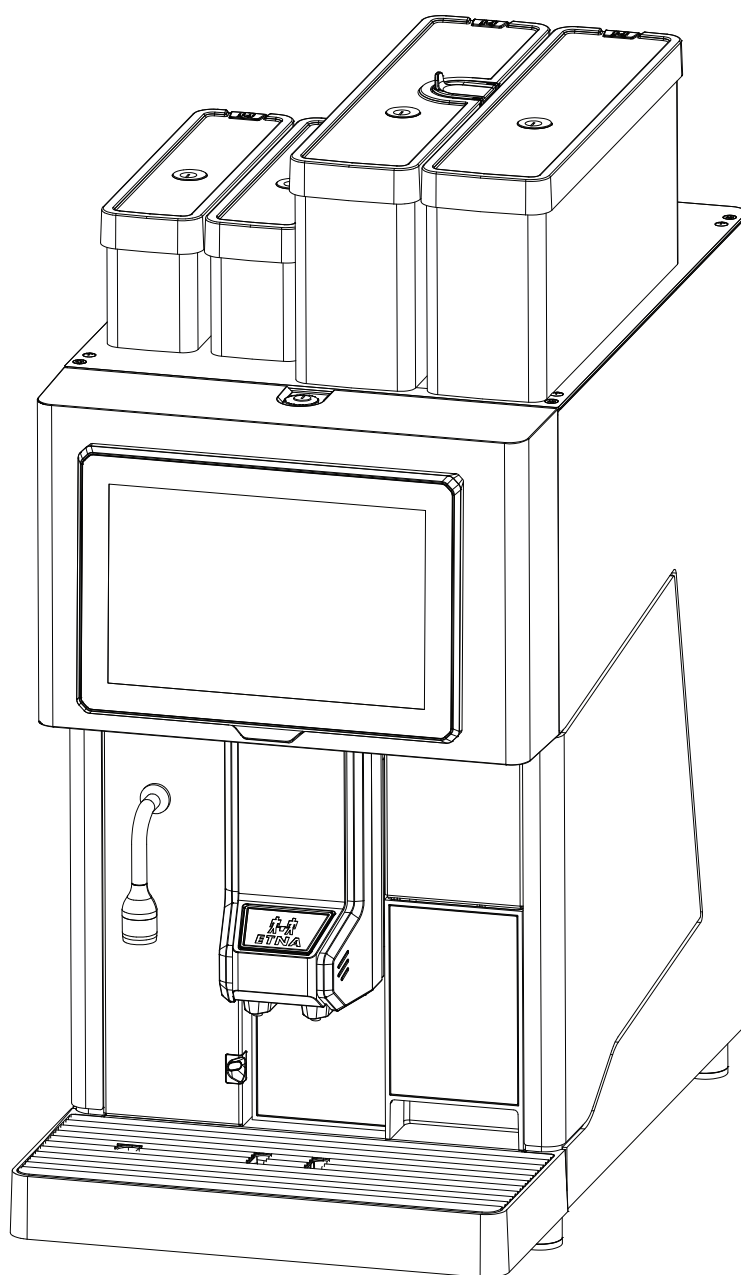


Technical manual Sagitta Espresso





Technical manual Sagitta Espresso

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1 INTRODUCTION

1.1 This manual

Congratulations on the purchase of your Sagitta Espresso.
This machine has been developed and produced using high-quality technologies.

This manual is intended to be used by authorised, trained users. Here, they will find all the information they need to be able to operate the machine safely, carry out regular maintenance, and clean the machine. Before using the machine, please read this manual carefully.



Ensure the manual is kept close to the machine so that all of the instructions can be followed properly.



Figure 1-1

1.2 Translations

This manual was originally written in Dutch.

The supplier may provide translations of this manual.

Manuals written in a language other than Dutch are always a translation of the Dutch source document.

1.3 Safety instructions – use

- Inspect the machine before use and check for any damage or faults. Please contact your supplier if the machine is damaged.
- If the power cable is damaged it must be replaced with a new one. Please contact your supplier to arrange for a replacement.
- Keep all packaging out of reach of children.
- Stand the appliance on a flat surface.
- Put the appliance in a place where it can be supervised by trained staff.
- This machine is not suitable for outdoor use.
- The appliance may not be used by persons, including children, with a physical, mental or emotional impairment, or who do not have the knowledge and experience to operate the appliance without supervision or instructions, until they have been approved to do so by a person responsible for their safety.
- Children must be supervised to ensure they do not play with the appliance.
- Protect the machine from water and damp.
- Do not clean the machine with a pressurised water jet.
- Do not install the machine in an area where a water jet may be used.
- Clean the control panel regularly to prevent it becoming dirty or greasy.
- Only use the appliance when the lids and upper valves are closed and all plates have been fitted.
- Never use a sharp object to operate the machine.
- Only use cups and jugs of the right size; your dealer can provide you with more information.
- Ensure that the (earthed) wall socket, and water supply connection can be accessed when the machine is in use. In case of emergency you will then be able to disconnect the power cable and turn the tap off quickly.

- If the appliance is not being used for a long period of time: empty and clean the containers, clean the appliance manually, clean the mixing parts thoroughly, run the cleaning programme, empty the water heater, and disconnect the water supply and power cable. No water may be left sitting in the appliance or its parts.
- When you want to use the appliance again after a long period during which it has not been used, clean the mixing parts and the preparation unit (if present) thoroughly. Replace the mixing parts, run the cleaning programme at least three times, and fill all receptacles before using the appliance.



Drinks produced by the appliance are very hot and can scald you.



Remove the power cable from the wall socket in case of danger. Do not use the cable to disconnect the plug from the wall socket.



Failure to follow the instructions above may affect the safe use of the machine.

1.4 Icons and safety symbols on the machine

The Sagitta Espresso uses the following icons:

- DANGER: Power supply current



Figure 1-2

- DANGER: Risk of pinch point injuries



Figure 1-3

1.5 Icons and safety symbols in the manual

The manual uses the following icons:



General warning. The machine may get damaged or cause personal injury.



Danger of electric shock.



Risk of scalding injury.



Comments, suggestions and advice.

1.6 Conventions and terms

The document refers to the 'left', 'right', 'front' and 'back' of the machine. If a machine part or specific section of the machine is named, it is described from the user's point of view of the control panel.

1.7 Service and technical support

Contact your dealer for more information about the relevant settings, maintenance and/or repairs not described in this manual. Your dealer will be happy to help you.

Please have the following information at hand when contacting your dealer:

- Model number
- Serial number

1.8 Machine identification inside the machine

1. Model number
2. Voltage
3. Frequency
4. Power consumption
5. Serial number
6. Water pressure

The machine identification plate is located inside the left frame plate.

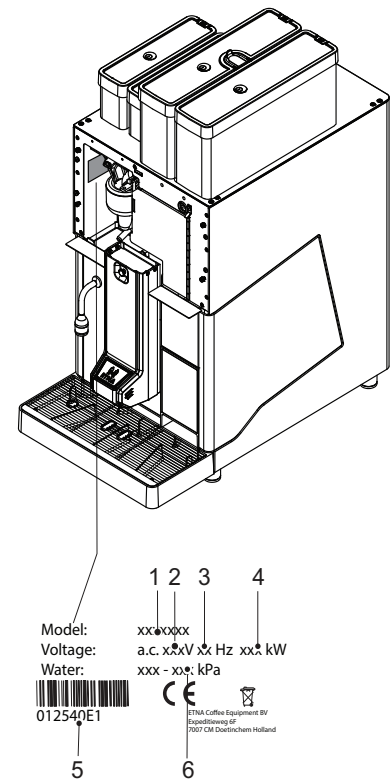
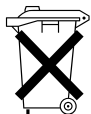


Figure 1-4

1.9 Used machines and the environment



For information on how to recycle the used materials in an environmentally-friendly way, please contact your local authority.



For information on how to dispose of the used materials in an environmentally-friendly way, please contact your local authority.

1.10 General safety precautions and limitations

The manufacturer accepts no liability for any damage caused by the failure to follow the safety instructions strictly, or by carelessness during the use, cleaning and servicing of the machine and accessories.

Additional safety precautions may apply depending on the circumstances or the accessories used. Contact your dealer immediately if you encounter a potential hazard when using the machine.



All users of the machine must observe the safety regulations and guidelines at all times.

1.10.1 Operating and cleaning instructions

- Anybody who cleans the machine must be familiar with the operating and cleaning instructions and follow them closely. The owner must ensure that staff are aware of the operating and cleaning instructions in the manual, and ensure that these rules and instructions are followed.
- Never perform the operations in a different order.
- Store the manual close to the machine.

1.10.2 Icons, symbols, and instructions

The icons, symbols and instructions included with the machine are part of the safety measures. They must therefore not be covered or removed and must be legible and kept close to the machine for its entire life span.

- If icons, symbols, or instructions cannot be read, please contact your supplier immediately for assistance.

1.10.3 Users

Only authorised users who have been trained by the machine's installer or owner can perform daily, weekly and monthly servicing and cleaning procedures. They must be aware of the hygiene rules and risks that may arise when carrying out these activities and when cleaning the machine.

The machine can be used by children aged 8 or older, and by persons with restricted mobility, physical, sensory or mental impairments, or those not experienced in or with knowledge of the machine if they are supervised or are given instructions on how to safely operate the machine and they understand the risks.

Children must not play with the machine.

Children may not perform servicing and cleaning activities unless they are over the age of 8 and under supervision.

1.10.4 Technical specifications

- The technical specifications of the machine and its accessories or parts may not be modified.

1.10.5 Changes

- No changes may be made to the machine, its accessories and parts.

1.10.6 Intended use

The machine's only intended use¹ is to dispense all the drinks listed on the user control panel. Use of the machine for other purpose does not comply with the terms and conditions. The manufacturer accepts no responsibility for damage or injuries arising as a result of this.

The machine complies with the current standards and directives.

- Only use the machine for the above-mentioned purposes when it is in perfect technical condition.

1.11 Available documentation

The following documentation is available for this machine:

- User manual
- Technical manual (ETNA dealers only)
- Parts book (ETNA dealers only)

1. "Intended use" within the meaning of EN-ISO 12100:2010 is the application for which this technical product has been produced, as specified by the manufacturer – including references in sales brochures. In case of doubt, use can be inferred from the construction, model and functions of the technical product during accepted normal use. Use of the product within the limits of intended use also entails compliance with the instructions in the manual.

2 MACHINE DESCRIPTION

2.1 General description

This machine can prepare a variety of hot drinks.

The hot drinks are dispensed in the corresponding cups, which must be placed on the machine's cup stand. The cups must be placed on the stand manually.

The machine display indicates that:

- A drink can be selected.
- A drink is being prepared.
- An error has occurred.
- The machine is performing an operation.

2.2 Main components

2.2.1 Front view

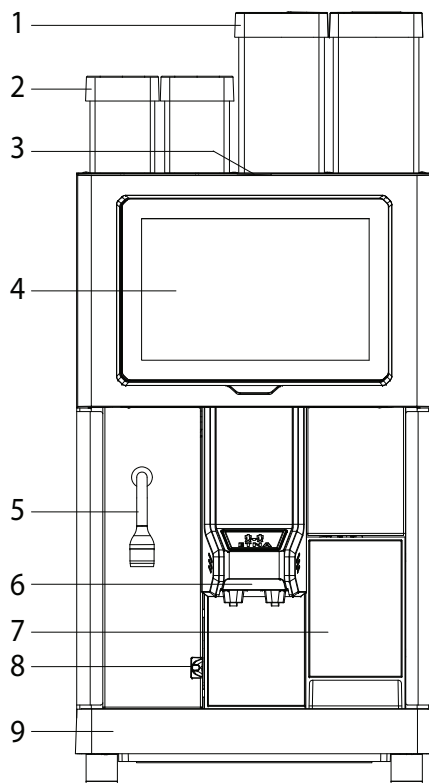


Figure 2-1

1. Bean containers
2. Ingredient containers
3. Lock (optional)
4. Control display
5. Hot water dispenser point
6. Hot drink dispenser point (height-adjustable)
7. Waste bucket
8. Cup sensor
9. Drip tray

The door with the control panel must be moved up to clean the coffee machine. Open the optional lock if there is one and move the display slightly forward and up. The gas springs keep the door in the selected setting.

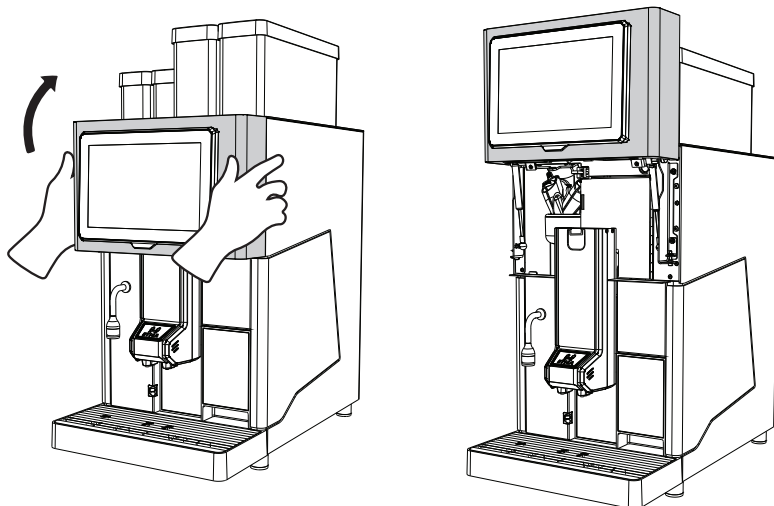


Figure 2-2

2.2.2 Interior view

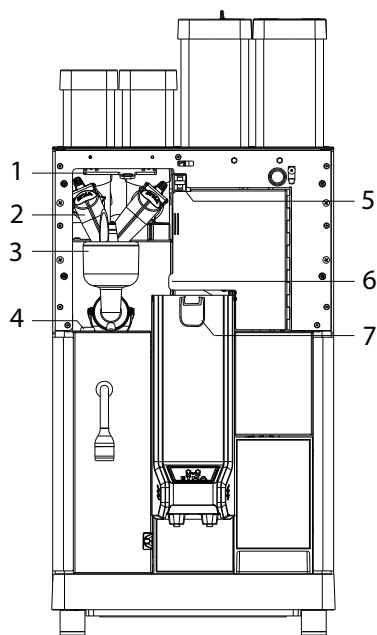


Figure 2-3

1. Ingredient container release (optional)
2. Container outlet (optional)
3. Mixer
4. Mixer drip tray
5. Service key
6. Brewing unit cover
7. Dispenser cover lock

2.2.3 Back view

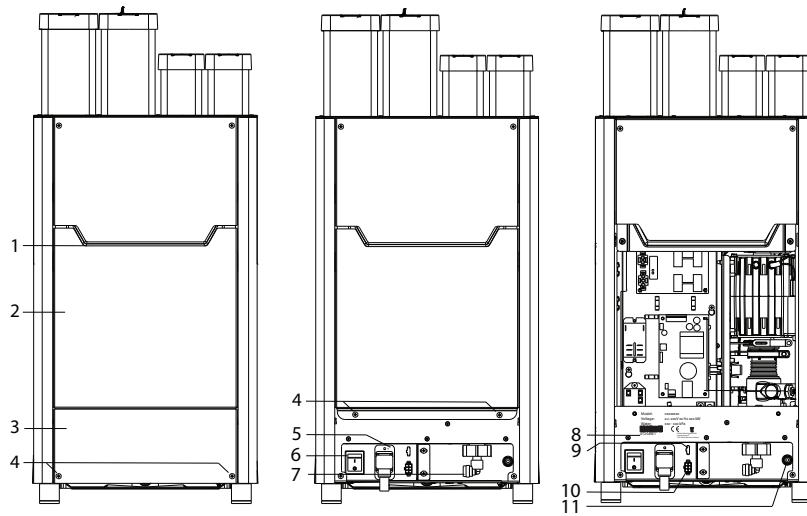
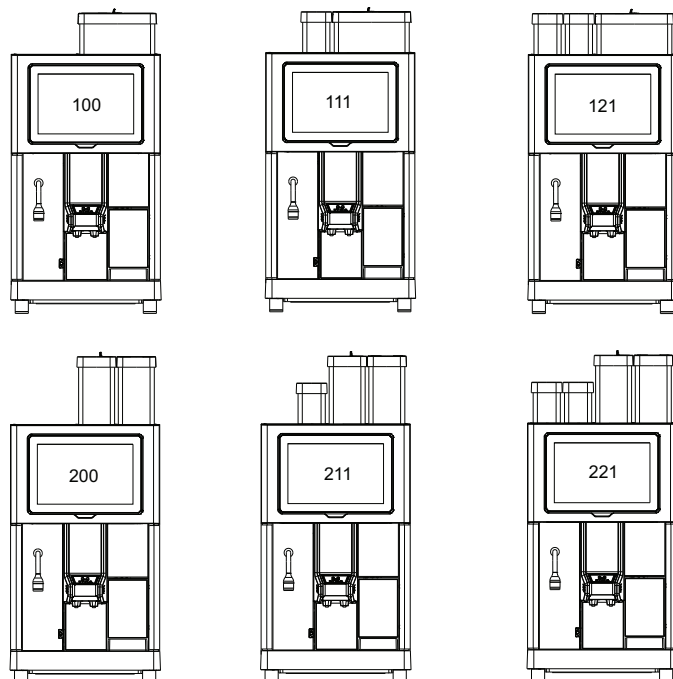


Figure 2-4

1. Ventilation opening
2. Cover
3. Connections cover
4. Cover mounting screws
5. On/off switch
6. 230V mains connection
7. Water connection
8. Type plate
9. MDB payment system
10. MDB milkbase connection
11. Milk connection

2.3 Container layout

The different models are equipped with the following containers.



