



DRINKS VENDING MACHINE
models ROSSO, ROSSO INSTANT
USER MANUAL



Version 3.3 / November 2016



Changes

Version	Date	Brief description	Pages
3.0	05.2015	Document creation Update of maintenance menu to version 0.49	All
3.1	11.2015	Changing items in the service menu Operator	76
3.2	10.2016	Replacing door lock machine model	35
3.3	11.2016	Adding a section 1.4	7

**COMPLIANCE DATA**

The drinks vending machines models ROSSO and ROSSO INSTANT are compliant with the requirements of the European Directives and Standards, listed in the following table:

Directive	Description
2004/108/CE	Electromagnetic compatibility directive
2006/95/CE	Low voltage directive
2006/42/CE	Machinery Directive
1999/5/CE	Artical No 3(1) (b) R&TTE Directive
2011/65/CE	Directive of the European parliament and of the Council of 8 june 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

Vending machine manufacturer LLC "KRAFT"
Russian Federation
199155 Saint Petersburg
Uralskaya str.13, let. A
Tel: +7 (812) 449-09-91
Fax: +7(812)350-7089

<http://www.unicum.ru/en/>

Original language - Russian



1.0 GENERAL INFORMATION	6
1.1 Introduction	6
1.2 Supplementary documentation	6
1.3 Terms of use	7
2.0 SAFETY	8
2.1 Main provision	8
3.0 PURPOSE	10
3.1 Technical features	10
3.2 Transportation and storage	11
3.3 Installation of the vending machine	12
3.4 The vending machine's components	14
3.4.1 The vending machine's exterior	14
3.4.2 Internal components	15
3.4.3 Open door circuit-breaker	17
3.4.4 Containers for ingredients and coffee beans	17
3.4.5 Cup dispenser	18
3.4.6 Spoon dispenser	19
3.4.7 Cup holder	20
3.4.8 Drink dispensing slot	20
3.4.9 Waste container	21
3.4.10 The hydraulic circuit (for ROSSO)	22
3.4.11 Autonomous operations, water reservoir and feed pump	23
3.4.12 Connection to water supply line (optional)	23
3.4.13 Flot chamber, pump and boiler	24
3.4.14 The coffee group	26
3.4.14.1 Coffee grinder and dosing apparatus (for ROSSO)	26
3.4.14.2 Espresso group (for ROSSO)	28
3.4.15 Water selector	31
3.4.16 Mixers for instant ingredients	31
3.4.17 Vending machine control and monitoring device	33
3.4.17.1 Description	33
3.4.17.2 Quick access keypad	34
3.4.17.3 Vending machine keypad	34
3.4.18 RIELDA lock set	35
3.4.19 Connecting SLAVE vending machines	36
3.4.20 Bank Note Acceptor (BNA)	37
3.4.21 Coin slot with change dispensing function	38



3.5 Vending machine's working principle	39
3.5.1 Dispensing the cups	39
3.5.2 Sugar and spoon	39
3.5.3 Preparation of drinks	39
3.5.4 Dispensing the drink	40
3.6 General technical servicing	41
3.6.1 Cleaning and disinfection	41
3.6.2 Periodic technical service	41
3.6.3 Flushing the vending machine's water tract	42
3.6.4 Weighing the ingredients	43
3.6.5 Cleaning the BNA	43
3.6.6 Cleaning the coin slot	45
4.0 SERVICE MODE	46
4.1 Technician's menu (Service engineer's menu)	47
4.1.1 Menu item "1.1 SYSTEM"	47
4.1.2 Menu item "1.2 PAYMENT SYSTEMS"	52
4.1.3 Menu item "1.3 TIME INTERVALS"	57
4.1.4 Menu item "1.4 CASH REGISTER"	58
4.1.5 Menu item "1.5 MODEM"	59
4.1.6 Menu item "1.6 PRICES"	61
4.1.7 Menu item "1.7 SNACK 1"	64
4.1.8 Menu item "1.9 HOT 1"	67
4.2 Operator's menu	76
4.2.1 Menu item "2.1 STATUS"	76
4.2.2 Menu item "2.2 CASH"	77
4.2.3 Menu item "2.3 SNACK 1"	78
4.2.4 Menu item "2.5 HOT 1"	79
4.2.5 Menu item "2.7 STATISTICS"	81
4.2.6 Menu item "2.8 DATA"	83
4.2.7 Menu item "2.9 PRICES"	84
5.0 WORKING WITH USB FLASH DRIVE	85
6.0 RECOMMENDED DRINK CONFIGURATIONS	87



1.0 GENERAL INFORMATION

1.1 Introduction

This user manual (hereinafter called the “Manual”) covers drinks vending machines models:

ROSSO, ROSSO INSTANT (hereinafter called the “Machine”).

