

QUICK REFERENCE GUIDES  
FOR

**PRIMO MAXI**

POST DEC 2015

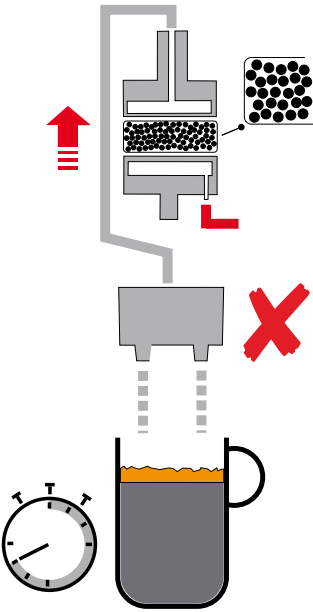
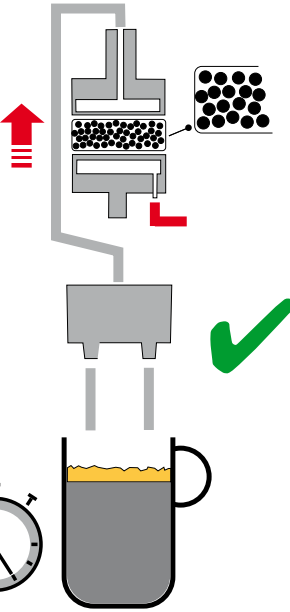
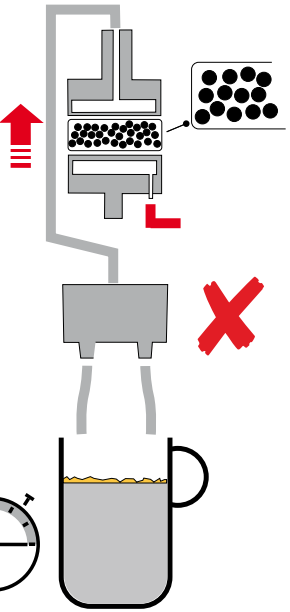
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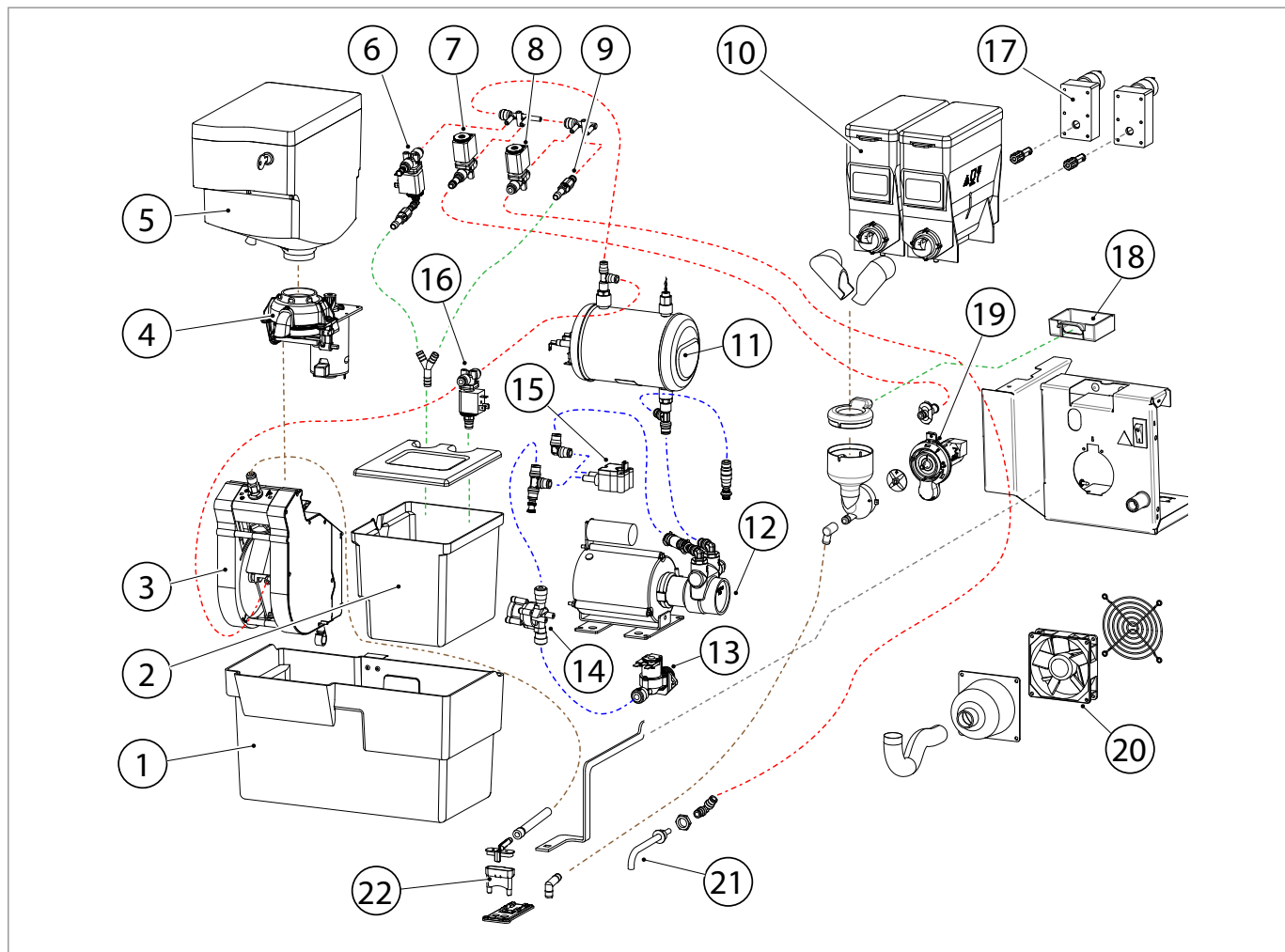
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### 2.6 Adjustment tips