Machine	Bean container	Instant container
Espresso 100	1	0
Espresso 111	1	1
Espresso 121	1	2
Espresso 200	2	0
Espresso 211	2	1
Espresso 221	2	2

2.4 Working principle

Once you've made your selection, the machine mixes the ingredients from the containers with water and the drink is dispensed.

- The hot water is supplied via the water heater.
- The instant products or liquid concentrate are dispensed from the containers into the mixer and/or the ground coffee is dispensed from the bean grinder into the brewing unit.
- The water and ingredients are mixed in the mixer or pressed through the brewing unit.
- Drinks are dispensed through the dispensing pipe into the cup placed on the cup stand.

2.5 Water connection

Using a water hose, connect the appliance to a tap with the correct thread (3/4 inch BSP), and make sure that the tap is open. Check for leaks regularly and protect the water hose from damage.

Only use water hoses that comply with EN 61770. Do not re-use old water hoses.

Connect the appliance to the water supply in accordance with local regulations.

2.6 Switching the machine on or off

- I pressed = On (switch light is on)

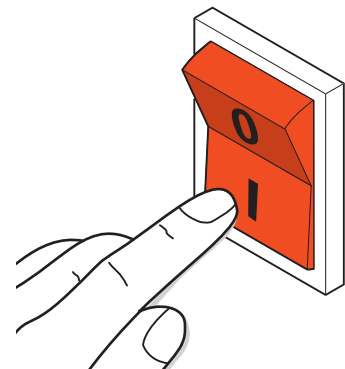


Figure 2-5

- 0 pressed = Off

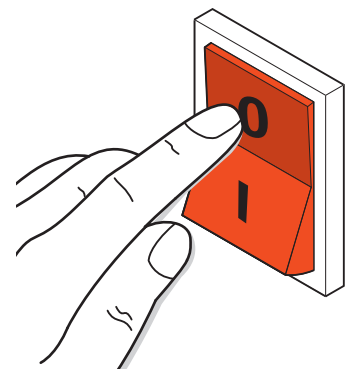


Figure 2-6

2.7 Service key

Insert the service key and turn it a quarter turn to make the machine operational for cleaning, repairs, and testing.



The machine contains rotating and moving parts. Be careful that your fingers do not get trapped when working with the machine.



The water heater heats up, or is already at the right temperature. Please note that the machine includes hot parts.

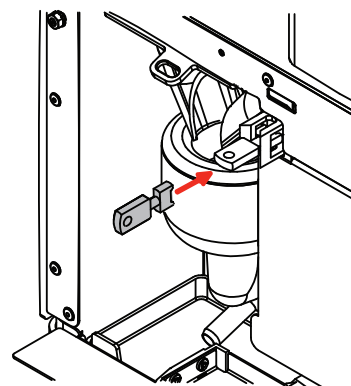


Figure 2-7

2.8 Operating the machine

2.8.1 Choosing a drink

All the steps required to prepare a drink are summarised in table 2-1.

Table 2-1 The steps for preparing a drink

	You want a drink
1.	Place your cup or mug on the cup stand
2.	Select your drink on the user control panel
3.	Your drink is being prepared

2.8.2 Strength control (if applicable)

All the steps required to prepare a drink of the right strength are summarised in table 2-2.

To add e.g. milk or sugar, the same steps can be followed (if available).

Table 2-2 The steps to adjust a drink's strength

	You want to adjust the strength of your drink
1.	Place your cup or mug on the cup stand
2.	Select your drink on the user control panel
3.	By selecting your selected drink again, you can vary its strength (a separate screen will be displayed on Smart Touch machines)
4.	Once you have selected its strength, you can confirm the drink and it will be prepared

2.8.3 Jug function (if applicable)

The jug function allows you to have several cups prepared at once. The "Jug screen" must be enabled to do this. The process for selecting several cups is summarised in table 2-3.

Table 2-3 Steps for the jug function

Smart Touch
Place your jug under the dispenser nozzle
Select your product on the user control panel
Select the number of cups you want
Select Start and your drink will be prepared the selected number of times



If the cup sensor is activated and the jug is removed, the drink currently being made will be completed but any further repetition(s) will be terminated.

2.8.4 Paid drinks

The standard version of the machine does not include a payment mechanism; it is possible to provide a payment mechanism on the machine (for installation instructions please refer to the instructions for use supplied with the payment mechanism).

Machines with a payment system can issue both paid drinks and free drinks. If a drink has to be paid for, the display will show the price of the selected product and the available credit.

If there is enough credit, the selected product will be made.

2.8.5 Energy-saving mode

If energy-saving mode is activated, the machine will use less energy. The display shows when the machine is in energy-saving mode.

Place a cup in the machine or select a product to temporarily disable energy-saving mode. The machine will reactivate energy-saving mode automatically.

The machine may have to warm up before a drink can be made, depending on how long the machine has been in energy-saving mode.

3 USE

3.1 Filling containers

The containers contain the ingredients for making drinks. You can fill the containers in one of two ways:

- by opening the top lid and filling the containers in the machine;
- by removing the containers from the machine and filling them outside the machine.



Take care not to trap your fingers when filling containers.



Make sure you put the right ingredient in each container.



See the label on the inside of the door for an overview of the maintenance functions.

3.1.1 Filling the ingredient containers inside the machine

1. Open the ingredient container lid (open the optional lock).
2. Top up the ingredient container with the right ingredients.
3. Close the ingredient container lid (and close the optional lock).
4. If the ingredient container was completely empty, the outflow also has to be refilled. Prepare some test drinks.
5. Rinse the mixing chamber if ingredients have dropped into it, see paragraph 4.5.

3.1.2 Filling ingredient containers outside the machine

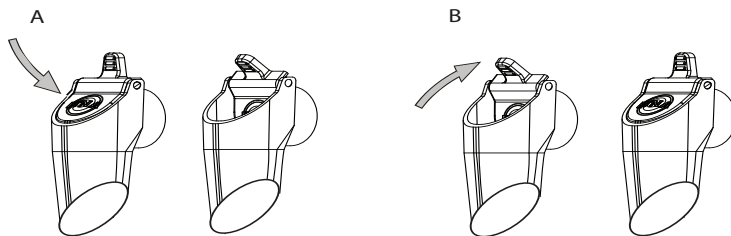


Figure 3-1

1. Move the machine's control display up.
2. Close the container outlet by pushing the valve until it clicks shut, (see figure 3-1) (A).

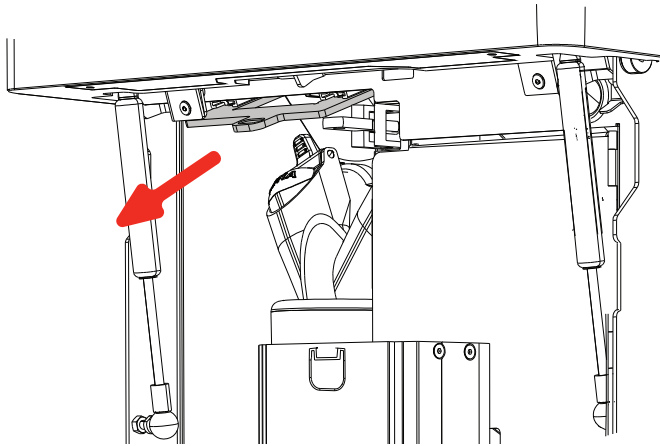


Figure 3-2

3. Pull the tab on the ingredient container lock forward at an angle (see figure 3-2).

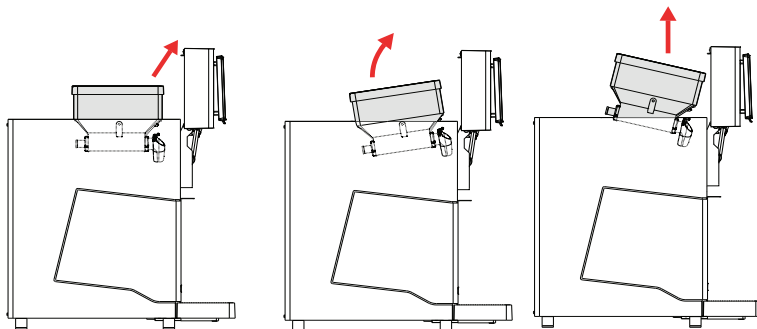


Figure 3-3

4. Pull the front of the ingredient container up and slightly forward so that the ridge on the control side is positioned just above the top, (1). (see figure 3-3)
5. Pull the back of the ingredient container upwards and then pull the entire unit up.
6. Fill the ingredient container and put it back in the machine in reverse order.
7. Push the tab on the ingredient container lock back at an angle to lock the containers (see figure 3-2).
8. Open the container outlet by pushing the tab until it clicks open, (see figure 3-1) (B).
9. Move the control display back to its initial position.

3.1.3 Filling the bean container

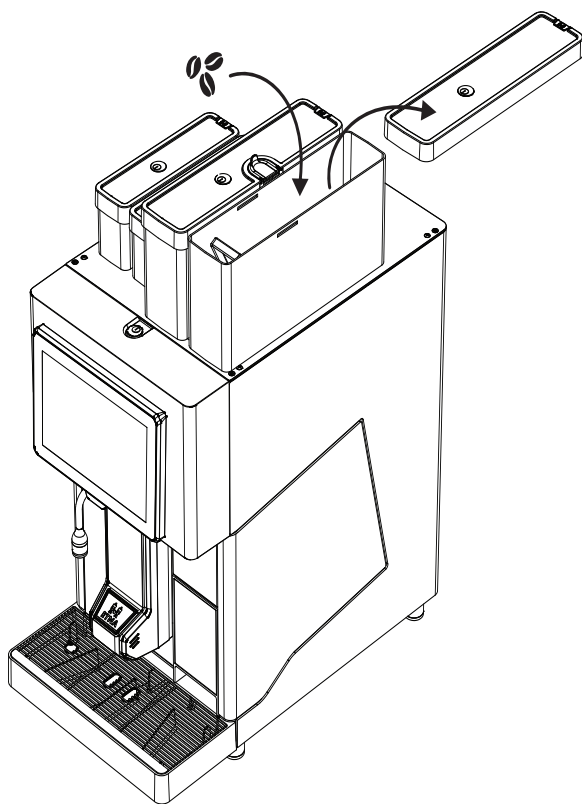


Figure 3-4

1. Remove the bean container lid (open the optional lock).
2. Fill the bean container with beans. The bean container can hold approx. 1 kg (2.2 lbs) of beans.
3. Put the lid back on the bean container (and lock it with the key).

4 MAINTENANCE AND CLEANING

Precise maintenance and especially careful cleaning are basic prerequisites for good product quality and problem-free operation.

This appliance is designed so that the owner or licensee can thoroughly clean and maintain it relatively quickly.



Read paragraph 4.1 before carrying out any maintenance on the appliance. For reasons of safety, hygiene, and to prolong the machine's lifespan, the maintenance activities described here may only be performed by authorised, trained users..

4.1 Safety instructions – maintenance and cleaning

- Please also see paragraph 1.3.
- Carry out the procedures in accordance with the hygiene rules.
- Machine repairs must be carried out by trained service technicians.
- Only trained service technicians with a thorough knowledge of electrical engineering can perform services of the electrical system.



Scald warning: the parts inside the machine may be very hot.

- Do not use the machine until all removed parts have been correctly reinstalled, you have cleaned the machine or completed its maintenance.

Then inspect the inside of the machine:

- The dispenser pipes must be directed towards the centre of the cup.
- The ingredient containers must be in their proper place.
- The mixer parts must be correctly positioned.
- The waste bucket must be in place (where applicable).
- The brewing unit must be correctly positioned (where applicable).

4.2 Perishable ingredients



There is an expiry date on the ingredients, so take into account the following:

- Always observe the expiry date on the packaging.
- Do not use ingredients that are approaching the expiry date.
- Replace any ingredients that have expired.
- Do not use any opened ingredients after the indicated expiry date.
- Only use the cleaning agents listed in the daily and weekly cleaning schedule, and follow the instructions on the packaging.

4.3 Service panel

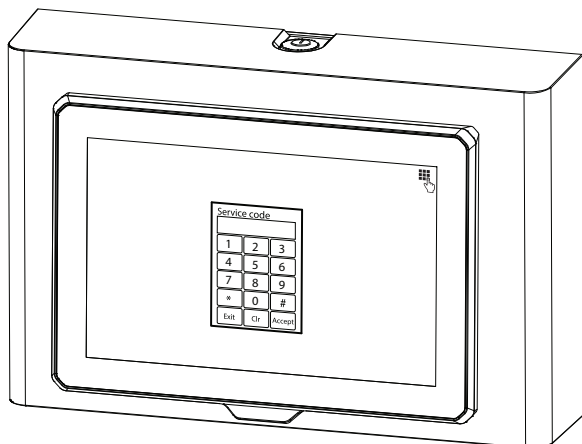


Figure 4-1

Depending on the machine setting, the service panel can be accessed by pressing the button in the top right corner of the back of the control display or by using the short cut in the top right corner of the screen.

You can perform the following actions on the service panel:

Button	Function
00	Rinse mixers
01	Clean valves + rinse mixers and brewer + reset waste bucket
02	Clean brewer with cleaning agent
03	Rinse brewer
04	Position brewer
05	Free/paid dispensing
06	Reset waste bucket
07	Read counters
09	Reset water filter
10	Change dispenser lighting

4.4 Maintenance

The quality of the drinks can only be guaranteed if the appliance is maintained regularly. A number of essential parts of the appliance are very sensitive to dirt. When in use, this appliance requires both daily and weekly maintenance.



Wash your hands before continuing with the following procedures.

4.5 Daily maintenance

Do the following every day:

- Check the contents of the ingredient containers and top them up as needed.
- Clean and empty the waste bucket.
- Clean and empty the drip tray.
- Rinse the mixers and brewing unit.
- Clean the machine's exterior including the user control panel.

Note the following during cleaning:

- Clean the machine and parts with a clean, damp cloth or paper tissue.
- Replace cleaned parts in the machine straight away.
- Clean the machine more often than stated if necessary. Frequent use requires more frequent cleaning.

4.5.1 Check ingredient containers

1. Open the door of the machine.
2. Check whether the ingredient containers still contain enough ingredients.
3. Fill the containers as described in paragraph 3.1 if necessary.
4. Close the door of the machine.

4.5.2 Empty and clean the waste bucket

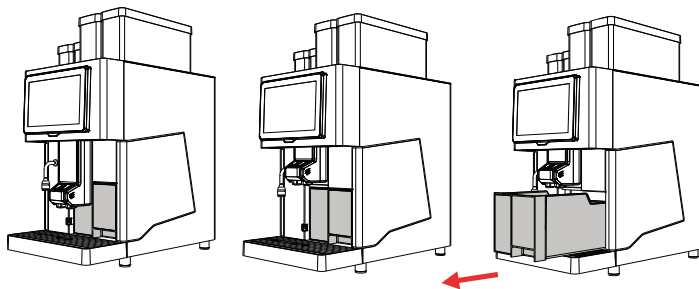


Figure 4-2



Take care that your fingers do not become trapped when removing or replacing the waste bucket.



The waste bucket is not dishwasher safe.



The machine can't be used or cleaned when the waste bucket has been removed.

1. Set the hot drinks dispenser in the top position.
2. Remove the waste bucket on the bottom right and empty it.
3. Clean the waste bucket.
4. Put the waste bucket back in the machine.
5. Reset the waste bucket counter on the service panel, see paragraph 4.3

4.5.3 Clean the drip tray



The drip tray is not dishwasher safe.

If the drip tray has a drain hose, it is recommended to clean it when fitted.

