La Radiosa ^UL

EN   English

01/11/2022

INTEGRATION OF RADIO MODULES

In compliance with the national laws in force, the manufacturer must check the compliance of the radio equipment with the essential requirements of the national legislation.
The procedure used to check compliance is at the manufacturer's discretion.
If a radio module is built in a "non-radio" equipment, the subject integrating the module will become the manufacturer of the end product and it must therefore check the compliance of the end product with the essential requirements of the national laws in force in the country of installation of the equipment.
As a matter of fact, the integration of radio modules in other products can influence the compliance of the end product with the essential requirements of the national laws in force.

DEFINITIONS ACCORDING TO THE LAW

The **manufacturer** is a natural person who or a public body which manufactures radio equipment and/or electric material or has it engineered, manufactured or marketed by putting its own trademark or name on it.
An **importer** or **distributor** who places radio equipment or electric material on the market by putting its own name or trademark becomes the manufacturer.
An **importer** or **distributor** who makes any change to radio equipment or electric material already placed on the market to such an extent that the said change may condition the compliance with the listed directives is held to be the manufacturer and it must therefore assume the relative obligations according to the said directives.

Symbology

The following symbols may be present inside the machines, according to models (signs of danger)

Attention: dangerous voltage
Power off before removing the cover
To reduce the risk of fire or electric shock, don't remove the cover. No user-serviceable part inside.
Repairs should be done by authorized service personel only.

Attention
Danger of crushing your hands

Attention
Hot surface

The signs of danger must be readable and visible; they shall be neither hidden nor removed. Damaged or unreadable labels must be replaced.

Warnings

This document intended for the technical personnel is made available in the electronic format at the manufacturer's (reserved area web site).

FOR INSTALLATION

The installation and any subsequent maintenance operation shall be carried out by the personnel skilled and trained on the utilisation of the machine according to the rules in force

The use of kits and/or accessories not type-approved by the manufacturer can not guarantee the observance of safety standards, in particular for live parts.
The installer will be the sole person responsible for any damage improper installation may cause to the machine or to things and people.
The manufacturer declines all responsibility for the use of non type-approved components.

Assembly and any testing operation must be carried out by qualified personnel who have a specific knowledge of the machine operation from the point of view of electric safety and health rules.

The intactness of the machine and its compliance with the standards of relevant installations must be checked by skilled personnel at least once a year.

Package materials must be disposed of in observance of the environment.

For the vending machines of hot drinkts only

The machine is equipped with an automatic washing system for the mixers with the relative water circuit and the brewing unit.
If the machine is not used for some time (weekends, etc.) even for pauses longer than two days, it is recommended to enable the automatic washing functions (e.g. before starting to use the VM.

FOR USE

The machine can be used by children over 8 years and by people having reduced physical, sensorial or mental skills under the supervision of people responsible for their safety or specifically trained on the use of the machine.
Children shall not be allowed to play with the machine by the people in charge of their supervision
Children shall not be allowed to clean or service the machine.

FOR THE ENVIRONMENT

Some tricks will help you to protect the environment:

- use biodegradable products to clean the machine;

- properly dispose of all the packages of the products used to fill and clean the machine;

- power off the machine during inactivity for energy saving.

FOR DISMANTLING AND DISPOSAL

When dismantling the machine, it is recommended to destroy the machine rating plate.

The symbol shows that the machine can not be disposed of as common waste, but it must be disposed of as it is established by the 2012/19/EU (Waste Electrical and Electronic Equipment - WEEE) European Directive and by the national laws arising out of it in order to prevent any negative consequence for environment and human health.
The differentiated collection of the machine at the end of its life is organised and managed by the manufacturer.
For the correct disposal of the machine contact the sales point where you have purchased the machine or our after-sales service.
The unlawful disposal of the machine implies the application of the administrative sanctions provided for by the rules in force.

Attention!

If the machine is equipped with a cooling system, the cooling unit contains HFC-R134a fluoridised greenhouse effect gas ruled by the Kyoto protocol, the total heating potential of which is equal to 1300.

FOR THE PRIVACY

Only for the machines having a video camera and/or webcam.
The video camera and/or webcam for factory settings is disabled; if enabled, it shoots soundless imagines without being able to store them.
The Customer acknowledges that he/she will become the Holder of the personal data acquired if the video camera and/or webcam built in the equipment is activated.
Starting from that time, the Holder will assume all the relative rights and duties according to the provisions in force on the matter.

English

Introduction

The technical documentation forms an integral part of the appliance and must therefore accompany any movement or transfer of ownership in order to allow the various operators to further consult the documentation.

Before installing and using the appliance, the document contents need to be scrupulously read and understood, as the manual provides important information regarding installation safety, provisions of use and maintenance work.

Some illustrations in this manual may show details that are different from those of the appliance, but the essential information will however remain unchanged.

The manual is divided into three chapters.

Chapter 1 describes the loading and routine cleaning operations to be performed in the areas of the appliance that can only be accessed via a key-operated door, without needing to use other tools.

Chapter 2 contains instructions regarding correctly installing the appliance and the information required to optimise the appliance's performance.

Chapter 3 describes the maintenance work that requires the use of tools to access potentially dangerous areas.

The operations described in Chapters 2 and 3 must solely be carried out by personnel with specific knowledge of the appliance's operation, both from an electrical safety and hygiene point of view.

TRANSPORT AND STORAGE

TRANSPORT

Special care must be taken when handling the appliance in order to avoid causing damage to the appliance and people.

When handling the appliance, there is a risk of hands and/or feet being crushed: use appropriate gloves and work shoes.

Move the appliance using lifting equipment that is suitable for the size and weight of the appliance (e.g. a forklift).

Only staff who are qualified to use lifting equipment can use the equipment.

Avoid:

- Tipping over and/or tilting the appliance;
- Dragging or lifting the appliance with ropes or similar;
- Lifting the appliance with lateral grips;
- Shaking or tossing the appliance and its packaging.

STORAGE

The storage environment needs to be dry and of a temperature between 32 and 104 °F.

If the appliance freezes, it must be conditioned in environments with temperatures between 32 and 104°F.

Wait until the appliance's temperature reaches the same temperature as its surrounding environment before switching it on.

If there is any moisture condensation, wait for it to dry completely before switching the appliance on.

WHAT TO DO SHOULD A MALFUNCTION OCCUR

In most cases, technical problems can be resolved by means of small interventions; we therefore suggest that you read this manual carefully before contacting the manufacturer.

If the anomalies or malfunctions cannot be resolved, please contact:

Evoca S. p. A.
Via Roma 24
24030 Valbrembo
Italy - Tel No. +39 035606111

APPLIANCE IDENTIFICATION AND FEATURES

Each appliance is identified by means of a specific serial number which can be found on the nameplate located on the internal side of the door.

The nameplate is the only one recognised by the manufacturer and contains all the information that allows the manufacturer to quickly and safely provide all kinds of technical information and easily manage the spare parts.
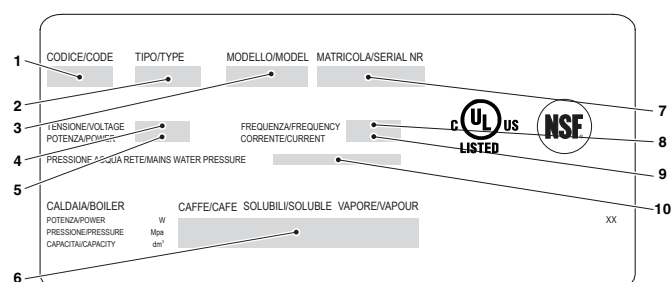
Fig. 1

1. Code
2. Type
3. Model
4. Supply voltage
5. Power
6. Heating unit details
7. Serial number
8. Supply frequency
9. Supply voltage
10. Water mains properties

POSITIONING THE APPLIANCE

The appliance is not suitable for outdoor installations. It must be installed in a dry environment, with a temperature between 35,6°F and 89,6°F and cannot be installed in environments where jets of water are used for cleaning (e.g. large kitchens, etc.).

❶ The appliance must be installed in environments where it can be overseen by trained staff.

The appliance can be positioned close to a wall but there must be a gap of at least 4 cm between the wall and the appliance for ventilation purposes.

Under no circumstances should the machine be covered with cloths or similar.

The appliance must be placed on a level surface.

Important !!!

In the event of unscheduled maintenance work and/or repairs, the appliance must be able to be accessed from all sides.

Therefore, make sure that the appliance can be rotated so that the back and side panels can be removed.

The appliance is ANSI/NSF 4 compliant only when equipped with the 3.93 inches feet

TECHNICAL SPECIFICATIONS

DIMENSIONS

- Height inches 30,82
- Width inches 14,48
- Depth inches 23,07
- Depth with door open inches 33,62
- Weight Lbs 97
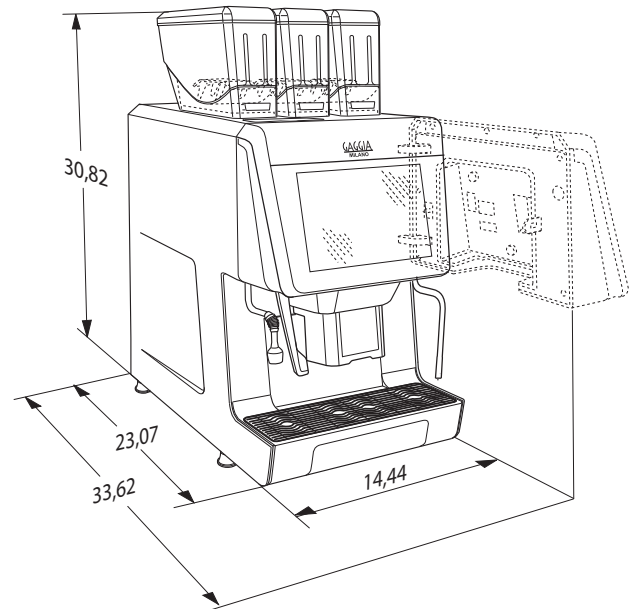
Fig. 2

ELECTRICAL CONNECTION

- Voltage: 208 / 240 V∿
- Frequency 60 Hz

The electrical features are detailed on the data tag located inside the appliance.

WATER SUPPLY

water distribution pressure between 17,40 e 123,28psig (1.2-8.5 bar)

BOILER

50,72 oz capacity with 2700 W heating element, 27,05 oz capacity with 2700 W heating element.

NOISE LEVEL

The level of continuous, equivalent, weighted acoustic pressure is less than 70 dB.

ESPRESSO ADJUSTMENTS

- Coffee grain size
- Coffee dose
- Water dose

INSTANT ADJUSTMENTS

- Instant powder doses
- Water dose

TEMPERATURE ADJUSTMENT

Via the software

ENABLE SIGNS

- Water present
- Pressurised hydraulic circuit
- Coffee present
- Brewing unit position
- Heating unit(s) temperature reached

SAFETY MEASURES

- Main switch
- Connectivity-disabling microswitch with the door open
- Product containers present
- Residue trays present
- Closed door sensor
- Heating unit safety thermostats with manual reset
- Main electric circuit protection device with fuse

COUNTDOWN PROTECTION DEVICE OF THE:

- Coffee unit gearmotor
- Grinder(s)

THERMAL PROTECTION DEVICE OF THE:

- Coffee unit gearmotor
- Coffee heating unit
- Grinders
- Motor-doser
- Motor mixer
- Water pump

CONTAINER CAPACITY

They can contain the approximate quantities of the following products:

- Approximately 1.1 kg of coffee beans
- Approximately 1.1 kg of pre-ground coffee
- Approximately 1.8 kg of instant hot chocolate
- Approximately 1.8 kg of instant ginseng
- Approximately 0.5 kg of instant barley
- Approximately 0.7 kg of instant milk

POWER CONSUMPTION

The power consumption of the appliance depends on many factors, such as the temperature and ventilation of the environment where the appliance is located, the temperature of the incoming water and the temperature in the heating unit, etc.

The calculated power consumption is indicative only.

A measurement at a room temperature of 22°C was carried out and the following power consumption was detected:

Temperature reached:	63 Wh
24-hour standby:	1171 Wh

ACCESSORIES AND KITS

The appliance can be fitted with accessories and kits in order to vary its performances:

The accessories and kits that can be attached to the appliance are available from the manufacturer.

The accessories and kits are supplied with installation and test instructions, which should be scrupulously followed in order to keep the appliance operating safely.

The party that performed the installation is responsible for any damage that may occur to the appliance, or to things and people due to incorrect installation.

Important !!!

Accessories and kits that have not been approved by the manufacturer, may not comply with the safety standards, most especially in regards to live parts.

The manufacturer is not liable if non-approved components are used.

The installation and subsequent test operations must be performed by qualified personnel, with specific knowledge of the appliance's operation both from an electrical safety and hygiene point of view.

Chapter 1
Cleaning and loading

The appliance is not suitable for outdoor installations. It must be installed in a dry environment, with a temperature between 35,6 °F and 89,6 °F and cannot be installed in environments where jets of water are used for cleaning (e.g. large kitchens, etc.).

ℹ️ **Wash your hands and wear disposable gloves before proceeding with the cleaning and loading operations: the use of gloves does not replace the need for hand hygiene.**

MAIN SWITCH AND SAFETY MEASURES

MAIN SWITCH

The (manual) main switch cuts off the power to the appliance and is positioned behind the solid residue tray.

When carrying out normal cleaning and product loading tasks, the appliance does not have to be switched off.

If the appliance needs to be switched off via the main switch, the residue tray must be removed.

CONNECTIVITY SWITCH

Only for models with connectivity.

When the door is opened, a specific switch deactivates the appliance's connectivity components.

When the door is open, the remote operation of the functional units and/or the remote control are disabled.

⚠️ **All operations that require the appliance to be live with the door open and the connectivity functions active, must EXCLUSIVELY be performed by qualified personnel who are aware of the specific risks involved when the machine is in this condition.**

To activate the connectivity components (i.e. for a communication test) with the door open, simply pull the connectivity switch pin.

If the switch is activated and deactivated within a short period of time, the appliance disables the connectivity components; the appliance will need to be restarted to restore these.

SAFETY MEASURES

The routine cleaning and product loading tasks can be performed safely.
The unit has magnetic sensors that detect:

- The closing of the door.

- The presence of the containers.

- The presence of the residue trays.

In the absence of one of the listed conditions, the appliance is disabled.

Fig. 3
1. Main switch
2. Connectivity switch

HYGIENE AND CLEANING

This manual shows the potential critical points and includes information about controlling the possible growth of bacteria.

Under the current health and safety regulations, the operator of the appliance must apply the self-control procedures, identified in accordance with the HACCP (Hazard Analysis Critical Control Point) Directive and national legislation.

It is also a good idea to sanitise the surfaces that do not come into direct contact with the food inside the appliance, as well as the side modules (cup warmers, coolers, etc.).

The sanitisation must be performed using disinfectants, whilst taking care to mechanically remove the residues and visible films using swabs and/or brushes.

Do not use solvents and/or strong-scented detergents.

Some parts of the appliance can be damaged by aggressive detergents.

The manufacturer shall not be held responsible for any damage caused due to the non-observance of the above or the use of aggressive or toxic chemical products.

Under no circumstances should water jets be used to clean the appliance.
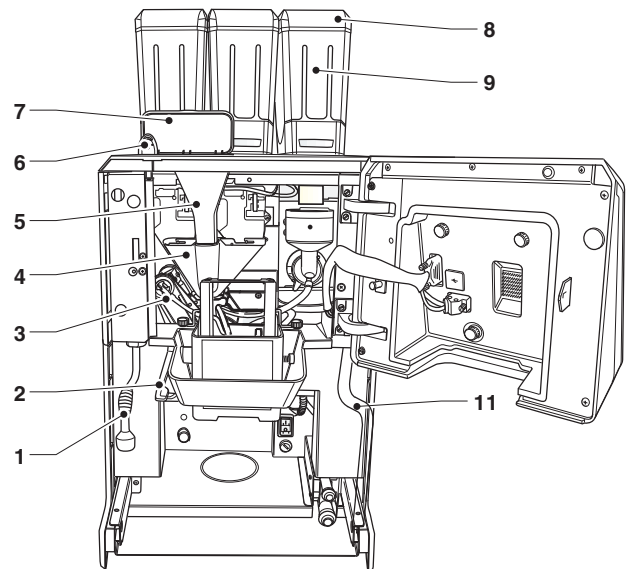
Fig. 4

1. Hot water spout
2. Nozzle-moving handle
3. Brewing unit
4. Coffee conveyor
5. Decaffeinated coffee chute
6. Door lock
7. Decaffeinated coffee door
8. Container lids
9. Product container
10. Mixer
11. Steam spout

USING HOT BEVERAGE VENDING MACHINES (DISPENSING INTO OPEN CONTAINERS)

(E.g. plastic cups, ceramic cups and jugs)

Vending machines that dispense beverages into open containers must be used exclusively for the sale and distribution of drinks which are produced via:

- Coffee infusion.

- The reconstitution of instant or freeze-dried products.

These products must be declared by the manufacturer as "suitable for automatically dispensing" into open containers.

Products must be preserved in strict accordance with the manufacturer's instructions regarding storage, storage temperature and the expiry date.

❶ **The dispensed drinks should be consumed immediately and must, under no circumstances be stored and/or packaged for later consumption.**

Any other use is considered improper and therefore potentially dangerous.

CONTROLS AND INFORMATION

The appliance must operate at a room temperature between 35,6 °F and 89,6 °F

The controls and information for the user are on the external side.

All messages destined for the user are shown on the appliance's display.
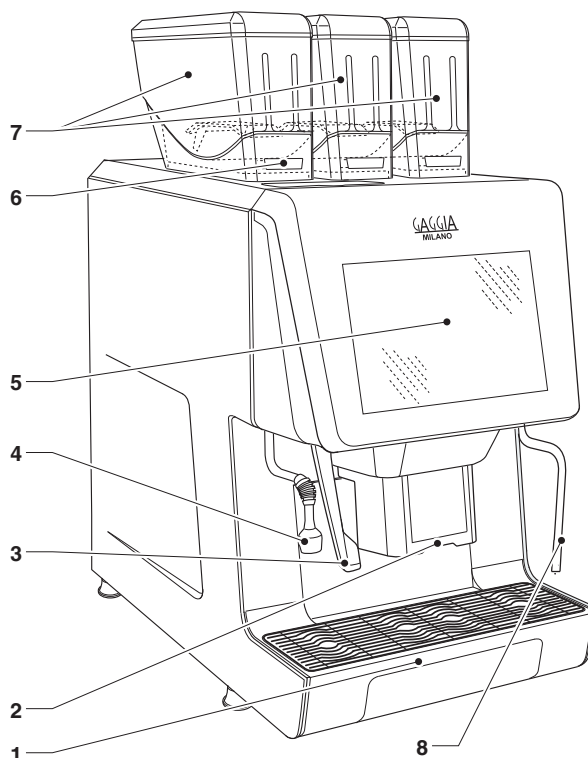
Fig. 5

1. Liquid residue tray
2. Dispensing nozzles
3. Nozzle-moving handle
4. Hot water dispensing spout
5. Touchscreen
6. Decaffeinated coffee door
7. Product containers
8. Steam spout

LOADING PRODUCTS

❶ **Before loading the products, check that they have been stored in compliance with the manufacturer instructions regarding storage and the storage temperature.**

❶ **Before loading the products, check the expiration date.**

The products must be declared by the manufacturer as suitable for automatically dispensing into open containers.

Products may also be loaded with partially-full containers.

COFFEE BEANS

It is recommended to use high-quality coffee beans in order to prevent appliance failure resulting from the presence of impurities.

1. Open the container lid using the key (if present).

2. Fill the container with coffee beans.

3. Carefully close the lid.

❶ **Do not exceed the maximum capacity of the containers; the maximum level of the containers coincides with the support point of the lid.**

INSTANT PRODUCTS

It is recommended to use high-quality instant products in order to prevent appliance failure resulting from the presence of impurities.

1. Open the instant powder container lid using the key (if present).

2. Fill the container with instant powder.

3. Carefully close the lid.

❶ **Avoid compressing the powder in order to prevent it from compacting.**

] ❶ **Make sure that the instant products do not contain any lumps.**

Do not exceed the maximum capacity of the containers; the maximum level of the containers coincides with the support point of the lid.
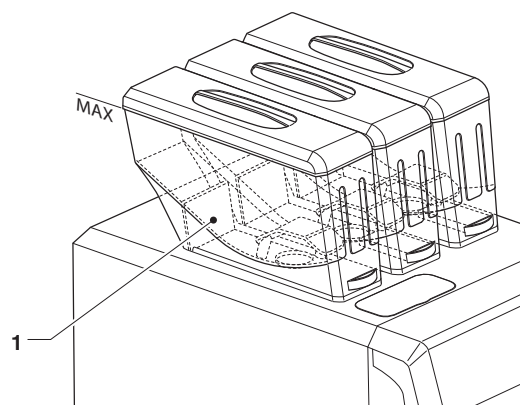
Fig. 6
1. Container

SUPPLIED TANK WATER (EXTERNAL KIT)

Models with an internally supplied water tank only.

Every day, when the machine is first turned on, the tank must be emptied of any residual water and sanitised when the no water warning appears, whilst making sure to mechanically remove any residues and visible films using swabs or brushes, if necessary.