The manual contains basic information about the Machine and its software. It includes the information, necessary for preparation for use, use and technical servicing of the Machine, as well as basic information about the Machine’s software.

This Manual is for the technical and engineering personnel, who provide technical servicing for the Machine and are permitted to handle electrical units of similar category.

Breach of the requirements of the current Manual can lead to trauma, device damage and renders the warranty ineffective. You must read and understand the requirements indicated in the current Manual, before installing and using the Machine, because it contains important information regarding unit safety, and servicing and usage instructions.

The knowledge of safety requirements is necessary to instruct the users to properly use the Machine.

The Machine buyer is responsible to make sure that the serving personnel had undergone needed training and was informed properly and that the instructions of the technical documents were fully observed.

The Machine manufacturer carries no responsibility for damage or loss incurred under the following circumstances:

- In case of unsanctioned modernization;
- In case of improper installation;
- In case of improper connection to the power and / or water supply;
- In case of cleaning and servicing contrary to the requirements;
- In case of improper operations or use of Machine’s equipment;
- In case of use of non-genuine spare parts.
- rejection of the use of food products, designed specifically for vending machines.

The manufacturer of the Machine is in no case liable for any possible losses, which might result from interruption of business due to Machine breakdown.

According to the client’s requirements the vending machine can have additional (optional) functions. These vending machine should only be used for making and selling drinks!

1.2 Supplementary documentation

We recommend that you read the user manuals and other associated documentation for peripheral devices, such as cheque printer, BNA, coin slot and other devices, which are included in the machine, to enable you to better understand the working of the vending machine.



1.3 Terms of use

This Manual is for a certain version of vending machine software, which is current at the time of printing of this Manual.

All possible modifications, modernizations and/or adaptations, which are effected or will be executed in future for following sales, do not mandate the manufacturer to conduct similar modernization of software for the earlier sold Machines, as well as it does not mandate the manufacturer to amend the user documentation, which is a part of the Machine's package.

The developer of the Machine and regulatory software have the right to make necessary changes to the Machine's structure, software's flow and in the documentation for its use without notice to the user.

1.4 Manufacturer's warranty

The manufacturer's warranty during the warranty period covers all vending machine units and assemblies, except for malfunctions, arising from non-observance of current maintenance documentation requirements by the customer or due to any mechanical failures.

The following components are excluded from the manufacturer's warranty:

- gaskets;
- fuses;
- control boards batteries;
- mixer impellers;
- hydraulic system tubes.



2.0 SAFETY

2.1 Main provision

- Before the installation and usage of the vending machine, it is necessary to carefully read and understand all the instructions, contained in the current manual, because they embody important information regarding safety of the unit, its operations and technical servicing.
- The vending machines should not be subjected to negative temperatures during operations and storage.
- These vending machines should not be installed in open air.
- The vending machines should be installed and if necessary repaired only by qualified personnel, who have undergone training to handle the machines and their constituent parts and are proficient in safety procedures. The vending machines should be connected to water supply and power supply in conformity with the applicable rules (standards) of the country in which they are installed.
- The vending machines should be installed on an even surface, where the angle of vertical inclination should be less than 2°. You can use the adjustable pegs of the machine to achieve desired vertical inclination. These pegs are included in the machine's base configuration.
- The vending machines should be connected only to protected power supply with earthing.
- The power plug of the machine should be approachable (accessible) after the machine has been installed.
- If the power cable would be damaged, it should immediately be replaced. It is strictly PROHIBITED to use the vending machine with damaged power cable!
- The vending machines should be cleaned, filled and installed only by qualified personnel.
- It is strictly prohibited to clean the vending machine using a water jet and the machines should not be installed in locations, where water jets are used (for example for cleaning).
- You should always use genuine spare parts.



ATTENTION: Do not touch the power plug with wet hands and do not insert it into the socket if the plug is wet!