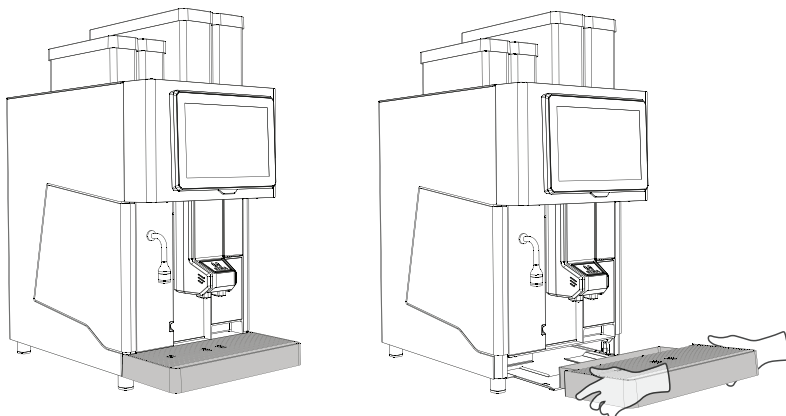


Figure 4-3

1. Remove the drip tray.
2. Clean the drip tray and put it back.

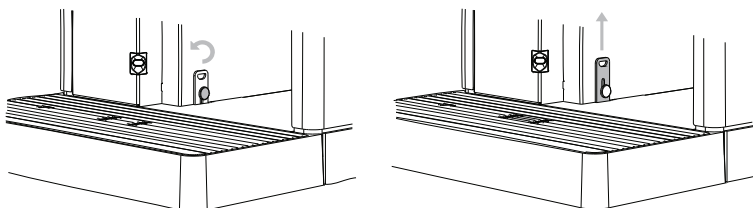


Figure 4-4

The drip tray with drain hose is locked. Once you have removed the waste bucket, you can see the locking mechanism. Loosen the screw slightly and raise the locking strip. Pull the drip tray backwards and remove the drain hose.

Do not forget to connect the drain hose during reassembly.

4.5.4 Clean mixers and brewing unit



When rinsing the machine, the water is very hot and can scald you.



Please note: make sure that the jug or cup is big enough to collect the rinsing water. It must be able to contain at least 1.5 litres.

Rinsing the mixers:

1. Open the door or the control display of the machine.
2. Insert the service key.
3. Place a jug or cup with a volume of at least 1.5 litres under the dispenser holder.
4. Rinse the mixers using the service panel, enter *00*: Rinse mixers.
5. Remove and empty the jug or cup.
6. Remove the service key.
7. Close the door or the control display of the machine.

Rinse the brewing unit:

1. Open the door or the control display of the machine.
2. Insert the service key.
3. Place a jug or cup with a volume of at least 1.5 litres under the dispenser holder.
4. Rinse the brewing unit using the service panel, enter *03*: "Rinse brewer".
5. Clean and reset the waste bucket, see paragraph 4.5.2.
6. Remove and empty the jug or cup.
7. Remove the service key.
8. Close the door or the control display of the machine.

Combined feature for rinsing the mixers and brewing unit:

1. Open the door or the control display of the machine.
2. Insert the service key.
3. Place a jug or cup with a volume of at least 1.5 litres under the dispenser holder.
4. Rinse the mixers and brewing unit using the service panel, enter *01*: "Clean valves + rinse mixers and brewer + reset waste bucket".
5. Clean and reset the waste bucket, see paragraph 4.5.2.
6. Remove and empty the jug or cup.
7. Remove the service key.
8. Close the door or the control display of the machine.

4.5.5 Cleaning the exterior

Clean the outside of the machine with a clean, damp cloth or paper tissue. Pay particular attention to:

- The user control panel
- The hot drinks dispenser area
- The bottom of the door

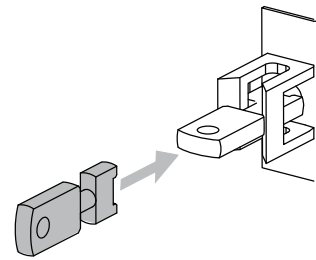


Figure 4-5

4.6 Weekly maintenance

Do the following every week:

- Clean the mixer parts.
- Clean the extraction chamber beneath the containers.
- Clean the brewing unit automatically.
- Clean the brewing unit manually.

Note the following during cleaning:

- Clean the machine and parts with a clean, damp cloth or paper tissue.
- Replace cleaned parts in the machine straight away.
- Clean the machine more often than stated if necessary. Frequent use requires more frequent cleaning.

4.6.1 Clean the mixer parts and ventilation chamber

Clean the following parts:

- Extraction cover (A)
- Mixing chambers (B)
- Drip tray (D)
- Mixer blades (E)
- Hoses
- Ventilation chamber



Take care not to scratch the mixing chamber when cleaning it.

1. Open the machine's control display (optional lock), see Figure 2.2.
2. Remove the closed ingredient containers from the machine. Store them in a clean, dry place.
3. Remove the ventilation chamber on which the containers rest when in the machine.
4. Remove the hose from the mixing chamber.
5. Remove the dispenser pipes from the dispenser holder.
6. Unlock the mixing chamber (B) by pulling the green catch (C) on its underside forward.
7. Remove the mixing chamber (B) from the machine by pulling it straight towards you (E).
8. Remove extraction cover (A) from the mixing chamber (B).
9. Use the tool to remove the mixer blade (E) from the motor shaft. Place the tool between the mixer blade (E) and motor shaft (1). Carefully move the tool forward until it clicks (2). Then remove the mixer blade by hand (3).
10. Clean and thoroughly dry all parts.
11. Clean the area in the machine immediately around the mixers with a clean, damp cloth.

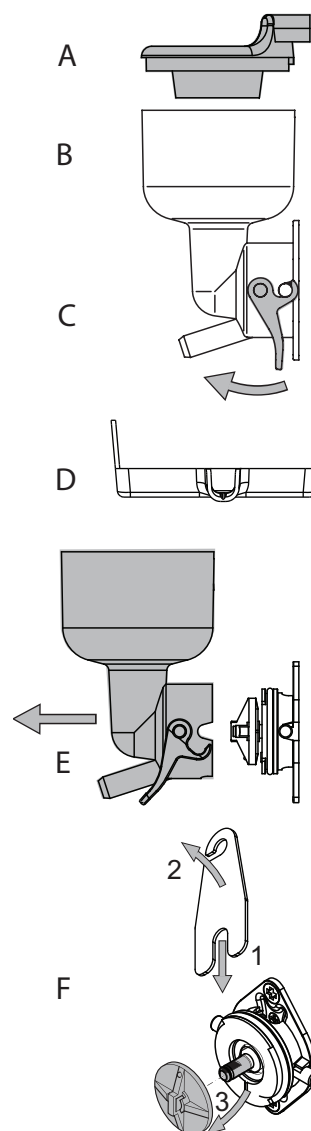


Figure 4-6

12. Put the mixer blade (E) back until it clicks. Ensure the marker on the mixer blade is aligned with the flat part of the motor shaft.
13. Replace the mixing chamber (B) and extraction cover (A) and connect the hose.



The mixing chamber must be well-secured to prevent leaks. Ensure the green bracket is firmly in place.

14. Replace the ventilation chamber.
15. Replace the ingredient containers in the correct position in the machine (check the labels on the ingredient containers and in the machine).

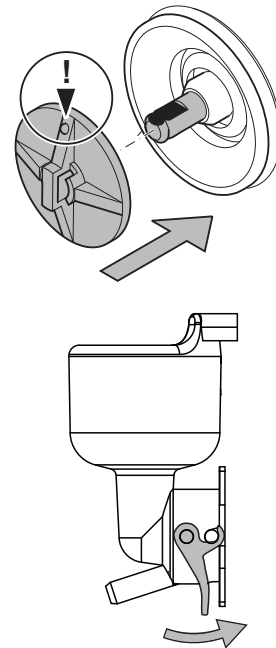


Figure 4-7

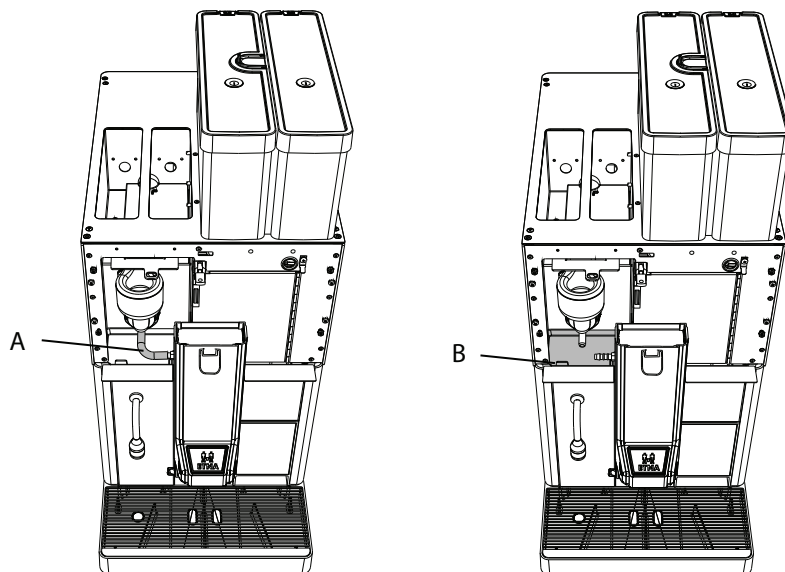


Figure 4-8

16. Remove the moulded hose, (see figure 4-8) (A).
17. Pull the tab of the drip tray up, (see figure 4-8) (B).
18. Clean the moulded hose and drip tray. Put them back.
19. Rinse the mixers using the service panel, see paragraph 4.5.4.
20. Check the system for leaks.
21. Close the control display.

4.6.2 Clean the brewing unit automatically



Only use the cleaning agent recommended by © ETNA Coffee Equipment b.v.

Using other cleaning agents may create problems.



Please note: make sure that the jug or cup is big enough to collect the rinsing water. It must be able to contain at least 1.5 litres.



Please note: when simultaneously cleaning the brewing unit and the Milkbase, make sure that the jug or cup is big enough to collect the rinsing water: it must be able to contain at least 2.5 litres.

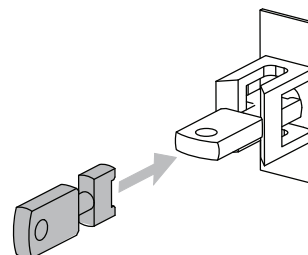


Figure 4-9

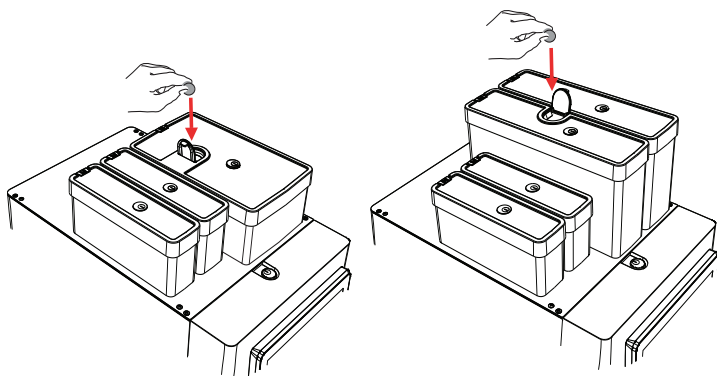


Figure 4-10

1. Open the machine's control display.
2. Insert the service key.
3. Empty the waste bucket and replace it in the machine.
4. Place a jug or cup with a volume of at least 1.5 litres under the dispenser holder.
5. To clean the brewing unit using the service panel, press the button below the USB connection and enter *02*: Clean brewer using cleaning agent.
6. Wait until the user control panel shows the message "Add cleaning agent".
7. Place the cleaning agent in the open inlet opening of the (left) bean container, (see figure 4-10).
8. Operate the user display to resume the cleaning process.
9. Wait until the cleaning process is complete.
10. Remove and empty the jug or cup.
11. Empty the waste bucket and put it back in the machine.
12. Remove the service key.
13. Close the machine's control display.

If you are cleaning a connected Milkbase at the same time, first perform steps 1 to 3 as described above. A jug or cup of at least 2.5 litres must be placed under the coffee machine's bracket before step 4. First start the Milkbase cleaning process. (This takes longer than the coffee machine cleaning process.) Then perform steps 5 to 9. Steps 10 to 13 can be done when the Milkbase has been cleaned.

4.6.3 Cleaning the brewing unit manually



Take care your fingers don't get caught.



Figure 4-11

The brewing unit must be cleaned weekly.

1. Open the machine's control display.
2. Insert the service key.
3. Open the brewing unit cover.
4. Open the brewing unit using the service panel, enter *04*: Position brewer.

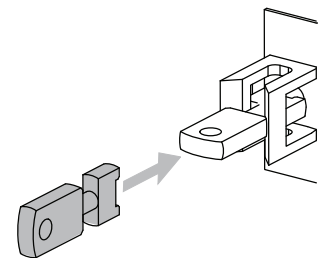
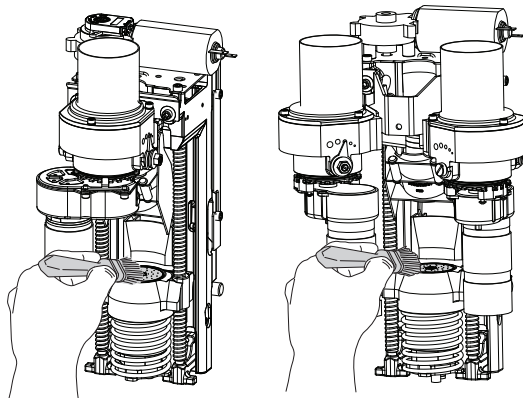


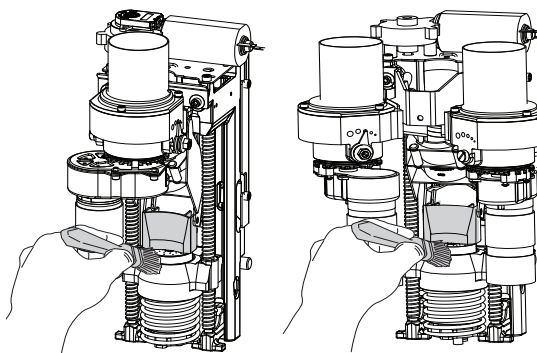
Figure 4-12



1 * 0 4 *

Figure 4-13

5. Thoroughly clean the extractor (piston) using a brush.



2 *

Figure 4-14

6. Press any button on the control display and the brewing unit position will change. Now clean the ejector thoroughly with a brush.

7. Press any button on the service panel again and the brewing unit position will change.

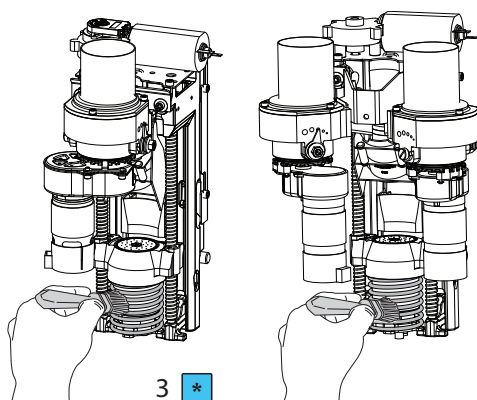


Figure 4-15

8. Clean the spring thoroughly with the brush.
9. Rinse the brewing unit, see paragraph 4.5.4.
10. Remove the service key.
11. Close the brewing unit cover.
12. Close the machine's control display.

4.6.4 Cleaning the bean container



Once the bean container is removed, the grinder's moving parts are switched off.



The bean container must not be cleaned while it is in place on the machine.



Only roasted, dry coffee beans may be placed in the bean container.

1. Remove the bean container lid (using the key), (see figure 4-16) (1).
2. Unlock the bean container by pushing the handle backwards, (see figure 4-16) (2).
3. Remove the bean container (see figure 4-16) (3).
4. Empty the bean container.
5. Clean the bean container and rinse it with clean water.
6. Dry the bean container thoroughly.
7. Put the bean container in the machine.
8. Pull the handle forward to lock the bean container.
9. Fill the bean container with coffee beans. The bean container can hold approx. 1 kg (2.2 lbs) of beans.
10. Put the lid back on the bean container (and lock it with the key).

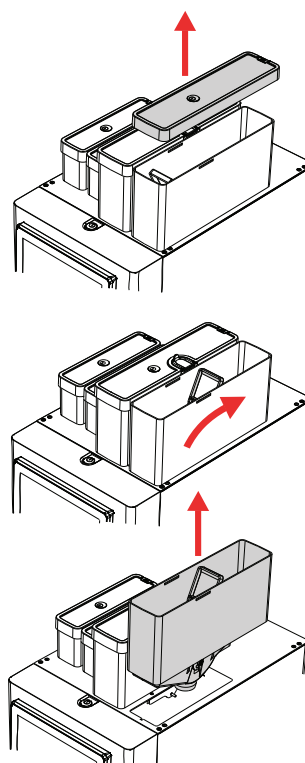
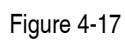


Figure 4-16

The labels offering a summary of maintenance activities to be carried out can be found inside the machine.