To restore service:

1. Fill the tank with clear, impurity-free drinking water.

2. Connect the tank to the appliance.

3. Confirm the reset operation.

Do not exceed the tank's maximum capacity; the maximum level is indicated on the tank with a reference mark.

PERIODICAL OPERATIONS

This manual shows the potential critical points and includes information about controlling the possible growth of bacteria.

Under the current health and safety regulations, the operator of the appliance must apply the self-control procedures, identified in accordance with the HACCP (Hazard Analysis Critical Control Point) Directive.

Each time a product is loaded or more frequently, depending on how often the appliance is used, the incoming water quality and the products used, it is necessary to clean and sanitise the appliance and parts that come into contact with the food, by proceeding as described in the following paragraphs.

In addition to the external parts of the brewing units and mixers that need to be cleaned so that any powder residue is removed, especially the funnel area, the parts of the mixer that come into contact with the beverage should also be sterilised.

Under no circumstances should jets of water be directed at the machine when cleaning it.

CLEANING THE RESIDUE TRAYS

The residue trays can be easily removed to make emptying and cleaning them easier.

The residue trays must be cleaned with the machine switched on and the door closed.

LIQUID RESIDUES

The liquid residue tray can be easily removed, even if it is directly connected to a mains drain.

Pull out the liquid residue tray to remove it.

If the liquid residue tray is not directly connected to a drain in the mains, it will need to be emptied on a regular basis.

Proceed to sanitise the tray.

SOLID RESIDUES

MODELS WITH A SOLID RESIDUE TRAY

The appliance control software notifies when the maximum number of dispenses has been reached.

Coffee-based selections are disabled.

To remove the solid residue tray:

1. Lift the dispensing nozzles using the movement lever.

2. Remove the liquid residue tray.

3. Empty and wash the trays with a sanitising solution.

4. Reset the solid residue counters to zero (solid residue tray empty function).
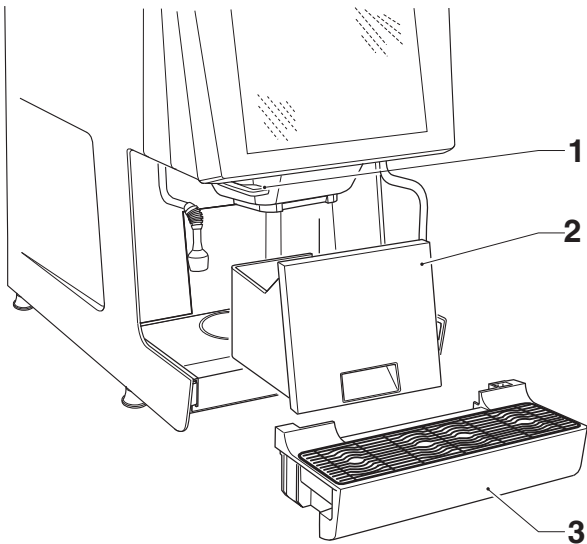
Fig. 7
1. *Nozzle-moving lever*
2. *Solid residue tray*
3. *Liquid residue tray*

MODELS WITH A SOLID RESIDUE DISCHARGE ON THE BENCH

Proceed as follows:

1. Lift the dispensing nozzles using the movement lever.

2. Remove the liquid residue tray.

3. Remove the solid residue chute cover.

4. Empty and clean the solid residue tray.

5. Wash the solid residue chute to remove any coffee residue.

6. Reinsert the residue chute and the liquid residue tray.
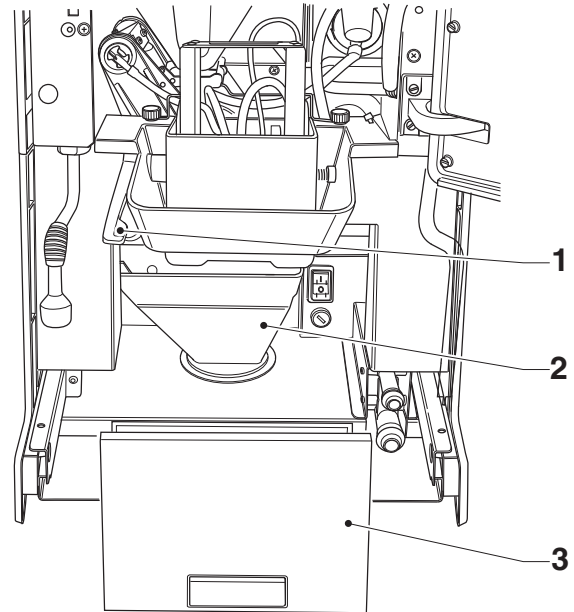
Fig. 8
1. *Nozzle-moving lever*
2. *Solid residue chute*
3. *Solid residue chute cover*

CLEANING THE MIXERS

Each time a product is loaded and/or on a weekly or more frequent basis, depending on how often the appliance is used, the quality of the incoming water and the products used, the mixers must be sanitised.

The parts that need to be cleaned are the powder trays, mixers, instant drink dispensing pipes and diffuser.
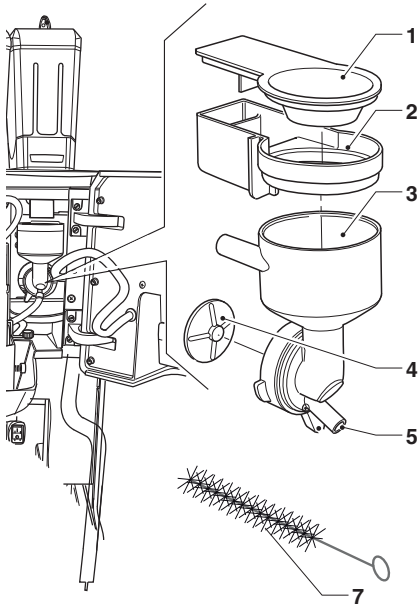
Fig. 9

1. *Instant powder funnel*
2. *Instant powder tray*
3. *Water funnel*
4. *Mixer fan*
5. *Instant beverage hose connection*
6. *Mixer locking ring*
7. *Brushes for cleaning*

To clean the mixer, proceed as follows:

1. Disconnect the instant beverage hose from the water funnel connection.

2. Turn the water funnel locking ring anti-clockwise and remove the mixer from the appliance.

3. Separate all the components (instant product funnels, water funnels, conveyors and powder trays).

4. Remove the fans: block the disk fitted on the motor mixer shaft with one finger, then unscrew the mixer fan.
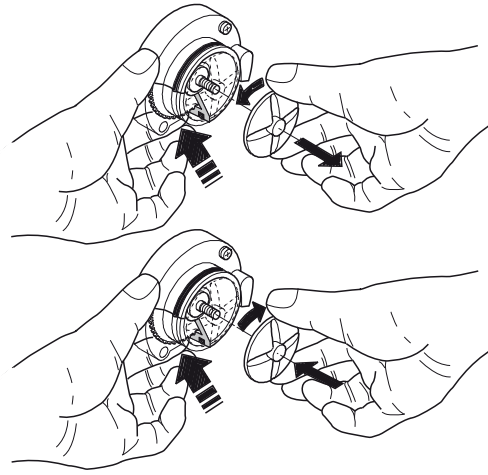
Fig. 10

5. Soak the components for about 20 minutes in a container filled with a pre-prepared sanitising solution, whilst taking care to mechanically remove the residues and visible films using swabs or brushes if necessary.

6. Rinse thoroughly and dry each part carefully.

7. Reassemble the fans.

8. Reassemble the mixer parts and correctly reposition the water funnel.
Check that it has been correctly inserted.
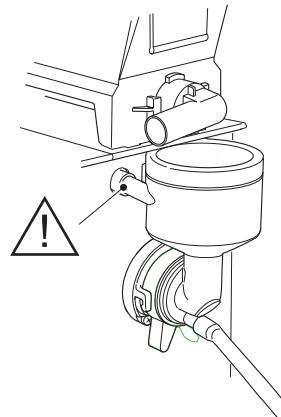
Fig. 11

9. Turn the water funnel locking ring clockwise in order to secure the mixer to the appliance.

After installing the components, it is necessary to:

- Wash the mixer and add a few drops of the sterilising solution into the various funnels.
- Thoroughly rinse the components in order to remove any sterilising solution residue.

CLEANING THE NOZZLES AND SPOUTS

Weekly or more frequently, depending on how often the appliance is used and the quality of incoming water, it is necessary to sanitise the instant beverage dispensing ducts and nozzles.

To clean the nozzles, proceed as follows:

1. Pull down the nozzle-moving handle.

2. Remove the cover and disconnect the hoses from the nozzles.

3. Disconnect the coffee dispensing hose from the flow divider nozzle.

4. Unhook the flow divider nozzle from the nozzle support.

5. Remove the flow divider and the instant beverage nozzles.

6. Proceed to sanitise all the components, whilst taking care to mechanically remove visible residues and films using swabs or brushes, if necessary.

7. Clean the spouts (if present) with a cloth that has been dampened with sanitising solution.

CLEANING THE BREWING UNIT

After each time a product is loaded or at least once a week, it is good practice to clean the external parts of the brewing unit by removing any powder residue, especially from the funnel, filter and scraper areas.

CLEANING THE WATER SUPPLY TANK

Every day, when the appliance has finished being used for the day, the supplied water tank must be emptied of any residual water and sanitised, whilst making sure to mechanically remove any visible residues and films using swabs or brushes if necessary.

SWITCHING THE MACHINE ON

Every time the appliance is switched on, it performs initial checks by dispensing hot water from the nozzles.

A screen appears showing the heating status of the heating units.

The selections are not available until the appliance has reached its operating temperatures.

When the operating temperatures are reached, the beverage selection screen will be displayed.

WASH CYCLES

The appliance has been designed to perform wash cycles on the main functional units.

⚠ **During the wash cycles, hot water comes out of the nozzles and this can be a potential safety hazard.**

⚠ **Scalding hazard! Do not put your hands in the dispensing area during the wash cycles.**

⚠ **The wash cycles do not replace the need to regularly disassemble the components for sanitisation.**

ACCESSING THE WASH FUNCTIONS

To access:

1. Tap ☰ when the door is closed.

2. Select the components that require washing from the "daily functions".

For appliances that do not have a drainage system for the liquid residue tray, we recommend that you place a container with a capacity of at least 3 litres under the nozzles.
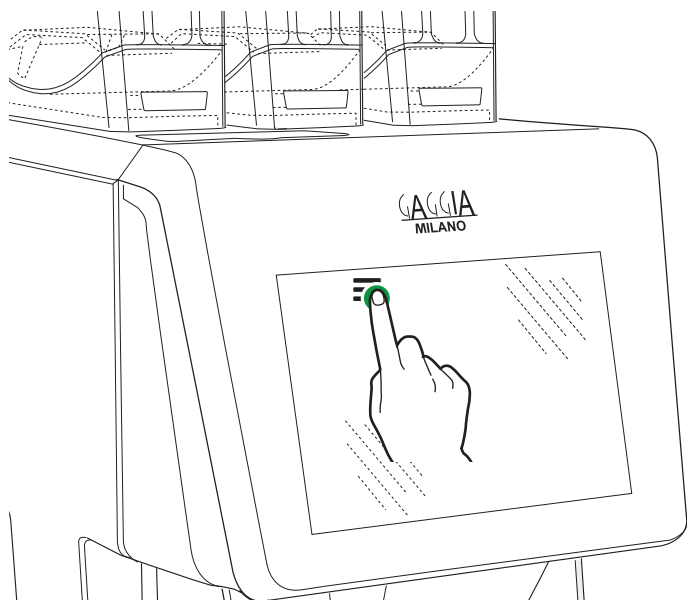
Fig. 12

RINSING THE COMPONENTS

Start the rinse cycle (with hot water only) of the various components (mixer, brewing unit, etc.).

⚠ **The rinse cycles do not replace the need to regularly disassemble the components for sanitisation.**

Remove the cups from the dispensing area.

⚠ **Scalding hazard! Do not put your hands under the nozzles during the wash cycles.**

The selections will remain disabled for the entire duration of the rinse cycle.

The automatic rinse cycles can be programmed; before programming the automatic rinse cycles, a warning message will be displayed on the touchscreen.

BREWING UNIT WASH CYCLE

The brewing unit wash cycle should be carried out each time that the appliance has finished being used for the day, or more frequently, depending on how often the appliance is used.

When the brewing unit needs to be cleaned (with detergent), it signals when the time limits and/or number of selections have been reached (if set).

ⓘ Coffee-based beverages cannot be dispensed until the brewing unit wash cycle has been performed.

Only use coffee maker-specific products.

⚠ When using these products, strictly follow the manufacturer's instructions on storage, handling, dosing and use; carefully read the safety instructions.

Do not use generic products as there is no guarantee that they are hygienic, will not alter the taste of the beverages, or will have no negative effects on human health.

For appliances that do not have a liquid residue drainage system, place a container with a capacity of at least 3 litres under the nozzles in order to collect the wash residues.

The brewing unit wash takes several minutes.

1. Insert the detergent chute (supplied as standard) into the decaffeinated coffee chute.

⚠ Always use the detergent chute to prevent detergent residue remaining in the decaffeinated coffee chute.

2. Add the detergent by dropping it into the detergent chute.

3. Start the detergent cycle.

4. When the cycle has finished, remove the detergent chute.

Warning!

When the wash cycle has finished, the coffee-based beverages will be available once again.

The appliance stores the date of the last successful wash cycle.
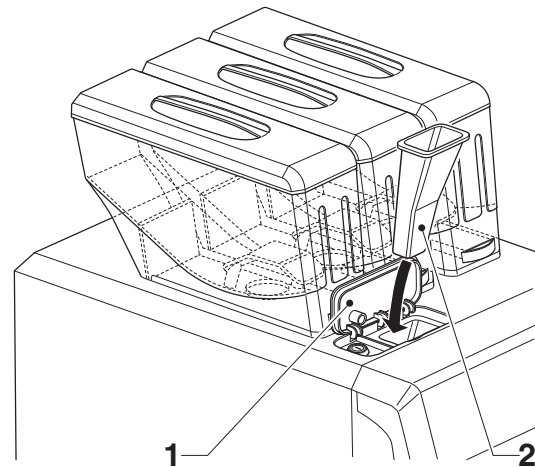
Fig. 13
1. *Door for introducing decaffeinated coffee*
2. *Detergent chute*

CLEANING THE TOUCHSCREEN

The touchscreen is touch-sensitive; a reduction in sensitivity and/or functional changes may be caused by an accumulation of dirt on the touchscreen.

Use a soft, dry, cloth when cleaning and avoid using abrasive products that contain solvents or alcohol.

Clean the touchscreen by applying light pressure.

SERVICE SUSPENSION

If, for any reason, the appliance needs to be switched off for a long period of time, the following must be carried out:

1. Completely empty the containers and wash them carefully with the sterilising products.
2. Completely empty the grinders by dispensing coffee until the empty warning appears.
3.
4. Proceed with the guided wash brewing unit and mixers.
5. Close the tap positioned upstream of the water hose and completely empty the hydraulic circuit.
6. Disconnect the appliance from the electrical mains.
7. Remove any product residues from the machine.
8. Empty the solid and liquid residue trays.

Chapter 2
Installation

The installation and subsequent maintenance operations must be carried out with the appliance connected to the power supply and therefore by specialised staff, who are trained to use the appliance and have been informed of the specific risks deriving from such a situation.

The appliance needs to be installed in a dry environment, with a temperature between 35,6 °F and 89,6 °F and cannot be installed in environments where jets of water are used for cleaning (e.g. large kitchens, etc.).

❶ During the appliance installation operations, use law-compliant gloves and work shoes, classified as personal protective equipment (PPE).

The PPE must be adequate to protect the wearer from mechanical risks (cuts, scrapes and crushing, etc.) and physical risks (hot water, etc.)

❶ The appliance must be installed in environments where it can be overseen by trained staff.

❶ When the appliance has been installed, the hydraulic circuits and the parts that come into contact with the food products need to be sterilised in order to eliminate any bacteria which could have formed while the machine was in storage.

UNPACKING THE APPLIANCE

After the packaging has been removed, check the condition of the appliance.
If any doubts should arise, do not use the appliance.

The packaging materials (plastic bags, expanded polystyrene, nails, etc.) must be kept out of the reach of children as they are a potential source of danger.

The packaging materials need to be disposed of in authorised waste disposal centres. Recyclable materials should be given to specialised recycling companies.

Important !!!

The appliance must be positioned on a level surface so that the maximum inclination does not exceed 2°F.

SWITCHES AND SAFETY DEVICES

MAIN SWITCH

The (manual) main switch cuts off the power to the appliance and is positioned behind the solid residue tray.

When carrying out normal cleaning and product loading tasks, the appliance does not have to be switched off.

CONNECTIVITY SWITCH

When the door is opened, a specific switch deactivates the appliance's connectivity functions (LAN network, Wi-Fi, Bluetooth).

When the door is open, the connectivity is disabled.

⚠ **All operations that require the appliance to be live with the door open and the connectivity functions active, must EXCLUSIVELY be performed by qualified personnel who are aware of the specific risks involved when the machine is in this condition.**

To activate the connectivity components (i.e. for a communication test) with the door open, simply pull the connectivity switch pin.

If the switch is activated and deactivated within a short period of time, the appliance disables the connectivity components; the appliance will need to be restarted to restore these.

SAFETY MEASURES

The routine cleaning and product loading tasks can be performed safely.

The unit has magnetic sensors that detect:

- The closing of the door.

- The presence of the containers.

- The presence of the residue trays.

In the absence of one of the listed conditions, the appliance is disabled.

This appliance is equipped with a magnet that allows the appliance to operate with the door open.

ⓘ **Under no circumstances should the magnet be left inside the appliance. It must be kept by staff who have been specially trained how to use it.**
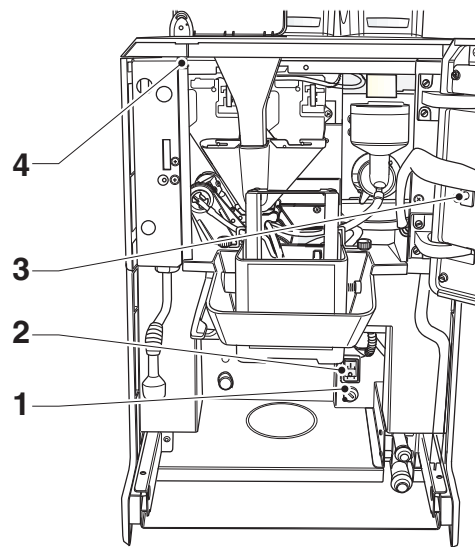
Fig. 14
1. *Line fuse*
2. *Main switch*
3. *Connectivity switch*
4. *Magnetic door sensor*

DISCARDING THE SOLID AND LIQUID RESIDUES

Where possible, you should empty the solid residues into a bucket and connect the liquid residue tray to a standpipe.

LIQUID RESIDUES

Connect the liquid residue tray to a standpipe using the drain fitting that inserts into the liquid residue tray.

When this is not possible, it is preferable to use a bucket to collect the residues from the tray.

To connect the liquid residue tray to the drain fitting, drill the liquid residue tray into the drain fitting area.

Make sure that the liquid flows from the tray without any obstacles.

SOLID RESIDUES

The solid residues can be emptied directly into a bucket using the solid residue chute supplied as standard, by inserting it into the drain hole.

The solid residue bucket must be housed inside a closed cabinet.
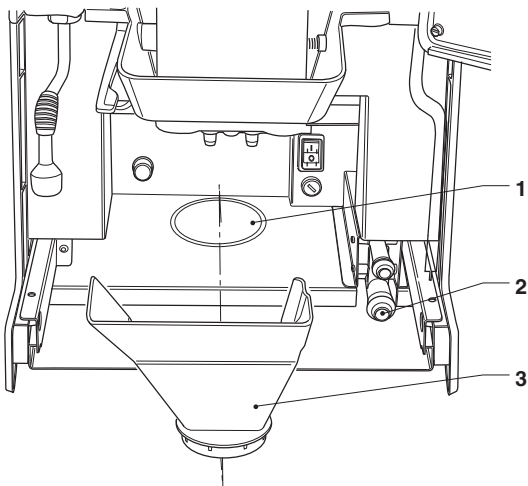
Fig. 15
1. Solid residue discharge set-up
2. Liquid residue drain fitting
3. Solid residue chute

REMOVING THE SIDE AND REAR PANELS

To gain access to the internal components, the panels must be removed.

1. Remove the liquid residue tray.

2. Remove the fixing screws of the side panels.

3. Remove the fixing knurls on the side panels.

4. Slide the side panels forward to release them.

5. To remove the rear panel, slide it to the left.

To reassemble the panels, repeat the process in reverse order.
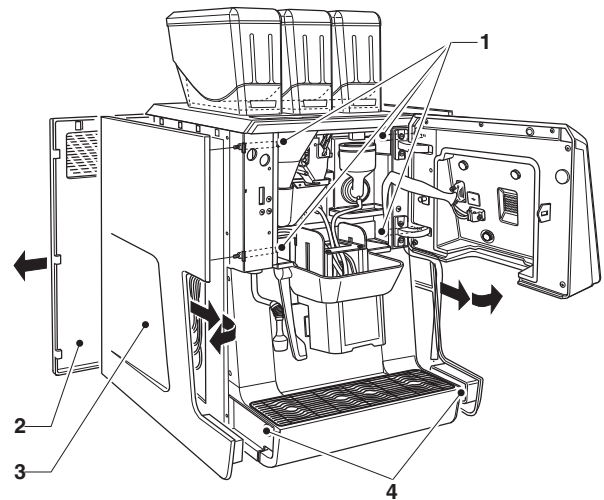
Fig. 16
1. Side panel fixing knurls
2. Rear panel
3. Side panel
4. Side panel fixing screws

WATER SUPPLY

The appliance must use drinking water and take into account the regulations in force where the appliance is installed.