Cream layer too low	Cream layer perfect	Cream layer missing or too light
<ul style="list-style-type: none"> <li>- Grind too fine</li> <li>- Bitter</li> <li>- Preparation too long</li> <li>- Too much ground dosing</li> <li>- Coffee drips from splitter</li> </ul> <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><b>Note!</b> 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.</p>	<ul style="list-style-type: none"> <li>- The right grind</li> <li>- Perfect coffee taste</li> <li>- The right preparation time</li> <li>- The right coffee measurement</li> <li>- Coffee sprays full and parallel</li> </ul> <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"> <li>- Grind too coarse</li> <li>- Weak</li> <li>- Preparation too short</li> <li>- To low ground coffee dosing</li> <li>- Coffee sprays bent outwards</li> </ul> <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>

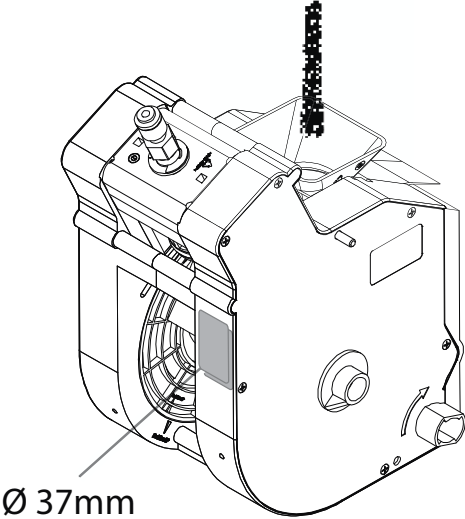

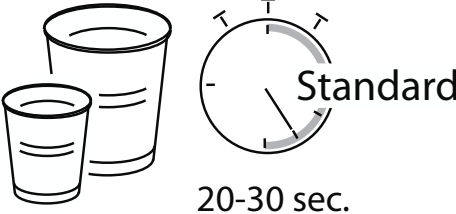










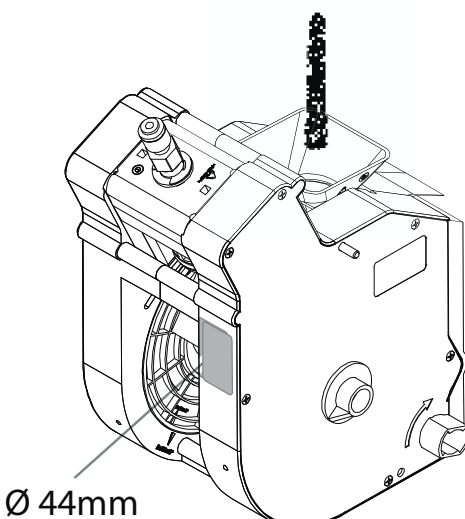

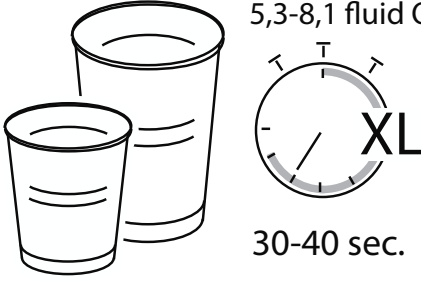










### 3. PRINCIPLES OF OPERATION



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

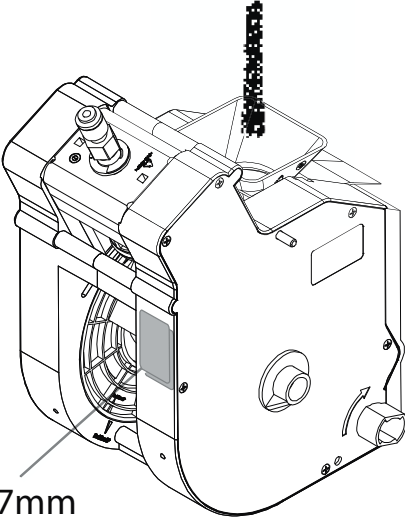

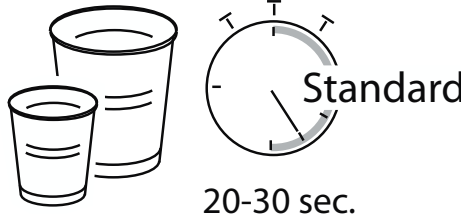










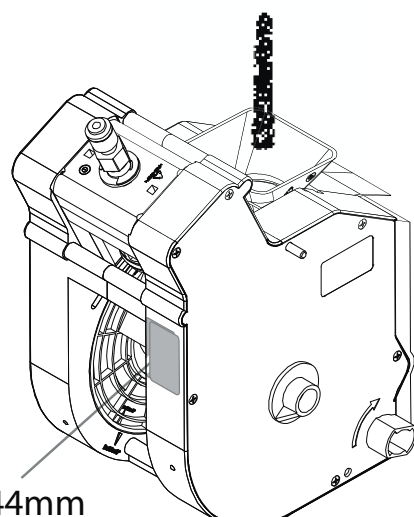

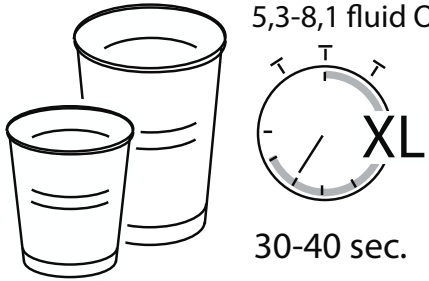










Item		Description
12.	KW2	Pump 10 bar
13.	KW1	Inlet valve
14.	PR	Pressure reducer 2 bar
15.	FL1	Flow meter
16.	DV1	Brewer valve
17.	IM2-3	Canister drive motor
18.		Cassette moisture extraction
19.	MM2	Mixer system
20.		Fan
21.		Hot water outlet
22.		Coffee / Drink outlet