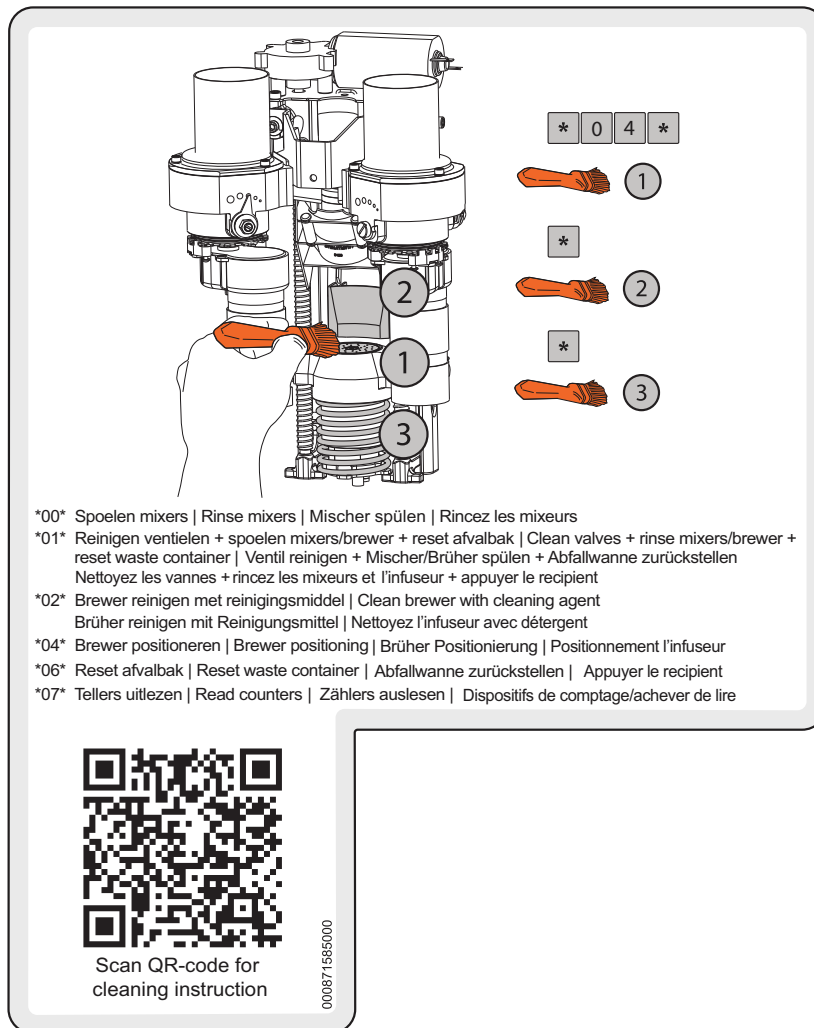


Figure 4-18

5 TROUBLESHOOTING

5.1 User control and service panels

The user control panel also displays the machine's status and error messages.

The service panel can be used to clean and programme the machine.

5.1.1 Error messages

Despite all of the preventive measures, the machine may malfunction. If this happens, an error message will be displayed. The table shows a number of applicable potential error messages along with their causes and solutions.

Error message	Code	Possible causes	solution
Heating water	16	The water temperature in the water heater is too low	Wait until the water heater has warmed up
No water in brewing unit	33	Brewing unit water supply not present	Check the machine water supply (valve)
Water heater filling	48	The water heater is filling with water	Wait until the water heater has been filled
No water	49	The water level in the water heater is too low	Check the machine water supply (valve)
Check drip tray	51	Drip tray is full of water, drip tray is not in place	Empty drip tray, insert drip tray
Machine not secured	52	Door is open, waste bucket not present, bean container not present	Close door or insert yellow key, insert waste bucket, insert bean container
Add cleaning agent	56	Cleaning cycle has been started	Add cleaning agent and press a button to continue
Machine in energy-saving mode	64	Energy-saving mode has been activated	Press a button to temporarily move the machine out of energy saving mode.
Initialising	65	The machine is initialising	Wait until the machine is initialised
Machine is not safe	192	No containers or service key not inserted	Insert containers, close display or insert service key
Drip tray is not ready	193	Drip tray bucket is full	Insert or empty drip tray
Waste bucket counter has been reset	208	Waste bucket counter has been reset by rinsing or cleaning, or manually	Check whether the waste bucket has been emptied
Waste bucket is full	225	The waste bucket counter has reached its maximum	Empty the waste bucket and reset the message
Water filter expired	226	Water filter lifespan has expired	Please contact your supplier to have the water filter replaced
Clean brewing unit	227	The brewing unit requires cleaning	Clean the machine with cleaning agent *02*

Error message	Code	Possible causes	solution
Rinse machine	228	The machine requires rinsing	Rinse the machine *01*
Other malfunctions or error messages		If you have any questions or problems,	please contact your supplier.

5.1.2 Service panel in programming mode

When the user is using programming mode, the following functions are available on the user control panel:

Smart Touch	Function
	Navigate through the menu or to increase or decrease values.
	Navigates backward through the menu and cancels the value entered.
	Confirms the selected value.

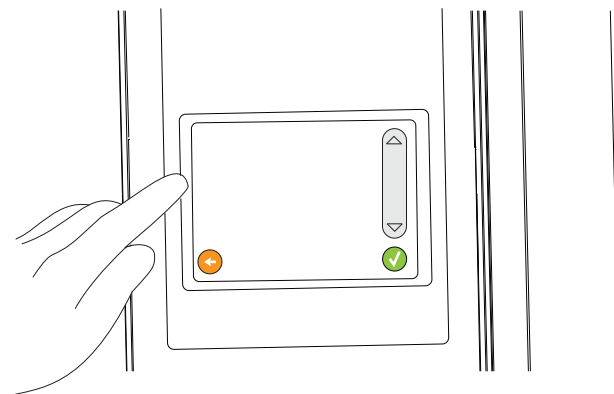


Figure 5-1

5.1.3 User menu (Operator)

Use the service panel inside the machine to enter the PIN code.

The standard PIN code for the user menu is **#4321#**.

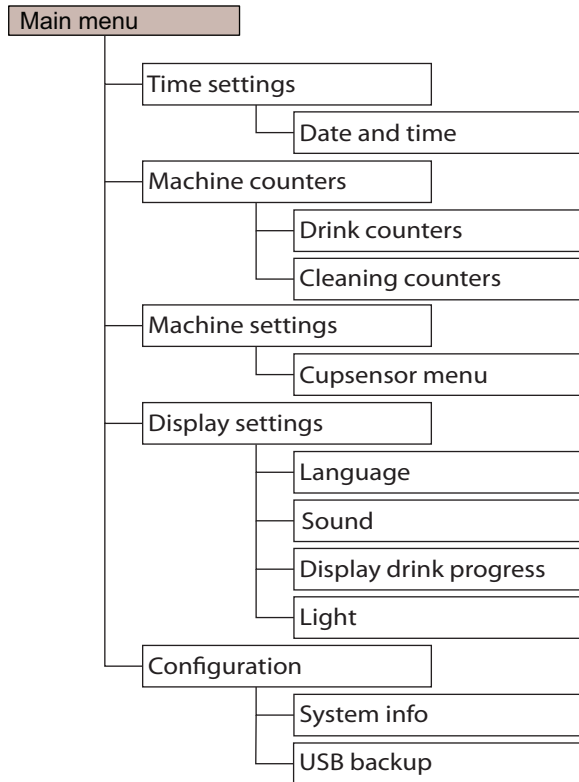


Figure 5-2

5.1.4 Service code

The following service codes for quick access to the machine's functionality, if applicable to the machine.

Table 5-1 Service codes during machine start-up

Function	Code	Machine(s)
Update display firmware	Press #	Bootloader v1.3 or higher
Update display firmware	Press # and 7	All

Table 5-2 Service codes after machine start-up

Function	Code	Machine(s)
Rinse machine	*00*	All
Rinse machine + reset waste bucket	*01*	All
Clean machine	*02*	Freshbrew, Espresso, Sagitta
Clean brewing unit	*03*	Freshbrew, Espresso, Sagitta

Function	Code	Machine(s)
Position brewing unit	*04*	Freshbrew, Espresso, Sagitta
Switch the payment system on/off	*05*	All
Reset waste bucket counter	*06*	Freshbrew, Espresso, Sagitta
View day counters	*07*	All
Fill liquid pump	*08*	Liquid
Change colour of dispenser lighting	*10*	All
Change colour of capacitive buttons	*11*	Capacitive touch key
Clean/empty grinder	*20*	Espresso and Sagitta
Erase day counter readings	*21*	All
Skip heating	*22*	Freshbrew and Instant
Language to English (until reset)	*23*	All
Show machine information	*27*	All
Show connected MDB devices	*29*	All
Fill water heater	*30*	Espresso and Sagitta
Empty water heater	*31*	Espresso and Sagitta
Show current temperature	*51*	All
Show current water flow	*52*	Espresso and Sagitta
Show current water reservoir level	*53*	Internal water tank
View counter total	*57*	All
Copy recipes to USB	*73*	All
Copy recipes from USB	*74*	All
Copy settings to USB	*75*	All
Copy settings from USB	*76*	All
Copy counter readings to USB	*77*	All
Copy diagnostics to USB	*78*	All
Access service menu	#4231#	All
Access operator menu	#4321#	All
Reset all system counters	#8100#	All
Functional test screen	#8121#	All from software v2.00 upwards
Take screenshot	#8129#	Smart Touch (USB)
Create dealer settings	#8173#	All

Function	Code	Machine(s)
Reset dealer settings	#8174#	All
Factory reset	#8176#	All

5.2 Service menu diagram

Main menu	
–	Time settings
–	Drink settings
–	Machine counters
–	Machine settings
–	Display settings
–	Configuration

- 1 Time settings, see paragraph 7.4.
- 2 Drink settings, see paragraph 7.5.
- 3 Machine counters, see paragraph 7.6.
- 4 Machine settings, see paragraph 7.7.
- 5 Screen settings, see paragraph 7.8.
- 6 Software settings, see paragraph 7.9.

5.3 Circuit diagram

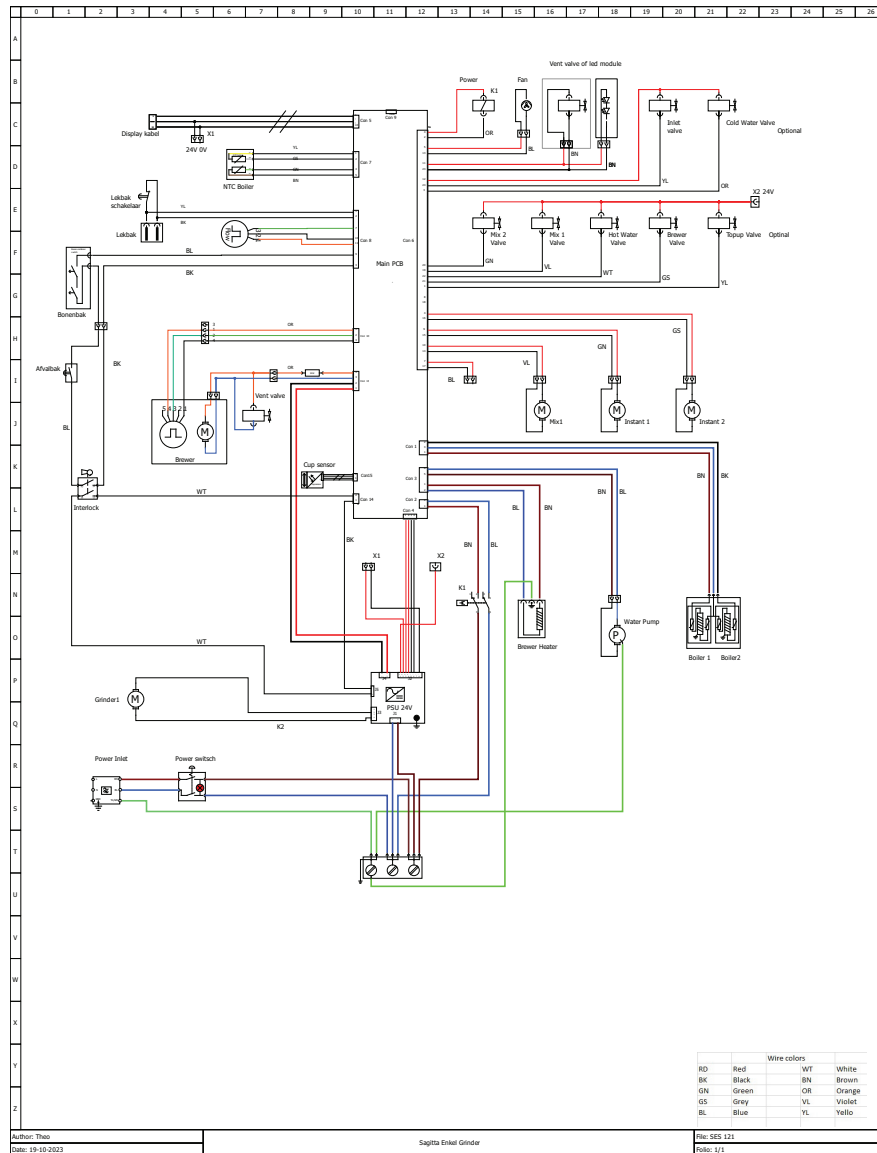
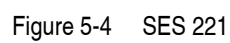


Figure 5-3 SES 121



5.4 Water flow diagram

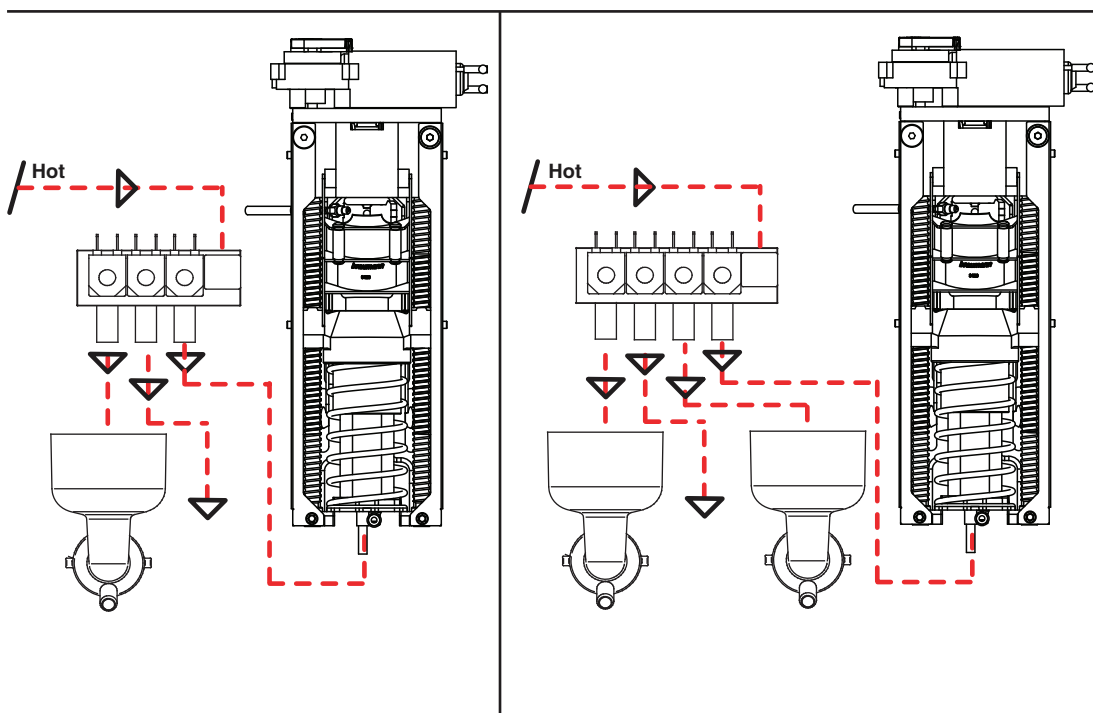
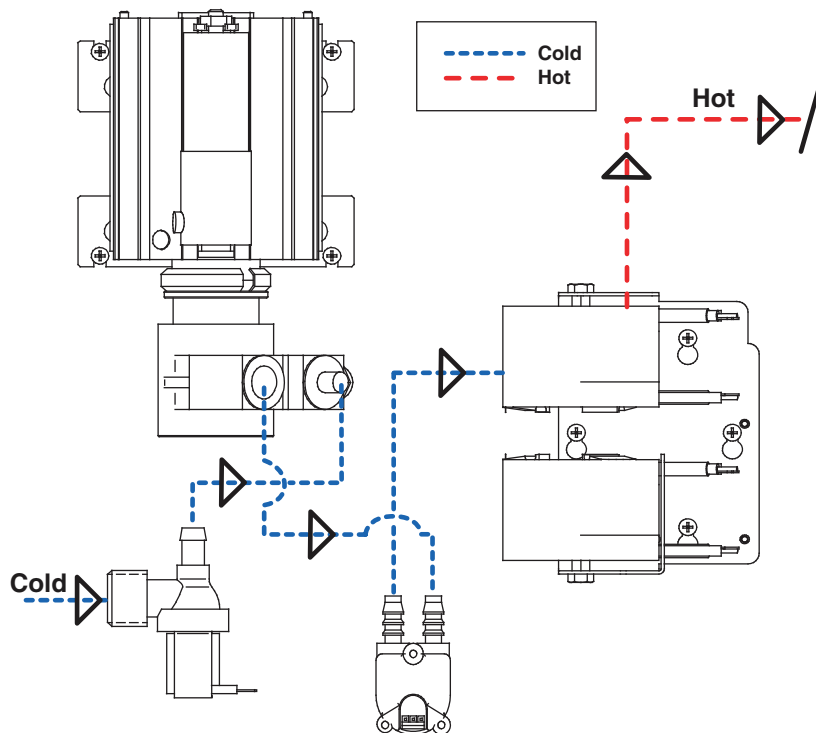


Figure 5-5

6 TECHNICAL SPECIFICATIONS

6.1 Electrical system



For the correct configuration of the machine, consult the name plate, see paragraph .

