jug |
| | | Yes | Yes | paid jug | free jug |
| | | No | No | free jug | free jug |

Table 2

| Service menu continued ... | | | | | | |
|----------------------------|------------------|--------|--|-------------|---|---|
| Main item | Sub-item | Sub | Item | Range | Set | Description |
| 2.3 Recipe settings | <Recipe name> 1 | Unit 1 | DV 1 WT | 0,0-30,0 s | | WachtTijd DoseerVentiel 1 |
| | | | DV 1 | 0-100 ml | | Doseerhoeveelheid DoseerVentiel 1 (Brewer) |
| | | | Koffie WT | 0,0-30,0 s | 0,5 s | WachtTijd koffiemolen |
| | | | Koffie | 0,00-5,00 s | | Koffiedoseertijd koffiemolen |
| | | | Brewer WT1 | 0,0-30,0 s | 0,5 s | WachtTijd 1 brewer na koffiemalen. |
| | | | PI time | 0,0-15,0 s | 0,5 s. | Pre-infusion time (PI time). The brewer valve is open for the set PI time, the coffee powder is moistened at water supply pressure (approx. 2 bar). Note: if coffee is still coming out of the brewer, the PI time is too long. |
| | | | PI pause | 0,0-15,0 s | 2,0 s. | Pre-infusion pause (PI pause). The brewer valve is kept closed during the set PI pause; the coffee swells up. Note: the Pre-infusion function can simply be turned ON/OFF in menu 2.2 Button settings) / Pre-infusion). |
| | | | Brewer WT2 | 0,0-15,0 s | 3,0 s. | Brewer delay time 2 after making coffee. This affects the residual moisture in the coffee pellet. |
| | | | Pressure WT1 | 0,0-15,0 s | | Delay time between unit 2 and unit 1 Mainly used for extending the time between topping and coffee for Latte macchiato. |
| | Pressure time | | 0,0-15,0 s | | The pressure boiler is brought to low pressure. | |
| Pressure WT2 | 0,0-15,0 s | | Delay time 2 after the pressure boiler is reduced to low pressure again. | | | |
| | <Recipe name> 12 | | | | | |

| Service menu vervolg ... | | | | | |
|--------------------------|-------------|------------------------|---------------|--------|--|
| Hoofd item | Sub item | Item | Bereik | Set | Beschrijving |
| 2.4 Settings | Language | English | | | Display language selection. English is factory set. |
| | | Nederlands (Dutch) | | | |
| | | Deutsch (German) | | | |
| | | Français (French) | | | |
| | | Svenska (Swedish) | | | |
| | | Norsk (Norwegian) | | | |
| | | Suomi (Finnish) | | | |
| | | Dansk (Danisch) | | | Other languages on request (if available) |
| | Temperature | Temperature boiler | 70-97°C * | 90°C * | Boiler temperature |
| | | Temperature hysteresis | 0-10°C | 0°C | Temperature decrease after which the boiler must heat up again |
| | | Output block | 70-80°C | 70°C | Boiler temperature at which no more vending can take place. Display: [Out of service, boiler heating] |
| | | Output release | 80-90°C | 80°C | Boiler temperature at which vending can be released again |
| | | Temperatuur stand-by | uit / 60-80°C | uit | Boiler temperatuur tijdens stand-by |
| | Display | Show clock | Yes/no | No | Show clock in display |
| | | Show date | Yes/no | No | Show date in display |
| | | | | | |
| | | | | | |
| | 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 1 | 40-100% | 40% | Fan speed when idle |
| | | Fan speed 2 | 40-100% | 70% | Fan speed during dispensing |

| Service menu continued ... | | | | | | |
|---------------------------------------|-------------|-----------------------|---------------------------------------|---------------------|--|--|
| Main item | Sub-item | Item | Range | Set | Description | |
| 2.4 Settings (continued...) | Coin system | None | | | No payment system connected | |
| | | G13 | Coin channel 1 Coin channel 6 | 0-100.00 + Token | € 0.05 € 0.10 € 0.20 € 0.50 € 1.00 € 2.00 | Coin value per channel setting. Resp. € 0.05 to € 2.00. 0.00 = free TOKEN = coffee coin. |
| | | | Single vend | yes-no | yes | Yes: any excess money inserted is not kept for the following drink. No: is kept for the following drink. |
| | | | Max coin acceptance | € 0.05-100.00 | € 2.00 | Insertions higher than, for example, € 2.00 will be refused and returned via the coin groove 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 | Display credit (Cr.) on the display |
| | | | MDB | Single vend | yes-no | yes |
| | | Max coin acceptance | | € 0,05-100,00 | € 2,00 | Insertions higher than, for example, € 2,00 will be refused and returned via the coin groove 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 (Cr.) 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 drink selected can be made after sufficient money has been inserted. |
| | | Cash and Card | | yes/no | no | yes: when Y-cable is used for coin- 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 sec. | 20 s. | Set the time that the machine may be released |

| # Coin channel settings foreign currencies | | Danish Krone | Swedish Krone | Norwegian Krone | South African Rand | Jordanian Dinar |
|--|-------|--------------|---------------|-----------------|--------------------|-----------------|
| | | DK | SKR | NOK | ZAR | JOD |
| CH 1 | 0,50 | 0,50 | 1,00 | 0,50 | 0,50 | |
| CH 2 | 1,00 | 1,00 | 5,00 | 1,00 | 1,00 | |
| CH 3 | 2,00 | 5,00 | 10,00 | 2,00 | 25,00 | |
| CH 4 | 5,00 | 10,00 | 20,00 | 5,00 | 50,00 | |
| CH 5 | 10,00 | 1,00 | 10,00 | 5,00 | 1,00 | |
| CH 6 | 20,00 | 0,00 | 20,00 | 0,00 | 0,00 | |
| Max coin accep. | 10,00 | 10,00 | 10,00 | 2,00 | 50,00 | |

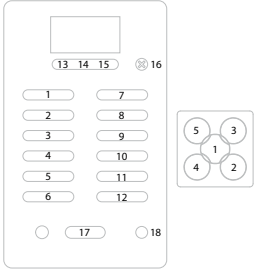
| Service menu continued ... | | | | | | |
|--------------------------------|--|----------------------|--------|------------|--|---|
| Main item | Sub-item | Item | Range | Set | Description | |
| 2.4 Settings (continued...) | I/O reset counters | | yes-no | no | Add menu item <u>Reset counters</u> to the operator menu. | |
| | I/O Quick recipe | | yes-no | no | Menu item <u>Snelrecept</u> aan het operatormenu toevoegen | |
| | Drip tray signal | | yes-no | yes | Deactivate the drip tray sensor warning in the software. | |
| | 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 then need to be connected to a water supply. In the display, DEMO is shown on the bottom line. Keys, LEDs and the Display operate normally. | |
| | Stop button | | yes-no | yes | If this function is standard set to yes. To deactivate the stop button, set 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 possible. | |
| | Free vend | | yes-no | yes | Set the machine for free or paid vending. | |
| | I/O Free vend | | yes-no | yes | Add/remove menu item 1.0 Free vend to the operator menu. | |
| | Cup sensors | Cup sensor left | | yes - no | yes | yes; cup sensor active no; cup sensor inactive |
| | | Cup sensor middle | | yes - no | yes | |
| | | Cup sensor right | | yes - no | yes | |
| | | I/O Cup sensors | | yes - no | yes | Add/remove menu item 1.10 Cup sensors to the operator menu. |
| | Optilight brewing process <i>New!</i> | blink during process | | yes - no | no | Blinking OptiLight during dispensing a drink |
| | | blink rate | | 0,1 - 10,0 | 0,3 | blinking rate setting |
| | | Optilight | | R G B | red | colour setting during blinking |
| | | | | | | |
| | | | | | | |
| | | | | | | |

| Service menu vervolg ... | | | | | |
|--------------------------|--------------------|-----------------------|----------|---|---|
| Hoofd item | Sub item | Item | Bereik | Set | Beschrijving |
| 2.5 Reset counters | Service counters | Rinse counter? | | | Reset rinse counter. |
| | | Clean counter? | | | Reset cleaning counter. |
| | Recipe counters | Recipe counter 1 - 12 | | | Reset recipe counters for each recipe. |
| | | Reset total counter | | | Reset total counters. |
| | Reset all counters | | | | Reset all counters at once. |
| 2.6 Service boiler | Service moment | Cups | 0-50.000 | 20.000 | After reaching the set service moment (cups), the message Service boiler appears in the display on switching on. See also Chapter 6 Service. |
| | | | | | |
| | Service counter | Cups | | 20.000 ↓ 0 ↓ -20.000 | The total number of vended cups is counted down here. It can be checked here 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. |
| | | | | | |
| 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

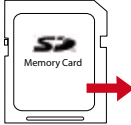
| Water Quality | Hardness | | | | | Service moment after x (cups) |
|---------------|----------|-------|-------|---------|-----------|-------------------------------|
| | °D | °F | °K | mmol/l | mgCaCo3/l | |
| Very hard | 18-30 | 32-55 | 11-18 | 3,2-5,3 | 321- 536 | 5000 |
| Hard | 12-18 | 22-32 | 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 |

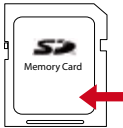
* factory setting

| Service menu continued ... | | | | | |
|----------------------------|--|-------------------------|----------------------|---|--|
| Main item | Sub-item | Sub | Range | Description | |
| 2.7 Hardware test | Inputs | Temp | Boiler temp °C | <p>Shows the status of the sensors/switches concerned</p>  | |
| | | Drip tray sensor | yes/no | | |
| | | Waste bin | yes/no | | |
| | | Door switch 1 (pin) | yes/no | | |
| | | key switch | yes/no | | |
| | | brewer switch 1 (right) | yes/no | | |
| | | brewer switch 2 (left) | yes/no | | |
| | | Door switch 2 (lock) | yes/no | | |
| | | Key panel | | | |
| | | Service panel | | | |
| | | Cup sensor left | yes-no | | |
| | | Cup sensor middle | yes-no | | |
| | | Cup sensor right | yes-no | | |
| | Jumper detection | yes-no | | | |
| | Outputs | | | | |
| | <p>Test by holding in recipe button 11.</p> <p># During test the display shows the Nominal current (mA).</p> <p>When the Nominal current of a output rises above the set current * mentioned output will be shut off.</p> | KW1 | 500mA | Inlet valve (Boiler) | |
| | | DV1 | | Dispensing valve 1 (Brewer) | |
| | | DV2 | | Dispensing valve 2 (Mixer 2) | |
| | | DV4 | | Dispensing valve 4 (Hot water) | |
| | | DV5 | | Measuring valve 5 (n.a.) | |
| | | DV6 | | NO valve | |
| | | IM1 # | 600mA | Grinder motor 1 | |
| | | IM3 # | | Ingredient motor 3 | |
| | | IM4 # | | Ingredient motor 4 | |
| | | BM # | 900mA | Brewer motor | |
| | | MM2 # | 1000mA | Mixer motor 2 | |
| | | Ventilator | 200mA | Fan | |
| LED's | | | LED's | | |
| KW2 | | 500mA | Pump (via SSR) | | |
| KW3 | | | Valve KW3 cold water | | |
| OptiLight | | | Red, Green, Blue | | |