### 3.4.2 Espresso brewer spec's

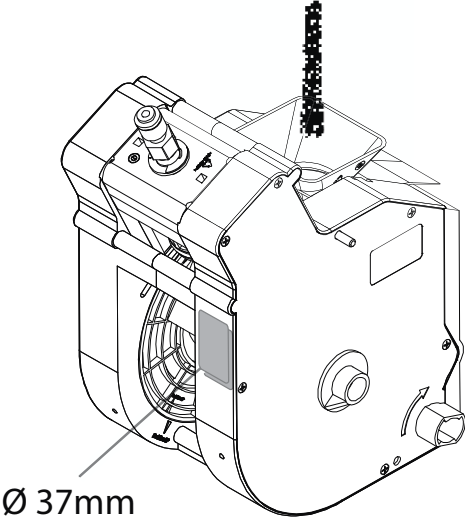

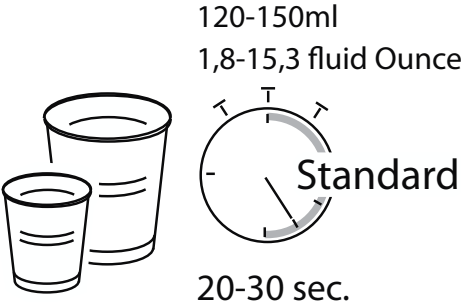










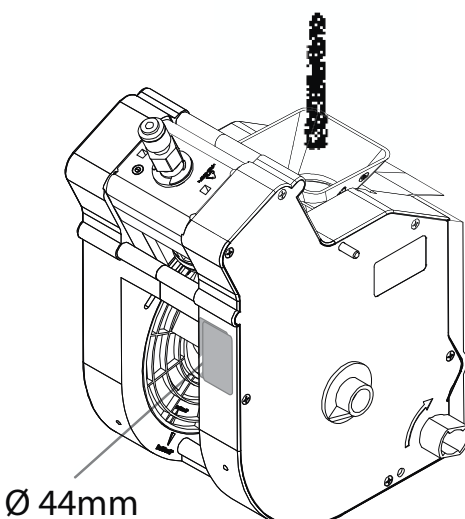

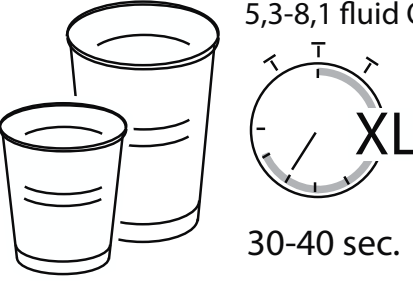










Standard brewer	XL Brewer
<p>min. 6,5 - max. 9,5* gram min. 0,23 - max. 0,35* Ounces</p>  <p>Ø 37mm</p>  <p>120-150ml 1,8-15,3 fluid Ounces</p>  <p>20-30 sec.</p> <p>min. 50 - max. 150 ml</p> <div> * max. 9,0 gram  * max. 9,5 gram</div> <p>min. 1,8 fl oz - max. 5,3 fl oz</p> <div> * max. 0,32 Ounces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

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## 3.4.2 Espresso brewer spec's

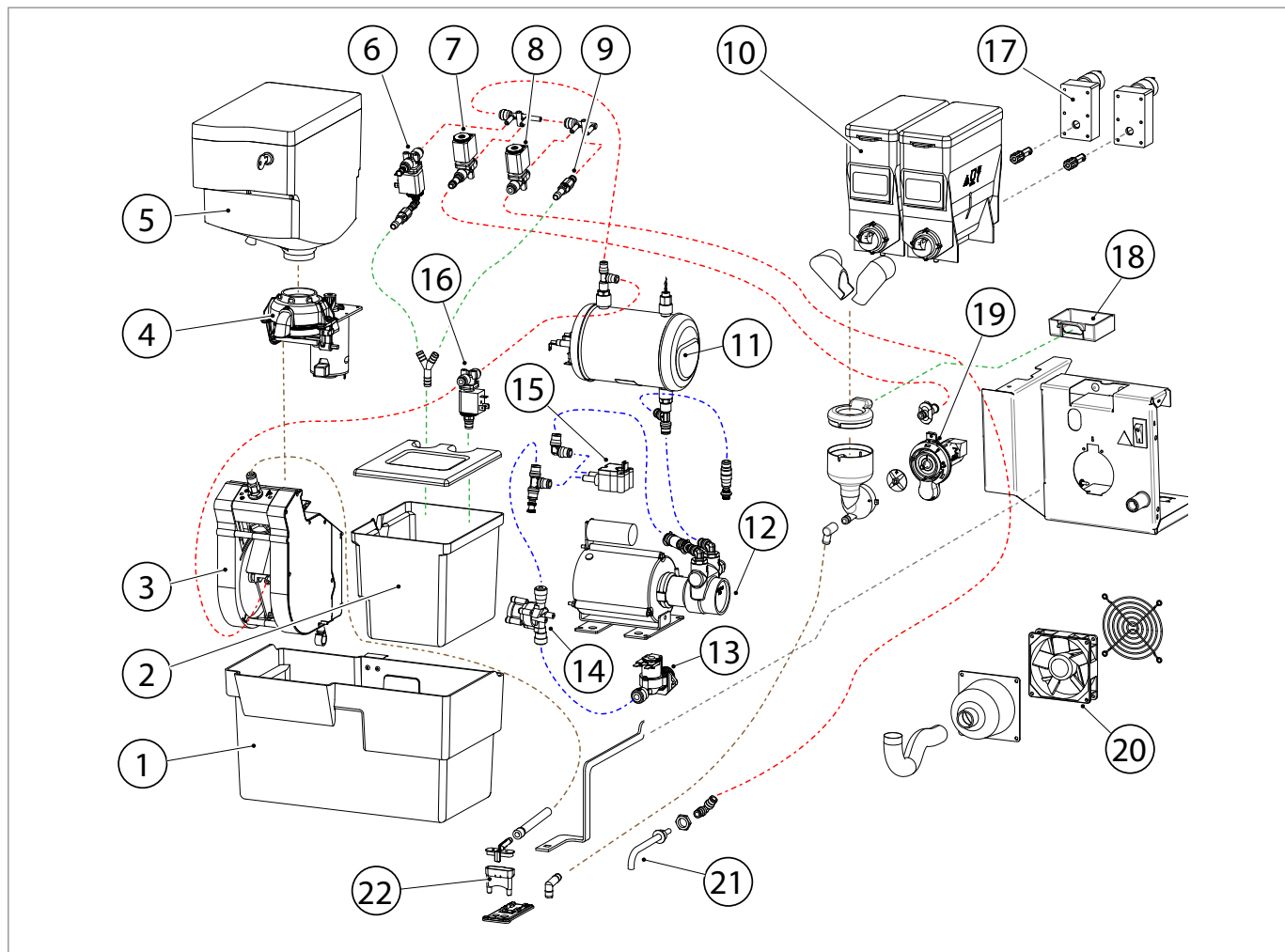
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### 3. PRINCIPLES OF OPERATION