ATTENTION: Please check the quality of drinking water used in the vending machine. The vending machine must be connected to the water supply according to the instructions issued by the competent authorities and in accordance with local rules!

Please make sure that the voltage in the power mains is compliant with the permissible value indicated on the machine's specification plate!

Please wash the vending machine before putting it to use!



- Regularly clean the vending machine, to adhere to the hygienic safety rules.
- Please only use washing materials, permitted for use in food preparation areas, to clean the vending machine's body.
- Make sure that the vending machine is OFF before starting technical service or repair.
- It is strictly prohibited to cover the vending machine with fabric or any other such material.
- Each vending machine is identified by the serial number inscribed on the specification plate, which is fitted on the rear wall of the machine. The specification plates carries all the technical details of the machine.



ATTENTION: The vending machine dispenses hot drinks! The front flap of the dispensing slot should be closed during the preparation of the drinks to avoid burning hands or other parts of body! Please do not open the front flap before the drink is ready for dispensing!



ATTENTION: This vending machine only be used inside covered premises!



3.0 PURPOSE

The ROSSO and ROSSO INSTANT vending machines are designed to prepare and sell drinks:

- Hot drinks using coffee beans (Model ROSSO);
- Hot drinks using instant coffee (Model ROSSO INSTANT);
- Hot drinks made of instant ingredients

The ingredients that you use for making the drinks, must be declared by the ingredient manufacturer as fit for use in open containers.

3.1 Technical features

The vending machine's main technical specs are inscribed on the specification plate.

Parameters	ROSSO	ROSSO INSTANT
Height (A), maximum	1850 mm	1850 mm
Width (B), maximum	600 mm	600 mm
Depth (C), maximum	670 mm	670 mm
Weight, maximum	130 kg	130 kg
Voltage	220 - 230 V	220 - 230 V
Power frequency	50 Hz	50 Hz
Power consumption (max)	1800 W	1800 W
Consumption of electricity per day, when surrounding air temperature is 22°C and making 40 drinks (each 100ml), maximum permissible (*)	4 kWh	4 kWh
External water supply		
Water pressure, minimum	0.5 bar (0.05 MPa)	0.5 bar (0.05 MPa)
Water pressure, maximum	8.5 bar (0.85 MPa)	8.5 bar (0.85 MPa)
Connection to water supply line	G 3/4"	G 3/4"
Internal water supply		
Standart cans / bottles (not included in the package)	2 x 20 L (max.)	2 x 20 L (max.)
Recommended parameters of water		
Hardness	0.9 - 1.0 mgeq/l	0.9 - 1.0 mgeq/l
Calcium	18 - 20 mg/l	18 - 20 mg/l
Cup and spoon dispenser		
Quantity of cups (max)	600 pcs	600 pcs
Cup diameter	70 mm	70 mm
Cup's volume	160 - 180 ml	160 - 180 ml
Quantity of spoons (max)	600 pcs	600 pcs
Spoon size (**)	95 / 105 / 115 mm	95 / 105 / 115 mm



Parameters	ROSSO	ROSSO INSTANT
Number of containers		
Coffee bean container	1 pcs	-
Instant ingredients container	4 pcs	5 pcs
Sugar container	1 pcs	1 pcs
Volume of containers (***)		
Volume of container for loose ingredients	5.2 l \pm 5%	5.2 l \pm 5%
Coffee beans	5.0 kg	-
Instant coffee	-	1.4 kg
Powdered milk	2.2 kg	2.2 kg
Chocolate	4.8 kg	4.8 kg
Tea	5.2 kg	5.2 kg
Vanilla cappuccino	4.8 kg	4.8 kg
Sugar	4.0 kg	4.0 kg

*) The estimated power consumption indicators are average numbers and are shown only as reference points;

**) 105 mm is the standard configuration of the spoon;

***) The quantity of ingredients can be different from the one shown depending on the specific weight of the ingredient.

3.2 Transportation and storage

All transportation and storage procedures should be executed very carefully to avoid damaging the vending machine. All the operations related to lifting and displacement of the vending machine should be executed using a fork lift. The forks of the lift should be slipped under the vending machine at the spots indicated on the machine's packing.