EN

| Service menu continued ... | | | | | |
|-------------------------------------|--------------------------|---------------------|-----------------------------|--|--|
| Main item | Sub-item | Sub | Item | Description | |
| 2.7 Hardware test (continued...) | Calibration water system | Flow meter | 1.850 p/ml (1.700-2.000) | With this (if necessary) the flow meter can be calibrated. The calibration is not described because it is not expected that it will ever have to be carried out. | |
| | | KW1 | | | |
| | | Pump | | Check/set the pump pressure (10 bar). Connect the manometer to the boiler inlet. Caution! Release the pressure in the boiler first using 2.14 Installation / Shut down. 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. Stop measurement; press any key. | |
| | Operating hours | Brewer/Mixer(s) | Brewer | | <p>Day - Hour : Min.</p> <p> </p> <p>0 - 00 : 00</p> <p>Number x activated</p> <p> </p> <p>----- X</p> |
| | | | Mixer 2 | | |
| | | Ingredient motor(s) | IM 1 (grinder) | | |
| | | | IM 3 (topping) | | |
| | | | IM 4 (cocoa) | | |
| | | Pump | KW2 (pump) | | |
| | | Valves | DV1 (brewer) | | |
| | | | DV2 (mixer) | | |
| | | | DV4 (hot water) | | |
| | | | DV5 | | |
| | | | DV6 (NO valve) | | |
| | | | KW1 (inlet valve) | | |
| Element | Element 1 | | | | |
| | Element 2 | | | | |

| Service menu continued ... | | | |
|---|--|-------------------|---|
| Main item | Sub-item | Item | Description |
| 2.8 read log | | | Last 20 error messages including time and date will be saved |
| 2.9 Erase log | Are you sure? | | Log will be erased |
| 2.10 Load defaults | | | |
| # See Section 1.2 Model code | <u>Model #</u> | <u>Type code</u> | <p>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.</p> <p>Note:</p> <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 2-2-2-2-2 again and the language is set to English again. Change as necessary. |
| | OB1 OB3 | 2B1A 2BAA | |
| <p>2.11 SD menu</p> <p>Before loading or saving data, place an empty SD memory card in the card reader.</p> <p>This is located behind the stainless steel panel on the inside of the door.</p> | <p>Load data</p>  | Personal settings | <p>With this menu item Personal settings can be loaded into the machine using an SD memory card (uploaded).</p> <p>This file contains the (changed) personal settings for the menus; 2.4 Settings / 2.6 Service boiler / 2.13 Additional settings. The data file (2Bxxxx00.MDU) must be on the SD card.</p> |
| | | Language | <p>With this menu item, a non-standard language set can be loaded into the machine. The data file (xxxxxx00.TLF) must be on the SD card.</p> |
| | | Recipe | <p>With this menu item Personal recipes can be loaded into the machine using an SD memory card (uploaded).</p> <p>This file contains the (changed) personal recipes for the menus; 2.1 Quick recipe / 2.2 Button settings / 2.3 Recipe settings. The data file (2Bxxxx00.RCU) must be on the SD card.</p> |
| | | Counters | <p>With this menu item Recipe counters can be loaded into the machine using an SD memory card (uploaded).</p> <p>There must be a data file (2Bxxxx00.CNT) on the SD card. This file contains all recipe counters from the 1.3 Recipe counters</p> <p>Use this function only when, for example, a new control must be installed in the machine and the counters must be 'moved' from the old control 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 memory card (uploaded).</p> <p>There must be a data file (2Bxxxx00.TMR) on the SD card. This files contains all the operating hours from the menu 2.7 Hardware test / operating hours.</p> <p>Use this function only when, for example, a new control must be installed in the machine and the counters must be 'moved' from the old control to the new one. Do not misuse this function!</p> |

| Service menu continued ... | | | |
|---------------------------------|--|-------------------|---|
| Main item | Sub-item | Item | Description |
| 2.11 SD menu (continued....) | Save data  | Personal settings | With this menu item Personal settings can be saved on an SD memory card and/or copied to another machine. All changed settings made in the menus; 2.4 Settings / 2.6 Service boiler / 2.13 Additional settings are saved in a data file (2Bxxxx00.MDU) on the card. |
| | | Recipes | With this menu item Personal recipes can be saved on an SD memory card and/or copied to another machine. All changed settings made in the menus; 2.1 Quick recipe pro / 2.2 Button settings) / 2.3 Recipe settings are saved in a data file (2Bxxxx00.RCU) on the SD card. |
| | | Counters | With this menu item Recipe counters (personal recipes) can be saved on an SD memory card. All counter readings from the menu; 1.3 Recipe counters are saved in a data file (2Bxxxx00.CNT) on the SD card. Note ; after the counters have been saved you will be asked if the counters in the machine must be reset. Press Esc. (X) for NO, press Enter (V) for YES. |
| | | Log | With this menu item the Log (error messages overview) can be saved on an SD memory card. All error messages from the menu; 2.8 Read log are saved in a data file (2Bxxxx00.LOG) on the SD card. Note ; Depending on your settings, Windows can see this file as a TXT file. |
| | | Operating hours | With this menu item the Operating hours can be saved on an SD memory card. All operating hours from the menu; 2.7 Hardware test / Operating hours are saved in a data file (2Bxxxx00.TMR) on the SD card. Note ; after the operating hours have been saved you will be asked if the counters in the machine must be reset. Press Esc. (X) for NO, press Enter (V) for YES. |
| | Remove SD-card | yes > no | |

| Service menu continued ... | | | | | |
|--|----------------------|-------------------|---|--------|--|
| Main item | Sub-item | Item | Range | Set | Description |
| 2.12 Change PIN code | New PIN code | Repeat PIN code | <p>With this menu item the PIN code can be changed. Use only the keys 1 to 4. The complete service menu is secured behind 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 PIN code is 2-2-2-2-2 <p>PIN code forgotten? In the PIN code input display (operator menu item 1.7) a number is displayed on the right. Enter the associated PIN code (see the list below) to access the service menu.</p> | | |
| <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p>Pin code (8) * * * * *</p> </div> | | | | | |
| 2.13 Additional settings | Waste bin management | Number of makings | 0-1000 | 130 | After reaching the set number of brewer movements, the vending is blocked and on the display the message is shown; Out of order - Waste bin full |
| | | Hysteresis | 0-100 | 20 | After reaching the set number of brewer movements minus the hysteresis, on the display the message is shown; waste bin almost full |
| | | 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. Any display messages disappear. |
| | | Waste bin signal | ja-nee | ja | Deactivate waste bin sensor in software (bypass). |
| | Cyclcy counter | xxxxx | 0-100.000 | | This cycle counter counts the number of brews the brewer has made. Tip; this counter can be reset after major maintenance when, for example, the brewer is checked. |
| | Reset cyclcy 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. |

EN

Pin Code Table

| No. | 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. | 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. | 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 |
| | | | | | |

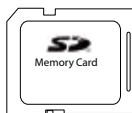
| Service menu continued ... | | | | | |
|----------------------------|---------------|--------------------|----------|-----|--|
| Main item | Sub-item | Item | Range | Set | Description |
| 2.14 Installation | Commissioning | | | | When a new machine is switched on, the commissioning menu starts automatically. Follow the instructions on the display. |
| | Shut down | | | | Start this shut down menu if the machine's boiler system 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 | rinse mandatory | 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 | |
| | | Rinse via front | yes - no | no | When rinsing via the front is set to YES, the rinse programme can be activated using the stop key on the front of the machine. Press and hold the Stop key for 10 seconds and then follow the instructions. |
| | Cleaning | Cleaning mandatory | 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. SOFTWARE

5.1 Memory card specs

Geheugen kaart spec's

Type: SD (Secure Digital card)
Size: 16 Mb or bigger



5.2 Machine setting management

The following changed settings can be saved on an SD memory card and/or copied to another machine:

- Personal settings
- Recipes

The following data maintained by the machine can be saved on an SD memory card and reloaded (e.g. when fitting a new circuit board):

- Counters
- Log
- Operating hours

See Page. 59 & 60 menu item 2.11 SD menu of this service book for further explanation.

Reading files on a computer

The following files can simply be opened on a computer.

Counter file *.CNT
Log file *.LOG
Operating hours file *.TMR

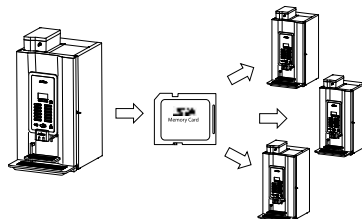
Place the SD card in your computer and open the required file with notepad or wordpad. See the example

Note: Depending on your settings, Windows can see the LOG file as a TXT file.

5.3 Software installation

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

- www.animo.eu / dealer login: Extranet
- by e-mail



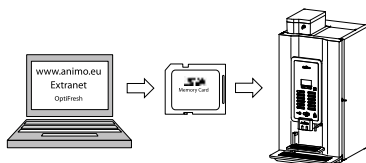
Generated on 2014-11-10,
14:10:38
Software version: V5.50.1729

```
Button 1 (koffie creme)
Free: 15
PayedLow: 0
PayedHigh: 8
PayedToken: 0
Test: 24
Total: 47
Pot: 6
PriceLow: 0
PriceHigh: 0
PriceTotal: 400
```

```
Button 12 (heet water)
Free: 20
PayedLow: 0
PayedHigh: 0
PayedToken: 0
Test: 1
Total: 21
Pot: 11
PriceLow: 0
PriceHigh: 0
PriceTotal: 0
```

```
Totals
Free: 69
PayedLow: 0
PayedHigh: 9
PayedToken: 0
Test: 46
Total: 124
Pot: 17
PriceTotal: 450
```

```
Other counters
Clean: 2
Service: 19940
Service Month: -91
Operating: 152
```



When loading new software the following changed settings (data) are lost:

- Changed recipes
- Changed personal settings
- A non-standard language file will be overwritten by the standard language file NL/GB/DU/FR

Counts, Log and operating hours will be preserved!

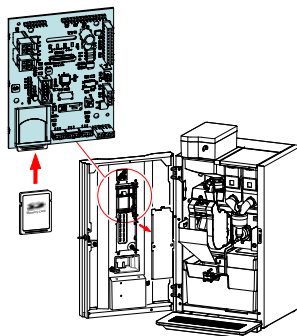
1. Download the OptiBean software from the Animo extranet site.
2. Unpack the ZIP file and copy all files to an SD card.
3. Remove the cover plate on the inside of the door.
4. Insert the SD card in the card holder.
Tip: Save any changed settings first on an SD card. This can be the same SD card as the one containing the new software. Go to service menu item 2.10 SD menu / Save data and save the required settings.
5. Switch the machine off (0).
6. Switch the machine on again (I).
7. Press the Enter key (key 10). The new software will now be installed automatically. The following procedure takes about 5 minutes.
8. Choose the appropriate model and confirm your selection with Enter.
9. The display now shows 'Make your choice'.
10. The new software has now been installed.
11. Now reload the Personal recipes and settings saved in step 4 into the machine. Go to service menu item 2.10 SD menu / Load data and reload the saved settings back into the machine.
12. Remove the SD card from the card holder.