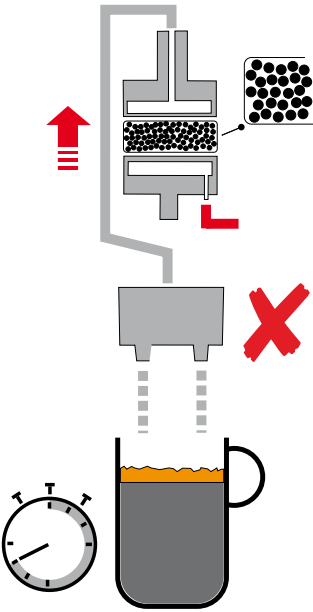
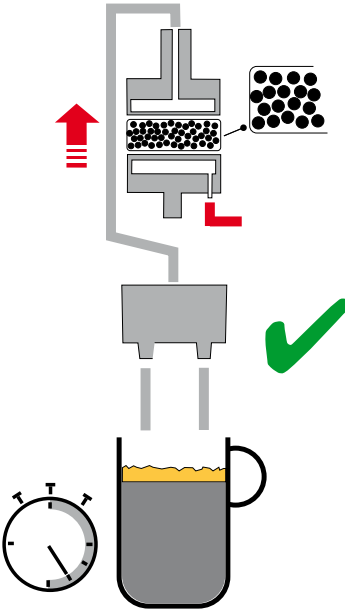
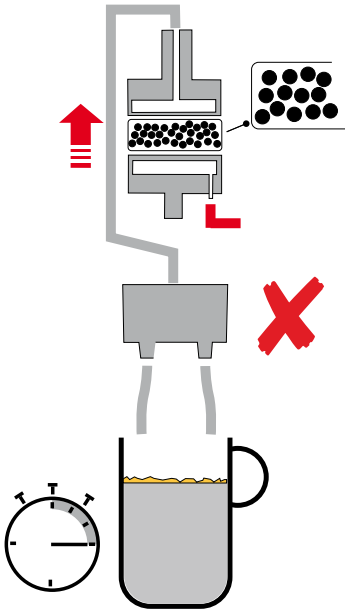


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22.		Coffee / Drink outlet



### 2.6 Adjustment tips

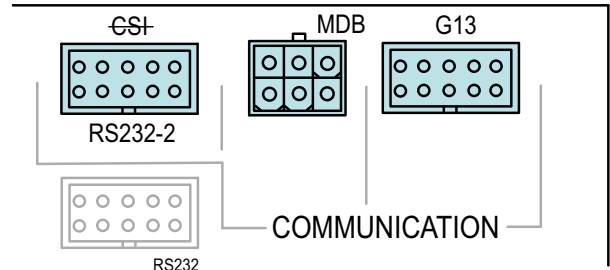
Cream layer too low	Cream layer perfect	Cream layer missing or too light
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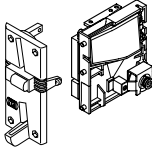
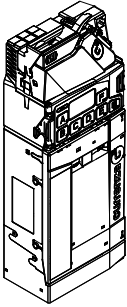


### 9.1.3 Main circuit board communication

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

These connectors meet the MDB protocol for vending machines.

For further information or advice please contact our support department.



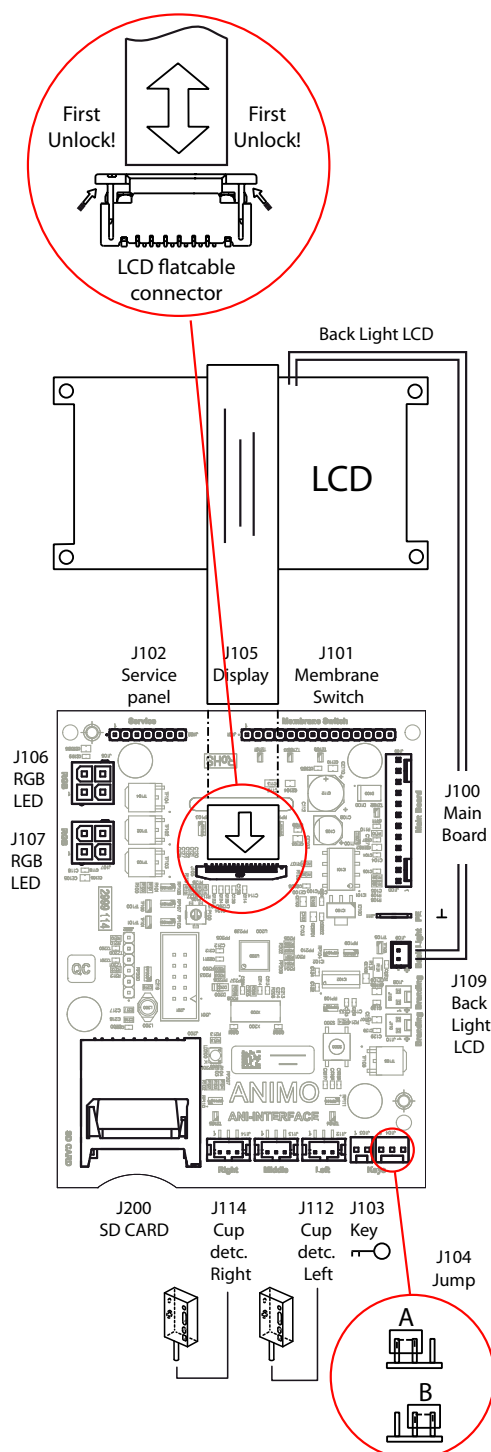
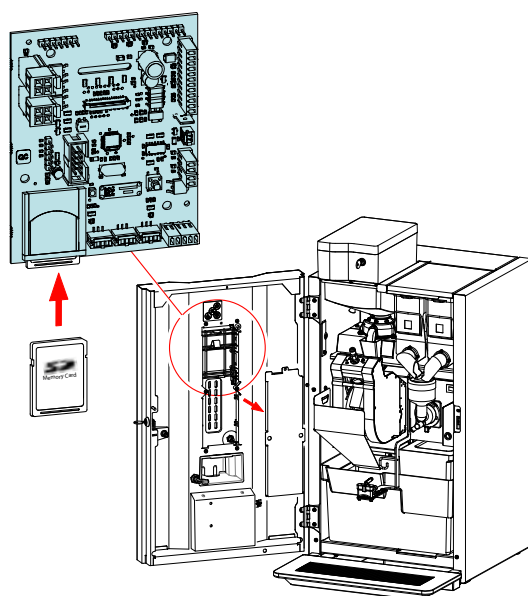
Communication		
Conn	Protocol	Notes
G13	Parallel interface  art. no. 04025 03267	<ul style="list-style-type: none"> <li>- Coin acceptor NRI G13</li> <li>- External release contact* <i>*the machine can be released by using a potential-free contact (pulse).</i></li> </ul>
		<ul style="list-style-type: none"> <li>- G13 Kabel 1 meter art. no. 03392</li> <li>- Extern vrijgave contact; kabel 1004237</li> </ul>
MDB	Serial interface MDB (Multi Drop Bus)  art. no. 03433	<ul style="list-style-type: none"> <li>- Coin changer NRI C<sup>2</sup></li> <li>- Cashless payment system</li> <li>- Telemetry EVA DTS (SD card needed) </li> </ul>
		<ul style="list-style-type: none"> <li>- MDB cable 1 meter art. no. 03479</li> <li>- MDB cable 1 meter art. no. 1004564 (2x male connector)</li> <li>- MDB Y-kabel art.no. 1002008</li> </ul>
RS232-2	Serieel interface DEX UCS new from sept 2015	<ul style="list-style-type: none"> <li>- Telemetry EVA DTS / DEX UCS (SD card needed) </li> </ul>
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.