The following should be observed during the vending machine's transportation:

- The vending machine should be transported only in the original packing;
- The vending machine should be transported in strictly vertical position;
- The vending machine should not be tilted and turned or flipped over
- It is not permissible to lift the machine from the side walls;
- It is not permissible to lift the vending machine using ropes, cables etc.

The vending machine should be stored in dry premises where air temperature is in the range of 1 to 40°C and level of humidity is no more than 80%.

It is prohibited to stack the vending machines on top of each other in storage. The vending machines should be stored in vertical position in original packing.

3.3 Installation of the vending machine

The ROSSO and ROSSO INSTANT vending machines cannot be installed in open air. The vending machines should be installed in dry premises with temperatures ranging from 5° to 30°C.

The vending machine should be installed at a distance of 5cm from the wall to provide for sufficient ventilation.

The vending machine must not have a vertical tilt of more than 2°.

Please remove the packing and take out the master-key from the change dispensing slot. Using this key program the machine's lock. Then using the functional key open the vending machine's door (the key is stuck inside the change dispensing slot using scotch tape) – (see section 3.4.19 and figures 1, 2, 3).



Figure 1



Figure 2



Figure 3

The vending machine's inner components are all wrapped in packing. Before turning the machine ON please make sure that all of the packing materials have been removed. You can see the spots where the packing is wrapped, indicated by arrows in figures 4 and 5.

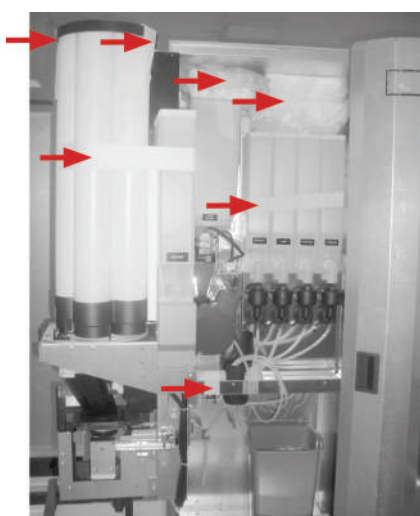


Figure 4

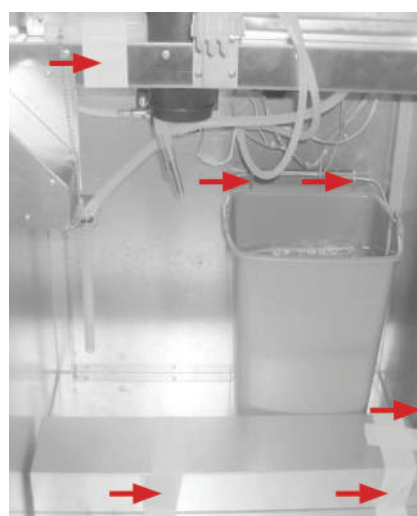


Figure 5

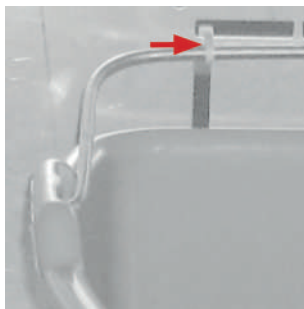


Figure 6

The liquid waste container is fixed on the lower part of the machine's body with the help of plastic studs. Remove the studs (see figure 6).

Then remove the packet (see figure 7), which is inside the container. This packet contains all the fixtures needed for installation (see figure 8).



Figure 7

1. Power cable
2. Set of adjustable pegs
3. Passport
4. Weights for spoons
5. Fixtures for piqued waste container
6. Clamp for waste coffee collector
7. Electric circuit-breaker key

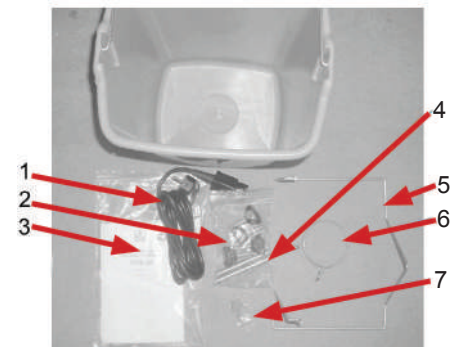


Figure 8

The vending machine is fixed to the carrier tray using M10 screws. Remove the screws and install the adjustable pegs. You can adjust the vertical tilt of the machine using these pegs.