After installation, check the display contrast in the **Operator menu / 1.9 Contrast**



Attention: during the software installation the display can show some contrast fluctuations.

This is a normal symptom because the contrast parameter is first active after the whole software is installed.



SELECT FILE/FOLDER
< file name > . DHX ✓

< file name > . DHX
ERASING ████████ ⌛

< file name > . DHX
FLASHING ████████ ⌛

< file name > . DHX
VERIFYING ████████ ⌛

START APPLICATION

PAR /
LOAD FILES? ✓

Reading
< file name > . TLF ⌛

Reading
< file name > . MDD ⌛

Reading
< file name > . RCD ⌛

Finished
No Errors

Model
2Bxxxx ⚡

Model 2Bxxxx ✓
Are you sure?

Model 2Bxxxx
moment please

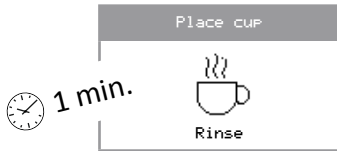
OptiBean
V 5 . xx . xxxx

OptiBean
ANILCD V1 . xx . xxxx

6. MAINTENANCE

6.1 Daily rinsing program

After 1 day the display shows RINSE.
This message will disappear again after the rinsing program is executed.

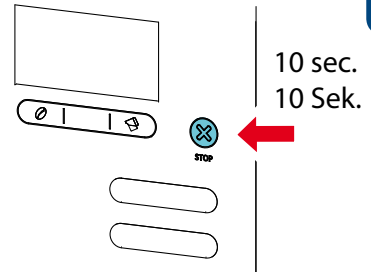


1. a) Activate the rinsing program [1a] and follow the instructions in the display.
b) The rinsing program can also be activated by pressing the STOP button for 10 sec. [1b].
2. Confirm with the V-key [2] to start the rinsing.
The brewer and mixer unit are rinsed with clean water.

1a

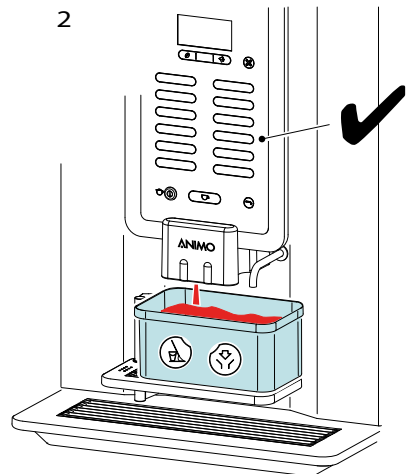


1b



EN

2

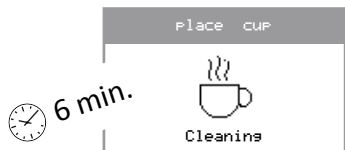


In the **Service menu / 2.16 Cleaning management / Rinsing mandatory** (yes / no), the user can even be obliged to carry out the rinsing program. If the rinsing program is not activated the machine blocks.

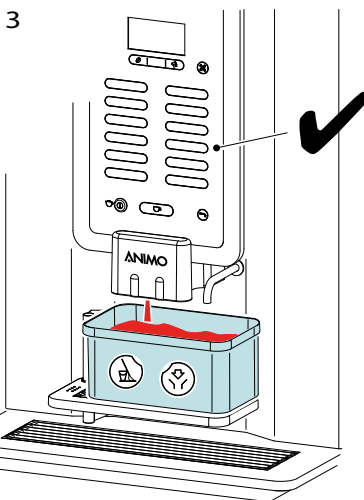
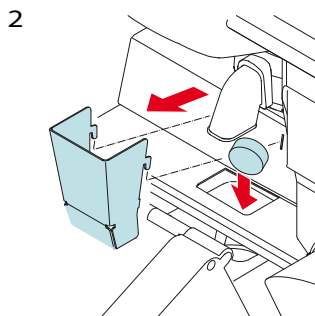
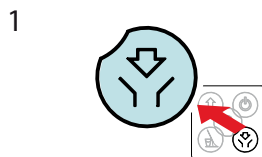


6.2 Weekly cleaning program

After 7 days appears the display shows CLEANING. This message will disappear again after the cleaning program is executed.



1. Activate the cleaning program [1] and follow the instructions in the display.
2. The cleaning program for the espresso brew unit is started. By adding the coffee cleaner tablet [2] the brew unit will be cleaned from coffee oils.
3. Confirm with the V-key [3] when the coffee cleaner tablet is added in the brewer chamber.
4. After the cleaning cycle the rinsing program start automatically and rinses the brewer (and mixer) with clean water.



In the **Service menu / 2.16 Cleaning management / Cleaning mandatory** (yes / no), the user can even be obliged to carry out the cleaning program. If the cleaning program is not activated the machine blocks.



6.3 Periodic maintenance

6.3.1 Service boiler

During installation of the machine the boilers service moment has been set. See service menu item **2.6 Service boiler / 2.6.1 Service moment**

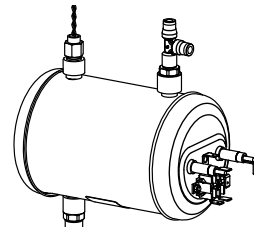
During use, the drinks are counted. When the boiler service moment is reached the text [*Service Boiler*] will appear in the display.



1/ Descale Boiler

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

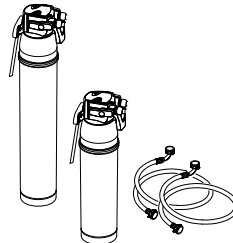
1



2/ Replace water filter

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

2



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

2.6 Service boiler

└─ 2.6.02 Reset Service counter

6.3.2 Service brewer

The service moment 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 brewer moment is reached the text [*Service brewer*] will appear in the display.

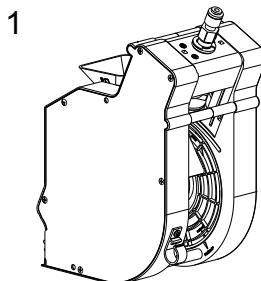
Achieving the service brewer moment indicates that the brewer needs servicing.



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.

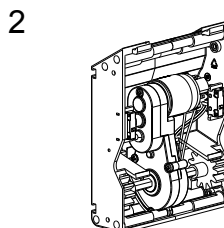


2/ Drive unit

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.



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

2.13 Other settings

└─ 2.13.04 Reset Service brewer

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 yet 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 you having to descale the machine too often.

EN

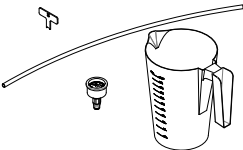
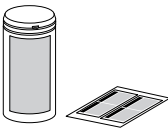
Brewer unit

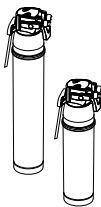

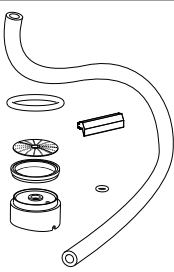
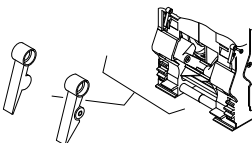

In some cases, use is made of an exchange brewer during maintenance. The exchanged brewer can then be reconditioned in the workshop and used again for later maintenance.


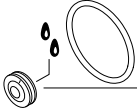
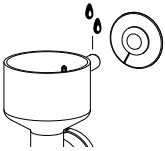
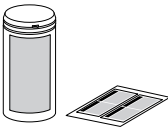
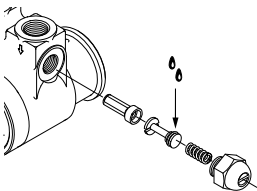
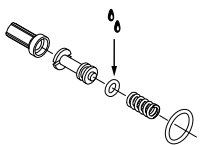
6.4.1 Servicing

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



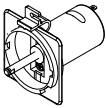
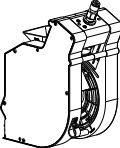
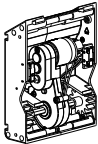
With an estimated output of > 25,000 cups/year, maintenance every 6 months.

| Activities | Time | Consumables | Art.no. | OptiBean | |
|---|---------|---|---------------------------------------|----------|---|
| | | | | 2 | 3 |
| 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 | |  | 1001365 | | |
| - Use the boiler service kit and Animo descaling agent. | |  | 00009 (can) / 49007 (sachet) | | |

| Activities | Time | Consumables | Art.no. | OptiBean | |
|--|---------|---|----------------------------|----------|----|
| | | | | 2 | 3 |
| 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 Attention; the kit contents has been changed. The upper filter has been left out, in stead a new wiper and brewer outlet tube is added. | |  | Standard brewer 1001395 | 1x | 1x |
| Reset the service brewer signal in the service menu. 2.13 Additional settings / 2.13.4 Reset service brewer | | | XL brewer 1002561 | 1x | 1x |
| Replace the left and right brewer handles on the back of the brewer if they are worn out. | |  | 1001967 | 1x | 1x |
| | | | 1001968 | 1x | 1x |
| Carry out cleaning procedure using cleaning tablets. | |  | 1001397 | | |

| Activities | Time | Consumables | Art.no. | OptiBean | |
|---|---------|---|---------------------------------------|----------|----|
| | | | | 2 | 3 |
| Mixer(s) | 10 min. | | | | |
| Check the motor shaft for dirt and wear. Replace mixer in case it runs heavy or raw. | | | | | |
| Replace mixer blade. | |  | 03254 | 1x | 1x |
| Replace the shaft seal and O-ring in the green mixer mounting ring. Lubricate the inside shaft seal with food grade grease. | |  | 1000742 | 1x | 1x |
| | | | 1000741 | 1x | 1x |
| Lubricate mixer house water inlet with food grade grease. | |  | | | |
| Clean the mixer components with Animo cleaning agent | |  | 00008 (bus) / 49009 (sachet) | | |
| Espresso pump (Yearly) | 5 min. | | | | |
| Yearly lubricate O-ring with food grade grease. | |  | | 1x | 1x |
| or install a new bypass valve. Fits on brass and stainless steel pump. | |  | 1004217 | 1x | 1x |

EN

| Activities | Time | Consumables | Art.no. | OptiBean | |
|---|---------|---|---------|----------|----|
| | | | | 2 | 3 |
| Checking (general) | | | | | |
| Check the complete machine operation. Check parts for damage/wear and/or leaks. | | | | | |
| Cleaning (general) | | | | | |
| Clean the espresso group brewer and mixer unit for weekly cleaning. Complete machine, inside and out. | | | | | |
| 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 | |  | 03252 | 1x | 1x |
| Brewer unit (2 Yearly) | 5 min. | | | | |
| Brewer unit | |  | 1001386 | 1x | 1x |
| Drive unit (2 Yearly) | 5 min. | | | | |
| Drive unit | |  | 1001387 | 1x | 1x |

WARNING

- During maintenance activities, remain with the machine.
- When de-scaling, always follow the instructions for the de-scaling agent used.
- It is advisable to wear safety glasses and protective gloves when de-scaling.
- After de-scaling, let the machine complete at least three cycles.
- Wash your hands thoroughly after de-scaling.
- 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 depressurise the boiler system.