The dispenser is to be installed with adequate backflow protection to comply with applicabale Federal state, and local codes.

FROM WATER MAINS

Water distribution pressure must be: 17,40 e 123,28psig (1.2-8.5 bar)

Run the water from the mains until it is clear and dirt free.

Connect the water mains to the 3/4" fitting of the water inlet solenoid valve via a food grade pipe (also available as a kit) that is suitable for withstanding the water mains pressure (minimum internal diameter of 0,2362 inches).

Installing a tap on the water mains outside the appliance and in an accessible position, is recommended.

Only use new seal and pipe sets and do not reuse any existing materials.

DESCALER

The appliance is not supplied with water softener.

In the event that the appliance is connected to a water mains with very hard water, a water softener must be installed.

The water softeners available as accessory, need to be periodically regenerated according to the instructions provided by the manufacturer.

Use water softeners that have a big enough capacity to be effectively used in the appliance.

If the appliance uses a water tank, appropriate filter cartridges can be used.

Fig. 17
1. *3/4"G water inlet coupling*
2. *Inlet tube*
3. *Overflow tube*

ELECTRICAL CONNECTION

The machine is arranged for electrical operation at a 208 / 240 V - 60Hz.

For the connection, make sure that the nameplate details correspond to those of the mains, and in particular that: the voltage is within the recommended limits for the connection points;

It is mandatory to use a main switch, in accordance with the current installation standards and make sure that it is located in an accessible position. The switch must have the suitable characteristics to withstand the maximum required load and ensure a complete disconnection from the power supply under conditions of overvoltage category III and, therefore, protect the circuit against ground faults, overloads and short circuits.

The switch, the socket and the plug must be placed in an accessible position.

The appliance is to be considered electrically safe only when it has been correctly connected to an efficient earthing system, in accordance with the current safety regulations.

It is important to have this fundamental requirement checked. If in doubt, have the system carefully checked by a qualified professional.

The power supply cable is flexible, has a non-detachable plug and is supplied with the appliance.

The cable connection should be made on the appropriate terminal board on the right side of the appliance, as shown on the wiring diagram.

To connect the cable, the side panel must be removed.

Any connection cable replacements must be solely carried out by qualified personnel and using only the following types of flexible cables: SJTO 3x14 AWG 105° UL complete with certificated plug NEMA L6-30P.

The use of adapters, multiple plugs and/or extension leads is forbidden.

The manufacturer shall not be held responsible for any damage caused due to the non-observance of the above-mentioned precautions.
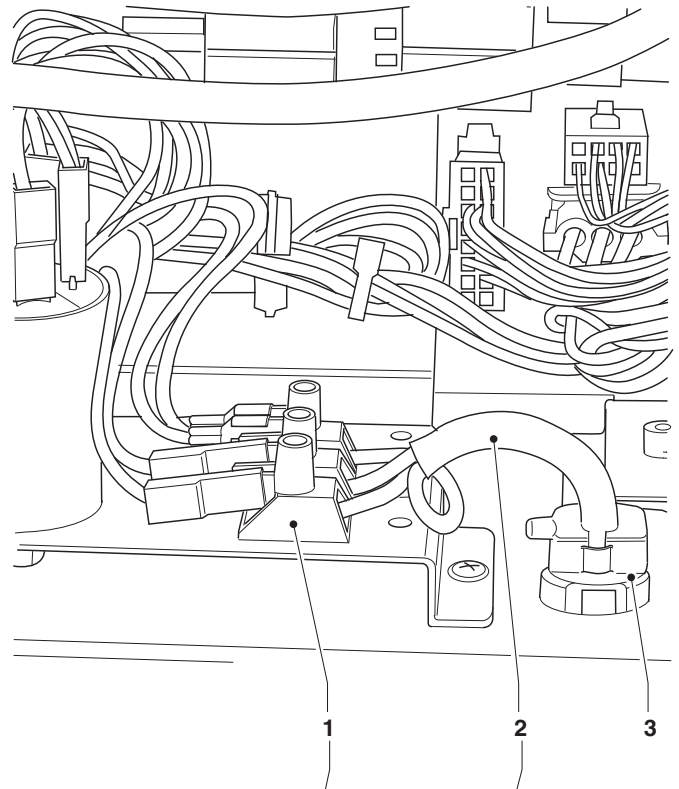
Fig. 18
1. Connection terminal board
2. Electric cable
3. Cable clamp

CONNECTIVITY INDICATIONS

INSTRUCTIONS FOR WI-FI CONNECTION

- Position the appliance where there is a strong Wi-Fi signal.

- Always enable security (encryption) features to protect communications from unauthorized access.
  A network that uses a more recent encryption system is safer.
  "Open" encryption does not guarantee any type of protection.

Wi-Fi networks in public areas or "hotspots" (such as coffee shops and airports, etc.) may not guarantee any kind of protection.

- Configure the Wi-Fi settings from the appliance's connectivity menu and set the encryption used by the network to which the appliance will be connected.
  We recommend that you enable the "firewall" function from the appliance's network settings.

❶ Contact your local network administrator (system administrator) for the appropriate network parameters to which the appliance will be connected.

The appliance does not support the WPS (Wi-Fi Protected Setup) or PBC (Pushbutton Configuration) easy configuration functions.

BLUETOOTH INSTRUCTIONS

Check that the Bluetooth function is active on the appliance and the second device.

To enable communication between the appliance and a Bluetooth device, the two devices need to be paired (see the "network" function).

❶ The appliance boasts a (non-configurable) firewall that blocks unwanted access to the appliance when connected; it is advisable to enable the firewall from the programming menus.

INSTRUCTIONS FOR 3G CONNECTION

To use the 3G connection, it is necessary to have a SIM card (standard format) with an active data tariff plan.

Insert the SIM card into the appropriate slot on the CPU card.

- Position the appliance where there is a strong 3G network signal.

- Configure the 3G network-related settings from the appliance's menu.

NETWORK SAFETY INDICATIONS

The appliance's software has a (non-configurable) firewall that blocks unwanted access to the appliance when connected to the network.

❶ The firewall must be enabled from the network settings menu.

Always use the security (encryption) features when connecting to the Wi-Fi, in order to protect communications from those with unauthorised access.

A network that uses a more recent encryption system is safer.

"Open" encryption does not guarantee any type of protection.

❶ "Hotspot" Wi-Fi networks in public areas (coffee shops and airports, etc.) may not guarantee any kind of protection.

INITIAL START-UP

When the appliance starts up for the first time, a guided sequence will be displayed with some preliminary settings (language, appliance name, etc.).

After the selections have been made, the hydraulic circuit is filled up (installation).

When the appliance starts up, the mains solenoid valve is opened automatically until the hydraulic circuit is filled up.

NB: If there is a lack of water during the installation cycle, the appliance will stop and wait for the water.

If substantial water pockets form in the hydraulic circuit, then the hydraulic circuit must be manually filled.

After the hydraulic circuit is filled, the appliance rotates the brewing unit to correctly position it; the display shows the following in sequence:

- The software version of the appliance and the software version of the touchscreen.

- The heating cycle status of the heating units.

When the heating cycle has finished, the beverages will be available.

FIRST SANITISATION

When the appliance has been installed, a thorough food circuit disinfection needs to be performed (brewing unit, mixers, beverage dispensing ducts, inner tank) to ensure that the dispensed products are hygienic.

Under no circumstances should jets of water be used for cleaning.

The sanitisation is performed using sanitising products.

Wash the mixers by adding a few drops of sanitising solution and fully wash the cappuccino maker and the brewing unit.

Once the sanitisation has been performed, rinse the mixers well to remove any solution residue.

To supply water to the mixers, use the rinse function from the "washes" menu.

Important !!!

The appliance is equipped with an automatic wash system for the main functional units.

If the appliance is subject to idle periods (weekends, etc.), even for periods of less than two days, it is good practice to enable the automatic washing functions (before beginning to use the appliance).

OPERATION

BREWING UNIT

The pinion-engaged gearmotor lets the cranks rotate, which in turn cause the infusion chamber to rotate.

The upper piston aligns itself with the infusion chamber and descends inside it. The position where the piston stops for the infusion will depend on the quantity of ground coffee in the chamber.
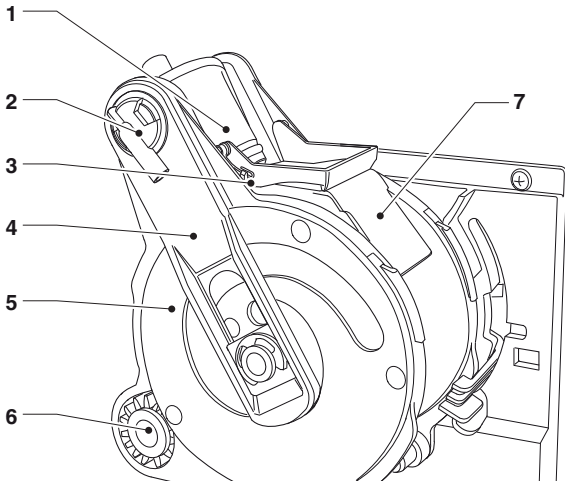
Fig. 19

1. Upper piston
2. Espresso nozzle
3. Scraper
4. Connecting rods
5. Cranks
6. Pinion
7. Used pod chute

When the coffee has been dispensed, the upper piston lowers in order to mechanically compress the coffee pod which causes excess water to be drained via the third route of the dispensing solenoid valve.

At the end of the cycle the gearmotor is activated in the opposite direction, lifting the upper piston and rotating the infusion chamber towards the emptying side, on the opposite side of the dispensing side; the lower piston rises.

Once the emptying position is reached, the gearmotor inverts its rotation direction again, bringing the infusion chamber back to the idle position.

The scraper holds the coffee pod and lets it fall, while the lower piston returns to the idle position.
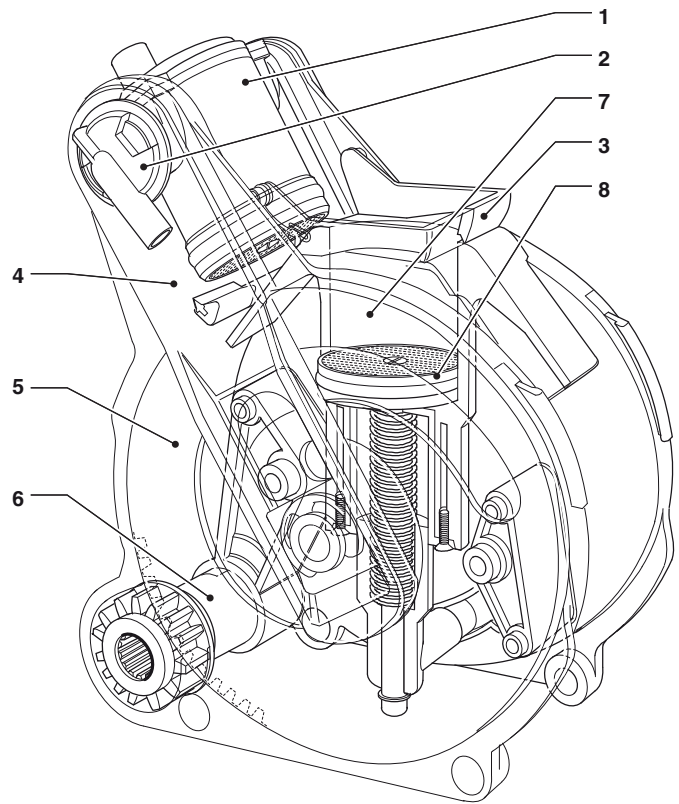
Fig. 20

1. Upper piston
2. Espresso nozzle
3. Scraper
4. Connecting rods
5. Cranks
6. Pinion
7. Infusion chamber
8. Lower piston

VOLUME OF THE INFUSION CHAMBER

The doses of coffee that the brewing unit can handle, depends on the model of the brewing unit.

The upper piston automatically positions itself.

Brewing unit	doses
Z4000	21 g

DISPENSING HOT WATER FROM THE SPOUT

Only for models with a hot water spout

⚠ **Scalding hazard! Short spurts of hot water may come out of the nozzle when the dispensing starts: do not put your hands in the dispensing area.**

To dispense hot water from the spout, use the "Hot water" selection.

The appliance dispenses hot water:

- Until the recipe's set amount is reached.
- Until the dispensing cycle is stopped (stop dispensing function).

CALIBRATION CHECKS AND SETTINGS

STANDARD CALIBRATIONS

The appliance is supplied with a selection dose table which includes the calibrations and doses that are set as standard.

To obtain the best results for each product used, we recommend the following checks are performed:

- That the coffee pod is slightly compressed and moist.
- The infusion time.
- The grammage of the coffee.
- The temperature of the beverage at the nozzle.
- The water dose.

The grammage of the product, the amount of water and the heating unit temperatures are controlled directly by the control electronics.

WATER DOSE

The type of selection determines the amount of water to be dispensed.

COFFEE GRIND ADJUSTMENT

To vary the degree of grinding (to make it finer or coarser), turn the grinder's adjustment knob:

- For a coarser grind, turn the knob anticlockwise (away from the grinders).
- For a finer grind, turn the knob clockwise (towards the grinders).

ⓘ The finer the grind, the longer the coffee will take to dispense and vice versa.

It is good practice to change the grind fineness when the coffee grinder motor is enabled.

Note: after the grind fineness has been changed, at least 2 selections need to be performed to safely check the new ground coffee grain size.

CONNECTIVITY

The appliance can communicate across the network and send email notifications.

The appliance also allows for short-range Bluetooth communication.

Bluetooth is a standard for exchanging information through a short-range radio frequency.

ⓘ **In order to use the connectivity functions and send email notifications, an active network connection is needed.**

ⓘ **The appliance sends email notifications. It is impossible to receive emails on the appliance.**

The connectivity functions must be enabled from the menu.

ⓘ **The appliance cannot be used for accessing the internet from other network-connected devices connected or providing network services.**

The appliance supports the main Wi-Fi encryption systems (cryptography).

A network that uses a more recent encryption system is safer.

ⓘ **The appliance connectivity functions are disabled when the door is open.**

TOUCHSCREEN

Only use fingers to interact with the touchscreen; do not use sharp objects.

If the touchscreen is not used and displays the same screen for a long period of time, afterimages or movements may appear: turn off the touchscreen (energy saving) or set an animated screensaver for when it is not in use.

Using high-quality content will affect the general performance and use up memory space.

TOUCH

Tap icons, functions and objects to activate or open context menus.

Fig. 21

MOVE AND DRAG

To move and drag icons and objects, tap and drag them to a new location.
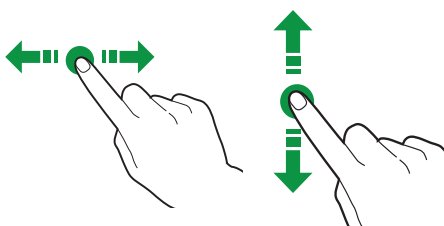
Fig. 22

SCROLL

Slide your finger to the right, left, up or down on the touchscreen to scroll through the values, screens and functions.
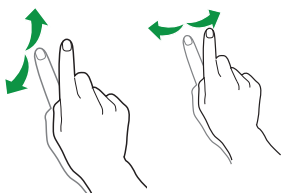
Fig. 23

USING USB MEMORY STICKS

The appliance allows USB memory sticks to be used for import/export operations and software updates.

❶ **The appliance recognises USB memory sticks with a FAT32 file system.**

Compatibility with all USB memory devices available on the market is not guaranteed.

OPERATING IN NORMAL USER MODE

The layout and arrangement of the icons/screens in this manual is indicative only and may vary from those displayed on the appliance, depending on the settings (layouts, themes, and/or icons).

When operating normally, the appliance displays the screen with the available selections or categories.

With some of the personalised settings (i.e. moving the beverages to a different place) some selections may not be displayed: simply scroll through the screen.

Depending on the settings that have been programmed, the selections can be grouped into categories (coffee-based beverages, decaffeinated, other beverages, etc.).

In the event that an anomaly or fault is detected, a message will be displayed indicating the type of fault/error.

Some selections may be disabled when certain types of faults occur (e.g. coffee empty, etc.).

DISPENSING A BEVERAGE

Select a beverage.

The screen with the beverage customisations can be displayed.

Whilst the beverage is being prepared, the beverage's preparation status is shown.

Depending on the settings configured from the programming menu, it is possible to stop a beverage's preparation.

Fig. 24

1. Beverage category profiles
2. Upper bar
3. Selections
4. Barista panel*
* If enabled

OPERATING IN BARISTA MODE

The "barista" mode must be enabled from the programming menu found in the display general settings.

The "barista" mode allows multiple beverage dispenses to be queued.

Select the beverages to be dispensed.

Tap the barista panel (bottom right) to see the list of requested beverages. The beverages in the queue can be deleted 🗑 from the panel and/or the dispensed cycles in progress can be cancelled ✖.

Whilst the beverages are being prepared, further selections can be requested; these will be displayed in the barista panel.

The next beverage is dispensed when confirmation is received from the operator: tap the writing on the barista panel that indicates that the "beverage is ready".

Fig. 25

The layout and arrangement of the icons/screens in this manual is indicative only and may vary from those displayed on the appliance, depending on the settings (layouts, themes, and/or icons).

The washes that can be performed from the status bar, are always accessible.

If the access profile management is active, access to the washes is not freely accessible (i.e. password-protected).

APPLIANCE STATUS PANEL

Tap ❶, "Extras" or "Messages" (with the barista mode active) on the top bar of the selection screen to view the status panel.

Fig. 26

The status panel:

- Displays fault/error notifications;

- Displays the nutritional information of the selections;

- Allows the language of the displayed messages to be changed;

- Displays the filling level of the trays and containers;

- Displays the available wash functions;

- Provides access to the programming functions.

CLOSING THE STATUS PANEL

Drag the bottom of the status panel upwards.

Fig. 27

SYSTEM ARCHITECTURE

In order to work, the appliance requires an operating system and application software.

The settings/customisations are managed by the application software.

OPERATING SYSTEM

The operating system provides the basic functionalities for managing resources, communicating with peripheral devices and coordinating the various activities.

The operating system is necessary in order to install the application software and use the appliance.

❶ **The operating system update completely deletes the CPU memory, including application software, customization settings and statistical data.**

APPLICATION SOFTWARE

The application software allows the appliance features to be used and the settings to be changed via the graphical user interface (GUI).

The application software does not work without the operating system.

❶ **Updating the application software does not delete the operating system and any settings/customisations.**

SETTINGS AND CUSTOMISATION

The application software makes it possible to set and customise recipes, calibrations and the graphic interface.

Settings/customisations also include the machine configuration database (layout).

These settings can be saved onto a USB memory stick and then be imported and used on other appliances.

ℹ Before using the settings/customisations on other appliances, it is necessary to check the software versions of the application and operating system.

Check that they are up to date or at least, the same version from which they were exported.

The settings/customisations are not compatible with previous software versions.
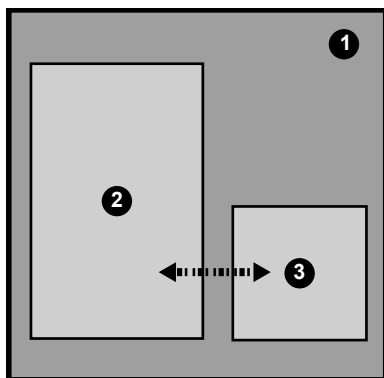
Fig. 28
1. Operating system
2. Application software
3. Settings/customisations

Notes regarding Programming

The electronic control unit of the appliance allows many functions to be used.

A brief explanation of these main functions is provided below. They are useful for better managing the appliance's operation but are not necessarily in the same order as they are displayed in the menu.

Some functions that are specific to certain functional units may be described; functional units that differ according to the model.

The layout of the icons/screens in this manual is indicative only and may vary from those displayed on the appliance, depending on the settings (layouts, themes, and/or icons).

ACCESSING THE PROGRAMMING MENUS

To access the programming menu:

- When the door is closed, tap ≡ settings.

Depending on the settings, a password may be required before being provided access to the programming menus.

Enter the password to access the enabled menus.

The (default) passwords are:

- Technician (4444);

- Distributor (3333);

- Loader (2222);

- User (1111).