Description	Value
Voltage	230 V
Frequency	50 Hz
Power consumption	2.55 kW

This device has an earth connection for functional purposes only.

6.2 Water supply system

Description	Value
Water connection	G 3/4 inch – outer ring
Minimum water pressure	1.5 bar (0.15 MPa)
Allowable maximum operating pressure	8 bar (0.80 MPa) ¹

1. If the pressure is higher, you must install a pressure reducer.

6.3 Acoustic noise level

Description	Value
In operation	max. 70 dB(A)



Measurements according to DIN 45635, during normal use.

6.4 Environmental conditions

Description	Value
Ambient temperature	5–40°C



Never put the machine in a room where temperatures may fall below 0°C, as this will freeze the water.

6.5 Dimensions and weight

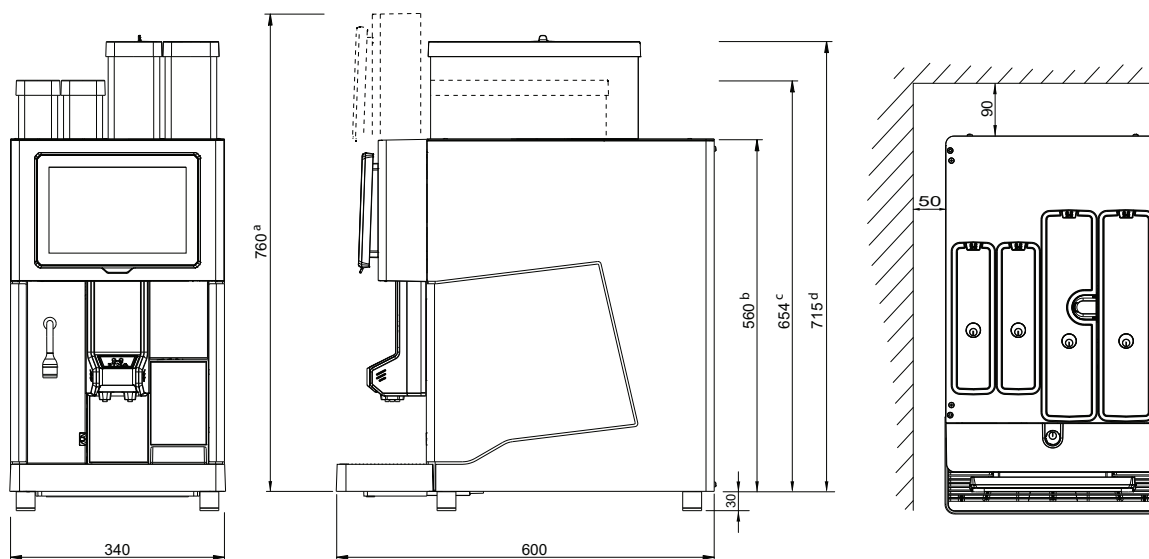


Figure 6-1

Description	Value
Height ^a	760 mm (with display up)
Height ^b	560 mm (without containers)
Height ^c	654 mm (with single bean container)
Height ^d	715 mm (with double bean containers)
Height	30 mm (feet)
Width	370 mm
Depth	600 mm
Weight when empty	45 kg

7 SOFTWARE

7.1 Software update

The machine software can be found under the dealer login and depends on the type and version. Check the machine's type and version on the identification plate, see paragraph .

- 1 Format the USB stick correctly:

File system: **FAT32**

Cluster size: **4096 bytes**

- 2 Put the update files in the root folder of the USB stick.
- 3 Insert the USB stick into the machine's USB port.



Optional: Copy the drink and machine settings to keep them or transfer them to another machine (same type and version), see paragraph 7.2.

- 4 Switch off the machine.
- 5 Press and hold the black button next to the USB port and switch on the machine. Release the black button as soon as a horizontal bar appears on the screen.



The software update can also be started from the service menu, see paragraph.

7.9

- 6 The message "Firmware updated" appears after the horizontal bar has completed its cycle for the 2nd time. Press and hold the black button on the service panel for 5 seconds to complete the update.

If the message "Firmware updated" doesn't appear, press *72* on the service panel and follow the instructions.

- 7 Check that the words "Completed successfully" appear on the screen. Complete the installation by pressing the black button on the service panel.
- 8 Check that the software is installed correctly by checking the version. Press *27* on the service panel and check the software version and update files.



Optional: Restore the drink and machine settings created previously, see paragraph 7.2.

- 9 Switch off the machine, wait 5 seconds and switch the machine on again.
- 10 Test that the machine is working correctly.
- 11 Remove the USB stick from the machine. The machine is ready for use.

7.2 Copy recipes and settings to and from machine

It is possible to copy active recipes and machine independent settings to a USB stick. You can do this to restore the changed settings after a software update or to copy them to another machine (same type and version).



It is not possible to copy recipes and settings from software versions 0.18 or lower to software versions 0.19 or higher. These will have to be transferred manually.

Copy machine recipes and settings:

- 1 Format the USB stick correctly:

File system: **FAT32**

Cluster size: **4096 bytes**

- 2 Insert the USB stick into the machine's USB port.
- 3 To copy **recipes**, press *73* on the service panel. Depending on the machine setting, the service panel can be accessed by pressing the button in the top right corner of the back of the control display or by using the short cut in the top right corner of the screen. Follow the instructions displayed on the screen.
- 4 To copy **settings**, press *75* on the service panel. Depending on the machine setting, the service panel can be accessed by pressing the button in the top right corner of the back of the control display or by using the short cut in the top right corner of the screen. Follow the instructions displayed on the screen.



You can also copy recipes and settings from the service menu, see paragraph 7.9.



Document the calibration value and water heater capacities before a software update, see paragraph 7.7.

Document the counter readings and cleaning overview if you wish. These are lost during a software update in machines without an active EEPROM.

- 5 Remove the USB stick from the machine or continue with the software update, see paragraph 7.1.

Copy recipes and settings to machine:

- 1 Insert the USB stick with the copied recipes and settings into the machine's USB port.
- 2 To copy **recipes**, press *74* on the service panel. Depending on the machine setting, the service panel can be accessed by pressing the button in the top right corner of the back of the control display or by using the short cut in the top right corner of the screen. Follow the instructions displayed on the screen.
- 3 To copy **settings**, press *76* on the service panel. Depending on the machine setting, the service panel can be accessed by pressing the button in the top right corner of the back of the control display or by using the short cut in the top right corner of the screen. Follow the instructions displayed on the screen.



You can also copy recipes and settings from the service menu, see paragraph 7.9.



Check the calibration value and water heater capacities and adjust if necessary, see paragraph 7.7.

- 4 Remove the USB stick from the machine or continue with the software update, see paragraph 7.1.

7.3 Demo mode

If you activate demo mode, the machine will not need water and will simulate drink preparations. The machine will not operate its moving parts and the water heater will not heat up.

To activate demo mode:

- 1 Navigate to software in the service menu, see paragraph 7.9.
- 2 Go to demo mode and turn it on.
- 3 Restart the machine.

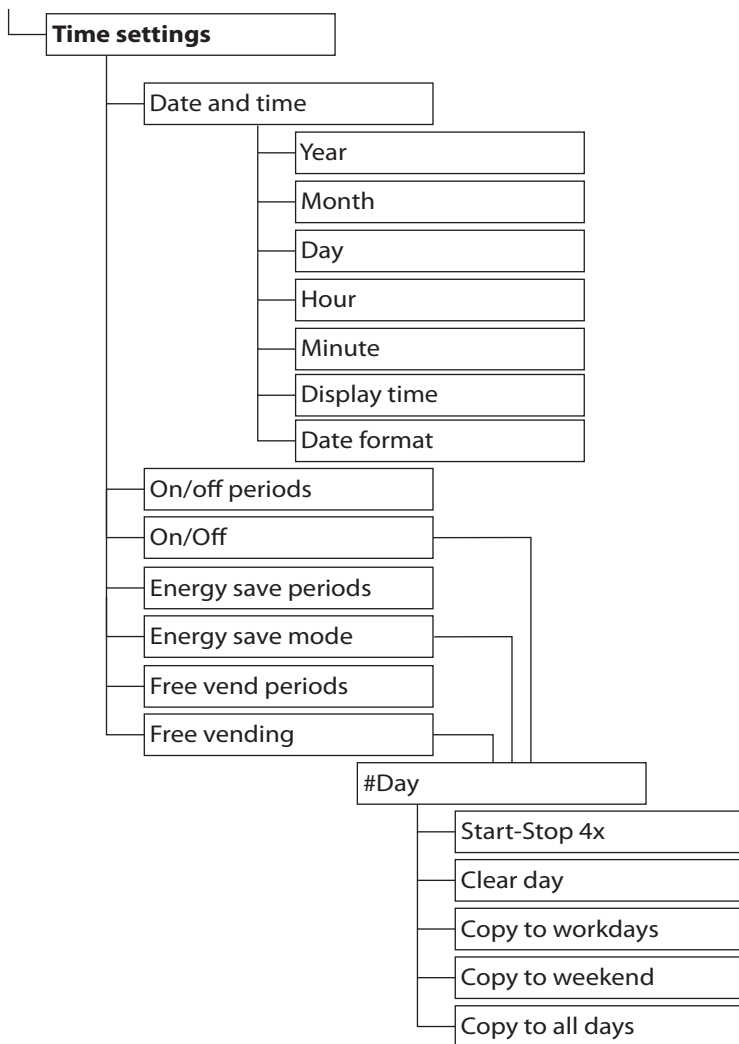


When the machine is switched ON, the display shows a message when demo mode is active.

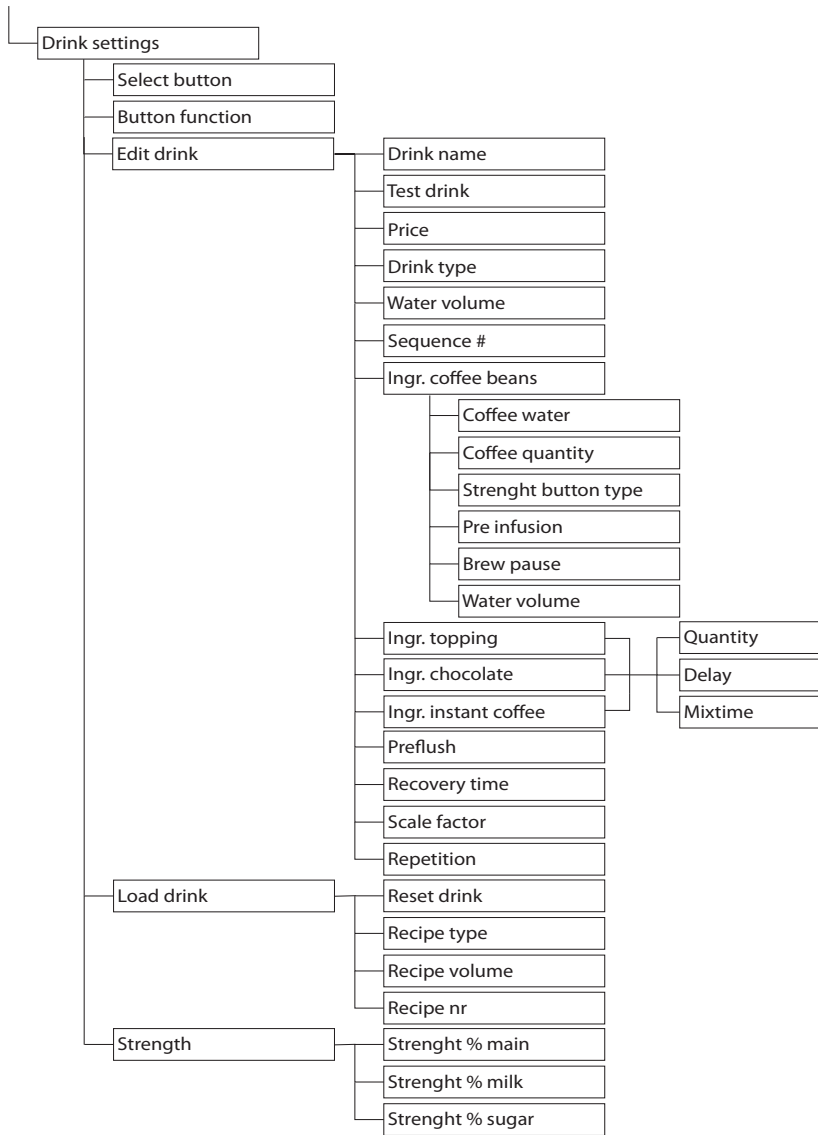
To deactivate demo mode:

- 1 Navigate to software in the service menu, see paragraph 7.9.
- 2 Go to demo mode and turn it off.
- 3 Restart the machine.