EN

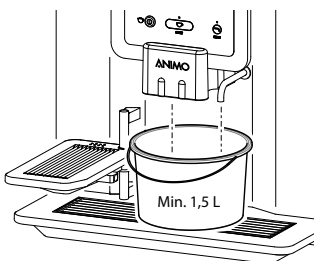
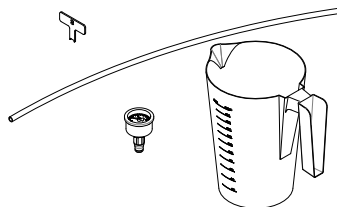
6.5 De-scaling instructions

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

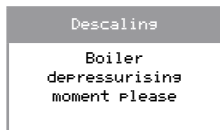
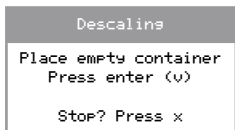
Time required, agents and tools:

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



Descaling

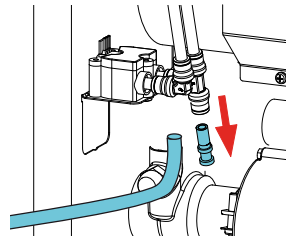
1. Start the descaling programme. **Service menu / 2.15 Descale** and follow the instructions on the display.
2. Close the door and place an empty bucket under both outlets.



3. Prepare 2 litre de-scaler solution. Read the warnings and instructions for the Animo de-scaling agent first.

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

Descalins
Place suction tube
in descaler solution
Press enter (<v>)

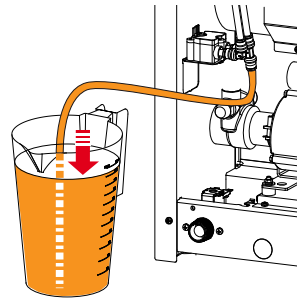


5. The first acid solution (approx. 1 litre) is pumped into the boiler and heated. A soaking period of 300 sec. follows*.

Descalins
Pumping solution
through system
Moment please

Descalins
boiler temperature
is increased (<...>°C)

Descalins
Moment please
Soaking: 300 sec.

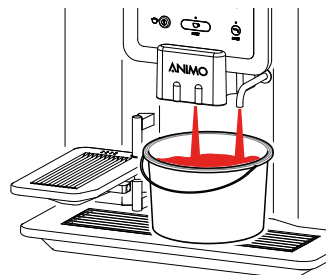
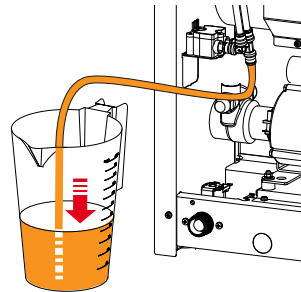


6. Then for 12 seconds the second acid solution (approx. 1 litre) is pumped through each of the dispensing valves. The fresh acid solution is now heated in the boiler again and a soaking period of 600 seconds follows*.

Descalins
Pumping solution
through system
Moment please

Descalins
boiler temperature
is increased (<...>°C)

Descalins
Moment please
Soaking: 600 sec.



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

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

| Descaling |
|--|
| Remove hose Place stop Place empty container |
| Press enter (v) |

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

| Descaling |
|---------------------------------|
| Flushing Moment please 6x |

| Descaling |
|--|
| boiler temperature is increased (...°C) |

| Descaling |
|--------------------------|
| Place empty container |
| Press enter (v) |

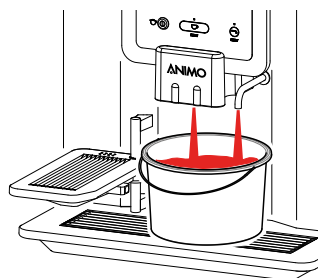
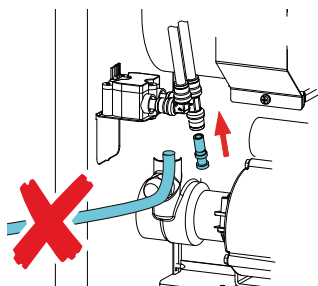
9. Reset after descaling the service boiler signal in the service menu:

2.6 Service boiler

2.6.02 Reset Service counter

10. The machine is now ready for use again.

i Always check if no de-scaler solution stayed behind in the heating system. Draw some hot water and mix some coffee milk through it. If the milk curdle, additional flushing of the heating system is required.

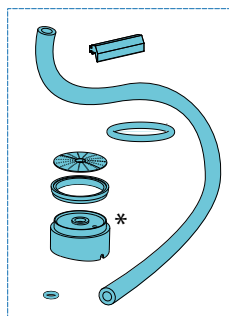


EN

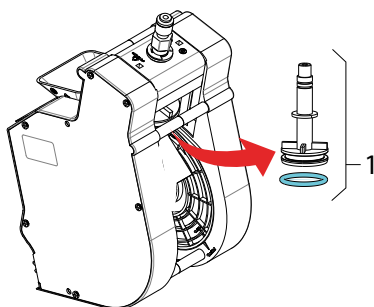
6.6 Maintenance espresso group

6.6.1 Brewer replacement kit 25K

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

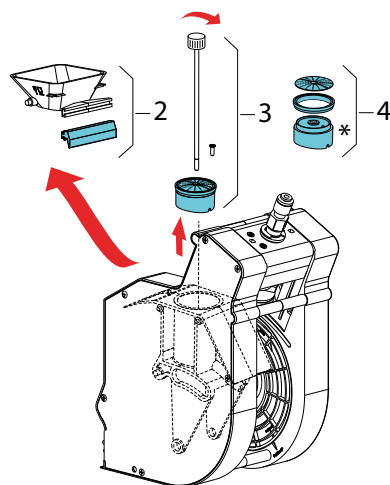


| Brewer replacement kit 25K | Brewer | |
|----------------------------|----------|---------|
| | Standard | XL |
| Art. No. | 1001395 | 1002561 |
| O-ring big | 1x | 1x |
| Wiper | 1x | 1x |
| Filter 150 µm | 1x | 1x |
| Teflon ring | 1x | 1x |
| Lower piston * | 1x | - |
| O-ring small | 1x | 1x |
| Dispensing hose 370mm | 1x | 1x |



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

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



i *only the replacement kit for the standard brewer has a new lower piston!

OptiBean /OptiBean XL

5. To place a new O-ring [8] first unscrew bold [5].
6. Pull out 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 reversed order.
9. Place a new brewer outlet hose [9].



Always place the outlet hose according the drawing below

10. After 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?

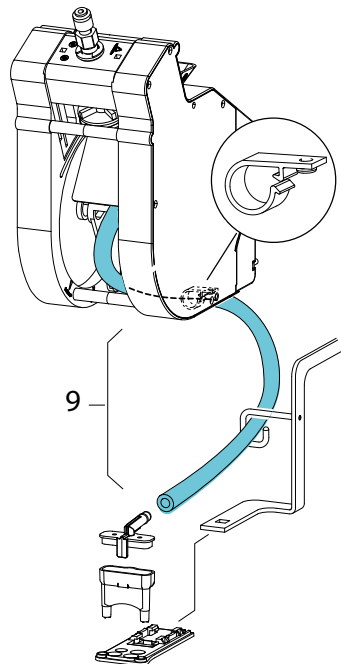
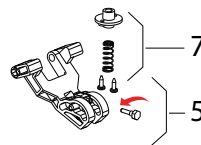
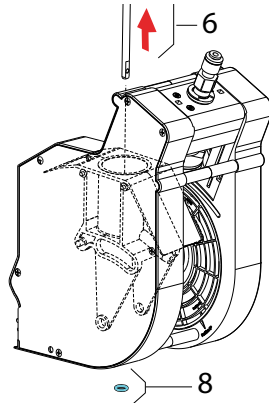
After a new brewer was installed reset the cycle counter in the service menu:

2.13 Other settings

2.13.02 Reset Cycle counter)

6.6.2 Drive unit

- Clean out potential coffee dust from the drive unit.
- Check the switch- and gear function

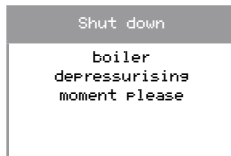


6.7 Check / set the pump pressure

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 following the instructions on the display.
2. For just releasing the pressure in the boiler it is not necessary to disconnect the supply hose. Press enter (v)



3. Stop the process, the boiler is now depressurised.
4. Remove the rear wall. 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

2.7 Hardware test

2.7.02 Calibration water system

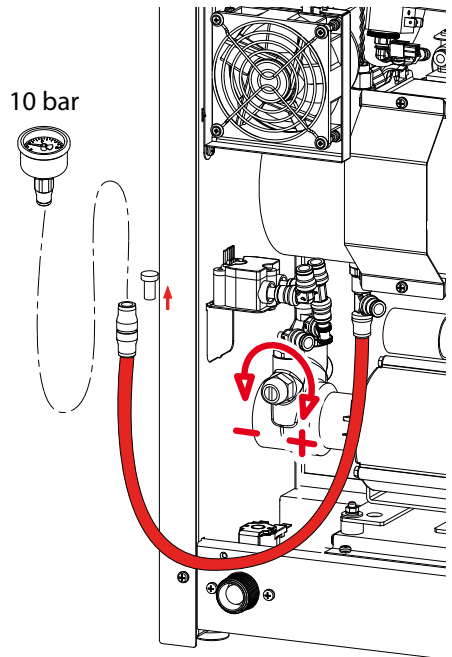
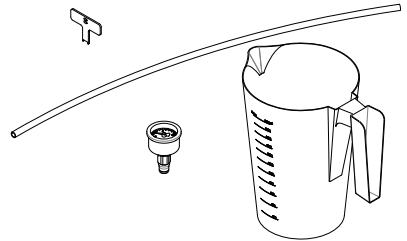
Pump **TEST**

7. Start the pump by pressing the **Test button** (recipe key 11) on the front panel.
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 any button

Required equipment and tools:

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

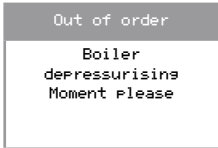


7. TRANSPORT / SHUT DOWN

WARNING

- Pressurised hot water! Do not remove components like valves, couplings, plugs and hoses before depressurise 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 following the instructions on the display.
2. Close the water supply tap and remove the water supply hose.