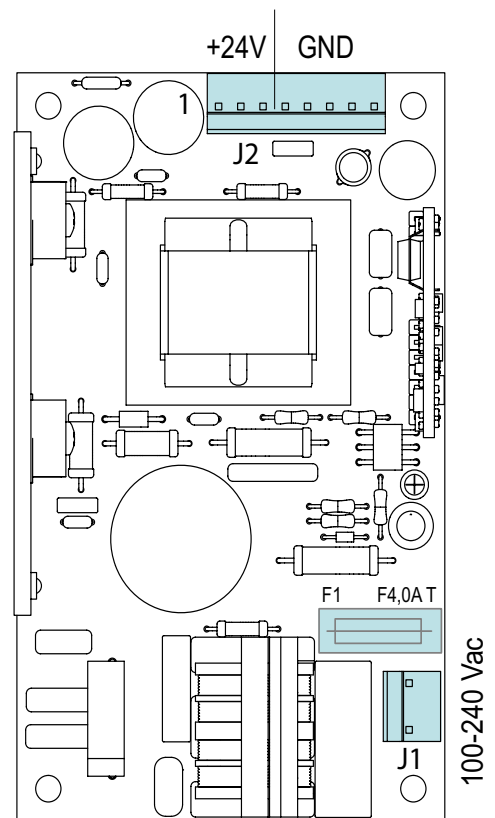
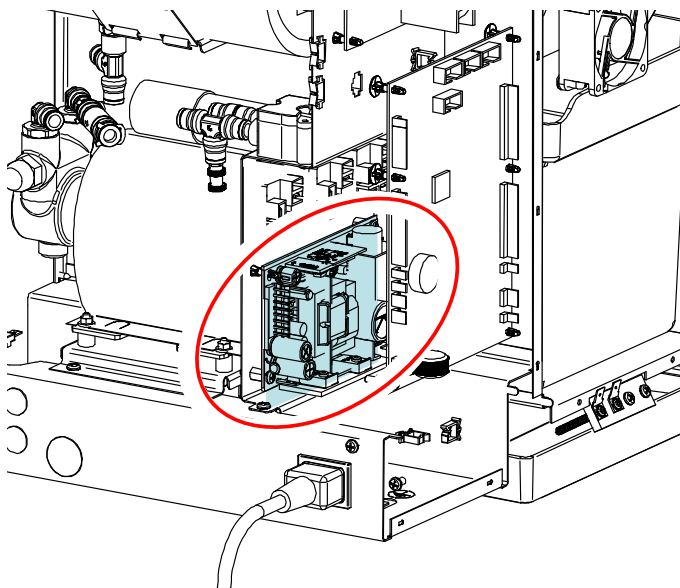
- On an overload, the power supply switches itself off automatically. Reset the power supply by turning the main switch off and on again.

#### 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	

Fuse F1	4A slow	art.no. 1004957
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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

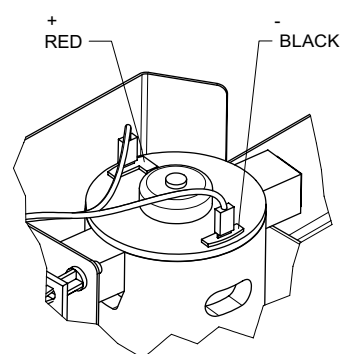
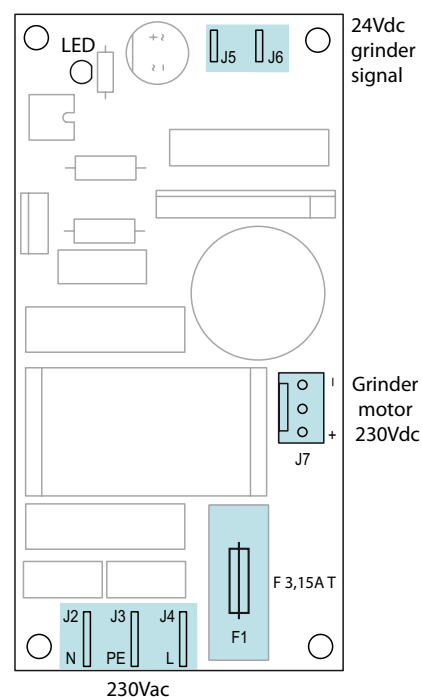
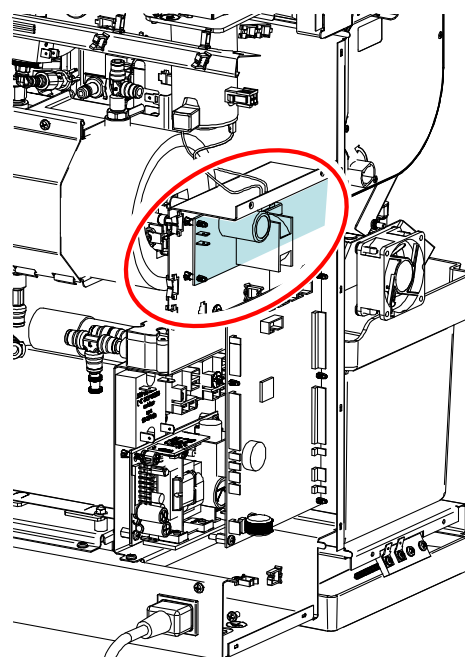
24 Vdc ingredient 1 signal			
Pin		Colour	Notes
J5	24Vdc +	red	polarity not important
J6	24Vdc -	brown	