After adjustment. Please cover the pegs using decorative casing, as shown in figures 9, 10, 11.



Figure 9

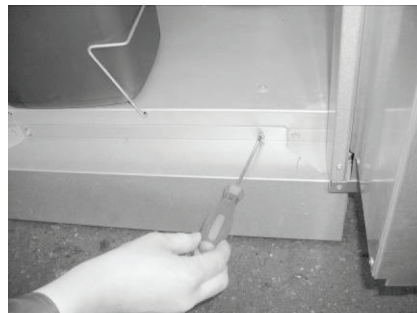


Figure 10



Figure 11

The vending machine must be installed and serviced only by qualified and authorized personnel, who have undergone training to operate and service the given class of machines.

The packing materials should be utilized in accordance with the environmental laws of the locality of installation.

3.4 The vending machine's components

The ROSSO and ROSSO INSTANT vending machines come in the shape of rectangular metallic boxes of the following dimensions (max):

- Height 1850 mm
- Breadth 600 mm
- Depth 670 mm

The body houses various functional units of the vending machine. The body is closed with a metallic door, which has decorative plastic components.

The door contains the following equipment:

- Money intake and refund devices;
- Indicator panel;
- Drinks dispensing slot;
- Drink selection buttons;
- Change return button;
- Sugar quantity adjustment button;
- Light panels

3.4.1 The vending machine's exterior

The vending machine's metallic door is made of 1mm thick steel and has decorative plastic components. The door carries the following main components (see figure 12).

1. Upper and lower light-boxes, with LED lights. The upper light-box can optionally be replaced with a video monitor.
2. Drinks selection keypad, which can also hold labels with product name.
3. The protective plastic flap for the drinks dispensing slot.
4. The "MIZMATIC" programmable lock.
5. Bank note acceptor (BNA).
6. 4 row contrast character display.
7. Sugar level adjustment button ("+" / "-")
8. Coin deposit slot and change dispensing button.
9. Change (coins) dispensing slot.
10. Decorative replaceable panel, which covers the adjustable pegs.

The following components are located on the rear outer wall of the vending machine.

CAN BUS connector to connect FoodBox Slave / FoodBox Long Slave vending machines: position 1.

Power cable connector: position 2

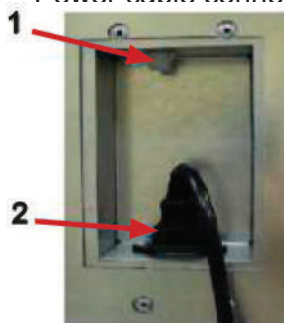


Figure 13

A 3/4" threaded connector to connect with water supply (optional)



Figure 14



Figure 12



3.4.2 Internal components

a. Body

The vending machine's body contains: drinks preparation units, containers for ingredients, waste containers, payment systems, circuit boards used to control the vending machine's functioning and space for the installation of 2 (two) bottles / cans of water.

The dispensers for cups and spoons, container for sugar and drinks dispensing section are all placed on a swinging bracket. The control panel and payment system are protected by a metallic box and are situated on the inner-side of the door.

Figure 15 (description):

1. Cup dispenser;
2. Container for sugar;
3. Coffee bean container (ROSSO);
4. Container for loose ingredients;
5. Coffee grinder (ROSSO);
6. Coffee dosing apparatus (ROSSO);
7. Mixers;
8. Espresso group (ROSSO);
9. Pipes to supply dissolved ingredients into the cup;
10. Boiler cover
11. Coffee waste dispensing tube (ROSSO);
12. Space for the installation of can/bottles of water;
13. Water supply pump for autonomous functioning;
14. Fan for drying mixer nozzles;
15. Waste container (in front of bottles);
16. Protective housing for power supply (see figure 18).

The float chamber and water selector are located behind the coffee bean container (see section 3.4.17).