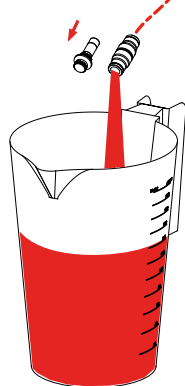
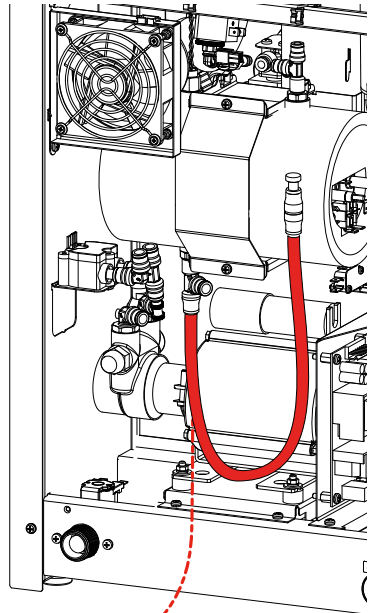
3. There is now no pressure in the boiler. The shut down menu can be cancelled if necessary. Follow the menu to empty the complete water system.
4. Remove the rear wall, remove the drain hose from the rear plate and remove the drainage plug. Let the boiler drain into an empty tray (approx. 1.5 litres).



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

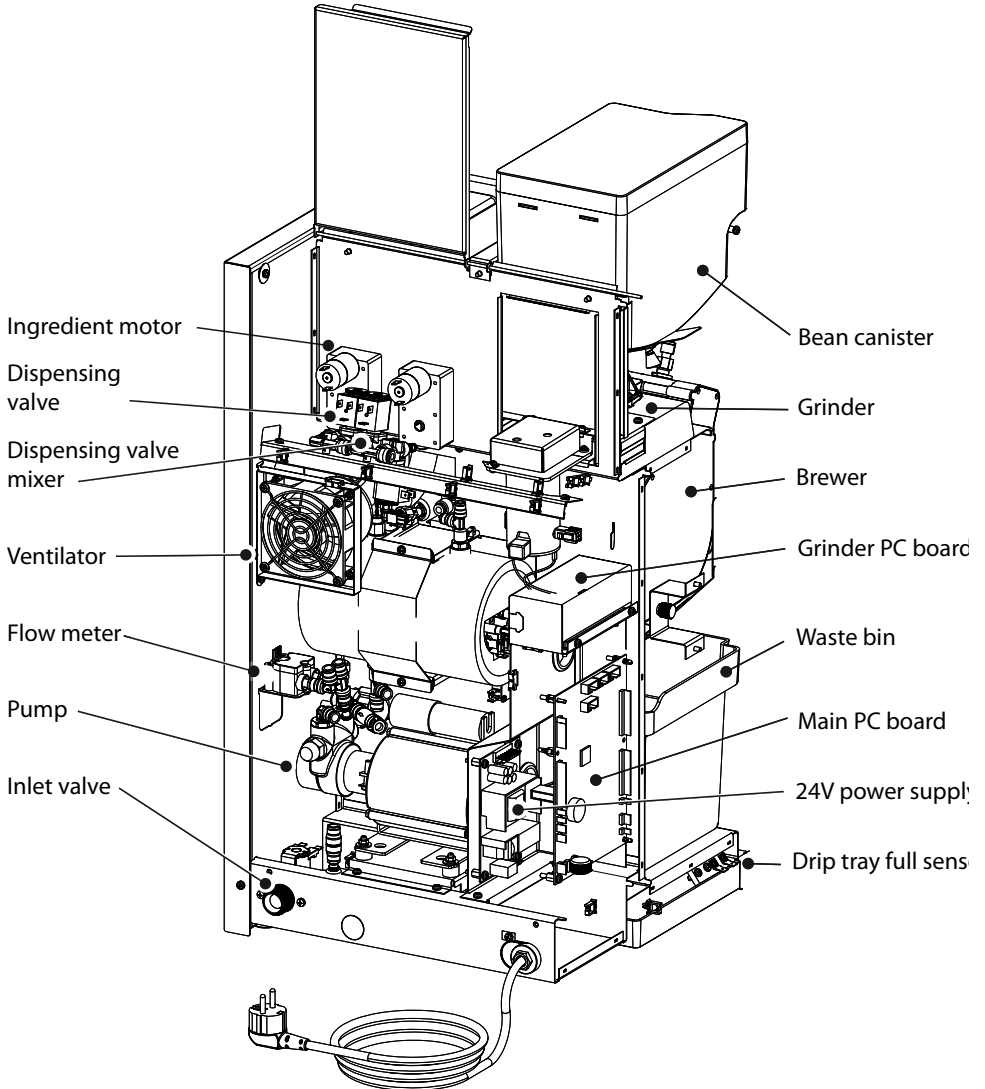
Required equipment and tools:

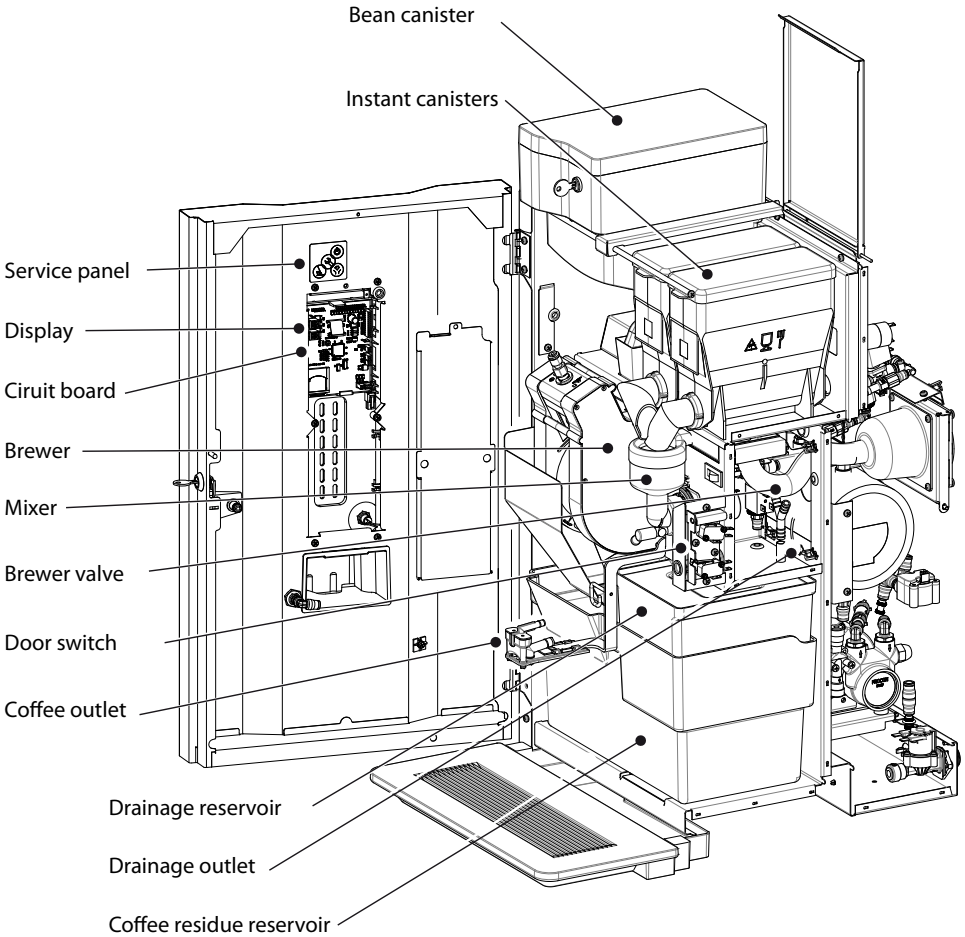
- Crosshead screwdriver
- Tray of approx. 1.5 L



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8. COMPONENT ACCESSIBILITY





9. ELECTRONICS OVERVIEW



WARNING

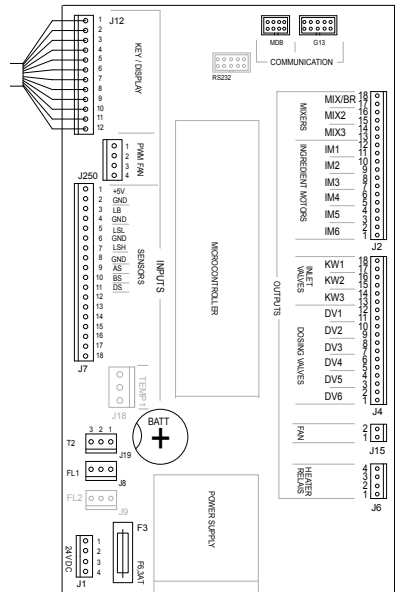
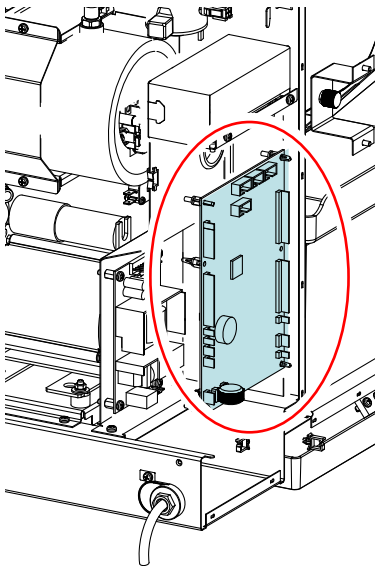
During repair and/or maintenance activities, avoid electrostatic discharges (ESD) to the control.