Fig. 29

1. *Search field*
2. *Function menu*
3. *Exit*
4. *Favourites*
5. *Password keypad*
6. *Information area*
7. *Message area*
8. *Fault area*
9. *Maintenance information area*

FUNCTION MENU

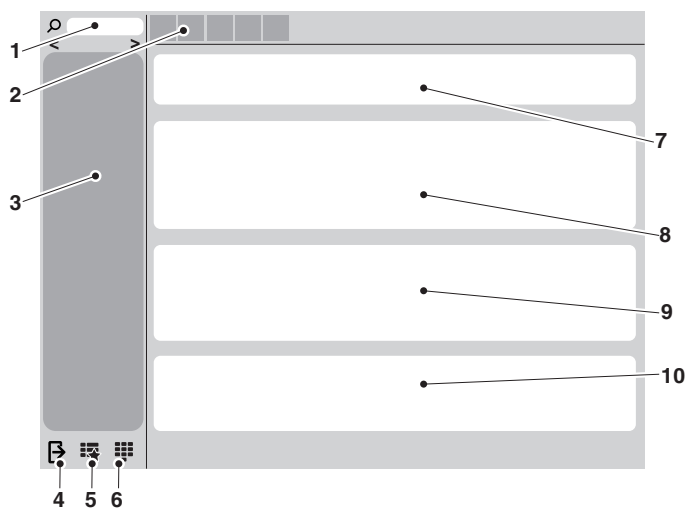Tap MENU ≡ to view the appliance's menu functions.

EXIT

Tap EXIT ↪ to come out of the programming menu.

The selections page will be displayed.

SEARCH

Tap SEARCH **Q** to search for functions within the menu.

Enter the function's name; when you begin typing, the functions containing the text that you have entered will be displayed (search results).

Tap the desired function from the search results.

FAVOURITES

FAVOURITES ▤ are shortcuts to frequently used functions.

After having added a function to the FAVOURITES, simply access the FAVOURITES and tap the function for quick access.

ADDING A FUNCTION TO "FAVOURITES"

From the function screen, tap ☆; it will change colour (★ is activated).

REMOVE A FUNCTION FROM "FAVOURITES":

- From the favourites screen, tap the function to be removed in order to access that function.

- Tap ☆; it will change colour (★ is disabled).

INFORMATION AREA

Displays information regarding the appliance (software version, etc.).

MESSAGE AREA

Displays messages of an informative nature, e.g. statistics on the most requested selections, etc.

FAULT AREA

Displays the faults found on the appliance.

MAINTENANCE INFORMATION AREA

Displays information regarding the maintenance deadlines.

MAINTENANCE NOTIFICATION sets the current date/time as the last date of maintenance.

ENTERING VALUES

The values in the programming menu can be entered/modified as follows:

KEYPAD
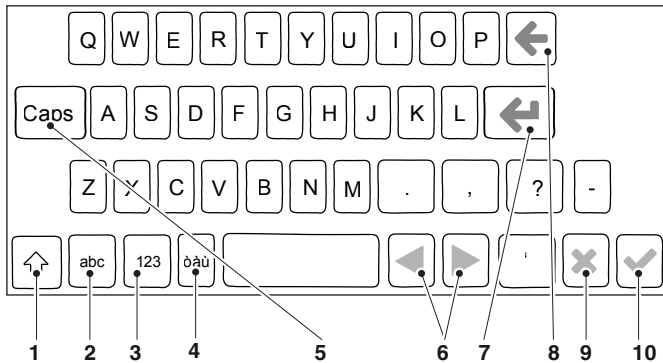
Fig. 30

1. *Uppercase (shift)*
2. *Button to switch the "number/symbol" keypad to the "letter" keypad*
3. *Button to switch the "letter" keypad to the "number/symbol" keypad*
4. *Caps lock*
5. *Moves the cursor in the text*
6. *New line (text over two lines)*
7. *Clear (back space)*
8. *Confirm*
9. *Cancel*

NUMERIC KEYPAD
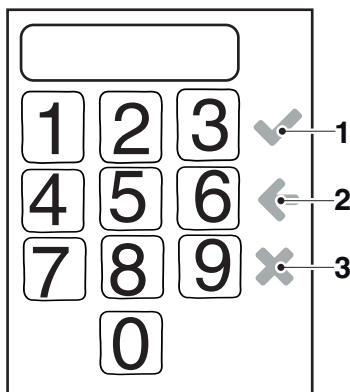
Fig. 31

1. *Confirm*
2. *Clear (back space)*
3. *Closes the keypad*

CHECKBOX

Tap the checkbox to enable/disable the option.

Fig. 32

DROP-DOWN LIST

Tap to open the drop-down list and select the value.
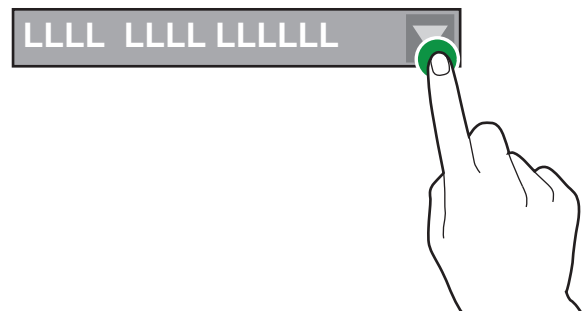
Fig. 33

VALUE PICKERS

Scroll and select the desired value.

To quickly enter a value (without scrolling), tap ⚏ and enter the numeric value.
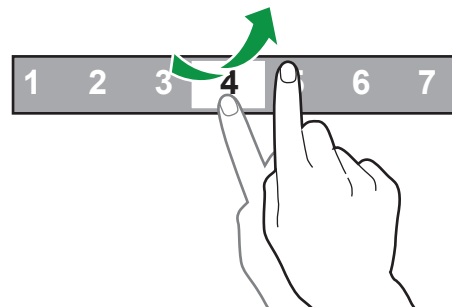
Fig. 34

DAILY ACTIONS

Groups together all of the functions that are used on a daily or more frequent basis (washes, resetting the residue counters, etc.)

CLEANING AND WASHES

Automatic washing and rinsing functions of the appliance's functional units (brewing unit, mixer, etc.).

Select the components that require washing.

Some washes might require parameters to be set (e.g. the amount of water to use, etc.).

EMPTYING THE SOLID RESIDUE TRAY

Resets the counter that manages the "Residue full" warning when the solid residue tray is full.

In order to correctly manage the pre-alarms and warnings, the counter must be reset each time the solid residue tray is emptied.

MONEY MANAGEMENT

Enabled only for models with a payment system.

With this function, it is possible to:

- Empty the coins from the coin mech's change-giver tubes.

- Insert coins into the coin mech tubes to activate the change-giver function.

- Check the total amount of money in the coin box.

SELECTION SETTINGS

DISPLAY LAYOUT

Select the layout of the selections from the default ones which are displayed in normal user mode.

To change the order of the selections, drag the selection icon to the new position.

To make a selection available or unavailable when the appliance is in normal user mode, drag the selection icon from the available selections and vice versa.

DISPLAY LAYOUT OF THE SELECTION CATEGORIES

With the management by categories, the selections can be grouped by type.

For each category, a selection layout can be chosen.

To add or delete a selection in a category, simply drag the selection icon from the available selections and vice versa.

To change the order of the selections, drag the selection icon to the new position.

SELECTION CATEGORIES

Allows the selection categories to be created, modified or deleted.

The selection categories are displayed during normal operation and they allow the selections to be grouped by their beverage type (e.g. "milk-based beverages").

The function allows:

- A new category to be created ╋ ;

- A category to be duplicated ▢ and modified ✎ ;

- A category to be deleted ☷ ;

- The available categories to be enabled/ disabled.

CREATING OR MODIFYING A CATEGORY

The name, description and icon of a category can be assigned or modified.

BEVERAGES

From the screen, it is possible to:

- Create new beverages and associate a recipe ╋ .
  The software checks that there is compatibility between the recipe and appliance configuration (layout).
  If ❶ is displayed, this means that an incompatibility has been detected.

- Delete a beverage 🗑 .

- Duplicate 🗋 and customise ✎ a beverage.
The 👁 icon indicates that the beverage is available during normal operation.

CREATING OR MODIFYING A BEVERAGE

It is possible to:

- Assign/modify the name of beverages displayed during normal operation.

- Select which recipe to use when preparing the beverage.
  Several recipes can be associated to the same selection, according to the cup size (S, M or L).
  In normal operating mode, the size of the cup will be displayed.
  By default, the appliance uses recipes for single drinks; for double selections (X2), recipes with adequate doses need to be created.

- The software checks that there is compatibility between the recipe and appliance configuration (layout).
  If ❶ is displayed, this means that an incompatibility has been detected.

- Change the image associated with the beverage (on the main selection screen and during the dispensing cycle); tap the image to choose a new image.

- Enable the option to prematurely stop a selection ("stop dispensing" function).

- Associate a multimedia content playlist to be displayed whilst dispensing.

- Dispense a test beverage.

- Enable the "Jug" function and define its settings (the number of dispenses required to fill the jug, whether the jug is enabled by default upon selection, etc.).

RECIPES

It is possible to:

- Create a new recipe ╋ .
  The newly created recipe is saved in the "not available" category.
  Then, associate the recipe to the beverage.
  The software checks that there is compatibility between the recipe and appliance configuration (layout).
  If ❶ is displayed, this means that an incompatibility has been detected.

- Delete a recipe 🗑 .

- Duplicate 🗋 and customise ✎ a recipe.
The 👁 icon indicates that the recipe is available during normal operation.

CREATING A NEW RECIPE

The guided procedure allows a new recipe to be created.

A screen is displayed where:

- A name can be assigned to the new recipe.

- Set a wait time (in seconds) for the "Take beverage" message to appear when the beverage has been dispensed.
The wait time allows the tubes to be emptied and drip into the cup.

- Tap 📖 and then "Add preparation" to add the products which make up the recipe (e.g. coffee, chocolate, etc.).
The parameter screens vary according to the added product (espresso coffee, fresh brew coffee, instant powders, etc.).

- To customise the beverage, tap 📖 and then "Add customisation".
The various parameters can be set for every customisation option.
The "Coffee strength" customisation option allows the recipe to be customised (even those associated with S, M and L beverages).

- Save the settings and return to the main screen.

"Test recipe" on the main screen allows a test selection to be dispensed in order to check the created recipe.

After the test selection, the recipe can be modified.

MODIFYING A RECIPE

From the recipe screen, it is possible to:

- Change the name of a recipe.

- Set a wait time (in seconds) for the "Take beverage" message to appear when the beverage has been dispensed.
The wait time allows the tubes to be emptied and drip into the cup.

Other ingredients and/or customisations can be added to the recipe.

From the recipe screen, tap 📖 to add other ingredients and/or customisations.

To change the settings of individual ingredients (e.g. the amount of water, powder, etc.), tap the ingredient bar to open the context menu.
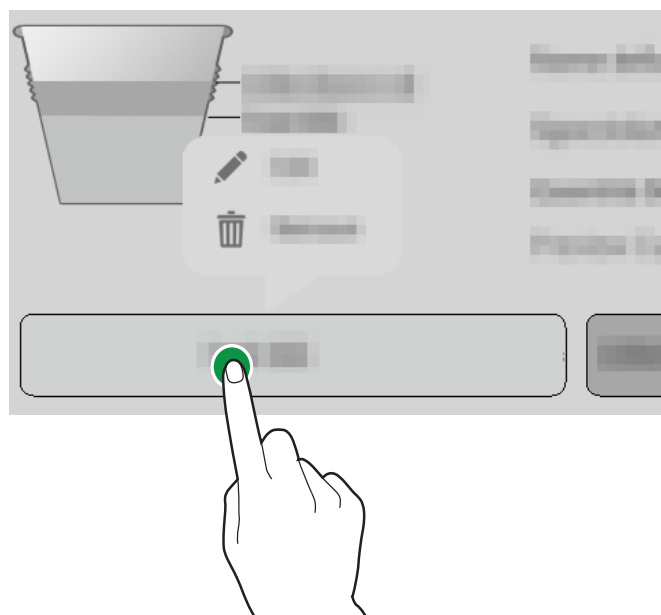
Fig. 35

- Tap edit ✏ to change the parameters.
- Tap remove 🗑 to delete the ingredient.

To move an ingredient before or after an-other ingredient, simply drag the bar of the ingredient.
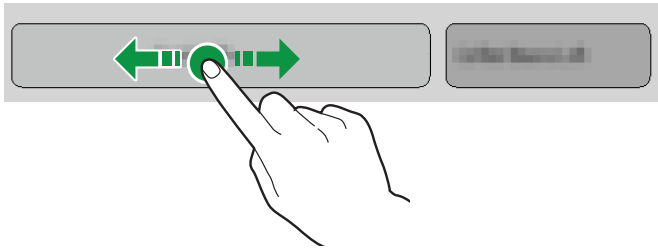
Fig. 36

After changing the parameters, save the settings and return to the main screen.

"Test recipe" on the main screen allows a test selection to be dispensed in order to check the modified recipe.

BASIC ESPRESSO PARAMETERS

You can set the:

- Set the name of the ingredient;

- The dose (water and powder);

- Dispense a test beverage;

- Water dose used for the pre-infusion;

- Choose the pressure profile to use for the espresso infusion.

Customisations can be added to the recipe (e.g. the intensity, quantity, etc.).

Specific parameters must be set for each customisation.

The timed ground dose is indicated as a percentage, compared to the time taken to volumetrically grind the coffee.

ADVANCED ESPRESSO PARAMETERS

START DELAY

Sets an ingredient time delay; the delay is useful if a recipe consisting of multiple ingredients is created.

For example, when creating the "Espresso with milk" recipe, a time delay can be set between when the coffee and the milk is dispensed.

It can help the beverage be presented better.

PUMP SPEED

Set the pump speed. The pump speed is set in PWM (pulse-width modulation).

The 100 value indicates the maximum pump speed.

POD SQUEEZING

The squeezing is carried out by the upper piston which, by mechanically compressing the pod, favours the expulsion of the water from the pod before it is discarded into the solid residue tray.

- ON: the pod squeezing is enabled.

- OFF: the pod is not squeezed.

PRE-INFUSION TIME

Sets the pre-infusion time before the actual infusion occurs.

The pre-infusion time allows the coffee pod to be wet in an even manner.

POD SQUEEZING FORCE

Choose the squeezing force exerted on the pod by the piston.

BASIC INSTANT PARAMETERS

You can set the:

- Set the name of the ingredient;

- The dose (water and powder);

- The instant powder dispensing speed (g/s).

Customisations can be added to the recipe (e.g. the intensity, quantity, etc.).

Specific parameters must be set for each customisation.

ADVANCED INSTANT PARAMETERS

START DELAY

Sets an ingredient time delay; the delay is useful if a recipe consisting of multiple ingredients is created.

For example, when creating the "Hot chocolate with milk" recipe, a time delay can be set between when the powder and the milk is dispensed.

It can help the beverage be presented better.

MIXER DELAY

Sets a start delay time for the mixer, compared to when the water is dispensed.

ABSOLUTE MIXER MIX TIME

The mixing duration can be set independently from the pump/valve operation time.

The mixing duration is set in milliseconds and calculated from the moment the pump/solenoid valve is activated.

RELATIVE MIXER TIME

The mixing duration can be set differently, by stopping it before or after the pump/solenoid valve stops.

The mixing duration is set in milliseconds and calculated from the moment the pump/valve is activated.

MIXING SPEED (LOW/MEDIUM/HIGH)

The mixing speed can be defined according to the desired presentation of the product.

WATER QUEUE

Extends the amount of water dispensed into the mixer after the mixing stage has finished, in order to adequately rinse the mixer.

Set the desired amount of water.

POWDER SPEED

Sets the working speed of the motor-doser to define its flow rate.

POWDER DELAY

An instant powder time delay can be set so that it starts after the water has been dispensed into the mixer (activation of the pump/solenoid valve).

STEP

The instant powder is dispensed at regular intervals at the same time as the water.

Set how many intervals are required to dispense instant powder whilst the water is being dispensed.

Set the intervals (steps) according to the powder used, in order to obtain a high-quality and well-presented beverage.

DECAFFEINATED COFFEE CYCLE

The instant powder is dispensed before the water to improve the presentation of the beverage.

It is recommended to enable this option for instant coffee.

CONTAINERS

According to the machine layout, how the product containers have been arranged can be shown.

Choose a container in order to:

- Assign a name to the container.

- Associate an ingredient to the container (Chocolate, Espresso, 2 espressos, etc.).

- Set the container's maximum capacity so that the "product running out" check can be managed.

- Change the colour associated with the container.

PHYSICAL LAYOUT

It is the mechanical layout of the configuration used by the appliance.

It shows the set-up of the containers and main functional units.

The appliance's new mechanical settings can be indicated to the software.

❶ Make sure that your settings correspond with the appliance's actual configuration.

❶ The appliance adjusts the operating cycles of the functional units according to the choices that have been made.

⚠ Settings that do not comply with the actual configuration can be dangerous and cause damage to the appliance.

MACHINE SETTINGS

CONFIGURATION

SELECT CONFIGURATION
It allows the appliance's group and individual configurations to be managed.

A group of configurations contains multiple individual configurations (layout).

Groups of configurations and individual configurations can be deleted and duplicated.

When using a new configuration, you can decide whether to reset the statistical data, calibrations, and maintenance counters or not.

❶ Before uploading the configuration of another appliance (cloning), make sure that the two appliances' settings are compatible.

BACKUP
Allows the machine settings to be saved as a backup file.

RESTORE
Allows the backed-up machine settings to be restored.

The appliance can be restored to its:

- Factory settings;

- Previously-saved custom settings.

After having restored the settings from the configuration file, enter the configuration menu and "Select configuration".

IMPORTING FROM A USB
Allows the new machine settings to be imported from a configuration file that has been saved onto a USB memory stick.

❶ The import function can be used to clone the settings of another appliance; make sure that the two appliances' settings are compatible.

EXPORTING VIA A USB
Allows the machine settings to be exported into a configuration file on a USB memory stick.

❶ The export function can be used to clone current settings onto another appliance; make sure that the two appliances' settings are compatible.

MODIFYING INTERFACE STRINGS
The names of the beverages, recipes, containers and nutritional information, which are displayed on the screens, can be changed in the available languages.

The programming menu strings cannot be changed.

CUSTOMISING THE INTERFACE

EDIT
Allows some user interface graphics to be set, such as backgrounds, text size, colours, etc.

The function lists all the elements that can be customised; the dimensions are indicated for some of these elements.

CUSTOM GRAPHICS
Allows you to choose which custom graphics to apply to the user interface.

The files uploaded via the "import" function will be displayed.

The "graphics package" can be duplicated from this function and modified to create a variant.

IMPORT
Allows the custom graphics files on the USB memory stick to be browsed through and selected, in order to be imported onto the appliance.

EXPORT
Allows the custom graphics to be saved onto a USB memory stick.

GENERAL DISPLAY SETTINGS

Enables/disables the display of:

- Set the touchscreen's brightness; set it at 100 for maximum brightness.

- Displays the number of dispensing cycles completed since the appliance has been switched on.

- The price of the selections when operating normally (for models with a payment system).

- Time and date.

- Enables/disables the direct dispensing of selections. A beverage cannot be customised (quantity, intensity, etc.) before being dispensed in the direct dispensing mode. When this mode is enabled, the barista mode is excluded and vice versa.

- Screensaver; when enabled, you can enter after how long to activate the screensaver.
  Select whether to display a screensaver or a playlist.

- Enable the "barista" mode.

PLAYLIST

Allows playlists with entertainment content to be created and managed.

A playlist contains videos and/or image sequences that are played whilst the selection is being dispensed.

If a playlist only contains images, you can indicate after how long to show the next image.

╅ Adds videos or images to the playlist.
▢ Copies the playlist.
🗑 Deletes the playlist.

A name must be assigned to a new playlist.

The playlist contents can be played in the following modes: random ⤬ or cyclic ⟲.

INPUT SENSOR SETTINGS

The functional unit allows the operation of some of the appliance's sensors to be set.

SOLID RESIDUES

Enables/disables the solid residue count that manages the "residue full" warning.

Set the number of solid residue tray capacity selections.

The level of the residue trays can be checked from the appliance's status window.

CALIBRATIONS

CALIBRATING THE FLOW METER

The flow meter calibration allows the correct amount of water to be obtained for the recipes.

The flow meter calibration procedure is as follows:

1. Dispense and draw the preset amount of water.

2. Measure the amount of water dispensed (in cc).

3. Enter the measured value.

A calibration adjustment value (positive or negative) may need to be used for beverages dispensed by the brewing unit.

GRINDER CALIBRATION

The calibration allows the grinder working speed to be adjusted, according to the grams to be ground.

To calibrate, proceed as follows:

1. Start the calibration procedure: a dose of coffee beans will be ground and released.

2. Weigh the ground coffee.

3. Enter the measured weight.

MOTOR-DOSER CALIBRATION

The calibration of instant products and pre-ground coffee in the motor-dosers allows the motor-doser operating speed to be adjusted and the flow rate to be defined in g/s.

To calibrate, proceed as follows:

1. Dispense the powder at the lowest speed.

2. Weigh the dispensed instant powder.

3. Enter the measured weight.

4. Dispense the powder at maximum speed.

5. Weigh the dispensed instant powder.

6. Enter the measured weight.

PUMP/SOLENOID VALVE CALIBRATION

The calibration allows the flow capacity to be adjusted in cc/s.