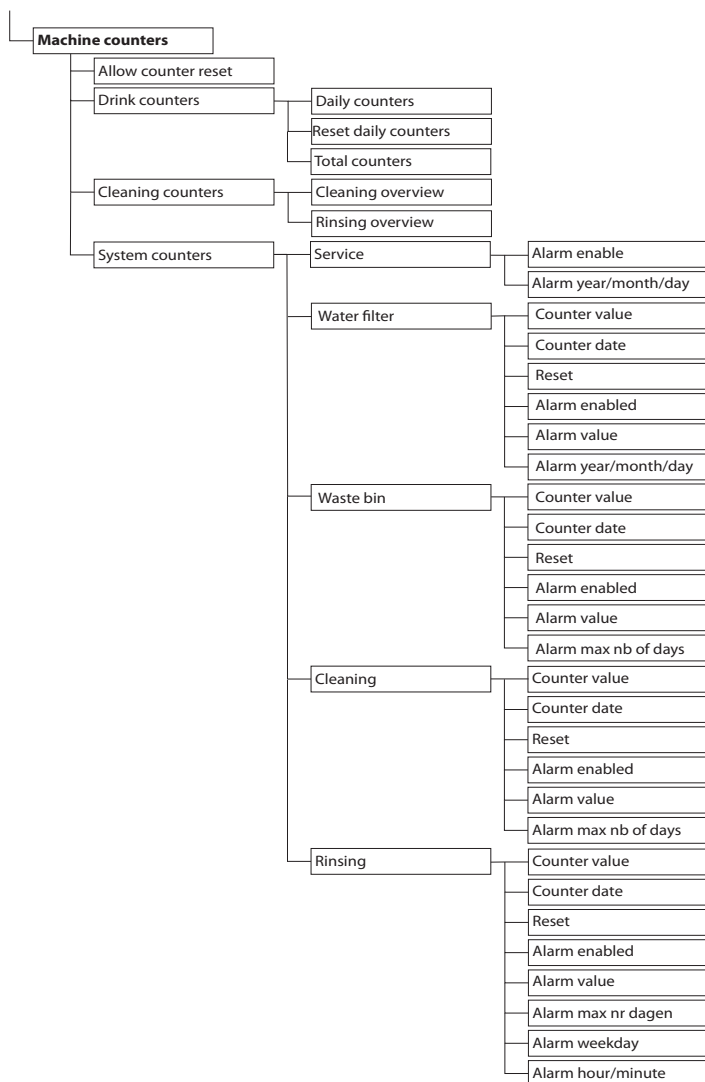
7.4 Time settings



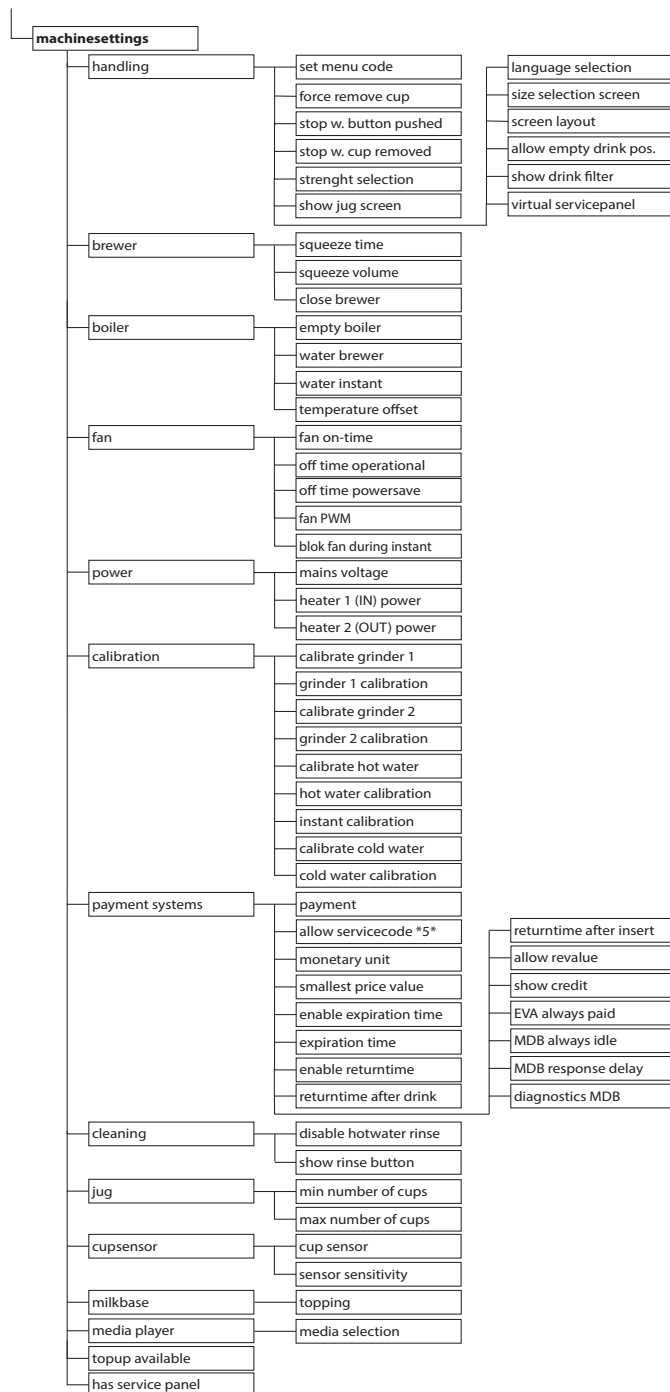
7.5 Drink settings



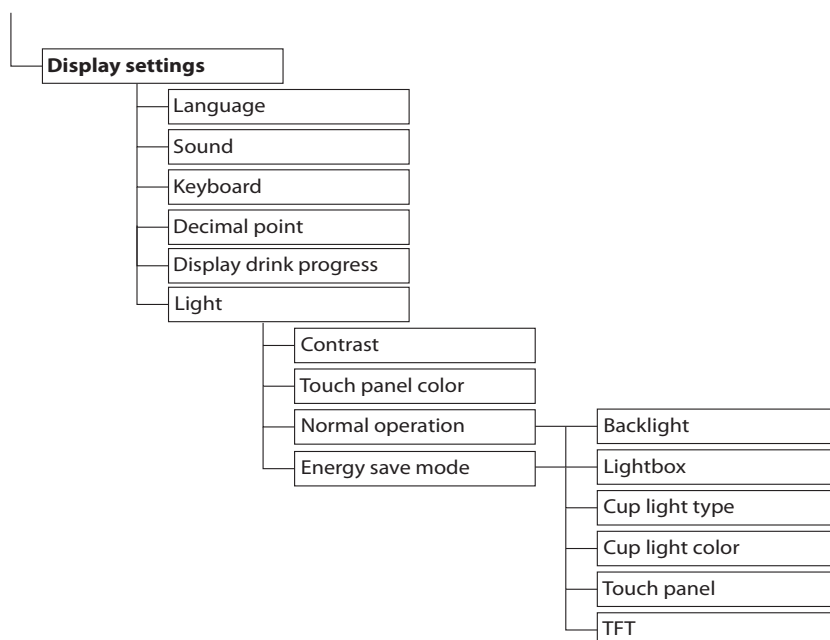
7.6 Machine counters



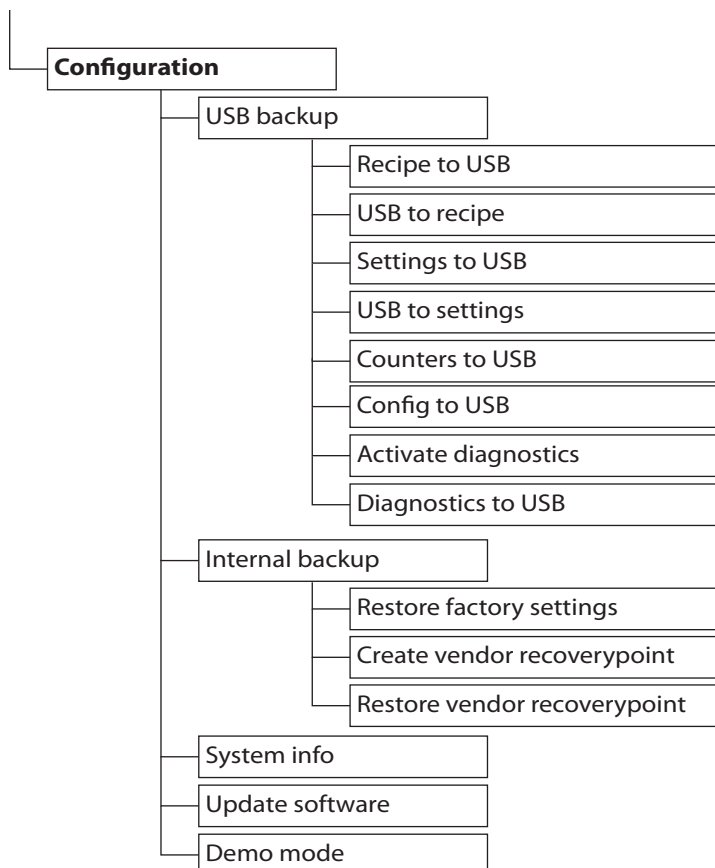
7.7 Machine settings



7.8 Display settings



7.9 Software settings



7.10 Machine calibration



To calibrate the machine, you need the following:

- 0.5 l cup/jug
- Scales with an accuracy of 0.1 g
- Calibration tool to collect ground coffee

- 1 Open the control panel upwards.
- 2 Use the service key (if present).
- 3 Open the door.
- 4 Remove the container's dispenser nozzle.
- 5 Place the calibration tool under the dispenser.
- 6 Go to Machine settings.
- 7 On the service panel, press **#4231#** to go to the Service menu.

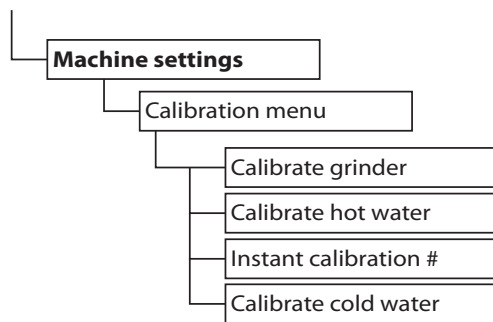


Figure 7-1

- 8 Go to the calibration menu, press ENTER.
- 9 Go through the following steps:

Calibrate grinder

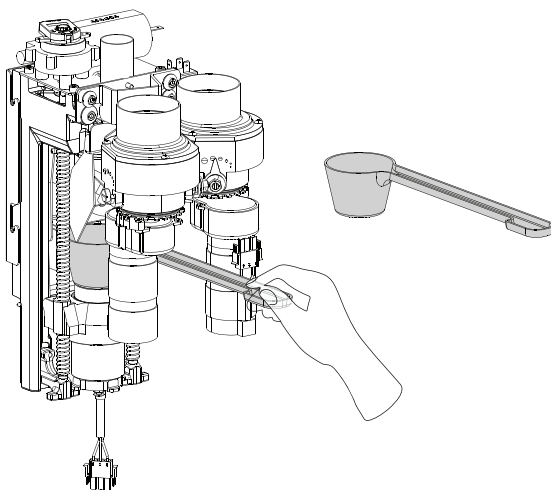


Figure 7-2

- Select “calibrate grinder”, press ENTER, select yes and press ENTER. The brewing unit goes to the lowest position to make room to position the calibration tool and collect the ground coffee.
- Hold the scoop firmly under the coffee guide.
- Display shows “calibrate grinder”, press a key to continue.
- Check that no coffee falls off the scoop.
- Empty the scoop. The bean grinder is now properly filled.
- Repeat the dispensing procedure twice more.
- Weigh the dispensed amount.
- Divide the weighed amount by 2 to obtain the average value.
- Go to “Grinder calibration” and enter the measured value using the + and – keys, press ENTER.
- Empty the scoop, go back and press ESC 3 times.
- Restart the machine, see par. 9.4.

Calibrate hot water

- Select “calibrate hot water”, press ENTER, select yes and press ENTER.
- Hold the cup/jug under the hot water dispenser.
- Display shows “calibrate hot water”, press a key to continue.
- Empty the cup/jug and repeat the dispensing procedure twice more.
- Weigh the dispensed amount.
- Divide the weighed amount by 2 to obtain the average value.
- Go to “hot water calibration” and enter the measured value using the + and – keys, press ENTER.
- Empty the cup, go back and press ESC 3 times.
- Restart the machine, see par. 9.4.

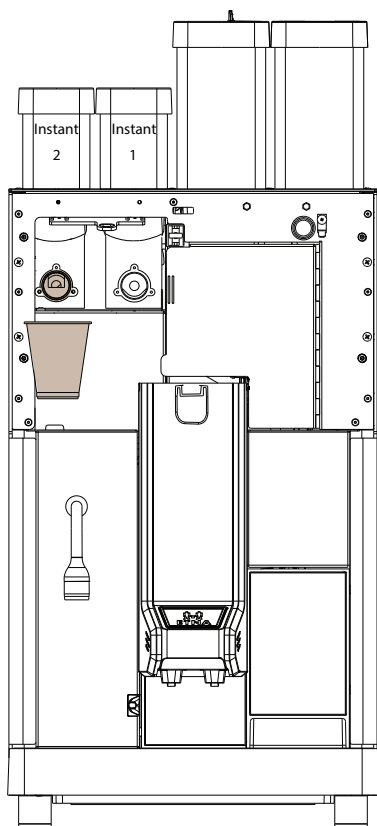


Figure 7-3

Calibrate instant

- Go to instant calibration, press ENTER.
- Select "calibrate instant #", press ENTER, select yes and press ENTER.
- Hold the cup or scoop under the instant dispenser.
- Display shows "calibrate instant #", press a key to continue.
- Empty the cup/jug and repeat the dispensing procedure twice more.
- Weigh the dispensed amount.
- Divide the weighed amount by 2 to obtain the average value.
- Go to 'Instant # calibration' and enter the measured value using the + and – keys, press ENTER.
- Empty the cup, go back and press ESC 3 times.
- Restart the machine, see par. 9.4.

'Optional' Calibrate cold water

- Select "calibrate cold water", press ENTER, select yes and press ENTER.
- Hold the cup/jug under the hot water dispenser.
- Display shows "calibrate cold water", press a key to continue.
- Empty the cup/jug and repeat the dispensing procedure twice more.
- Weigh the dispensed amount.
- Divide the weighed amount by 2 to obtain the average value.
- Go to "cold water calibration" and enter the measured value using the + and – keys, press ENTER.
- Empty the cup, go back and press ESC 3 times.
- Restart the machine, see par. 9.4.

8 Installation

8.1 Connecting the machine

1. Place the machine on a stable and dry surface.
2. Connect the machine to the tap with a water hose that has the correct thread (3/4 inch BSP) and open the tap. Make sure there are no leaks.
3. Electrical safety is only ensured with a properly earthed wall socket as prescribed in the electrical safety regulations.
4. The supplier can't be held responsible if the wall socket does not comply with the specified safety regulations.
If you are in any doubt about the earthing of the wall socket, consult a specialist.
If the plug can't be used with the wall socket, have the wall socket replaced.
5. The machine is now ready for installation. This requires a password. Your supplier will provide this.
6. Close the door.
 - Wait until the software is ready.
 - The ready notification appears on the display.



The supplier is not liable for any damage to the machine in the event of improper and/or incorrect handling.



This device only has functional earthing.

9 REPLACEMENT OF PARTS

9.1 Safety instructions – replacement of parts



Unplug the machine from the wall outlet before repairing or replacing any parts.

- Please also see par. 1.3.
- Technical maintenance and the replacement of parts can only be carried out by a qualified service technician.
- Check the wiring for damage before any repair work starts.
- Do not reuse self-locking materials and hose clamps.
- Clean and dry everything after repair.

9.2 Repairs



Unplug the machine from the wall outlet before carrying out any repairs.

Close the water tap and disconnect the water supply hose, if applicable.

Position the machine so that the left, right and rear sides can be accessed easily.

9.2.1 Access to the machine



Be careful when moving the machine. The machine is heavy, see par. 6.5.

- 1 Read the safety instructions, see par. 1.3.
- 2 Unplug the machine from the wall outlet.

9.2.2 Remove the casing

- 1 Get access to the machine, see par. 9.2.1.
- 2 Remove the drip tray.

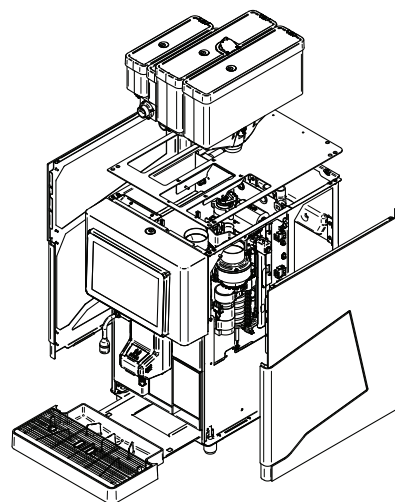


Figure 9-1

Access to the top of the machine:

- 1 Remove the ingredient containers and the bean container(s).
- 2 Remove the four countersunk Phillips screws and remove the top plate.

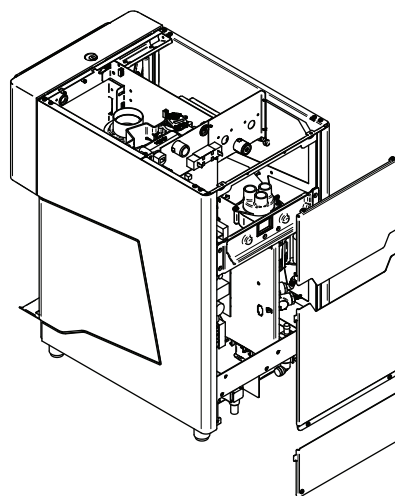


Figure 9-2

Access to the rear of the machine:

- 1 Remove the two screws and lift the upper back plate.
- 2 Remove the two screws from the lower cover plate and move it downwards.
- 3 Remove the two screws from the middle top plate and move it downwards.

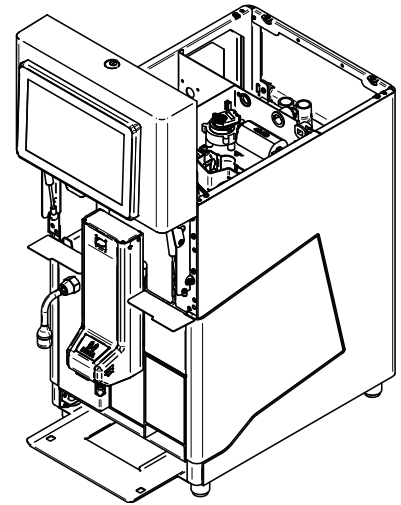


Figure 9-3

Access to the left side of the machine:

- 1 Remove the two Phillips screws from the front of the control display.
- 2 Remove the two Phillips screws at the top.
- 3 Move the side plate down.
- 4 Remove the plate from the left side of the machine.