230Vdc			
Pin		Colour	Notes
1	230Vdc +	red	polarity <u>is</u> 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	<b>Note the right direction!</b> +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.

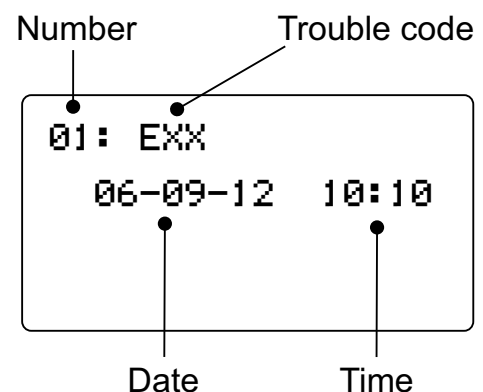
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#### 10.1 Read log

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.









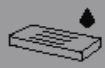


- In the 1st line the same error codes are displayed as used in the fault analysis table (see Section 10.4).
- In the 2nd line are the date and time at which the error code occurred.












#### 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.		Run the rinse program and follow the instructions in the display. See chapter <b>6. Maintenance</b> / <b>6.1 daily rinsing program</b>
Make your choice  Cleaning	Cleaning program is not activated in time.		Run the cleaning program and follow the instructions in the display. See chapter <b>6. Maintenance</b> / <b>6.2 Weekly rinsing program</b>
Make your choice  Service boiler	Boiler needs maintenance.	See chapter <b>6.3 Periodic maintenance</b> / <b>6.3.1 Service boiler.</b>	
Make your choice  Service brewer	Brewer needs maintenance.	See chapter <b>6.3 Periodic maintenance</b> / <b>6.3.2 Service brewer and 5.4.4 Servicing</b>	
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	The boiler temperature is (temporarily) too low because too much water has been used.	Once the temperature is restored, the message automatically disappears and the drink selection buttons are reactivated.	
	If this text remains in view for 6 minutes, an E21 boiler time out follows.	See E21 boiler timeout.	
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 lock	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 <b>6. Maintenance / 6.1 daily rinsing program</b>
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. <b>6. Maintenance / 6.2 Weekly rinsing program</b>
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.	



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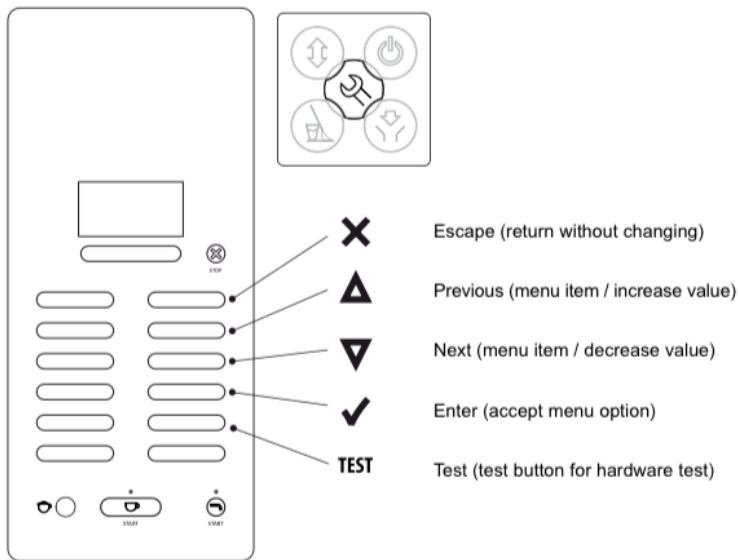
4. MENU STRUCTURE

4.1 The operator / service menu

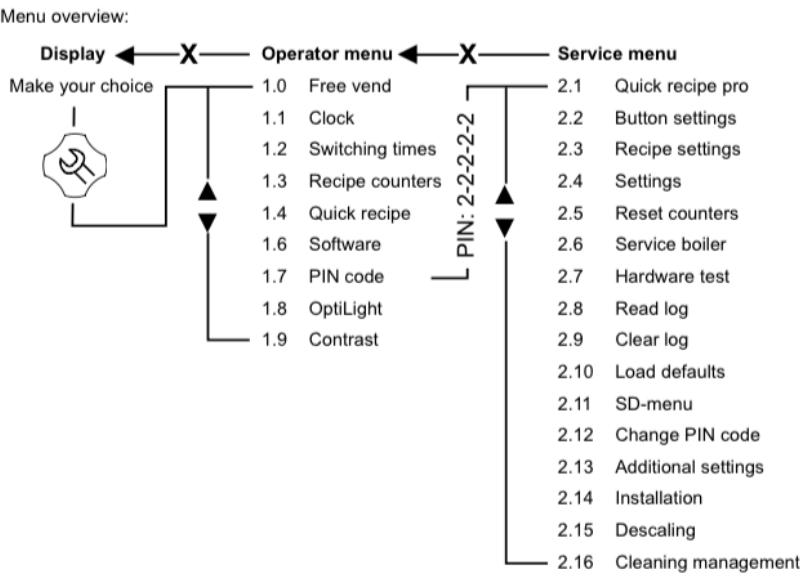
Most of the settings, including the product settings are secured by a PIN code. This PIN code is intended to prevent the user accessing the service menu.