To calibrate, proceed as follows:

1. Dispense the water at the minimum flow rate.

2. Measure and enter the amount of dispensed water.

3. Dispense the water at the maximum flow rate.

4. Measure and enter the amount of dispensed water.

OUTPUT SETTINGS

BREWING UNIT

- No coffee: a sensor detects the rotation of the grinder when it is grinding; if a block (e.g. foreign bodies) or excessive speed (grinder empty) occurs, the control blocks the selections which use the grinder.

- Pregrinding: enables/disables the coffee grinder for the next selection. Pregrinding reduces the preparation time of the next selection containing ground coffee. Pregrinding affects the aroma of the next selection containing ground coffee.

- "Use decaffeinated coffee" option: allows the "use decaffeinated coffee" option to be enabled for a selection that uses coffee (beans and/or pre-ground).

- Allows the position of the brewing unit's infusion chamber to be set.
Set the infusion chamber's position to allow the coffee powder to be arranged more evenly in the infusion chamber.

- Enable/disable the brewing unit heating when it is not used for a certain amount of time.

FAN PARAMETERS

Enables/disables the operation of the appliance's fans.

STEAM SUCTION

- ON: the fan is always active.

- OFF: the fan is active whilst the beverage is being prepared.
The fan stays on until the dispensing is complete and for the time that has been set.

LIGHTING

Allows the appliance's lighting parameters to be set.

MAINTENANCE

PROGRAMMING AUTOMATIC WASHES/RINSES

The automatic wash and/or rinse cycle programmes of the appliance or functional units can be enabled/disabled.

Programme the type of wash and/or rinse to be performed on the day and time that has been set.

Automatic wash/rinse cycles can be added and removed via ✖.

⚠ The automatic washes/rinses use hot water. Scalding hazard! Do not put your hands in the dispensing area.

During the washes and rinses, a message appears showing the progress of the operation.

WASH MESSAGES

Set the intervals (number of hours and/or selections) for each type of wash/rinse.

When the set values have been reached, the appliance will display a wash/rinse message.

Each wash/rinse can be made compulsory: the appliance or some functional units will not work until a wash/rinse has been performed.

NEXT WASHES

Displays when the next wash/rinse will be required for each type of wash/rinse.

RINSES DURING INACTIVE PERIODS

This function can be used to programme quick rinses on some of the functional units, when they are not in use.
Set:

- How long after its last use to dispense the rinsing water into the functional unit.
  E.g. 12 minutes: a rinse cycle is performed 12 minutes after the functional unit was last used.

- Set the amount of water and/or the rinse duration in seconds.

Before the rinse cycle begins, a message informing of the impending rinse cycle is displayed.

During the washes and rinses, a message appears showing the progress of the operation.

GENERAL SETTINGS

TANK

The appliance can be supplied by mains (OFF) or a tank (ON).

ENABLING THE DISPENSING COMPLETE SIGNAL

Enables/disables a beep when the appliance has finished dispensing.

LIQUID TRAY LEVEL SENSOR

Enables/disables the "liquid residue tray full" signalling sensor.

ACCESSING THE MENUS WITH THE DOOR CLOSED

Enables/disables access to the programming menus when the door is closed.

HEATING UNIT PARAMETERS

Sets the operating parameters of the heating unit(s).

- Temperature: sets the operating temperature of the heating unit.

- Minimum temperature for dispensing beverages: sets the minimum temperature for making beverages available.
  If the heating unit temperature is lower than the temperature that has been set, a "low temperature" error message will be displayed.

With the "Temperature threshold" and "Minutes" parameters, the heating unit's heating cycle can be set to compensate for the first espresso's low temperature.

For example, if no beverages are dispensed during the set minutes, the temperature of the water in the heating unit is increased by the degrees set in the "Temperature threshold".

A higher temperature value can be set so that the "low temperature" message will not be displayed.

MIXER ANTI-LOCK

Sets how long after the last instant selection to briefly activate the mixers (anti-lock function).

The function is useful if instant powder residues remain in the mixers.

MOTORISED ADJUSTMENT OF THE BURRS

The grain size (coarser or finer) can be adjusted on appliances with a motorised burr adjustment device.

Set the value (expressed in 1/6 of a turn of the burr-holding locking ring) to move the burrs closer or farther away.

When the burrs are moved closer together, a finer grain size is obtained.

When the burrs are moved farther away, a coarser grain size is obtained.

Alternatively, manually turn the grinder adjustment knob on machines without a motorised burr adjustment device.

NEXT MAINTENANCE

Enable and set the number of days and/or the number of dispenses.

When one of the values that has set is reached, the appliance will display a "perform maintenance" message.

MAINTENANCE NOTIFICATION

Reset the counter that manages the maintenance alerts.

❶ In order to correctly manage the notifications, only reset the counter to zero after all of the maintenance work has been carried out.

NEXT WATER SOFTENER MAINTENANCE

Enable and set the number of litres at which a "perform maintenance" message is displayed, regarding the softener.

SOFTENER MAINTENANCE NOTIFICATION

Reset the counter that manages the softener warnings.

❶ In order to correctly manage the notifications, only reset the counter to zero after all of the maintenance work has been carried out.

MACHINE INFORMATION

The appliance has a number of sensors that keep the various functional units under control.

When an anomaly is detected, the appliance displays the type of fault and the appliance (or part of it) is put out of service.

Detected faults are stored in specific counters.

FAULT HISTORY

This function makes it possible to view a list of the fault history; the fault history contains the name of the fault with the date and time.

With this function, the list of reported faults can be reset to zero.

EVENT HISTORY

This function allows the events reported by the appliance to be viewed and filtered.

With this function, the list of reported events can be reset to zero.

FAULTS

Displays the faults found on the appliance. If there are no faults, the list will be empty.

NO WATER

No water from the water mains or tank.

Make sure that the appliance is connected to the water mains and that the tap is open or the tank is full of water.

Tap the "Reset" button to restore the appliance's operation.

DOSER N FAULT

If the current absorption of a motor-doser does not fall within the range of default values, all the selections which involve that motor-doser will be disabled.

Where N is the number of the faulty motor-doser.

FLOW METER

Failure to count the flow meters within a maximum time.

MACHINE BOARD

Failed communication between the machine board and the CPU board.

Check the electrical connections between the two boards.

COIN MECH

For models with a payment system only.

The machine will lock if it receives a pulse lasting more than 2 seconds on a validator line or if the communication with the serial coin box is interrupted for longer than 30 (Executive protocol) or 75 (BDV protocol) seconds.

COFFEE UNIT -UNIT MICROSWITCH FAULT-

Whilst the brewing unit was moving, the control microswitch was not activated within a certain time limit.

It is possible that this fault is combined with another coffee unit positioning fault.

COFFEE UNIT -UNIT START FAULT-

The microswitch indicates that it is still in the idle position.

COFFEE UNIT -BREWING UNIT FAULT-

The control microswitch indicates that the coffee unit is not in the infusion position.

COFFEE UNIT -DISPENSING UNIT FAULT-

During the infusion phase, the control microswitch signals the movement of the espresso unit.

COFFEE UNIT -UNIT DISCHARGE FAULT-

At the end of the infusion, the control microswitch signals that the coffee unit does not reach the "used pod discharge" position.

COFFEE UNIT -UNIT IDLE FAULT-

The control microswitch indicates that the brewing unit did not go back to the idle position after the pod was emptied.

GRINDER

A sensor detects the grinder's actual rotation during the grinding time.

In the event of a blockage (due to foreign bodies, etc.), the grinder is shutdown and the espresso-based selections are disabled.

This option can be used to enable/disable the grinder rotation check.

HEATING UNIT ERROR

The heating unit operating temperature is not reached after several temperature measurements in a given time.

The appliance has been taken out of service.

SOLENOID VALVE N FAULT

If the current absorption of a solenoid valve does not fall within the range of set values, all the selections which involve the solenoid valve will be disabled.

Where N is the number of the faulty solenoid valve.

SHORT CIRCUIT MOSFET

If a control device for the DC motors on the activation board (mosfet) remains active, the machine will signal a fault.

SHORT CIRCUIT

If the software detects a short circuit in one of the DC motors connected to the activation board, this fault will be displayed. It is possible that a fault will also be detected on one of the DC motors at the same time.

SOLID RESIDUE FULL

The maximum number of coffee bean-based selections has been reached.

Proceed to empty the solid residue tray.

SOLID RESIDUE TRAY

The solid residue tray has not been inserted correctly and/or is missing.

HEATING UNIT FILLING TIMEOUT

The heating unit was not filled within the allotted time.

The flow meter detects that water passes through beyond the allotted time.

MIXER N FAULT

If the current absorption of a motor mixer does not fall within the range of default values, all the selections which involve that mixer will be disabled.

Where N is the number of the faulty mixer.

WATER PUMP OVERHEATING

The water pump is frequently activated for more than 10 minutes.

The fault prevents the pump's thermal protection from cutting in.

HEATING UNIT LEAK

Signals a possible loss of heating unit pressure during a "pressurised" cycle.

FULLY CLEANING THE MACHINE

Signals that the appliance needs to be fully cleaned.

The warning is displayed when the set time limit or number of selections is reached.

WASHING THE ESPRESSO UNIT WITH PODS

Signals that the espresso unit needs to be cleaned with sanitising pods.

The warning is displayed when the set time limit or number of selections is reached.

WASHING THE MIXERS

Signals that the mixers need to be washed.

The warning is displayed when the set time limit or number of selections is reached.

THE LIQUID RESIDUE TRAY IS FULL

Indicates that the liquid residue tray needs to be emptied because it is full.

MISSING LIQUID RESIDUE TRAY

The liquid residue tray has not activated the microswitch that indicates the presence of the tray.

Check that the liquid residue tray has been correctly positioned inside the appliance.

LOW WATER PRESSURE

The pressure switch measures low water pressure inside the appliance's hydraulic circuit.

LOW ESPRESSO TEMPERATURE

The espresso heating unit temperature is lower than the minimum programmed temperature for dispensing an espresso.

Wait for the set minimum dispensing temperature to be reached.

MACHINE DATABASE NOT AVAILABLE

The database that groups together and manages the machine configurations is missing on the appliance; it cannot be loaded or created.

Make sure there is enough memory space.

ESPRESSO CONTAINER IS MISSING

A sensor detects the coffee container(s).

If the sensor does not detect anything, the grinder is disabled.

The coffee container(s) has not been detected by the sensor, is incorrectly positioned or has not been repositioned in the appliance.

INSTANT CONTAINER IS MISSING

A sensor detects the instant powder container(s).

The instant powder container(s) has not been detected by the sensor, is incorrectly positioned or has not been repositioned in the appliance.

STATISTICS

SHOW STATISTICS

Displays the selection statistics (e.g. the number of dispenses carried out, time and date of the last dispense, etc.)

DATA RESET

Resets the stored statistics of the selections.

SHOW AUDIT

Displays the total number of dispenses and the total dispenses since the last statistics reset, for each selection.

The function allows the displayed audit data to be filtered by category.

NUMBERING SELECTIONS

Allows the selections to be numbered and match the selection number-beverage in the statistics.

FAVOURITES

"Favourites" are shortcuts to frequently used functions.

After having added a function to the "favourites," simply view the "favourites" and tap the function for quick access.

The functions

FAVOURITES LIST

Displays all frequently used functions that have been saved as "favourites"

Tap the function to access it.

REMOVE A FUNCTION FROM "FAVOURITES":

- From the list of favourites, tap the "bin" icon.

- Tap the function to be removed from favourites.

CLEAR THE LIST OF FAVOURITES

Removes all functions from the list of "favourites".

MACHINE IDENTIFICATION

Allows you to enter a numerical code and name to identify the appliance.

The code can be used to identify the appliance when analysing the statistics.

INSTALLATION DATE

Allows the date that the appliance was installed to be set.

Use ✎ to set the date.

❶ The date is used to manage maintenance intervals and automatic wash/rinse cycle intervals.

TECHNICAL SUPPORT CONTACT INFORMATION

Allows the contact information (name and phone number) of the technical support to be entered, in the event of faults.

This information will be displayed should a fault occur.

This information can be displayed for faults which block the appliance and/or faults which do not block the appliance, or for faults which cannot be reset during normal operation.

Use ✎ to edit the contact information.

ENERGY SAVING MODE

The appliance's energy saving function can be enabled. Its parameters can also be modified and its time frames can be set.

Enables/disables the energy saving function.

The appliance can manage various energy saving profiles.

Some of the parameters in every energy saving profile can be customised.

"SOFT MODE" PROFILE

This profile enables the energy saving mode after the appliance has a period of inactivity.
When a selection is requested, the machine exits the energy saving mode.

It is possible to:

- Set after how many minutes of appliance inactivity to activate the energy saving profile.

- Set the maintenance temperature of the heating unit(s) in the energy saving mode.

- Enable/disable the appliance's lighting.

- Select the display brightness level from those that have been predefined.

"DEEP MODE" PROFILE

This profile is active during the set time frames.

During the set time frames, the heating unit temperature is lowered and the maintenance temperature is set.

It is possible to:

- Set by how many minutes to advance the heating of the heating unit before the end of the of the time frame.
  E.g. 5 minutes: 5 minutes before the end of the time frame, the heating unit heating cycle is activated in order to reach the operating temperature.

- Switch off the heating unit(s).

- Set the maintenance temperature of the heating unit(s) in the energy saving mode.

- Enable/disable the appliance's lighting.

- Select the display brightness level from those that have been predefined.

ENERGY SAVING TIME FRAMES

Allows the time frames of the energy saving profiles to be set.

- Select the day for which the time frames will be set.

- Tap the "Add" button, then the line of the profile in order to position a rectangle indicating the time.

- Drag the rectangle to precisely define the time.

To delete a rectangle, tap the "Delete" button, then tap the rectangle to be deleted.

Settings made for the entire week or a single day can be copied.

Tap "Copy day" to be able to:

- Copy the time frames that have been set for a single day of the week; tap the day to set the energy saving mode to and then tap "paste day".

- Copy the time frames that have been set for all days of the week; then tap "paste days".

LLLL		7.30			
LLLL			9.30		
LLLL				2.00	

LLLL		7.30			
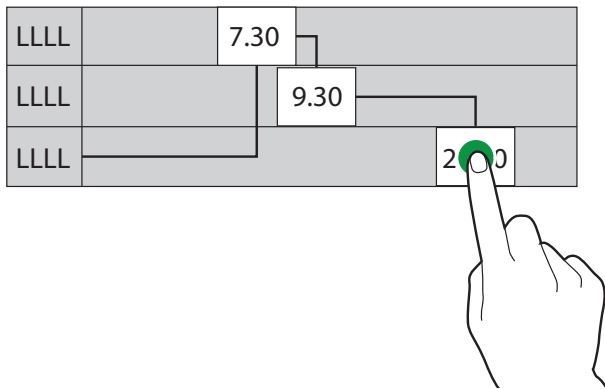
Fig. 37

PAYMENT SYSTEMS

Certain models only.

It is possible to decide which of the payment system protocols to enable and which functions to manage.

Some of the parameters, which are used in numerous payment systems, keep the set value even if the system type is changed.

COMMON PARAMETERS

IMMEDIATE CHANGE

Usually the amount for a selection is cashed in after the appliance sends the "Selection made" signal.

By enabling this function, which is disabled by default, the payment signal is sent when the beverage starts being dispensed.

This parameter must be set.

DECIMAL POINT POSITION

Set the decimal point position, i.e.:

0: decimal point is disabled

1: XXX.X (one decimal place)

2: XX.XX (two decimal places)

3: X.XXX (three decimal places)

TYPE OF DISPENSING

This allows you to set the operating mode for multiple or single dispenses. With multiple dispensing, the change is not automatically returned when one beverage has finished being dispensed; it remains available for further dispenses. When the return coins button is pressed, the remaining credit will be returned if its value is less than the maximum change value.

OBLIGATION TO BUY

This enables/disables the return coins key before a product is dispensed.

- ON: the change is returned after a product has been selected.

- OFF: the change is returned immediately when the return coins button is pressed (the appliance works as a change machine).

VALIDATOR

DECIMAL POINT POSITION

Set the decimal point position, i.e.:
0: decimal point is disabled
1: XXX.X (one decimal place)
2: XX.XX (two decimal places)
3: X.XXX (three decimal places)

OVERPAY

You can decide whether to:

- Collect any credit in excess of the selection amount after a certain time in seconds (parameter "000 deleted").

- Leave any credit in excess of the selection amount available for a subsequent selection (parameter "kept").

OVERPAY TIMEOUT

Makes it possible to set the time when the credit will be released if a selection hasn't been made.

MDB

OVERPAY

You can decide whether to:

- Collect any credit in excess of the selection amount after a certain time in seconds (parameter "deleted").

- Leave any credit in excess of the selection amount available for a subsequent selection (parameter "kept").

OVERPAY TIMEOUT

Makes it possible to set the time when the credit will be released if a selection hasn't been made.

MAXIMUM CREDIT

This function allows the maximum credit accepted for the introduced coins to be defined.

MAXIMUM CHANGE

It is possible to set a limit for the total amount of change that the coin box will give when the return change button is pressed or after a single dispensed beverage.

Any credit exceeding the amount that has been programmed with this function, will be cashed in.

ACCEPTED COINS

It is possible to define which coins that are recognised by the validator shall be accepted when the coin return tubes are full.

For the coin/value correspondence, the configuration of the coin mech needs to be checked.

EXACT CHANGE ACCEPTED COINS

It is possible to define which coins that are recognised by the validator shall be accepted when the machine is in "exact change" mode.

For the coin/value correspondence, the configuration of the coin mech needs to be checked.

RETURNED COINS

It is possible to define which coins among those available in the tubes shall be used for giving change. This parameter is only active with coin mechs that do not automatically choose which tube to use (Auto changer payout).

For the coin/value correspondence, the configuration of the coin mech needs to be checked.

EXACT CHANGE ALGORITHM

This allows the control algorithm to be chosen so that the machine is able to give change when the selection has been made.

Each algorithm checks a set of conditions (the amount of coins in the tubes or the empty or full status) in the tubes which is then used by the coin box to give change.

The "Doesn't give change" condition occurs when the tubes combined with the chosen algorithm have reached the minimum level of coins.

For the sake of simplicity, the combination is described in reference to tubes A, B and C, where tube A receives the lower value coins and tube C, the higher value coins.

0	=	A or (B and C)
1	=	A and B and C
2	=	only A and B
3	=	A and (B or C)
4	=	only A
5	=	only A or B (default)
6	=	A or B or C
7	=	only A or B
8	=	only A or C
9	=	only B and C
10	=	only B
11	=	only B or C
12	=	only C

E.g.: algorithm "6" will display the "Doesn't give change" message when all tubes (A, B and C) are at the minimum level.

Algorithm "04" will only display the "Doesn't give change" message when tube A (coin with the least value) has reached its minimum coin level.

PRICES

Only for appliances with a payment system.

CURRENCY SYMBOL

When the credit is displayed, this function allows the currency symbol to be set from those that have been predefined.

SALES PRICES

The appliance (depending on the payment method) can manage up to 4 different prices for each selection.

The prices can be active according to the time frame that has been set (standard or promotional).

The prices are grouped into 4 lists.

For each of the 4 lists, the price can be set both in a comprehensive manner (same price for all selections) or an individual manner (for each single selection).

FREE VEND PASSWORD

Enables/disables the free dispensing of one or more selections via a password.
Set:

- the password for one free dispensed beverage

or

- the password to dispense multiple selections for free.

PRICE PER TIME FRAME

Allows the time frames (standard or promotional) to be set for sales at differentiated prices.

- Tap the day you want to set the time frames for.

- Tap the "add" button, then the line of the time frame in order to position a rectangle indicating the time.

- Drag the rectangle to precisely define the time.

To delete a rectangle, tap the "Remove" button, then tap the rectangle to be deleted.

Settings made for the entire week or a single day can be copied.

Tap "Copy day" to be able to:

- Copy the time frames that have been set for a single day of the week; tap the day to set the energy saving mode to and then tap "paste day".

- Copy the time frames that have been set for all days of the week; tap "paste to all days".
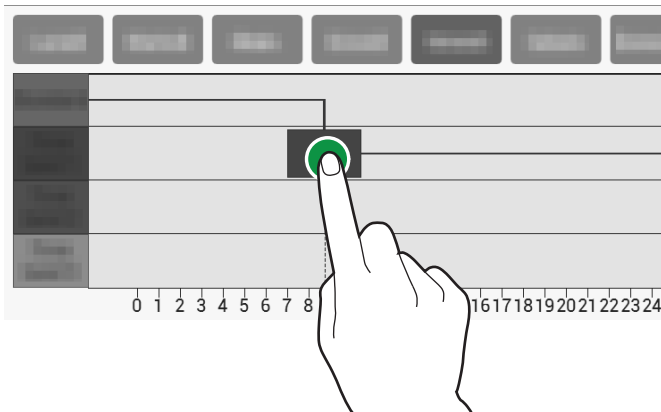
Fig. 38

IMPORT/EXPORT

Includes all the export and import statistic functions, machine settings, graphics packages, etc.

EVA-DTS

Allows EVA-DTS data to be exported onto a USB memory stick and/or onto data transmission devices (RS232, IrDA, telemetry, etc.).

USB

Saves a EVA-DTS file onto the USB memory stick.