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

9.1 Main control

This control is the machine's main control. The control can be accessed by removing the left side panel. On the control are the following major components;

- Fuse 6.3A S (art.no. 03391); to protect the control supply.
- Battery 3V 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 J12 | |
|--|--|
| Connecting cable between the main circuit board and the door circuit board | |

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

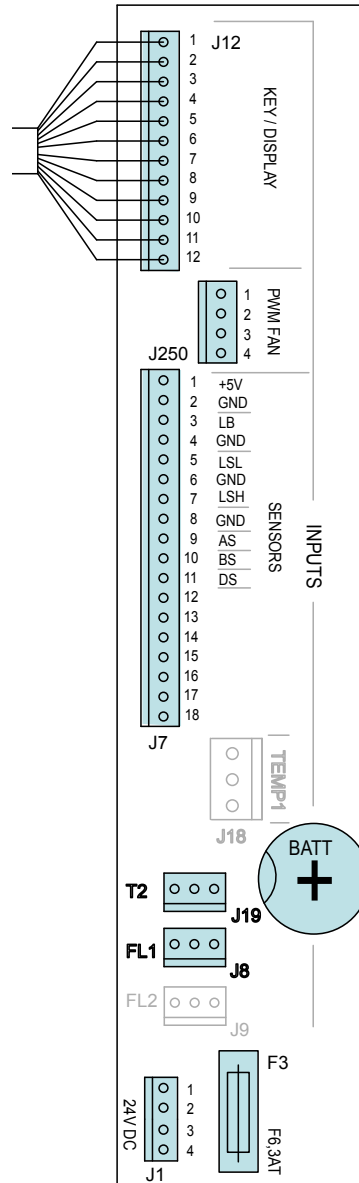
| Connector J7 (Inputs) | | | |
|-----------------------|---------------|--------|---|
| Pin | Sensor | Colour | Notes |
| 1-2 | - | - | |
| 3 | LB Drip tray | Yellow | |
| 4 | GND Drip tray | Black | |
| 5-8 | - | - | |
| 9 | AS waste bin | Pink | Waste bin in position; contact closed |
| 10 | - | - | |
| 11 | DS Door 1 | Orange | Door closed; contact closed |
| 12-13 | - | - | |
| 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 <u>lock</u> locked; contact closed |
| 17-18 | - | - | |

| 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 | Pluse | white | |

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

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



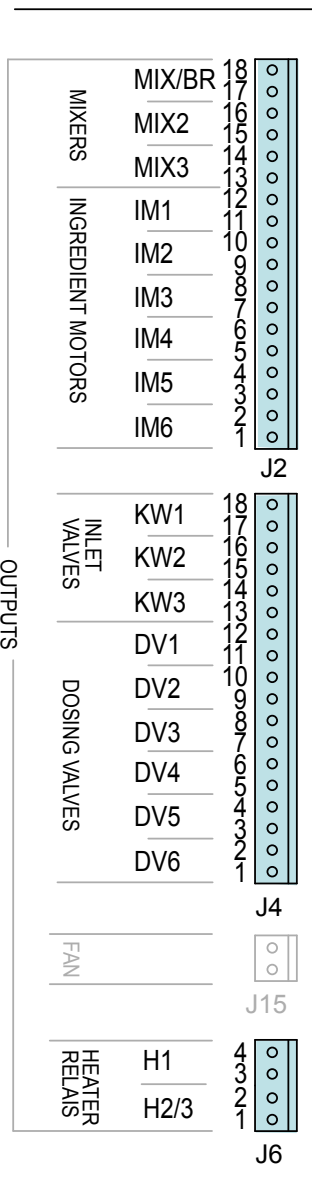
| Connector J1 (Supply) | | | |
|-----------------------|--------------|--------|-------|
| Pin | | Colour | Notes |
| 1 | Ground (GND) | black | |
| 2 | Ground (GND) | black | |
| 3 | +24 Vdc | red | |
| 4 | +24 Vdc | red | |

9.1.2 Main circuit board outputs

| Connector J2 | | | |
|--------------|--------------------|--------|---|
| Pin | Motor | Colour | Notes |
| 17-18 | Brewer | Black | Pay attention to the right direction! Common +24 Vdc (red wire) to red point on Brewer, Mixer and Ingredient motor. |
| 15-16 | Mixer 2 | 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 | KW 1 (inlet valve) | Violet | Red wire is common +24 Vdc connection |
| 15-16 | KW 2 (pump via solid state) | Rose | |
| 13-14 | KW 3 (optional) | Blue | |
| 11-12 | DV 1 (brewer valve) | Brown | |
| 9-10 | DV 2 (mixer 2 valve) | White | |
| 7-8 | - | - | |
| 5-6 | DV 4 (hot water drain) | Green | |
| 3-4 | DV 5 | Grey | |
| 1-2 | DV 6 (NO valve) | Orange | |

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

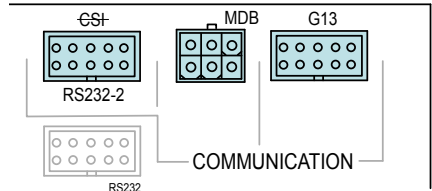


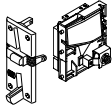
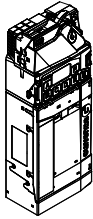


9.1.3 Main circuit board communication

The machine has standardized vending machine connections for connecting coin mechanism, coin changer and 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 Kabel 1 meter art. no. 03392 - Extern vrijgave contact; kabel 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 (SD card needed)  - MDB cable 1 meter art. no. 03479 - MDB cable 1 meter art. no. 1004564 (2x male connector) - MDB Y-kabel art.no. 1002008 |
| RS232-2 | Serial interface DEX UCS new from sept 2015 | <ul style="list-style-type: none"> - Telemetry EVA DTS / DEX UCS (SD card needed)  |
| RS232 | | not used |

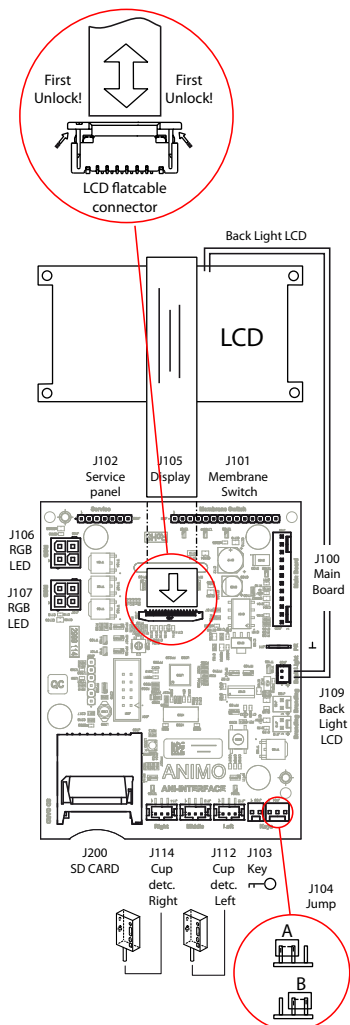
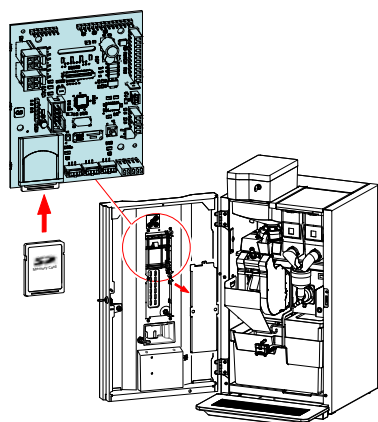


9.2 Interface / Display

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

9.2.1 Connections

| Interface & Display | | |
|---------------------|------------------------|---|
| Conn | | Notes |
| J100 | Main control | |
| J101 | Front membrane panel | |
| J102 | Service membrane panel | |
| J103 | Key switch | |
| J104 | Jumper position A-B | A = cup sensor; no B = cup sensor; yes |
| J105 | Display connection | See dismantling instructions |
| J106 | RGB LED | |
| J107 | RGB LED | |
| J108 | - | not used |
| J109 | Backlight display | |
| J110 | - | not used |
| J112 | cup sensor left | coffee spout position |
| J113 | cup sensor middle | |
| J114 | cup sensor right | hot water spout position |
| J200 | SD card holder | |



9.3 Power supply

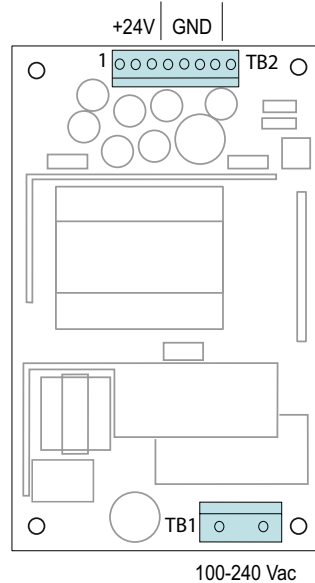
The 24 Vdc supply consists of a 24 Vdc – 65 W switched power supply and can be accessed by removing the rear wall.

- On an overload, the power supply switches itself off automatically. Reset the power supply by turning the main switch off and on again.

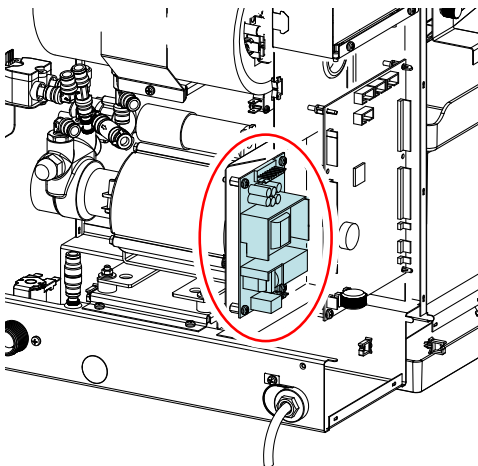
9.3.1 Connections

| Connector TB2 | | 24Vdc | |
|---------------|----------|---------|----------|
| Pin | | Col-our | Comments |
| 1-3 | 24 Vdc + | red | |
| 4-7 | 24 Vdc - | black | |
| 8 | - | - | |

| Connector TB1 | | 100-240Vac | |
|---------------|-----------------|------------|----------|
| Pin | | Col-our | Comments |
| 1 | 230 Vac Neutral | blue | |
| 3 | 230 Vac Phase | yellow | |



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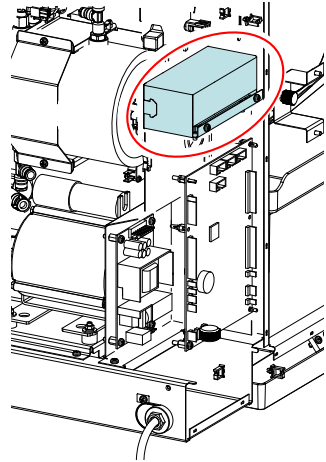
9.4 Grinder print 230Vac / 230Vdc

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.



9.4.1 Connections

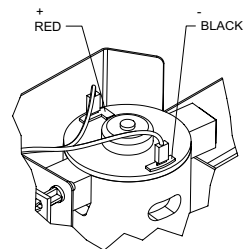
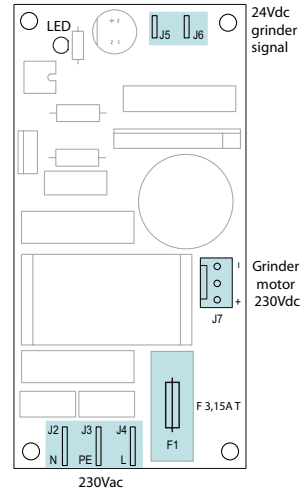
| 24 Vdc ingredient 1 signal | | | |
|----------------------------|---------|--------|------------------------|
| Pin | | Colour | Notes |
| J5 | 24Vdc + | red | polarity not important |
| J6 | 24Vdc - | brown | |

| 230Vdc | | | |
|--------|----------|--------|------------------------|
| Pin | | Colour | Notes |
| 1 | 230Vdc + | red | polarity is important! |
| 3 | 230Vdc - | black | |

| 230Vac | | | |
|--------|---------------|--------|-------|
| Pin | | Colour | Notes |
| J2 | 230 Vac Zero | blue | |
| J3 | PE (ground) | y/gr/ | |
| 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 for (cleaning) activities on 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 right location. To do this, remove the rear wall of the machine and check 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.