Access to the right side of the machine

- 1 Remove the two Phillips screws from the front of the control display.
- 2 Remove the two Philips screws at the top.
- 3 Move the side plate down.
- 4 Remove the plate from the right side of the machine.

9.3 Empty or fill water heater

Empty the water heater:

- 1 Close the water supply and insert a cup.
- 2 Go to “empty water heater” in the service menu via “machine settings” and “water heater menu”.

Fill the water heater:

- 1 Open the water supply and insert a cup.
- 2 Go to “fill water heater” in the service menu via “machine settings” and “water heater menu”.

9.4 Restart

- 1 Check that the wiring is connected correctly.
- 2 Check that the hoses and valves are properly connected.
- 3 Put the casing back on the machine.
- 4 Reconnect the water supply hose (if applicable) and open the tap.
- 5 Reconnect the power supply.

Turn on the machine with the on/off switch or insert the service key.

- 6 Perform the daily maintenance, see par. 4.5.
- 7 Close the door.

Wait until the software is ready.

The ready notification appears on the display.

- 8 Check the machine for leaks.
- 9 The machine is now ready for use.

9.5 Replace inlet valve

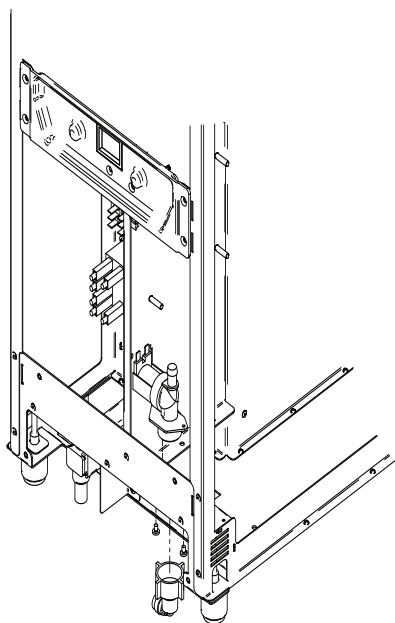


Figure 9-4

- 1 Empty the water heater, see par. 9.3.
- 2 Remove the left casing, see par. 9.2.2.
- 3 Disconnect the wiring from the inlet valve.

- 4 Disconnect the water hoses from the inlet valve.
- 5 Remove the two screws from the inlet valve.
- 6 Replace the inlet valve.
- 7 Connect the water hose to the inlet valve.
- 8 Connect the wiring to the inlet valve.
- 9 Restart the machine, see restart procedure par. 9.4.

9.6 Replace water pump

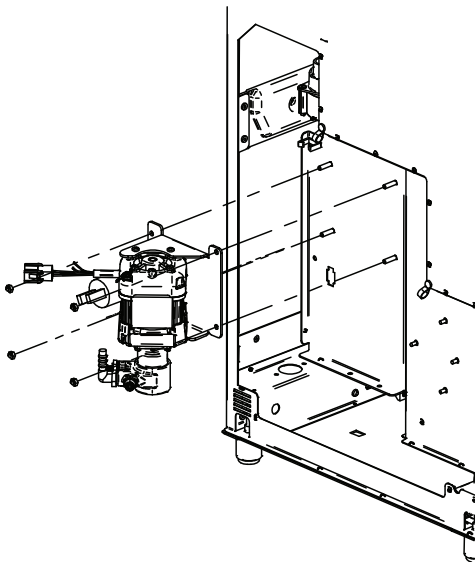


Figure 9-5

- 1 Empty the water heater, see par. 9.3.
- 2 Remove the left casing, see par. 9.2.2.
- 3 Disconnect the wiring from the pump.
- 4 Disconnect the water hoses from pump.
- 5 Disassemble the complete pump system (motor, bracket and pump head) by loosening the four nuts.
- 6 Replace the pump system.
- 7 Connect the water hoses to the pump.
- 8 Connect the wiring to the pump.
- 9 Restart the machine, see par. 9.4.
- 10 Fill the water heater, see par. 9.3.

9.7 Replace flow meter

- 1 Empty the water heater, see par. 9.3.
- 2 Remove the left casing, see par. 9.2.
- 3 Disconnect the wiring from the flow meter.
- 4 Disconnect the water hoses from the flow meter.
- 5 Remove the two screws from the flow meter.
- 6 Replace the flow meter.
- 7 Connect the water hoses to the flow meter.
- 8 Connect the wiring to the flow meter.
- 9 Restart the machine, see restart procedure par. 9.4.

Also complete the filling procedure in par. 9.3.

- 10 Calibrate hot water, see par. 7.10.

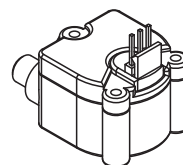


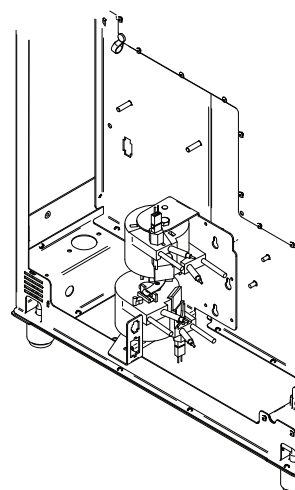
Figure 9-6

9.8 Replace water heater



All water heater parts may be hot. Water from the water heater may also be hot.

- 1 Close the water tap.
- 2 Get access to the machine, see par. 9.2.1 and remove the side plate.
- 3 Empty the water heater, see par. 9.3.
- 4 Disconnect the wiring from the water heating element.
- 5 Remove the water heater's mounting screws.
- 6 Remove the water heater from the machine by pulling it out from the side.
- 7 Replace the water heater and put the machine together again in reverse order.
- 8 Perform the restart procedure, see par.9.4.



9.9 Replace bean grinder

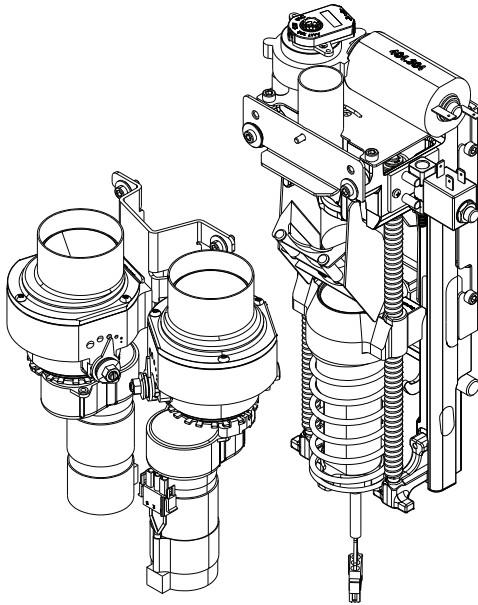


Figure 9-7

- 1 Remove the right casing, see par. 9.2.
- 2 Remove the bean container.
- 3 Disconnect the wiring from the bean grinder.
- 4 Replace the bean grinder.
It is mounted with a screw.
- 5 Connect the wiring to the bean grinder.
- 6 Insert the bean container.
- 7 Restart the machine, see restart procedure par. 9.4.
- 8 Calibrate the bean grinder, see par. 7.10.

9.10 Adjust the grinding discs

The grinding discs of the bean grinder have already been set at the factory.

The setting of the grinding discs can be changed with the pointer (2) on the right side of the bean grinder. Clockwise for fine grinding, counterclockwise for coarse grinding. First loosen the lock nut (1) with a 10 mm spanner.



Always make sure the bean grinder is running when setting the grinding level to fine.

- 1 Get access to the machine, see paragraph 9.2
- 2 Remove the right casing.
- 3 Remove the lock nut (1) with a 10 mm spanner.
- 4 To run the bean grinder, perform a grinder calibration, see paragraph 7.10.
- 5 While the bean grinder is running, turn the pointer (2) clockwise to the fine grinding level. Until a creaking sound is heard when the two grinding discs touch.

If the grinding discs don't touch each other when the pointer (2) is at the finest grinding level, remove the indicator (2) and put it back in the position of the coarsest grinding level. Again while the bean grinder is running, turn the pointer (2) clockwise to the fine grinding level. Until a creaking sound is heard when the two grinding discs touch.

- 6 Remove the pointer (2) and put it back in the position of the finest grinding level.
- 7 Move the pointer (2) 110° counterclockwise to the coarsest grinding level.
- 8 Remove the pointer (2) and put it back in the middle position between the finest and coarsest grinding levels.
- 9 Hold the pointer (2) and put the lock nut (1) back with a 10 mm spanner.
- 10 Restart the machine, see paragraph 9.4.
- 11 Calibrate the bean grinder, see paragraph 7.10.

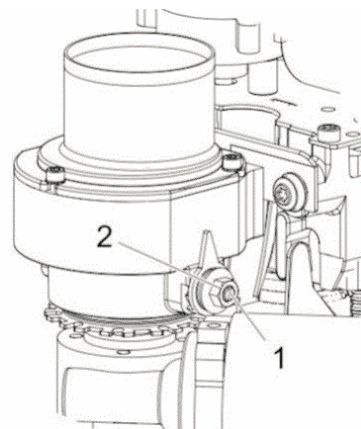


Figure 9-8

9.11 Replace the grinding discs

To ensure the best coffee quality, the grinding discs have to be replaced between the 100,000 and 125,000 coffee drinks (between 800 kg and 1000 kg of coffee beans).

- 1 Get access to the machine, see paragraph 9.2.
- 2 Remove the right casing.
- 3 Remove the bean grinder, see paragraph 9.9.
- 4 Remove the top cover (1) of the bean grinder with a 3 mm hex key.
- 5 Remove the grinding disc (2) from the top cover (1).
- 6 Clean the surface of the grinding disc (2) and top cover (1) thoroughly.



To ensure the best coffee quality and an optimal service life of the grinding discs, it is important to clean the surface thoroughly with a damp cloth.

- 7 Mount the grinding disc (2) to the top cover (1) of the bean grinder.
- 8 Put a screwdriver through the bean grinder dispenser. This stops the grinding disc (3) from turning along during removal.



Be careful not to damage the dispenser valve when you insert the screwdriver.

- 9 Remove the lower grinding disc (3).



If the lower grinding disc (3) can't be removed immediately, remove the middle Philips screw, holder (4) and grinding disc (3). Then remove the grinding disc (3) from the holder (4).

- 10 Clean the surface of the grinding disc (3) and holder (4) thoroughly.
- 11 Mount the grinding disc (3) to the holder (4).
Fit the holder (4) if it has been removed.
- 12 Assemble the top cover (1) with the grinding disc (2).
- 13 Insert the bean grinder, see paragraph 9.9.
- 14 Restart the machine, see paragraph 9.4.
- 15 Set the grinding level again, see paragraph 9.10.
- 16 Calibrate the bean grinder, see paragraph 7.10.

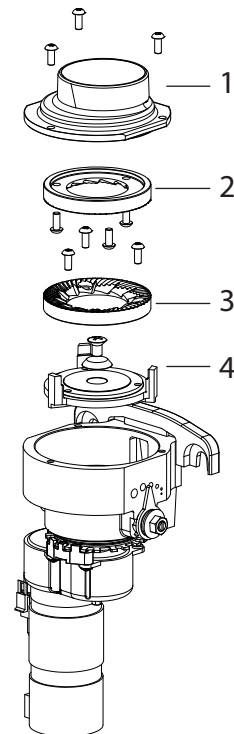


Figure 9-9

9.12 Replace the extraction fan

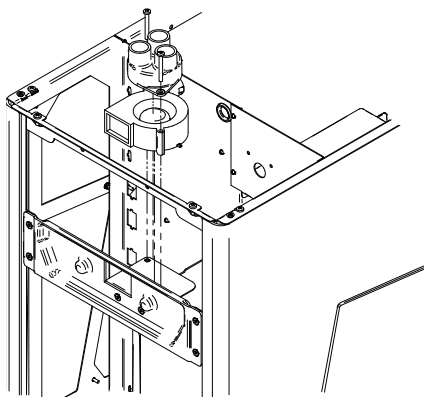


Figure 9-10

- 1 Remove the top casing, see par. 9.2.
- 2 Disconnect the wiring from the fan.
- 3 Remove the extraction hoses.
- 4 Remove the two screws from the fan mount.
- 5 Replace the fan.
- 6 Install the fan mount with the two screws.
- 7 Replace the extraction hoses.
- 8 Connect the wiring.
- 9 Restart the machine, see restart procedure par. 9.4.

9.13 Replace mixer motor

- 1 Open the door.
- 2 Get access to the machine, see par. 9.2.
- 3 Loosen the screws (A) to remove the mixer base and motor.
- 4 Disconnect the wiring.
- 5 Loosen the screws (B) to remove the motor.
- 6 Replace the motor.
- 7 Connect the wiring.

- 8 Put everything together again in reverse order.
- 9 Restart the machine, see restart procedure par. 9.4.

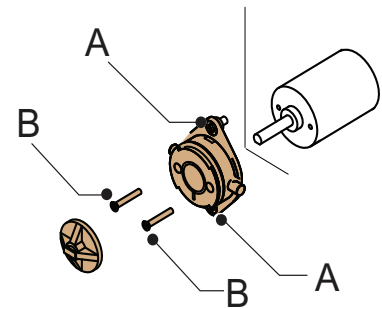


Figure 9-11

9.14 Replace mixer motor shaft seal

- 1 Open the door of the machine.
- 2 Remove the mixing chamber, see paragraph 4.6.1.
- 3 Loosen the screws (A) to remove the mixer motor.
- 4 Remove the mixer blade (C), see paragraph 4.6.1
- 5 Loosen the screws (B) to take out the mixer base.
- 6 Replace shaft seal. Make sure the lines on the shaft seal and mixer base align.
- 7 Replace mixer base o-ring.
- 8 Mount the mixer base and tighten the screws (B).
- 9 Install the mixer blade (C), see paragraph 4.6.1.
- 10 Place the mixer motor and tighten the screws (A).
- 11 Insert the mixing chamber, see paragraph 4.6.1.
- 12 Restart the machine, see paragraph 9.4.

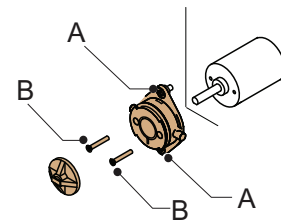


Figure 9-12

9.15 Replace ingredients motor

Remove ingredients engine

- 1 Get access to the machine, see par. 9.2.
- 2 Remove the left casing.
- 3 Open the door of the machine.
- 4 Remove the containers.
- 5 Remove the gear from the relevant motor shaft.
- 6 Remove the two screws used to mount the motor.
- 7 Disconnect the motor connector (left side of machine).
- 8 Remove the motor.

Mount the ingredients motor

- 1 Reconnect the motor connector.
- 2 Install the motor.
- 3 Secure the motor with the two screws.
- 4 Put the gear on the motor shaft.
- 5 Insert the containers.
- 6 Restart the machine, see restart procedure par. 9.4.

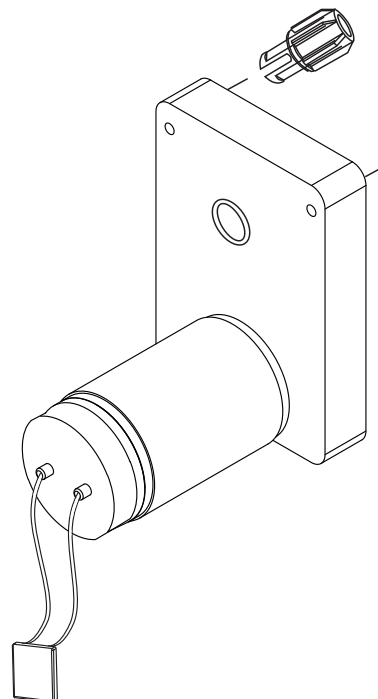


Figure 9-13

9.16 Replace drip tray sensor

- 1 Get access to the machine, see par. 9.2.1.
- 2 Remove the left casing, see par. 9.2.
- 3 Disconnect the wiring from the sensor.
- 4 Remove the two screws (A) from the sensor mount.
- 5 Replace the drip tray sensor (B).
- 6 Connect the wiring.
- 7 Restart the machine, see restart procedure par. 9.4.

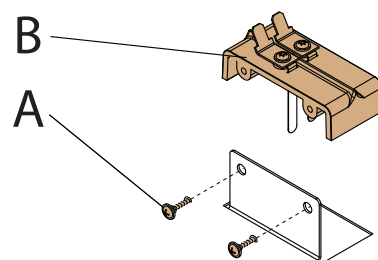


Figure 9-14

9.17 Replace cup sensor



Please note: printed circuit boards are ESD sensitive. Put on an ESD wrist strap and connect it to the machine frame.