SERIAL COMMUNICATION PROTOCOL

From this function it is possible to decide which communication protocol to use for communication with the data acquisition devices.

DDCMP - EDDCMP

These have the following configurable parameters:

- Baud rate: is the transmission speed to be used in communications between the appliance and data acquisition devices.

- Pass code: a code that must be the same as the data transfer terminal, in order to be identified.
  The default setting is 0.

- Security code: a code for mutual recognition between the appliance and the EVA-DTS terminal.
  The default setting is 0.

- End of transmission: if enabled, it can identify the end of transmission signal (EOT) which is sent with the last packet and interrupt the data transmission.

DEX/UCS

These have the following configurable parameters:

- Baud rate: is the transmission speed to be used in communications between the appliance and data acquisition devices.

VIDEOS

Allows videos to be imported/exported from the appliance via a USB memory stick.

SUPPORTED VIDEO FORMATS

- MP4 codes H.264 and 25 frames per second.
- AVI codes XVID, MPEG2 and 25 frames per second.
- MOV codes MPEG4 and 25 frames per second.
- 1200x800 maximum screensaver resolution.
- 640x480 entertainment video resolution.

❶ The use of high-quality content will affect the overall performance of the appliance and use up memory space.

⚠ Playing videos may require the authorisation of the copyright owner or other rights related to the content itself.

Make sure to comply with the copyright laws that are in force in the country where the appliance is installed.

IMAGES

Allows images to be imported/exported from the appliance via a USB memory stick.

SUPPORTED IMAGE FORMATS

- JPG and PNG.

❶ The use of high-quality content will affect the overall performance of the appliance and use up memory space.

⚠ Showing images may require the authorisation of the copyright owner or other rights related to the content itself.

Make sure to comply with the copyright laws that are in force in the country where the appliance is installed.

LOG FILE ERRORS

Exports the errors found on the machine into a log file.
It is stored onto a USB memory stick.

SYSTEM

DEVELOPMENT

EXPORT TREE MENU
Allows a text file of the tree menu of the appliance software functions to be exported (on to a USB memory stick).

VIEW LOG FILE
It allows the log file to be viewed.

The log file is the sequential and chronological record of operations that have been carried out by the appliance.

Enable events to be recorded in the log file from the "advanced functions" in the "development" menu.

EXPORT LOG FILE
It allows the log file to be exported onto a USB memory stick.

The log file is the sequential and chronological record of operations that have been carried out by the appliance.

Enable events to be recorded in the log file from the "advanced functions" in the "development" menu.

SYSTEM INFORMATION
It contains main information regarding the system, such as the used and available memory space, the connectivity firmware versions, etc.

IMPORT/EXPORT STRING TRANSLATIONS
It allows the user to import/export the user interface string translations via a USB memory stick.

EXPORT RECIPE SETTINGS
It allows the recipe settings (dose tables) to be exported onto a text file.

EXPORT THE MACHINE DATABASE
It allows the appliance database to be exported onto a file.

ADVANCED VARIABLE ENVIRONMENTAL FEATURES
It allows the advanced features to be enabled, in order to diagnose application and/or operating system malfunctions.

Activating these functions will slow down the appliance's operation.

This menu is for the exclusive use of the manufacturer.

TECHNICAL SPECIFICATIONS

COMPONENT TEST
Allows the appliance's main components to be checked.

The components that can be checked are displayed.

Choose the component to be checked.

BREWING UNIT
Starts moving the brewing unit.

ESPRESSO CONTAINER
A dose of coffee beans is ground.

INSTANT CONTAINER
The instant powder motor-doser is activated for a few seconds.

MIXERS
The mixer is activated for a few seconds.

LIGHTING
The appliance's lighting is activated for a few seconds.

SOLENOID VALVES
The selected solenoid valve is activated for a few seconds.

PUMP

The selected pump is activated for a few seconds.

⚠ **During the test, hot water is dispensed: do not put your hands in the dispensing area.**

SENSOR AND INPUT DEVICE TESTS

Displays the status of the appliance's various sensors and/or controls (probes, microswitches, etc.)

For devices with ON/OFF functions, the status is shown using colour: green is used if the appliance is active/actuated, and red is used if it is disabled/not actuated.

For the sensors, the detected value is displayed (e.g. the temperature).

OUTPUT DEVICE TESTS

Allows the operation of the appliance's various components to be checked.

The components that can be checked are displayed.

Choose the component to be tested.

ℹ **For safety reasons, the tests must be carried out with the door closed.**

Press and hold down the component button to activate it and check that it is working.

When the button is released, the component will be turned off.

TOUCHSCREEN TEST

Allows the operation of the touchscreen to be checked.

Tap and drag your finger across the touchscreen.

Each tap leaves a different-coloured trace.

The test allows any touchscreen areas with little or no sensitivity to be identified.

To exit the touch function, tap X.

FILLING AND EMPTYING THE HEATING UNIT

The heating unit can be filled and emptied.

The hydraulic circuit is automatically filled.

If work is performed on the hydraulic circuit or if significant water pockets start forming, manually fill the hydraulic circuit.

The heating unit emptying function opens a solenoid valve to allow air to enter the heating unit.

FILLING THE HEATING UNIT

The heating unit is automatically filled when the appliance is installed.

Use this function to fill the heating unit after maintenance work has been performed on the hydraulic system or if significant water pockets form.

EMPTYING THE HEATING UNIT

The heating unit must be emptied by technical personnel.

⚠ The heating unit water is very hot and can cause burns.

❶ Before emptying the heating unit, wait for the water in the heating unit to cool down.

The appliance has a procedure for "quickly cooling" the heating unit.

The emptying function opens a solenoid valve to allow air to enter the heating unit.

COMPLETE SELECTIONS

It allows complete test selections to be made with only accessories or without accessories.

The word "accessories" refers to cups, stirrers and sugar.

RESTORE FACTORY SETTINGS

Allows the appliance to be restored to its factory settings.

❶ All the statistical data, fault lists and settings will be lost.

PROGRAMMED APPLIANCE RESTART

Allows the appliance's automatic restart to be programmed.

This function can be used to immediately restart the appliance.

SETTING THE DATE AND TIME

The date and time are used to record events (for example faults, etc.), manage programmed washes and produce maintenance warnings.

Set the current date and time.

LANGUAGE

The predefined language used to display messages on the user interface and in the menus can be changed.

Some languages (used languages) are available for the "change language" function.

To make other languages available, the flag icon will need to be moved (from disabled languages) to "Used languages".

To delete a language from the "Change language" function, simply drag the flag icon to "Disabled languages".

USER PROFILES

Some programming functions can be enabled/disabled via the access profiles.

The access profile ensures that only the functions linked to it can be used.

If the access profile management is activated and the barista mode is disabled, no password is required to access the programming menu.

If the barista mode is activated, no password is required to access the washes (during normal operation).

Each user profile has an access password.

The default passwords are:

- Technician (4444);

- Distributor (3333);

- Loader (2222);

- User (1111).

Advanced programming functions must only be used by people with specific knowledge of the appliance (technical personnel) and hygiene regulations.

With this function, it is possible to:

- Enable/disable the menu functions for every access profile.

- Change the access password for each user profile: tap "change password".

- Change the profile name: tap the profile name to change it.

NETWORK

The Ethernet and Wi-Fi configurations vary according to the network to which you would like to connect the appliance and the adopted network protections.

ℹ Contact your local network administrator (system administrator) for the appropriate network parameters to which the appliance will be connected.

The appliance supports the TCP/IP protocol.

Ethernet and Wi-Fi connections cannot be enabled at the same time.

The configuration of the mobile network data connection varies according to the chosen telephone service provider.

ℹ Contact your chosen telephone service provider for the suitable parameters for data connection.

ETHERNET

Enable the Ethernet connection to configure the appliance to the LAN network.

The network parameters (such as the IP address, etc.) can either be automatically (DHCP to ON) or manually (DHCP to OFF) set.

❶ To automatically assign network parameters, there must be a DHCP server on the LAN network.

If you choose to manually set the parameters, the following must be entered:

- The IP address that you want to assign to the appliance;

- The subnet mask to which the IP address belongs;

- The gateway (router) IP address;

- The IP address of the resolving name server (DNS server).

⚠ If an error is made when manually entering the parameters or an IP address that is already in use on the LAN network is used, the appliance cannot communicate with the network.

You can check if the network connection is working from this function.

The MAC address is a unique address assigned by the manufacturer that identifies the appliance's network card.

The MAC address cannot be changed.

WI-FI

Enable the Wi-Fi connection to configure the appliance to the Wi-Fi network.

1. Enter the name of the Wi-Fi network (SSID) to which the appliance will be connected.

2. Choose the encryption used by the Wi-Fi network; the appliance supports the main Wi-Fi protection systems.
   ❶ "Open" encryption does not guarantee any type of protection.

3. Enter the Wi-Fi password for access. The display password parameter can be used to view the entered password.

4. The network parameters (such as the IP address, etc.) can either be automatically (DHCP to ON) or manually (DHCP to OFF) set.

❶ To automatically assign network parameters, there must be a DHCP server on the network.

If the parameters are manually set, the following must be entered:

- The IP address that you want to assign to the appliance.

- The subnet mask to which the IP address belongs.

- The gateway (router) IP address.

- The IP address of the resolving name server (DNS server).

⚠ If an error is made when manually entering the parameters or an IP address that is already in use on the Wi-Fi network is used, the appliance cannot communicate with the network.

You can check if the connection is working from this function.

The MAC address is a unique address assigned by the manufacturer that identifies the appliance's network card.

The MAC address cannot be changed.

BLUETOOTH

Enables and configures the Bluetooth connection and allows short-range data exchange (a maximum of ten metres) between the appliance and other devices.

To connect to a Bluetooth device you need to:

- Enter a name so that the appliance can be identified.

- Make the appliance discoverable when searching for Bluetooth devices (Searchable to ON).
  In detection mode, a wireless signal is transmitted which allows the appliance to be detected by other devices.

- Enter the PIN authentication code in order to be able to associate the Bluetooth device.

When a device can be detected, the pairing mode is also usually enabled.

All of the appliance's linked devices are shown.

MOBILE NETWORK DATA CONNECTION SETTINGS

Enables and configures the mobile network data connection parameters.

Enable the data connection in order to view and configure the parameters.

The parameter values (e.g., PIN, APN address, access data such as the username and password, etc.) vary according to the chosen telephone service provider: request these from your service provider.

The signal strength of the mobile network can be seen from this function.

FIREWALL

It allows the appliance's protection to be increased to prevent unwanted access when connected to the network.

We recommend enabling the firewall.

The appliance's firewall cannot be configured.

SOFTWARE UPDATE

Function not available

The software update must be performed by following the procedure described in the "maintenance" chapter.

INFORMATION

Allows all of the information regarding the appliance's software can be viewed (version, graphic theme used, machine configuration, etc.).

CONNECTIVITY

The appliance is able to send notifications (via email) regarding events and faults.

❶ In order to send notifications via email, you must have an active network connection and a SMTP outgoing mail server with an active email account.

An outgoing mail server (SMTP: Simple Mail Transfer Protocol) is a server that sends emails.

❶ The appliance sends email notifications. It is impossible to receive emails on the appliance.

Enable the function so that you can set the parameters for sending emails, in addition to the email addresses of notification recipients.

The parameters vary depending on the SMTP server used (internet email service provider or an email server on an internal or proprietary LAN network).

The appliance provides a set of preconfigured parameters for the major email service providers on the internet.

It is possible to manually enter the email parameters for the other internet email service providers or for email servers on internal or proprietary (custom) LAN networks.

❶ For email servers on the internal LAN network, contact your network administrator (system administrator) for the appropriate parameters.

❶ For internet email service providers, you need to contact the email service provider support or support services in order to have access to the appropriate email parameters.

You can enter and delete the email addresses that you intend to send notifications to.

After setting the parameters, you can send a test email to check that it has been configured correctly.

SETTINGS

Enable emails to be sent (ON/OFF) in order to be able to enter the configuration parameters.

Enter:

- The sender of the appliance's messages, e.g. *Vending Machine*.

- The name of the outgoing SMTP (Simple Mail Transfer Protocol), e.g. *smtp.example. com*.

- The port number used by the outgoing mail server. The common port numbers are: 25, 465 and 587.

- Enable the "Authentication required" parameter in order to enter the SMTP password. Authentication is required in order to allow an email to be sent.
  Enter the SMTP user: the sender email, e.g. *vendingmachine@domain.com* and its relative password.
  "Show password" allows you to view the entered password in plain text.

- Indicate whether the outgoing mail server uses the secure SMTPS connection.

- Add the email addresses of the recipients and select which types of emails they will receive (event alerts, faults, resolved faults, etc.).

❶ The appliance provides a set of preconfigured email parameters for the major internet email service providers.
If you want to use any email services that are not preconfigured and available from the drop-down menu, choose "custom".

EVENT ALERT NOTIFICATIONS

Enable the events for which you want to receive notifications (e.g. access to menus, sanitisation operations, etc.).

FAULT ALERT NOTIFICATIONS

Enable the faults you want to receive notifications for (e.g. no coffee, no water, etc.).

EVA-DTS NOTIFICATIONS

It allows the user to schedule the sending of emails with the data in EVA-DTS format.

The integrity of the appliance and its compliance with the corresponding system regulations must be checked, at least once a year, by specialised personnel.

ⓘ Always disconnect the appliance from the electric mains before starting any maintenance work which requires disassembling components.

The operations described below must solely be carried out by personnel with specific knowledge of the appliance's operation, both from an electrical safety and hygiene point of view.

ⓘ During the appliance maintenance operations, use law-compliant gloves and work shoes, classified as personal protective equipment (PPE).

The PPE must be adequate to protect the wearer from mechanical risks (cuts, scrapes and crushing, etc.) and physical risks (hot water, etc.)

GENERAL INTRODUCTION

In order to ensure that the appliance operates correctly over time, it shall be subjected to periodical maintenance.

Listed below are the operations to be carried out and the frequency with which they should be carried out; they are evidently indicative because they depend on the conditions of use (i.e. water hardness, environment humidity and temperature, type of product used, etc.).

The operations described in this chapter do not include all of the maintenance work.

The more complex interventions (i.e. descaling the heating unit) shall be carried out by a technician with specific knowledge of the vending machine.

In order to generally avoid risks of oxidation or chemical aggressions, the painted and stainless steel surfaces need to be kept clean using neutral cleaning products (avoid using solvents).

Under no circumstances should jets of water be used to wash the appliance.

MAIN SWITCH AND FUSE

To access the appliance's main switch and line fuse, remove the solid and liquid residue trays.

Important!!!

The line cable terminal block, line fuse, and noise filter are always live.

Inside the appliance, only the parts that are marked with the symbol below remain live.

The protective covers need to be removed after disconnecting the appliance from the power supply.
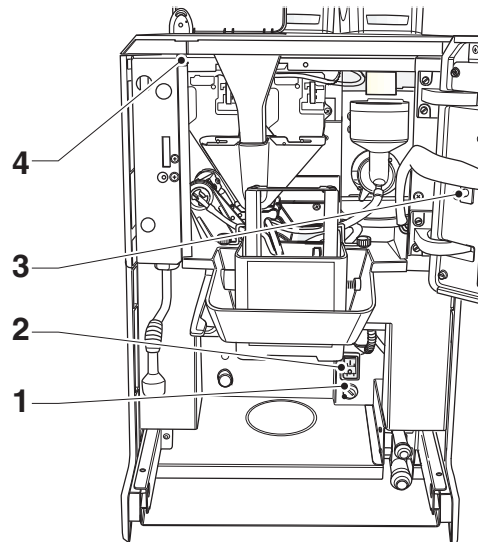
Fig. 39

1. *Line fuse*
2. *Main switch*
3. *Connectivity switch*
4. *Magnetic door sensor*

CONNECTIVITY SWITCH

When the door is opened, a specific switch deactivates the appliance's connectivity components.

When the door is open, the remote operation of the functional units and/or the remote control are disabled.

⚠ **All operations that require the appliance to be live with the door open and the connectivity functions active, must EXCLUSIVELY be performed by qualified personnel who are aware of the specific risks involved when the machine is in this condition.**

To activate the connectivity components (i.e. for a communication test) with the door open, simply pull the connectivity switch pin.

If the switch is activated and deactivated within a short period of time, the appliance disables the connectivity components; the appliance will need to be restarted to restore these.

BREWING UNIT MAINTENANCE

After 10,000 dispensed beverages or every 6 months, the coffee unit requires a small amount of maintenance work in order to optimise how it works over time.

To perform the maintenance work, the unit needs to be removed as follows:

1. Disconnect the coffee outlet nozzle from the unit by rotating it 90° away from the connecting rod and pull it outwards.

2. Turn the unit end stop lever, rotating it until it is in a horizontal position.

3. Remove the coffee unit.
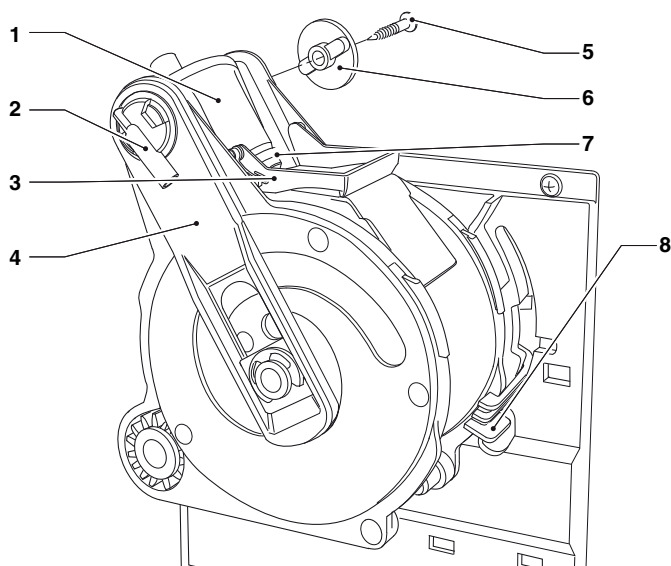
REMOVING/REPLACING THE UPPER FILTER AND SEAL

In order to remove or replace the upper filter and seal, proceed as follows:

1. Unscrew the lateral fixing screw (5) of the upper piston key (6).

2. Rotate the upper piston (1) upwards.

3. Remove and replace the upper seal (7).

4. Unscrew the upper filter (9) so that it can be removed and replaced.

REMOVING/REPLACING THE LOWER FILTER AND SEAL

In order to remove or replace the lower filter and seal, proceed as follows:

1. Manually bring the unit to the discharge position with the lower piston (12).

2. Unscrew the central fixing screw to remove the filter (10).

3. Press on the end of the piston guide ring (14) to obtain an extra stroke from the lower piston (12).

4. Using a small screwdriver, pry and slide the lower piston (12) out from the piston rod (14) whilst being careful not to damage the piston or the sealing elements.

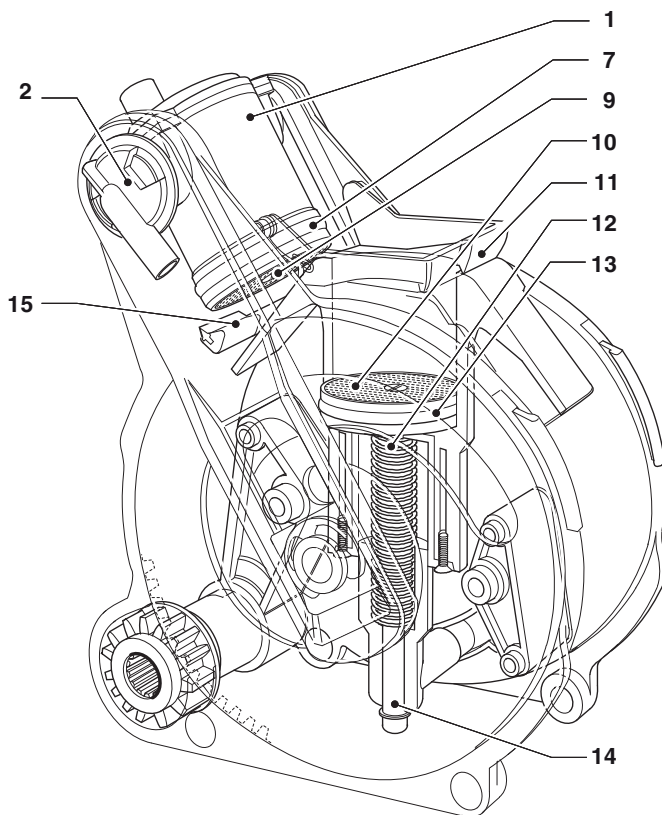5. Remove and replace the lower seal (13).

Fig. 40

1. Upper piston
2. Coffee outlet nozzle
3. Lower scraper
4. Connecting rod
5. Lateral screw
6. Key
7. Upper seal
8. Unit stop lever
9. Upper filter
10. Lower filter
11. Lower scraper
12. Lower piston
13. Lower seal
14. Piston guide ring
15. Upper scraper
16. Unit cover

PERIODICAL OPERATIONS

This manual shows the potential critical points and includes information about controlling the possible growth of bacteria.

Under the current health and safety regulations, the operator of the appliance must apply the self-control procedures, identified in accordance with the HACCP (Hazard Analysis Critical Control Point) Directive and national legislation.