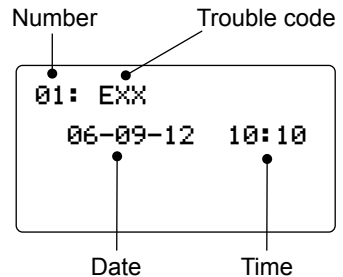
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10.1 Read log

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

To read these error messages, activate the menu item Read log (menu 2.8) in the service menu. The first error displayed is the most recent error message.












- In the 1st line the same error codes are displayed as used in the fault analysis table (see Section 10.4).
- In the 2nd line are the date and time at which the error code occurred.













10.2 Erase log




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

10.3 Display messages during use


| Display | Possible cause | Action |
|--|---|--|
| Make your choice  Rinsing | Rinse program 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> |
| Make your choice  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> |
| Make your choice  Service boiler | Boiler needs maintenance. | See chapter 6.3 Periodic maintenance / 6.3.1 Service boiler. |
| Make your choice  Service brewer | Brewer needs maintenance. | See chapter 6.3 Periodic maintenance / 6.3.2 Service brewer and 5.4.4 Servicing |
| Out of order  Boiler filling | When used for the first time: 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. |
| Out of order  Boiler heating | <p>The boiler temperature is (temporarily) too low because too much water has been used.</p> <p>If this text remains in view for 6 minutes, an E21 boiler time out follows.</p> | <p>Once the temperature is restored, the message automatically disappears and the drink selection buttons are reactivated.</p> <p>See E21 boiler timeout.</p> |
| Out of order  Drip tray full | Drip tray full. | Once the drip tray is emptied, the message automatically disappears and the drink selection buttons are reactivated. |
| Out of order  Waste bin full | The maximum number of coffee cups that the waste bin can hold has been reached. | Empty waste bin. The cup counter is automatically reset when the waste bin is replaced. |
| Out of order  Waste bin missing | Waste bin is not detected. | Check the waste bin. |

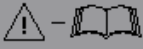
| Display | Possible cause | Action | |
|--|---|---|---|
| Out of order  Door open | For safety reasons, the machine automatically switches off if the door is opened. | The machine can be operated with the door open by using the door pin. | |
| Out of order  Stand-by | The machine is on standby. | This function can be set manually or automatically. | |
|  Close door | Door lock not closed properly. Hot water dispensing not possible. | Close door lock. | |
| Out of order  Rinsing | Rinse program 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 |
| Out of order  Cleaning | 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 |
| Coffee Place cup  | no cup positioned under the spout. | position a cup under the spout. | |
| Coffee place cup under correct outlet  | no cup positioned under the correct the spout. | position a cup under the correct spout. | |
| your drink has canceled  | the cup was taken away to quickly | keep the cup in position during the drink preparation. | |

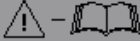
EN

| Display | Possible cause | Action |
|---|--|---|
| Make your choice  cup sensor left error | the cup detection sensor as shown in the display is faulty 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 |
| Make your choice  cup sensor middle error | | |
| Make your choice  cup sensor right error | | |

10.4 Troubleshooting

| Display | Possible cause | Action |
|--|---|--|
| Out of service  E3 Fill error | Boiler is filling 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 brewing proces. Detected by brewer switch 1 (right). | Check whether the brewer is properly positioned in the motor unit. Check brewer switch 1 & brewer lever right for correct operation in the service menu 2.7 Hardware test |
| E6 Boiler temperature | Temperatuur sensor measures a temperature over 105°C | Check the water supply for air. |
| | | Check the temperature sensor operation in the service menu 2.7 Hardware test |
| | | Check whether the boil-dry protection was activated. Reset as necessary. |
| E7 Brewer motor error | Brewer motor has stalled. Brewer motor output overloaded (current too high). The control has disabled the output. | Clean the brewer with the brush. Switch the machine off and on again. |
| | | Check the ground coffee volume (grams). Switch the machine off and on again. |
| E8 Mixer 2 error | Mixer 2 motor stalled. Mixer 2 motor output(s) 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 output(s) 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 motor(s) stalled. Ingredient motor output(s) overloaded (current too high). The control has disabled the output. | Check the operation of the drive motors in the service menu 2.7 Hardware test . Empty the canister(s) 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. |

| Display | Possible cause | Action |
|---|---|--|
| <p>Out of service</p>  <p>E14 Output group error</p> | <p>Ingredient motor output group overloaded (current too high). The control has disabled the output.</p> <p>Valve output group overloaded (current too high). The control has disabled the outputs.</p> | <p>Carry out the checks as specified for E11. Switch the machine off and on again.</p> <p>Carry out the checks as specified for E10. Switch the machine off and on again.</p> |
| 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) defective. Replace control. |
| E19 output FET error | Ingredient motor / valve / fan output remains activated | Ingredient motor / valve / fan output (FET) defective. Replace control. |
| E20 Software error | Software error | <p>Reset the machine.</p> <p>Load the defaults.</p> <p>Install new software.</p> |
| E21 boiler timeout | Heating element active for 6 minutes. If the boiler has still not come up to temperature, this error results. | <p>Check the water supply for air.</p> <p>Check the boil-dry protection on the boiler.</p> <p>Check the log menu. If E6 boiler temperature, the boiler has boiled dry. Check the NTC sensor and wiring/ connection and check SSR.</p> <p>Check the heating element.</p> |
| E22 recipe timeout | Maximum preparation time exceeded (120 sec). The time for preparing a recipe has been exceeded. | <p>Switch the machine off and on again. Run the rinse programme.</p> <p>Switch the machine off and on again. Run the cleaning programme.</p> <p>Switch the machine off and on again. Check the pump pressure (10 bar).</p> <p>Switch the machine off and on again. Check that the coffee grind is not too fine.</p> <p>Replace the brewer filters.</p> |
| 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. |

| Display | Possible cause | Action |
|---|--|---|
| Out of service  E24 brewer error | Brewer schakelaars komen niet in de juiste positie tijdens het zet-proces. Gedetecteerd door brewer schakelaar 2 (links) | Controleer of brewer goed in motor unit is geplaatst. Controleer brewer schakelaar 2 & brewer hendel links op juiste werking in het servicemenu 2.7 Hardware test |
| E25 flow meter error | Inlet valve is electrically open but the flow meter does not register a water flow. The water pressure is low or the water tank (stand alone set) is empty. | Check the water pressure, fully open the water supply tap, check the connecting hose for kinks. Check the operation of the inlet valve and flow meter. Switch the machine off and on again. Check after which recipe the error occurs and check if dispensing valve functions which belongs to the recipe. DV1 brewer, DV2 mixer, DV4 hot water recipe. Replace if necessary. Switch the machine off and on again. |
| E26 Low temperature | Temperatuur 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 | Temperatuur sensor measure a temperature higher than 125°C or has a short circuit | Boiler over heated, first let the boiler cool down. Check if dry-boil protection was triggered. Check the NTC sensor and wiring / connection. |
| E28 NTC not detected | Temperatuur sensor is not detected. | Check the NTC sensor and wiring / connection. |

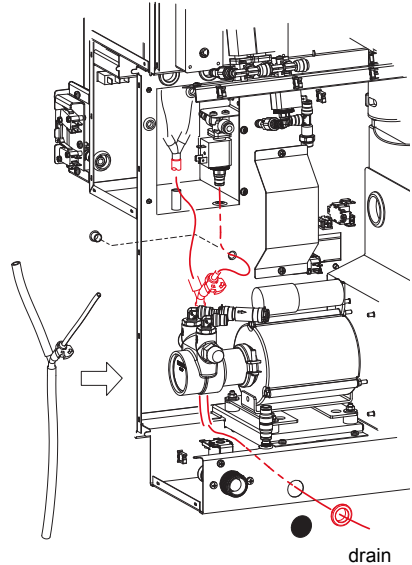
11. SPECIAL OPTIONS

1.1 Installation drain set

Required equipment and tools:

- Crosshead screwdriver
- Drain hose kit [1001347]

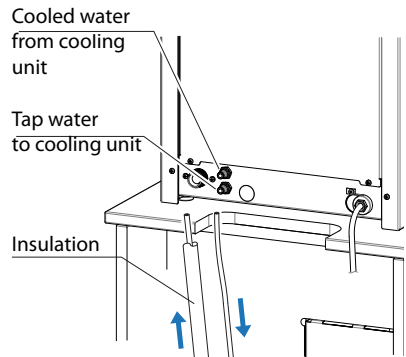
1. Remove the plastic plug under the brewer valve and next to the inlet valve.
2. Remove the drain hoses from the Y-piece and brewer valve.
3. Connect the short silicone hose to the Y-piece.
4. Connect the 6 mm Teflon hose to the flush side of the brewer valve.
5. Position the plastic sleeve in the hole next to the inlet valve
6. Feed the long silicone hose behind the boiler and pump to the sleeve.
7. Connect the drain hose to a drain or jerry can.
8. Remove the drainage reservoir from the machine.
9. Check whether the installed drain set drains the residual water properly to the drain by making a number of test drinks.



11.2 Installation OptiBean Hot&Cold

Required equipment:

- OptiBean H&C
 - Base cabinet with cooling unit [1001569].
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 which come from the cooling unit to the push fit connectors at the back of the Optibeans.
 4. Program the cold water recipe onto one of the empty buttons.
 5. Flush and venting the cold water system by dispensing a number of litres of water.



11.3 Installation OptiBean with waste to litter bin

Required equipment:

- OptiBean
- Base cabinet with access to litter bin [1001559]
- Top board with access to litter bin, [65031] small or [65032] large.

1. Build up the cabinet according to the instructions supplied.
2. Install the drain set which is supplied with the cabinet, see chapter 10.1
3. Remove the stainless steel hatch in the bottom of the OptiBean, and centre the machine over the transit case.
4. Replace the standard coffee waste bin for the special waste bin with stainless steel funnel and place it into the OptiBean.
5. Connect the OptiBean to the water (incl. water filter) and electricity.
6. Connect the drain water into the jerrycan supplied or to a drainpipe (when available).

7. Change the cup amount counter: **Service menu / 2.13 Other settings / Waste bin management / cup amount** between 300 to 500 cups.