- 1 Remove the right side of the machine, see par. 9.2.1
- 2 Disconnect the sensor connector.
- 3 Unscrew the sensor circuit board and move it slightly upwards.
- 4 Replace the PCB sensor.
- 5 Mount the sensor with the screw.
- 6 Connect the sensor connector.
- 7 Position the right side of the machine, see par. 9.2.1

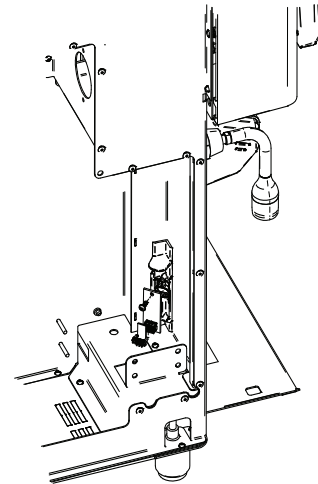


Figure 9-15

9.18 Replace upper extractor o-ring



Wash your hands before continuing with this procedure.

The top extractor o-ring needs to be replaced every year or every 30,000 coffee drinks (240 kg of coffee beans) to prevent leakage.

- 1 Get access to the machine, see paragraph 9.2.
- 2 Remove the right casing.
- 3 Remove the brewing unit, see paragraph .
- 4 Clean the brewing unit with lukewarm water. Electronic components such as the brewing unit motor and valve must not get wet.
- 5 Remove the coffee guide and clean it with a brush.
- 6 Remove the o-ring from the upper piston.
- 7 Clean the o-ring recess with a brush.

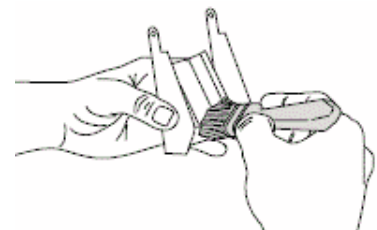


Figure 9-16

- 8 Insert a new o-ring.
- 9 Insert the coffee guide.
- 10 Insert the brewing unit, see paragraph .
- 11 Restart the machine, see paragraph 9.4.

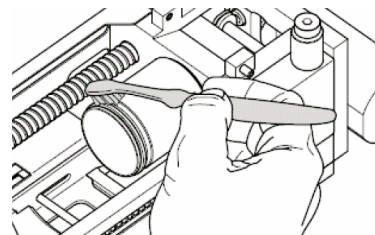


Figure 9-17

9.19 Replace o-ring and extractor cap at the bottom



Wash your hands before continuing with this procedure.

The extractor o-ring and cover need to be replaced every two years or every 60,000 coffee drinks (480 kg of coffee beans) to prevent leakage and ensure the best coffee quality.

- 1 Get access to the machine, see paragraph 9.2.
- 2 Remove the right casing.
- 3 Put the brewing unit in the lower position. Press *04* on the service panel, then press any button to get the brewing unit to the bottom position (*see figure 9-18*).
- 4 Remove the brewing unit, see paragraph .
- 5 Remove the coffee guide and clean it with a brush.
- 6 Remove screw (1) to make the lever system move backwards.

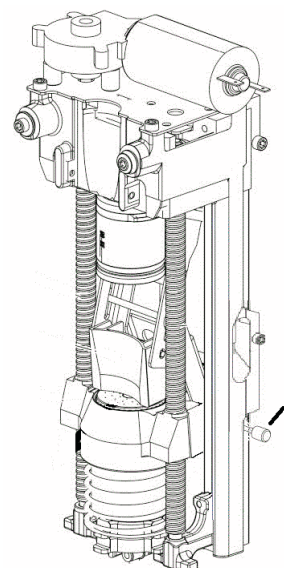


Figure 9-18

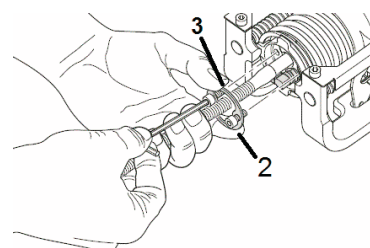


Figure 9-19

- 7 Remove the two screws (2) from the lower piston with a 4 mm hex key.
- 8 Push up and remove the lower piston (4), hold the heating element (5) and remove it at the bottom together with the metal ring (3).

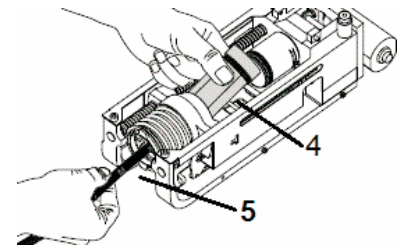


Figure 9-20

- 9 Remove the extractor cover (7) by unscrewing the 3 mm hex bolt (6). If the extractor cap (7) and hex bolt (6) are stuck, use pliers to loosen the extractor cap (7).

- 10 Remove the o-ring and Teflon ring (8).

- 11 Clean the lower extractor with a brush.



Do not use any metal brushes or sanding paper!

- 12 Replace extractor cap (7), o-ring and Teflon ring (8).
- 13 Put back the lower extractor (4), taking into account the heating element (5) and metal ring (3).

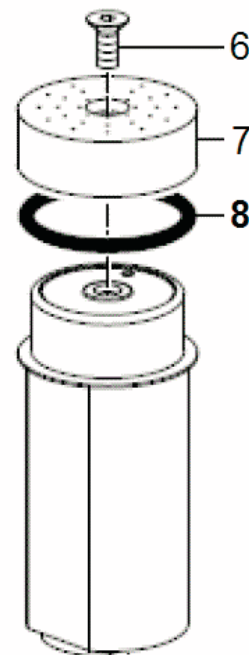


Figure 9-21

- 14 Fasten the lower piston with the two 4 mm hex bolts (2).
- 15 Push or pull the lever system forward and insert screw (1).
- 16 Insert the coffee guide.
- 17 Insert the brewing unit, see paragraph .
- 18 Restart the machine, see paragraph 9.4.

9.20 Control panel and display circuit board



Please note: printed circuit boards are ESD sensitive. Put on an ESD wrist strap and connect it to the machine frame.

Be careful when moving the machine. The machine is heavy, see par. 9.1.

- Read the safety instructions, see par. 9.1.
- Unplug the machine from the wall outlet.

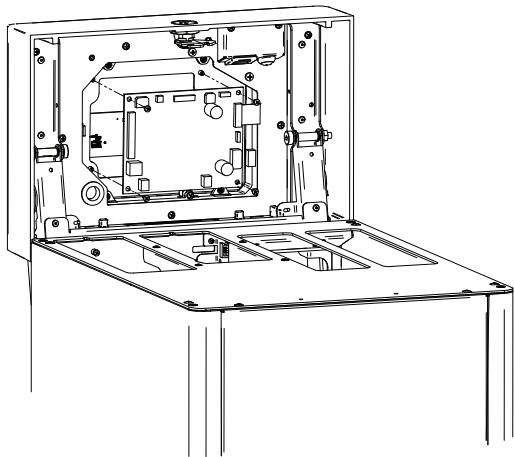


Figure 9-22

- 1 Move the control panel upwards.
- 2 Unscrew the plate with the USB connector.
- 3 Disconnect the USB cable from the display circuit board.
- 4 Remove the circuit board.
- 5 Remove the display circuit board by loosening the cables and mounting screws.

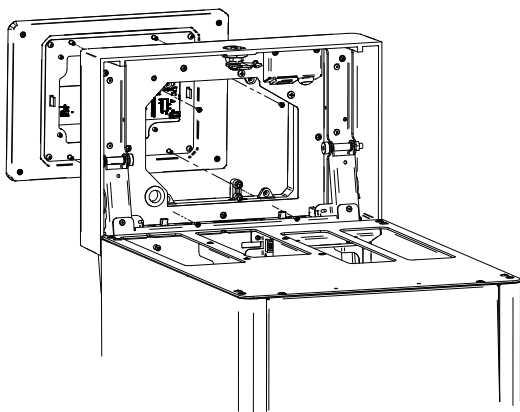


Figure 9-23

Remove control panel

- 1 Remove the 4 mounting screws.
- 2 Remove the control panel.

- 3 Assembly of the control panel and the display circuit board is done in reverse order.
- 4 Restart the machine, see restart procedure par. 9.4.

9.21 Replace the lighting circuit board



Please note: printed circuit boards are ESD sensitive. Put on an ESD wrist strap and connect it to the machine frame.

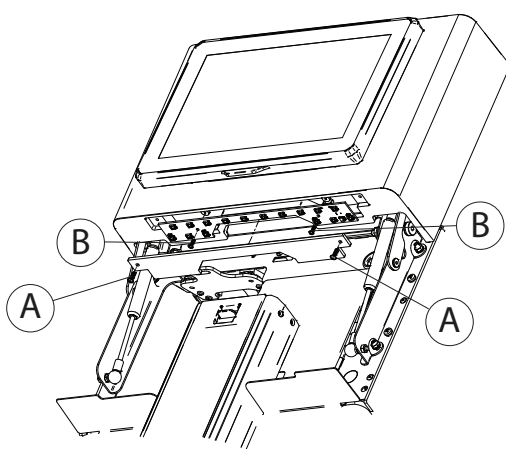


Figure 9-24

- 1 Raise the control panel.
- 2 Remove the two screws at the bottom (A) that mount the lighting screen to the display.
- 3 Remove the two screws at the bottom of the lighting circuit board (B) from the display.
- 4 Disconnect the wiring from the lighting panel.
- 5 Replace the lighting strip.
- 6 Connect the wiring of the lighting strip: push the cable through the hole in the display and mount it to the lighting circuit board
- 7 Install the lighting circuit board by securing it with 2 screws.
- 8 Mount the lighting screen.

9.22 Replacing the control circuit board



Please note: printed circuit boards are ESD sensitive. Take ESD protection precautions before working on these parts. Put on an ESD wrist strap and connect it to the machine frame.

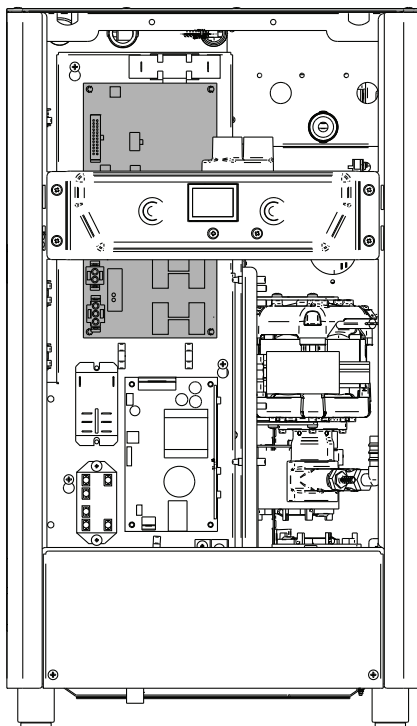


Figure 9-25

- 1 Get access to the machine, see par. 9.2.
- 2 Remove the rear casing, see par. 9.2.2.
- 3 Disconnect the connectors from the control circuit board.
- 4 Detach the control circuit board from the terminal pins securing it to the machine.
- 5 Replace the control circuit board.
- 6 Fit the control circuit board by pressing it onto the terminal pins.
- 7 Connect the connectors to the control circuit board.
- 8 Restart the machine, see restart procedure par. 9.4.

9.23 Replace the power supply



Please note: printed circuit boards are ESD sensitive. Put on an ESD wrist strap and connect it to the machine frame.

- 1 Open the door.
- 2 Get access to the machine, see par. 9.2 and remove the back plate.
- 3 Disconnect the power supply wiring.
- 4 Replace the power supply.
- 5 Replace the machine power supply.
- 6 Connect the power supply wiring.
- 7 Restart the machine, see restart procedure par. 9.4.

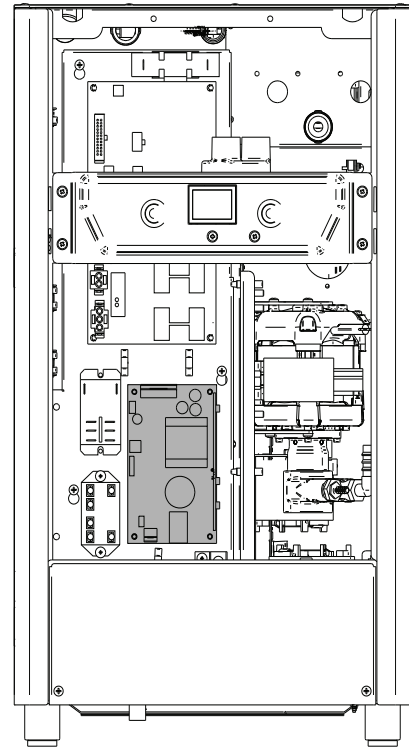


Figure 9-26

9.24 Replace the on/off switch

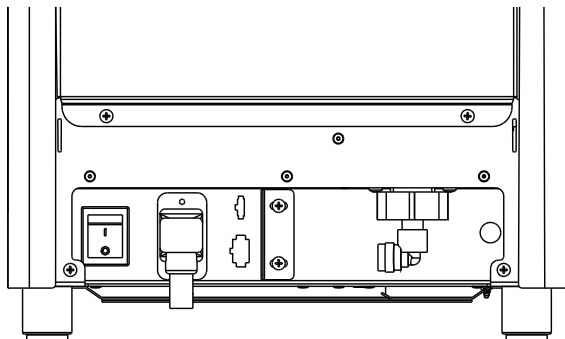


Figure 9-27

- 1 Get access to the machine, see par. 9.2
- 2 Remove the on/off switch connectors.
- 3 Replace the on/off switch.
- 4 Reconnect the on/off switch connectors.
- 5 Put back the right and rear panels.
- 6 Restart the machine, see restart procedure par. 9.4.

9.25 Replace bean container circuit board



Please note: printed circuit boards are ESD sensitive. Put on an ESD wrist strap and connect it to the machine frame.

- 1 Remove the top plate, see par. 9.2.1

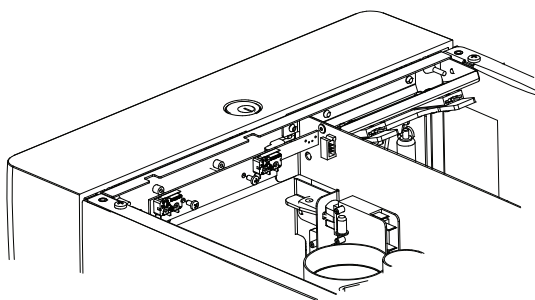


Figure 9-28

- 2 Disconnect the cable from the bean container circuit board.
- 3 Replace the container circuit board.
- 4 Mount the cable of the bean container circuit board.

9.26 Replace waste container switch



Please note: printed circuit boards are ESD sensitive. Put on an ESD wrist strap and connect it to the machine frame.

- 1 Remove the right side of the machine, see par. 9.2.1

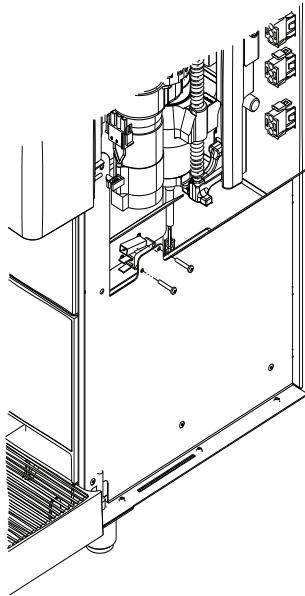


Figure 9-29

- 2 Remove the cable from the waste container switch.
- 3 Replace the waste container switch.
- 4 Fit the cable of the waste container switch.

9.27 Replace drip tray switch



Please note: printed circuit boards are ESD sensitive. Put on an ESD wrist strap and connect it to the machine frame.

- 1 Remove the left side of the machine, see par. 9.2.1

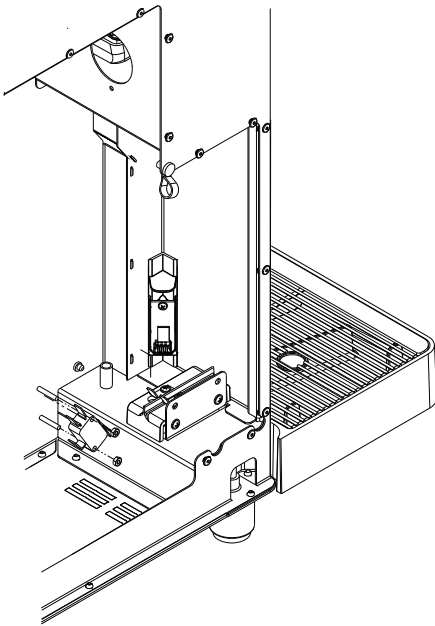


Figure 9-30

- 2 Remove the cable from the drip tray switch.
- 3 Replace the drip tray switch.
- 4 Mount the drip tray switch cable.