At least once a year, or more frequently depending on how the appliance is used and the quality of the incoming water, it is necessary to clean and sterilise the entire circuit and the parts which come into contact with the food products.

SANITISATION

- All components that come into contact with the food products, including the tubes, must be removed from the appliance and all of their parts must be disassembled;

- All the residues and visible films must be mechanically removed using swabs and brushes if necessary;

- The components must be soaked for at least 20 minutes in a sterilising solution;

- The internal surfaces of the appliance need to be cleaned with the same sterilising solution;

- Thoroughly rinse and reassemble the various components.

Before restarting the appliance, the sterilising operations need to be carried out again with the installed components, as described in the "Cleaning the mixers and food product circuits" chapter.

MIXERS

Proceed as follows:

1. Disconnect the hoses from the mixer connections.

2. Turn the mixer locking ring anticlockwise and remove the mixer.
   Take special care to fully lock it when reassembling it.

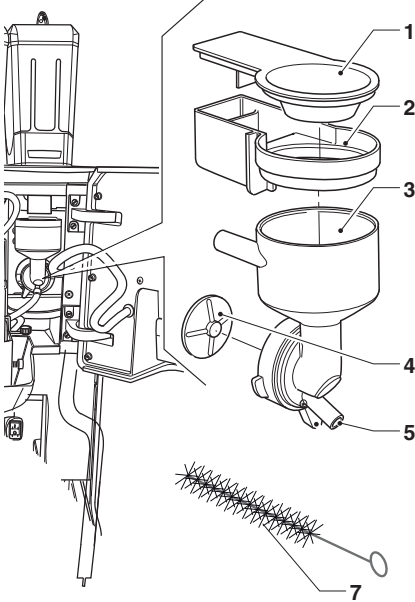3. Separate the instant powder funnel, the powder tray and water funnel.

Fig. 41

1. *Instant powder funnel*
2. *Instant powder tray*
3. *Water funnel*
4. *Mixer fan*
5. *Instant beverage hose connection*
6. *Mixer locking ring*
7. *Brushes for cleaning*

4. Remove the fans: block the disk fitted on the motor mixer shaft with one finger, then unscrew the mixer fan.
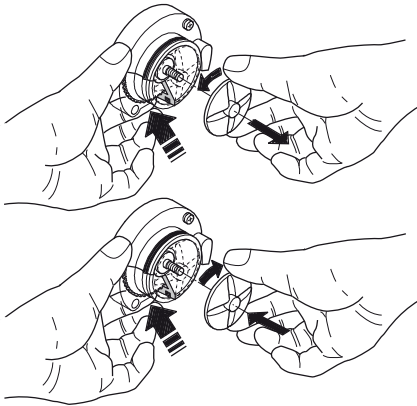
Fig. 42

5. Soak the components for about 20 minutes in a container filled with the pre-prepared sanitising solution.
   Wash all the components with sterilising products (follow the dosage indicated by the manufacturer), whilst making sure to mechanically remove residue and visible films using brushes and swabs if necessary.

6. Verify that the motor mixer's sealing gasket is not torn and has not lost its elasticity.
   If it shows any signs of wear, replace it.

7. Reassemble the powder trays and powder funnels after having thoroughly rinsed and dried them.

8. Reposition the mixer, whilst making sure that the water funnel has been correctly inserted.

Fig. 43

After the components have been reassembled, it is necessary to:

Wash the mixer and add a few drops of the sanitising solution into the various funnels and rinse thoroughly to remove any solution residue.

CLEANING THE NOZZLES AND SPOUTS

Weekly or more frequently, depending on how often the appliance is used and the quality of incoming water, it is necessary to sanitise the instant beverage dispensing ducts and nozzles.

To clean the nozzles, proceed as follows:

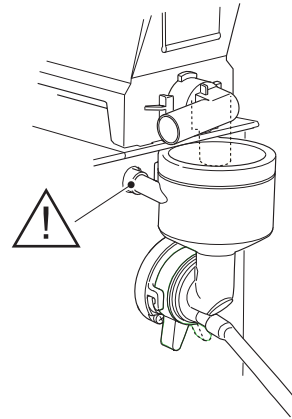1. Pull down the nozzle-moving handle.

2. Remove the cover and disconnect the hoses from the nozzles.

3. Disconnect the coffee dispensing hose from the flow divider nozzle.

4. Unhook the flow divider nozzle from the nozzle support.

5. Remove the flow divider, milk frother nozzle (if present) and the instant beverage nozzles.

6. Proceed to sanitise all the components, whilst taking care to mechanically remove visible residues and films using swabs or brushes, if necessary.

7. Clean the spouts (if present) with a cloth that has been dampened with sanitising solution.

REMOVING THE PRODUCT CONTAINERS

The containers are fitted with a safety magnet which indicates the presence/absence of the containers to the control electronics.

If the sensor does not detect the containers, the grinders are disabled.

To remove the product containers (coffee beans or instant products) simply remove the handle and then lift the container from behind.

Always lift the container from behind so that the grinders are disabled; non-compliance with this procedure can be a source of injury to people (accidental operation of the grinder).

When the handle of the container is pulled, it closes the shutter and simultaneously releases a container from the appliance.

When reassembling, reposition the container and push the handle inside the container.

Make sure that the container is properly secured to the appliance.
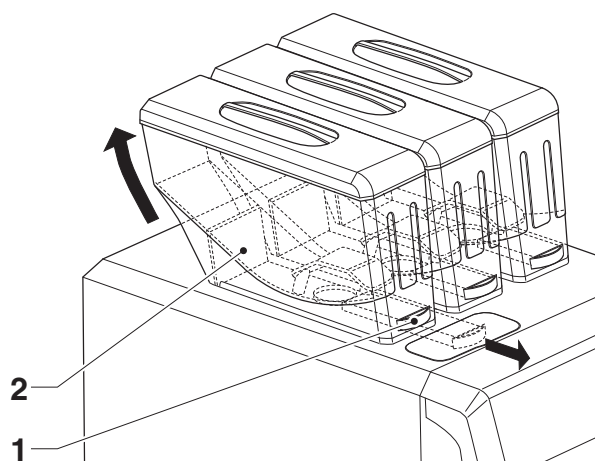
Fig. 44
1. Handle
2. Magnet

REMOVING THE SIDE AND REAR PANELS

To gain access to the internal components, the panels must be removed.

1. Remove the liquid residue tray.

2. Remove the fixing screws of the side panels.

3. Remove the fixing knurls on the side panels.

4. Slide the side panels forward to release them.

5. To remove the rear panel, slide it to the left.

To reassemble the panels, repeat the process in reverse order.
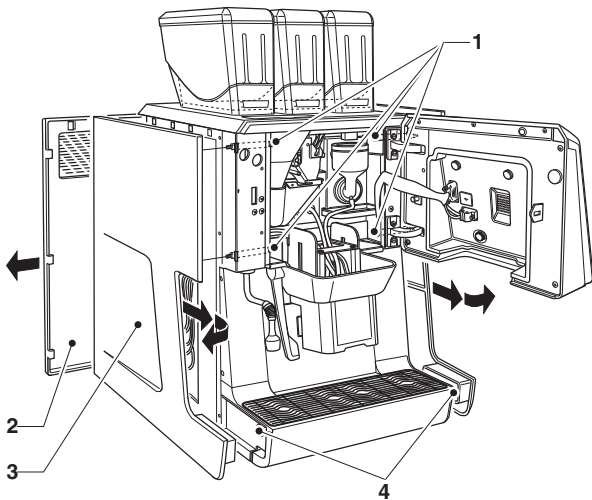
Fig. 45
1. *Side panel fixing knurls*
2. *Rear panel*
3. *Side panel*
4. *Side panel fixing screws*

CIRCUIT BOARD FUNCTIONS

The circuit boards are designed to be used on several appliance models.

If the boards need replacing, the circuit board configuration must be checked and the suitable software must be loaded.

ACTIVATION BOARD

The board is powered at 24 V and controls the activation of various users and sensor signals.

The LED indicators signal the following:

- DL1 (38) RESET LED;

- DL2 (19) RUN LED: it flashes during normal operation;

- DL3 (15) yellow POWER LED: indicates the presence of +5 V DC;

- DL4 (17) yellow LED - flow meter impulses;

- DL5 (15) not used;

- DL6 (21) red LED indicates that the coffee heating unit heating element is working;

- DL7 (20) not used.

RELAY FUNCTION

RL1: Grinder
RL2: Coffee-releasing electromagnet
RL3: Grinder 2*
RL4: Coffee-releasing electromagnet 2*
RL5: not used
RL6: Motor mixer
RL7: 120 V safety relay
RL9: 24 V safety relay
RL11: Grinder reverse rotation relay
* models with double coffee beans

The RL7 safety relay interrupts the neutral (120 V) when the door is opened.
The RL9 safety relay interrupts the 24V when the door is opened.
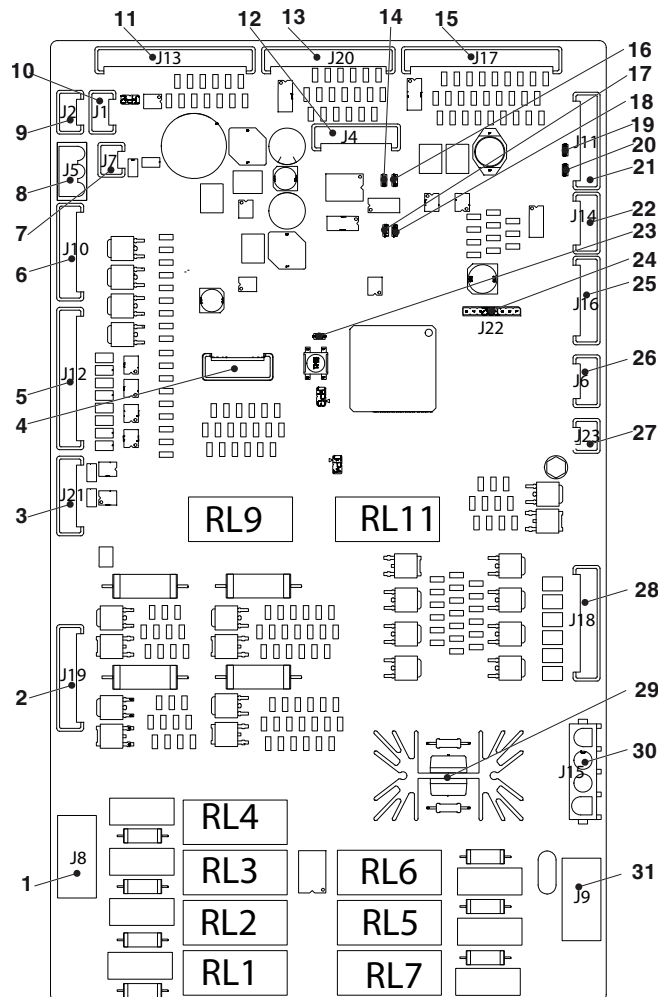
Fig. 46

1. (J8) Grinders, coffee-releasing electromagnets, AC relay
2. (J19) Brewing unit motor, brewing unit control microswitch
3. (J21) Brewing unit heater*
4. (J3) Water pump control board
5. (J12) Solenoid valves
6. (J10) Not used
7. (J7) Not used
8. (J5) 24 VDC board power supply
9. (J2) CAN bus
10. (J1) CAN bus
11. (J13) Digital inputs
12. (J4) Serial programmer
13. J20
14. DL5 "Pulse flow meter" LED
15. (J17) Digital inputs
16. DL4 "Pulse flow meter" LED
17. DL1 "RESET" LED
18. DL2 "RUN" LED
19. DL7 Heating unit operation LED
20. (DL6) Not used
21. (J11) Heating unit probes
22. (J14) Containers present
23. DL3 "POWER" LED
24. (J22) Payment module board
25. (J16) Not used
26. (J6) Steam suction fans
27. (J23) Liquid residue tray full
28. (J18) Grinder adjustment*, motor-doser
29. Heating unit Triac heating element(s)
30. (J15) Heating unit heating element
31. (J9) Motor-grinder, water pump, AC relay

* If present

CPU CARD

La CPU card manages communication with the touchscreen, payment systems (if fitted) and connectivity functions.

⚠ When the CPU card is removed (e.g. for replacement), take care to not damage the touchscreen's connections and the antenna.

ⓘ The touchscreen is connected to the J25 and CN15 connectors on the back of the CPU card.

ⓘ The antenna is on the back of the CPU card.
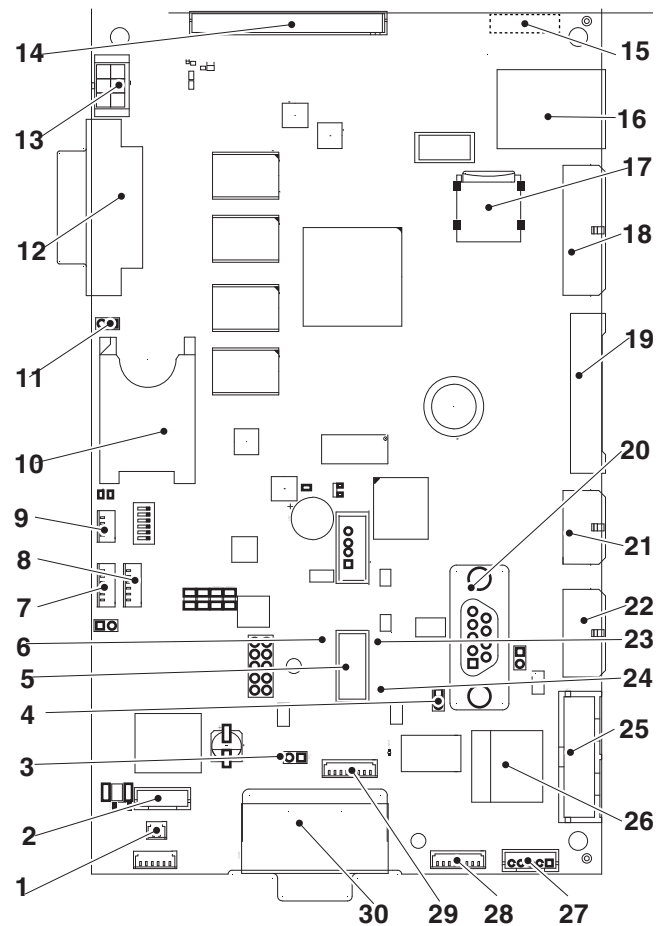
Fig. 47

1. (J2) Connectivity switch connection
2. (CN30) Not used
3. (JP2) CAN BUS 1 jumper closed
4. (JP5) CAN BUS jumper 2 open
5. USB connector
6. Green RESET LED
7. (J45) Not used
8. (J48) Not used
9. (J34) Not used
10. SIM card slot*
11. (JP4) SIM CARD* detecting jumper
12. (J16) Not used
13. (CN31) Modem set-up
14. (CN13) Input signals
15. Wi-Fi aerial**
16. Ethernet connector (1 Gbps)*
17. MICRO SD* slot
18. (J42) Aesthetic lighting
19. (J43) Compartment lighting
20. (CN53) Payment systems
21. (J41) Not used
22. (J35) Not used
23. Red POWER BOARD LED
24. Green RUN LED
25. (J36) Not used
26. Ethernet connector (100 Mbps)*
27. (CN9) Not used
28. (J47) Not used
29. (CN34) Not used
30. (CN29) Power supply and CAN BUS
* If present
** On the back of the board
31.

POWER SUPPLY

The power supply provides a voltage of 24 VDC to the appliance's electronics and the 24 VDC components.

The power supply does not require maintenance and/or calibration.

If any work needs to be carried out on the power supply, e.g. for replacement, always disconnect the appliance from the electrical mains.

⚠ **When replacing the power supply, make sure that the electrical properties (type, voltages, power, etc.) of the new power supply are the same as the previous one.**

PAYMENT MODULE BOARD

Certain models only.

The board allows the MDB payment system to be managed.

The board is located on the activation board.

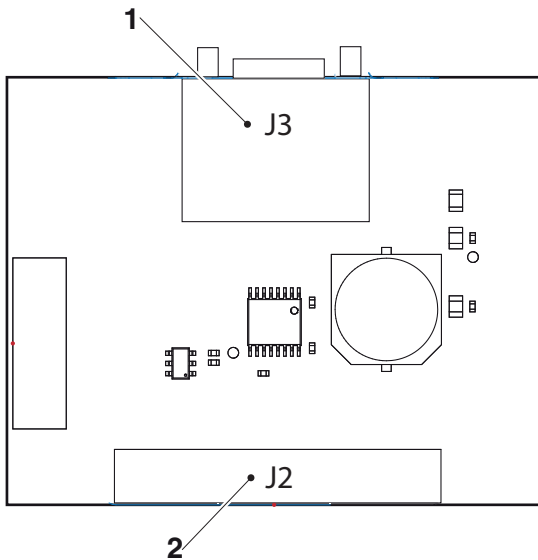*Fig. 48*

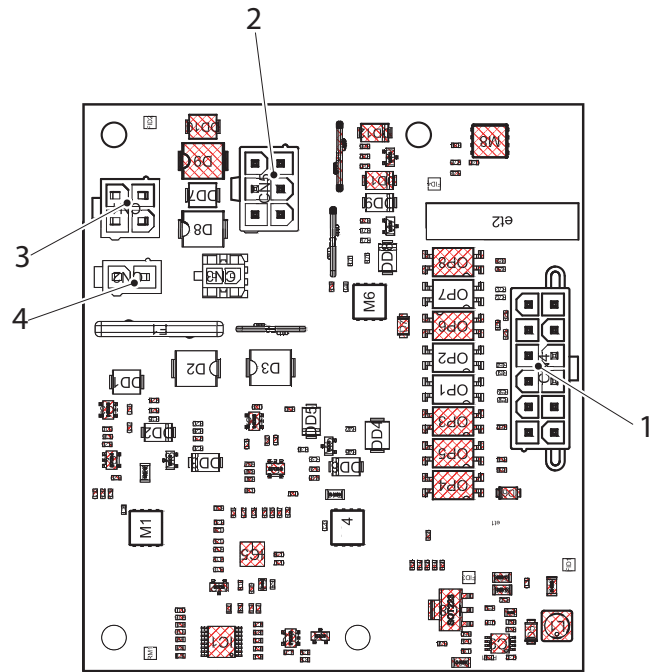1. To the touchscreen
2. Payment system

PUMP CONTROL BOARD

Fig. 49

1. CN4 signal
2. CN5 mixer
3. CN1 power supply
4. CN2 pump

INSTALLING AND/OR UPDATING SOFTWARE

ℹ **When the operating system is installed or updated, the application software, statistical data, settings and programmed customisations are deleted.**

Playlist videos/images are deleted.

Use the USB memory stick backup functions (import/export menu) to save the settings, customisations and videos/images for playlists.

The software must be installed and/or updated via a USB memory stick (when the appliance starts up).

ℹ **The USB memory stick must be formatted with the FAT32 file system and only contain the files needed for the update.**

Compatibility with all USB memory devices available on the market is not guaranteed.