**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.



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

**BREWER CAPACITY**  
 37mm 6.5g – 9.0g MAX  
 44mm 9.5g – 12.5g MAX

## 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 ].

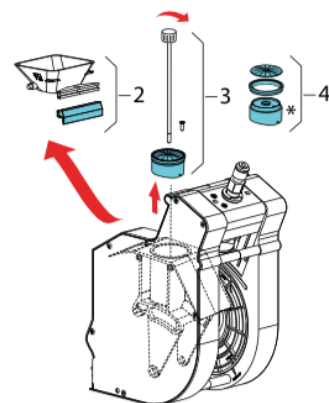
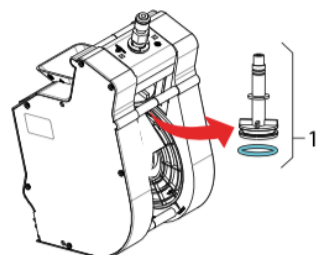
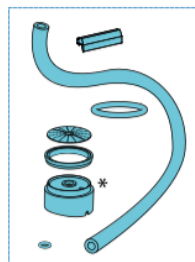


Brewer replacement kit 25K	Brewer	
	Standard	XL
Art. No.	1057167	1057151
O-ring big	1x	1x
Wiper	1x	1x
Filter 150 µm	1x	1x
Teflon ring	1x	1x
Lower piston *	1x	-
O-ring small	1x	1x
Dispensing hose 370mm	1x	1x

- 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!



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].

**i** 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?

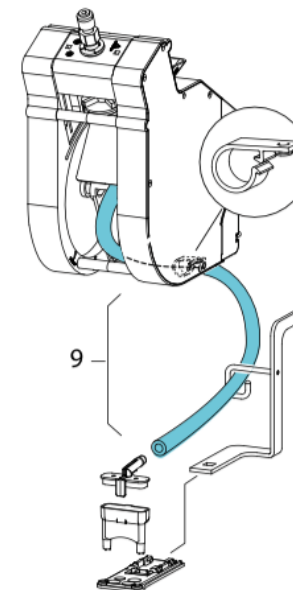
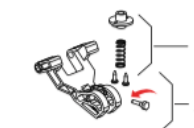
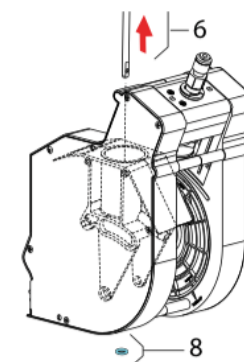
After a new brewer was installed reset the cycle counter in the service menu:

### 2.13 Other settings

#### 2.13.02 Reset Cycle counter

### 6.6.2 Drive unit

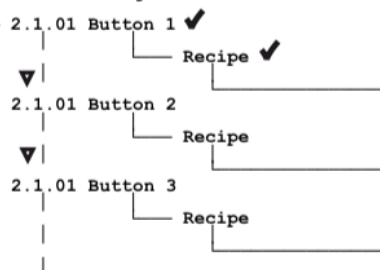
- Clean out potential coffee dust from the drive unit.
- Check the switch- and gear function



## 2.1 How to program a recipe?

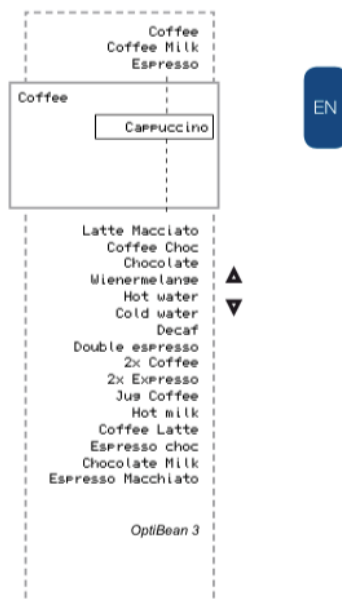
Every machine contains pre-programmed basic recipes. Each key can be changed, if required. In below example button 1 will be changed from **coffee** into **cappuccino**.

### 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 the display shows the programmed recipe.
3. Scroll with the navigation buttons through the range until the desirable recipe and confirm 2x (v)

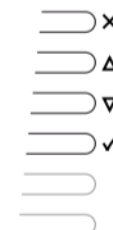
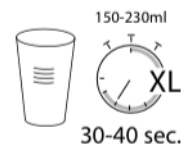
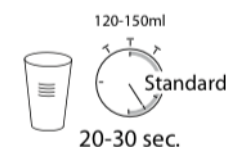
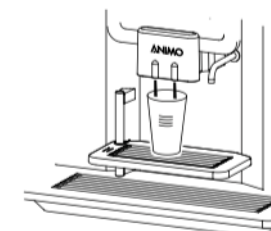
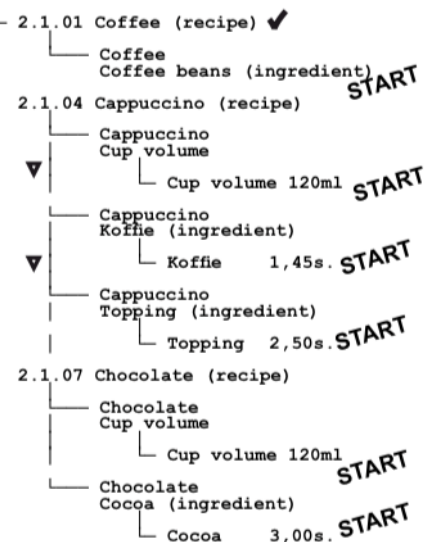
**i** Which recipes are factory-set can be found in recipes settings document which can be downloaded. See <http://www.animo.nl/en/downloads/service-documentation/>



## 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 ✓



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.