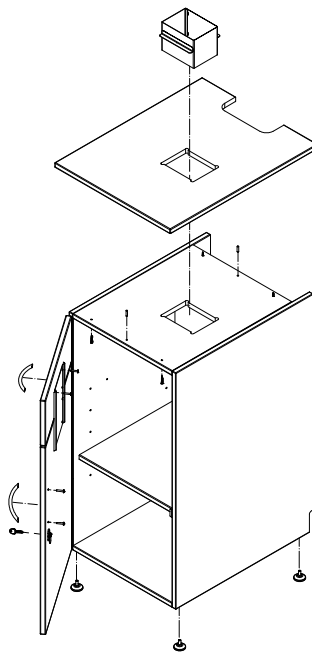
2.13 Other settings

├── 2.13.0 Waste bin management

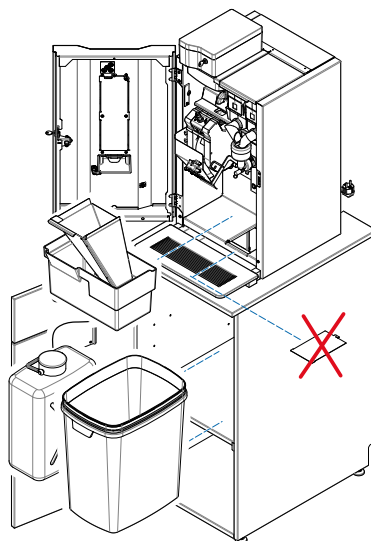
├── 2.13.00 Cup amount

We don't recommend to switch off the waste bin signal. By taking out the waste bin & funnel regularly when cleaning it the counter will be reset automatically.

8. Place the big litter bin directly under de transit case.



EN



12. PAYMENT SYSTEMS

12.1 Coin mechanism (optional)

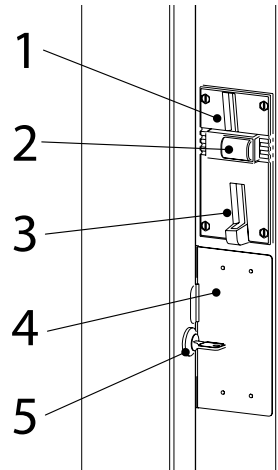
The OptiBean is available with an optional coin mechanism suitable for euros (€ 0.05 to 2.00). Other currencies are available on request.

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 wall is replaced with a wide side wall into which the coin mechanism and money drawer is built.

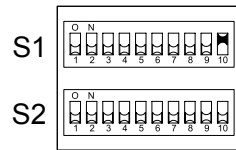
1. Coin slot
2. Return button
3. Return groove
4. Money drawer
5. Door lock (locks the money drawer at the same time)



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.

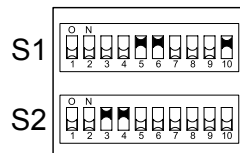
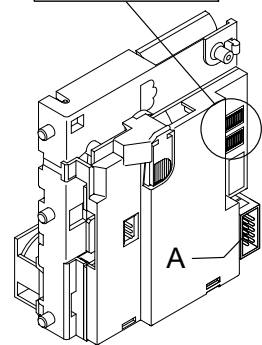


12.1.2 Blocking coins

If required, certain euro coins can be blocked using DIL switch block 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 existing token

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

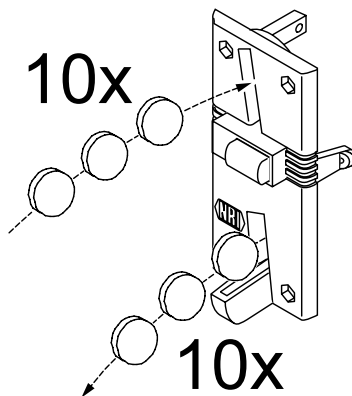
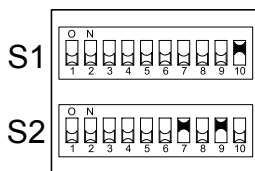
Set the service menu as described in the following section from step 4.

Art. No. token 03344



12.1.4 Programming a new token

- Required; 10 coffee coins
 - Note; remember the DIL switch positions for any blocked coins. Leave S1.10 set to ON
1. Set the following DIL switches on 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 tokens (not the same one 10 times). After inserting 10 coins, the blocking coil (internal) activates once.
 3. Complete the programming by setting DIL switch S2-9 downwards to OFF. If the storage was successful, the blocking coil activates once again. The set 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 & tokens

Carry out Section 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)

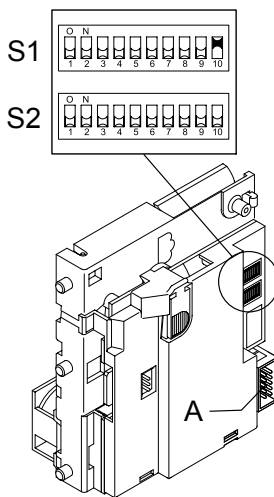
Are foreign currencies used, your coin system is adapted. In the software the coin channels need sometimes special attention! If a new software is loaded the coin channel settings are euro's. See **Service menu / coin systems / G13 / Coin channel 1-6**.

12.1.6 Accepting Tokens only (no Euro's)

Carry out 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 | | | | | |

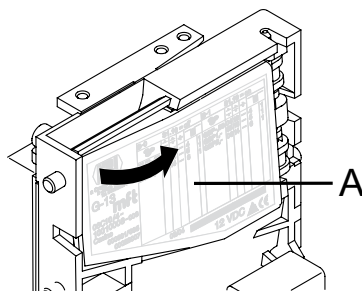


12.1.7 Coin channel cleaning

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.

i ATTENTION

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



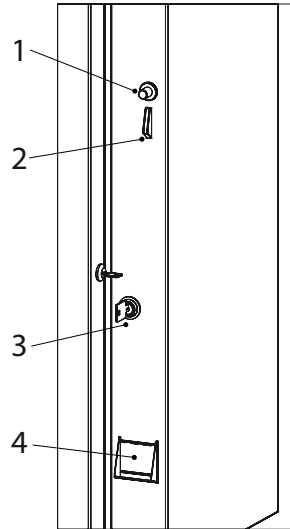
12.2 Coin changer (optional)

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 / 2x 0.10 / 0.20 / 0.50 / 1.00).

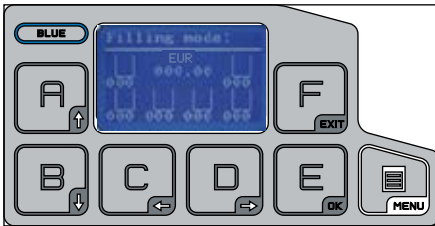
- | | |
|------------------|---------------------------|
| 1. Return button | 6. Coin insert funnel |
| 2. Coin slot | 7. Display |
| 3. Door lock | 8. Key panel |
| 4. Change | 9. Cassette removal Lever |
| 5. Return lever | 10. Tube cassette |



12.2.1 Tube filling

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

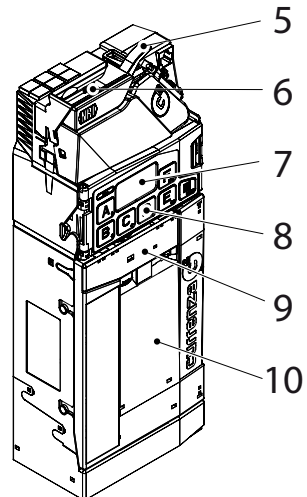
1. Activate filling mode:
Main menu > F = Fillins mode



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

12.2.2 Tube emptying

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



12.2.3 Programme a new token

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

For programming a new token ([B] see 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 changer's coin path, flight deck and sorter cover must be cleaned from time to time.



ATTENTION

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

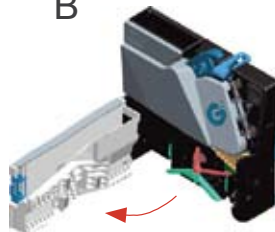
1. Turn power OFF.
2. Unlatch sorter cover (blue latch on the right of the display) and swing it open [A & B].
3. Open flight deck at the insert funnel and hold it open [C].
4. Remove any debris. Dust off any accumulation with a small brush or compressed air.
5. Clean the complete coin path, front and back, with a slightly wet cloth.
6. Allow to dry.
7. Close flight deck and latch sorter cover.
8. Turn power ON.



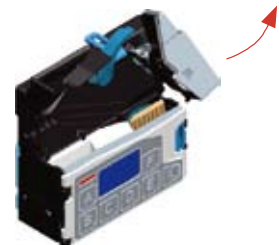
A



B



C



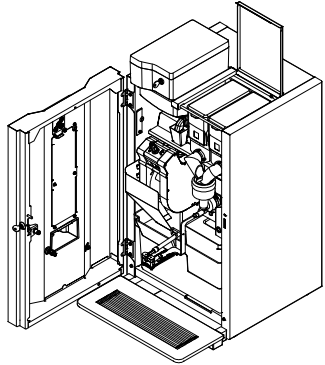
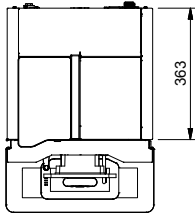
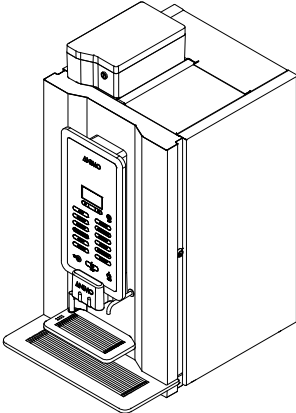
12.2.5 Fault analysis

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

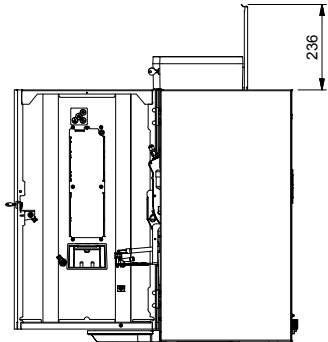
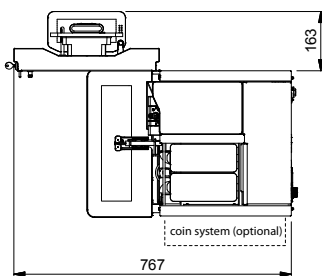
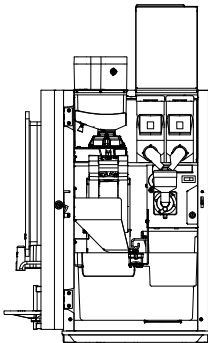
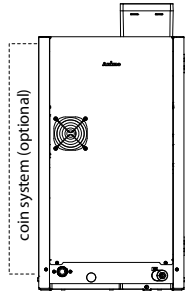
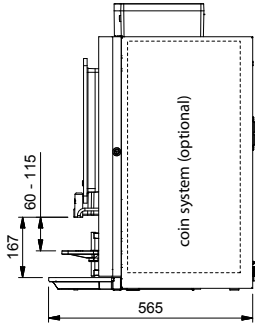
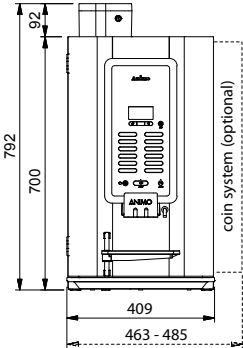




OptiBean /OptiBean XL



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ANIMO

DEDICATED TO EVERY CUP

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