KEY 1 "KEY SYSTEM" OPERATING SYSTEM

Proceed as follows:

1. Copy the single operating system files onto the main directory of the USB memory stick.

2. Turn off the appliance,

3. Insert the USB memory stick into the touchscreen's USB OTG port.

4. Turn on the appliance.

5. Some messages regarding the progress of the update are displayed.
The update takes a few minutes.

6. Once the update has finished, a message will appear prompting for the USB memory stick to be removed.

7. After the USB memory stick has been removed, the appliance will restart automatically.

8. Install the application software.

KEY 2 "UPDATE KEY" APPLICATION

Proceed as follows:

1. Copy the single application files onto the main directory of the USB memory stick.

2. Turn off the appliance.

3. Insert the USB memory stick into the USB OTG of the CPU card.

4. Turn on the appliance.

5. Some messages regarding the progress of the update are displayed.
The update takes a few minutes.

6. Once the update has finished, a message will appear prompting for the USB memory stick to be removed.

7. After the USB memory stick has been removed, the appliance will restart automatically.

8. The wizard for the initial settings will start (appliance model, message language, machine name, etc.).

ℹ **The application software update keeps the settings, set customisations and videos/images for playlists.**
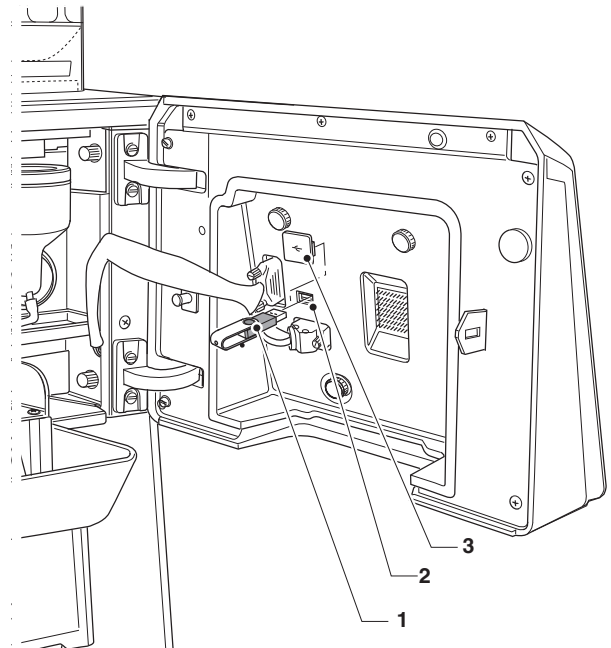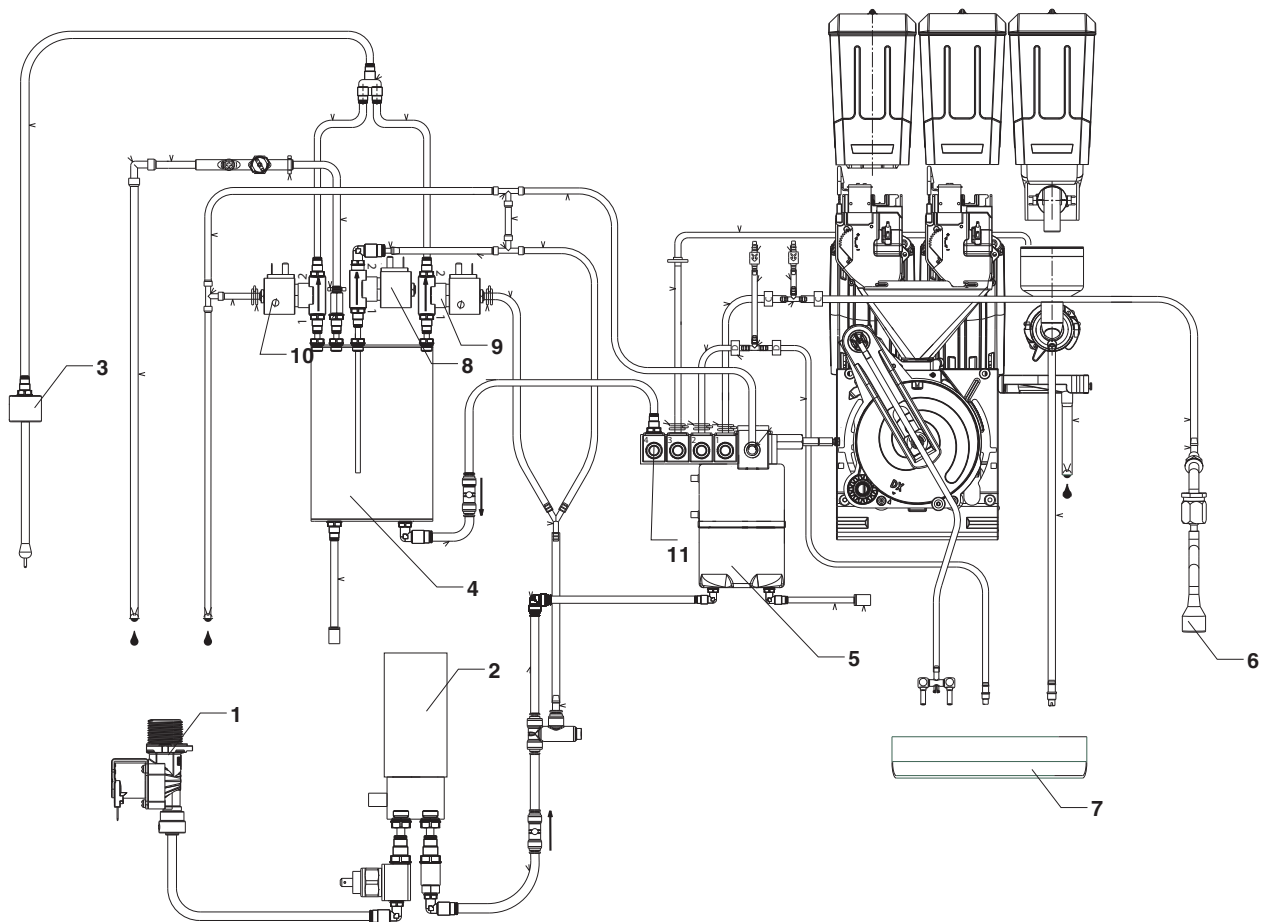

Fig. 50
1. *USB memory stick*
2. *USB OTG port*
3. *Cap*

5.

Appendix

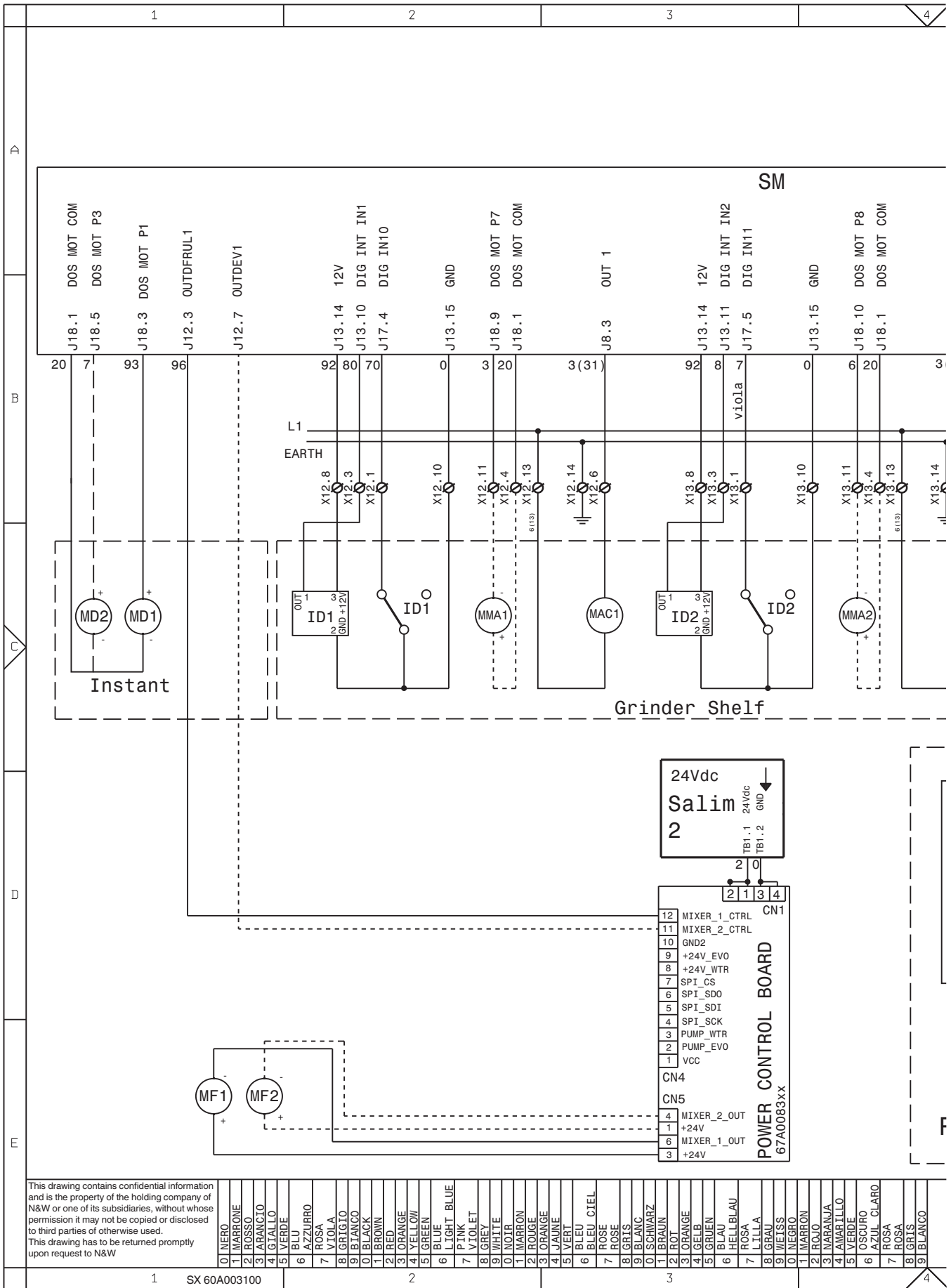4.
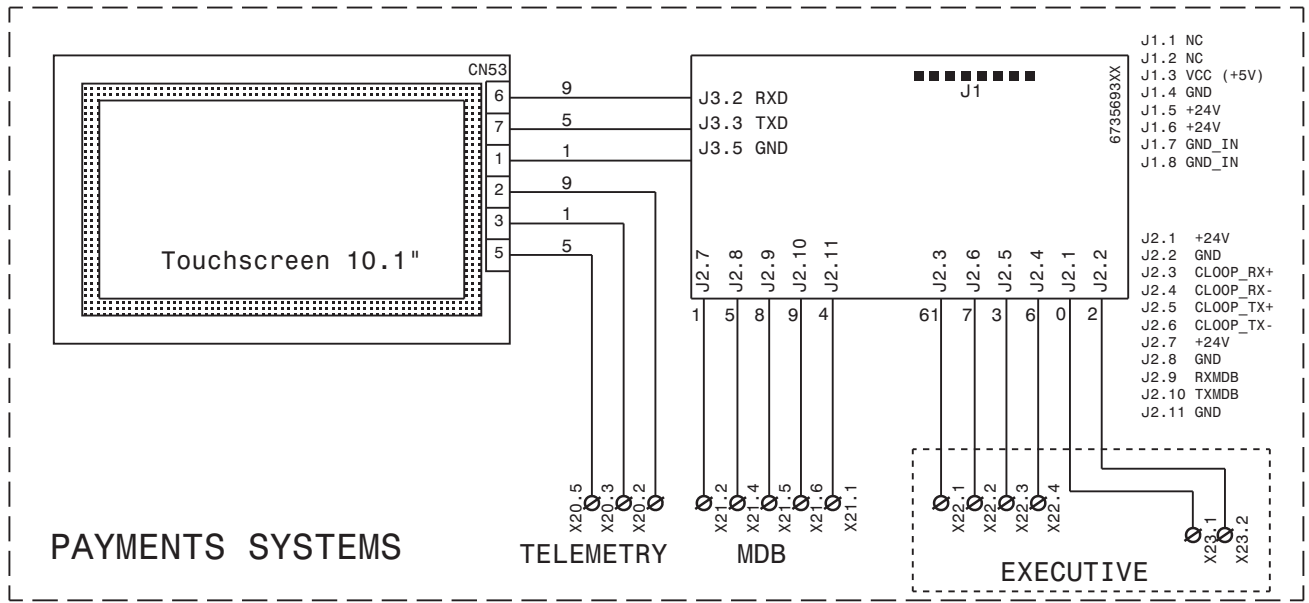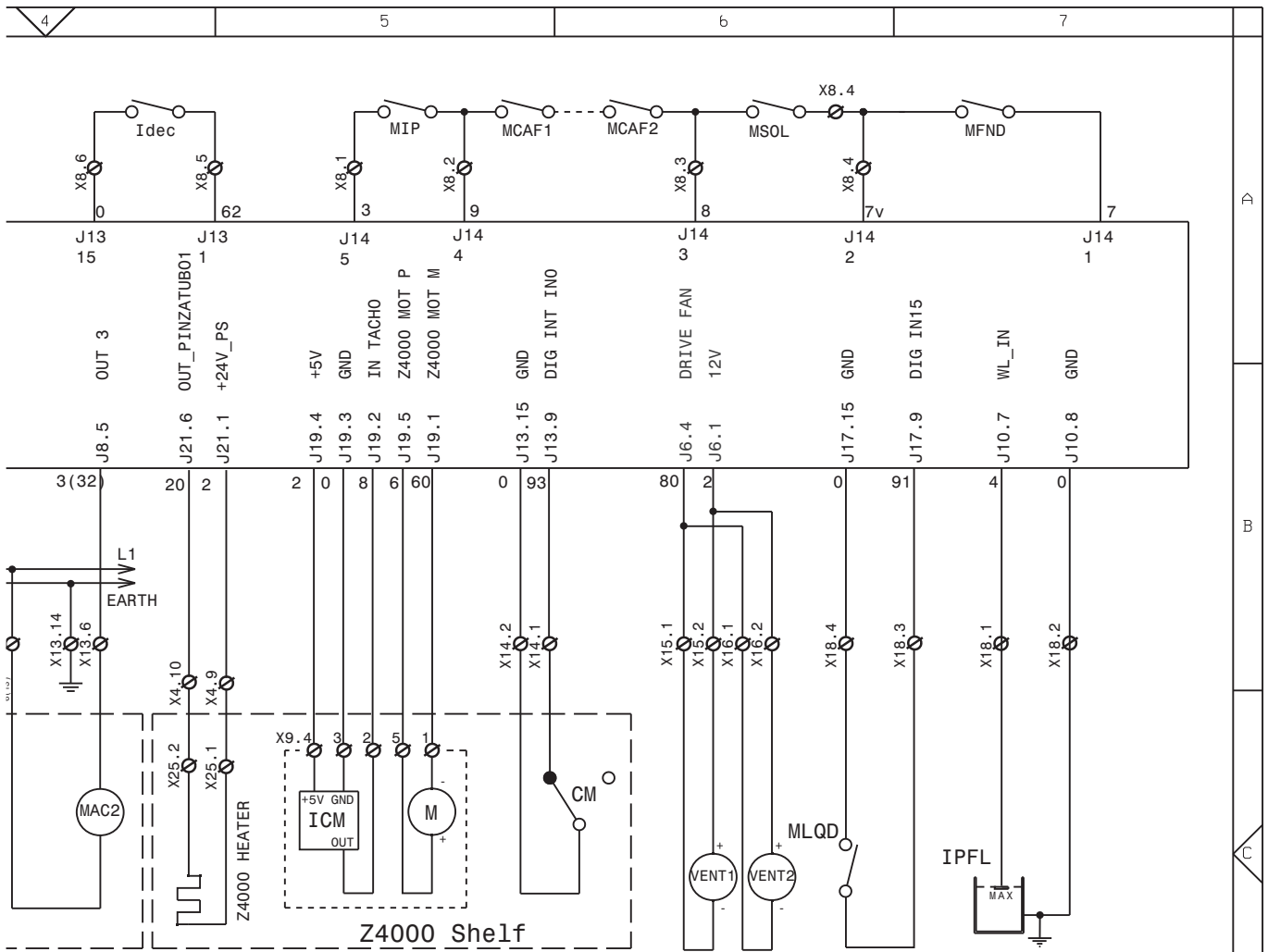
Fig. 51

1. water inlet solenoid valve
2. pump
3. steam spout
4. steam boiler
5. coffee boiler
6. hot water spout
7. liquid tray
8. steam boiler discharge solenoid valve
9. steam spout solenoid valve
10. steam spout solenoid valve
11. water inlet solenoid valve for steam

SM

DOS MOT COM — J18.1 — 20
DOS MOT P3 — J18.5 — 7
DOS MOT P1 — J18.3 — 93
OUTDFRUL1 — J12.3 — 96
OUTDEV1 — J12.7
12V — J13.14 — 92
DIG INT IN1 — J13.10 — 80
DIG IN10 — J17.4 — 70
GND — J13.15 — 0
DOS MOT P7 — J18.9 — 3
DOS MOT COM — J18.1 — 20
OUT 1 — J8.3 — 3(31)
12V — J13.14 — 92
DIG INT IN2 — J13.11 — 8
DIG IN11 — J17.5 — 7 (viola)
GND — J13.15 — 0
DOS MOT P8 — J18.10 — 6
DOS MOT COM — J18.1 — 20
— 3

L1
EARTH

X12.8 / X12.3 / X12.1 / X12.10 / X12.11 / X12.4 / X12.13 / X12.14 / X12.6 / X13.8 / X13.3 / X13.1 / X13.10 / X13.11 / X13.4 / X13.13 / X13.14

MD2 MD1   Instant

ID1 ID1
MMA1
MAC1
ID2 ID2
MMA2

Grinder_Shelf

6(13)

24Vdc
Salim 2
24Vdc / GND
TB1.1 / TB1.2
2 / 0

2 1 3 4   CN1

12 MIXER_1_CTRL
11 MIXER_2_CTRL
10 GND2
9   +24V_EVO
8   +24V_WTR
7   SPI_CS
6   SPI_SDO
5   SPI_SDI
4   SPI_SCK
3   PUMP_WTR
2   PUMP_EVO
1   VCC

CN4

POWER CONTROL BOARD
67A0083xx

MF1 MF2

CN5
4 MIXER_2_OUT
1 +24V
6 MIXER_1_OUT
3 +24V

| 0 NERO | 1 MARRONE | 2 ROSSO | 3 ARANCIO | 4 GIALLO | 5 VERDE | 6 BLU | 7 AZZURRO | 8 VIOLA | 9 GRIGIO | 0 BIANCO | 1 BLACK | 2 BROWN | 3 RED | 4 ORANGE | 5 YELLOW | 6 GREEN | 7 BLUE | 8 LIGHT BLUE | 9 VIOLET | 0 GREY | 1 WHITE | 2 MARRON | 3 NOIR | 4 ROUGE | 5 ORANGE | 6 JAUNE | 7 VERT | 8 BLEU | 9 BLEU CIEL | 0 ROSE | 1 ROSE | 2 GRIS | 3 BLANC | 4 SCHWARZ | 5 BRAUN | 6 ROT | 7 ORANGE | 8 GELB | 9 GRUEN | 0 BLAU | 1 HELLBLAU | 2 ROSA | 3 LILLA | 4 GRAU | 5 WEISS | 6 NEGRO | 7 MARRON | 8 ROJO | 9 NARANJA | 0 AMARILLO | 1 VERDE | 2 OSCURO | 3 AZUL CLARO | 4 ROSA | 5 ROSA | 6 GRIS | 7 BLANCO |

CM   CAME MOTEUR
ICM   INTERRUPTEUR CONTROLE MOTEUR
ID1-.. INTERRUPTEUR DOSE CAFE
IDEC INTERRUPTEUR PORTE DECAFEINE
IPF   INTERRUPTEUR BAC EAU PLEIN
M   MOTEUR GROUPE CAFE
MAC1-. PETIT MOULIN CAFE
MCAF1. MICRO PRÉSENCE CONTENEUR CAFÉ
MD1-.. MOTEURS DOSEURS INSTANTANEES

MF1-.. MIXERS INSTANTANEES
MFND MICRO PRÉSENCE BAC MARCS DE CAFÉ SOLIDES
MLQD MICRO PRÉSENCE BAC MARCS LIQUIDES
MMA1-. MOTEURS REGLAGE MOULINS
MSOL1. MICRO PRÉSENCE CONTENEUR SOLUBLES
SALIM PLATINE ALIMENTATEUR
SM   PLATINE CONTROLE MACHINE

	4	5	6	7	

Top section labels:

X8.4

Idec — MIP — MCAF1 — MCAF2 — MSOL — MFND

X8.6   X8.5   X8.1   X8.2   X8.3   X8.4

0   62   3   9   8   7v   7

J13 15   J13 1   J14 5   J14 4   J14 3   J14 2   J14 1

OUT 3   OUT_PINZATUB01   +24V_PS   +5V   GND   IN TACHO   Z4000 MOT P   Z4000 MOT M   GND   DIG INT IN0   DRIVE FAN   12V   GND   DIG IN15   WL_IN   GND

J8.5   J21.6   J21.1   J19.4   J19.3   J19.2   J19.5   J19.1   J13.15   J13.9   J6.4   J6.1   J17.15   J17.9   J10.7   J10.8

3(32)   20   2   2   0   8   6   60   0   93   80   2   0   91   4   0

L1
EARTH

X13.14   X13.6   X4.10   X4.9   X14.2   X14.1   X15.1   X15.2   X16.1   X16.2   X18.4   X18.3   X18.1   X18.2

X25.2   X25.1   X9.4 3 2 5 1

MAC2   Z4000 HEATER   +5V GND ICM OUT   M   CM   VENT1   VENT2   MLQD   IPFL MAX

Z4000 Shelf

PAYMENTS SYSTEMS

CN53

Touchscreen 10.1"

6 9   J3.2 RXD
7 5   J3.3 TXD
1 1   J3.5 GND
2 9
3 1
5 5

J1
6735693XX

J1.1 NC
J1.2 NC
J1.3 VCC (+5V)
J1.4 GND
J1.5 +24V
J1.6 +24V
J1.7 GND_IN
J1.8 GND_IN

J2.7 J2.8 J2.9 J2.10 J2.11   J2.3 J2.6 J2.5 J2.4 J2.1 J2.2

1 5 8 9 4   61 7 3 6 0 2

J2.1 +24V
J2.2 GND
J2.3 CLOOP_RX+
J2.4 CLOOP_RX-
J2.5 CLOOP_TX+
J2.6 CLOOP_TX-
J2.7 +24V
J2.8 GND
J2.9 RXMDB
J2.10 TXMDB
J2.11 GND

X20.5 X20.3 X20.2   X21.2 X21.4 X21.5 X21.6 X21.1   X22.1 X22.2 X22.3 X22.4   X23.1 X23.2

TELEMETRY   MDB   EXECUTIVE

	MODEL		DEFINITION		DATE	SHEET	PREPARED	CHECKED
IHUSA 8 GRIS 9 BLANCO			BLOCK DIAGRAM RADIOSA US SCHEMA2		-	1/1	LIBERALI	LIBERALI
				LEGENDA	PART NUMBER 60A003200		VERSION	