**i** 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**

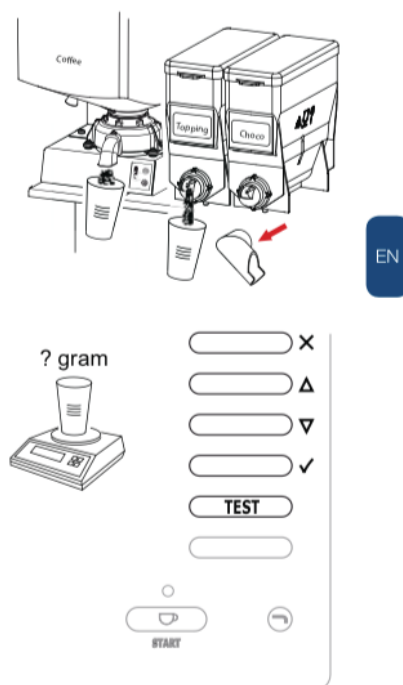
#### 2.1.04 Cappuccino (drink)

▼ Cappuccino  
Coffee beans (ingredient) **TEST**

▼ Cappuccino  
Topping (ingredient) **TEST**

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



EN

## 2.4 Adjustment rules

### 2.4.1 Espresso group

The OptiBean can be executed with following espresso group:

#### Standard espresso groep

- 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

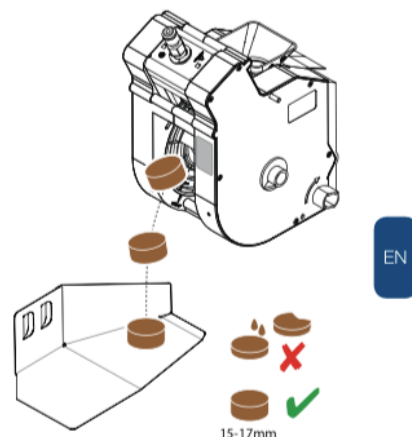
- Suitable for a maximum of 12,5 gr (0,44 ounce) ground coffee (1 cup of coffee).
- Suitable to brew a double cup of espresso (2x 70ml) or double cup coffee (2 x 115ml) in one single cycle.
- Not suitable to brew a double cup of coffee > 115ml in one cycle.



	(imp)
<b>Standard</b>	(0,23 oz)
min. 6,5 - max. 9,5* gram	(0,34 oz)
	* max. 9,0 gram (0,32 oz)
	* max. 9,5 gram (0,34 oz)
Ø 37mm	
min. 50 ml	(1,8 fl oz)
max. 150 ml	(5,3 fl oz)
<b>XL</b>	(0,34 oz)
min. 9,5 - max 13,4* gram	(0,47 oz)
	* max. 12,5 gram (0,44 oz)
	* max. 13,4 gram (0,47 oz)
Ø 44mm	
min. 50 ml	(1,8 fl oz)
max. 230 ml	(8,1 fl 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.



## 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:

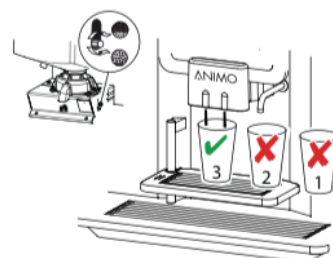
- Cup volume (menu setting)
- Amount ground coffee (menu setting)
- Ground coffee coarse or fine (grinder adjustment)
- When the coffee grinder is set coarser, the volume of the grind increases.
- When the coffee grinder is set finer, the volume of the grind decreases.
- Only adjust the grinder finer 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"><li>- Grind too fine</li><li>- Bitter</li><li>- Preparation too long</li><li>- Too much ground dosing</li><li>- Coffee drips from splitter</li></ul> <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>	<ul style="list-style-type: none"><li>- The right grind</li><li>- Perfect coffee taste</li><li>- The right preparation time</li><li>- The right coffee measurement</li><li>- Coffee sprays full and parallel</li></ul> <p>The coffee is ground well, the taste extraction is optimal. The cream layer is firm and persists for a long time.</p>	<ul style="list-style-type: none"><li>- Grind too coarse</li><li>- Weak</li><li>- Preparation too short</li><li>- To low ground coffee dosing</li><li>- Coffee sprays bent outwards</li></ul> <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 coarser (adjustment anti-clockwise). Also shorten the coffee dosing by 0.1 sec.</p> <p><b>Note!</b> 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.</p>	<p>Advice: enjoy your coffee</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>

## 10.4 Troubleshooting

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

EN












Display	Possible cause	Solution
<b>E17</b> 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.
<b>E18</b> MIXER GROUP FET ERROR	Brewer or mixer motor output remains activated.	Brewer or mixer motor output (FET) is defective. Replace the control.
<b>E19</b> OUTPUT FET ERROR	Ingredient motor / valve / fan output remains activated.	Ingredient motor / valve / fan output (FET) defective. Replace control.
<b>E21</b> BOILER TIMEOUT	Heating element is active for 6 minutes. If the boiler has not come to the set temperature after that, this error is the result.	Check the water supply for air.
		Check the boil-dry protection on the boiler.
		Check the log menu. If E6 boiler temperature error occurs, the boiler has boiled dry. Check the NTC sensor and wiring/connection and check the relays.
		Check the heating element.
<b>E22</b> BREW TIMEOUT	Maximum preparation time exceeded (120 sec). The time for preparing a recipe has been exceeded.	Switch the machine off and on again. Run the rinsing program.
		Switch the machine off and on again. Run the cleaning program.
		Switch the machine off and on again. Check the pump pressure (10 bar).
		Switch the machine off and on again. Check that the coffee grind is not too fine.
		Replace the brewer filters.
<b>E23</b> 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.
<b>E24</b> BREWER ERROR	The brewer switches do not arrive in the correct position during the brewing process.	Check whether the brewer is properly positioned in the motor unit. Check the brewer switches for correct operation in the service menu <b>2.07 Hardware test</b> .














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





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### 10.3 Display messages during use

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

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

EN

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

## 7. TRANSPORT / SHUT DOWN



### WARNING

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

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

**2.14.01 SHUT DOWN**

REMOVE SUPPLY HOSE  
AND PLACE CONTAINER  
PRESS OK

NO! PRESS CANCEL / YES! PRESS OK

CANCEL OK

**2.14.01 SHUT DOWN**

BOILER  
DEPRESSURISING  
MOMENT PLEASE

**2.14.01 SHUT DOWN**

REMOVE  
DRAIN PLUG  
PRESS OK

NO! PRESS CANCEL / YES! PRESS OK

CANCEL OK

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

**2.14.01 SHUT DOWN**

BOILER  
DRAINING  
MOMENT PLEASE

**2.14.01 SHUT DOWN**

BOILER  
IS EMPTY  
SWITCH OFF MACHINE

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

Required equipment and tools:

- Crosshead screwdriver
- Tray of approx. 1.5 L