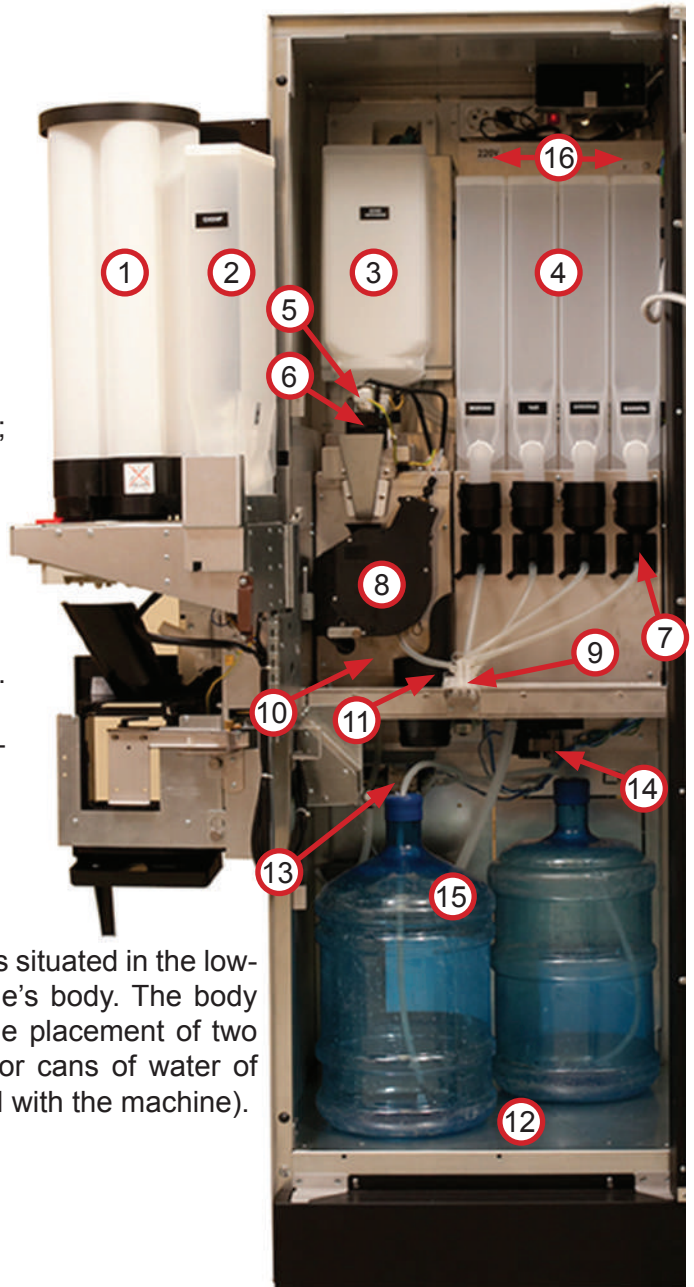


Figure 15



Figure 16

The waste container is situated in the lower part of the machine's body. The body also has space for the placement of two 20 litre each bottles or cans of water of volumes (not supplied with the machine).



The drinks dispensing tray is placed on a swinging bracket.
The dispensers for cups, spoons and sugar container are all situated above the drinks dispensing tray.

The drinks dispensing tray includes the following components (see figure 17):

1. Cup, sugar and spoon dispensing slot
2. Optic sensors (optional)
3. Turning handle to displace the cup (cup movement)

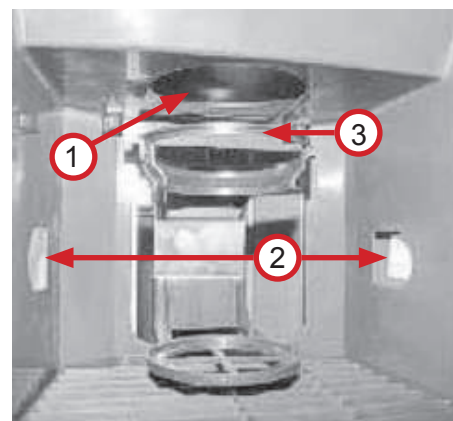


Figure 17

b. Door

The vending machine's door is equipped with money intake and change dispensing devices, indicators, drinks selection buttons, change dispensing button, sugar level adjustment button, light panel and drinks dispensing slot (see figure 19).

1. Door to the electronic circuitry section
2. Upper light-box cover
3. The keyboard short cut
4. Drinks selection keypad – label placement slot (back side)
5. Electronic circuitry section door latch
6. Drinks dispensing slot (back side)
7. Lock mechanism
8. Bank note acceptor (BNA)
9. Main Board (controller)
10. Modem (optional)
11. Coin slot with change dispensing function
12. Coin box (cash box)

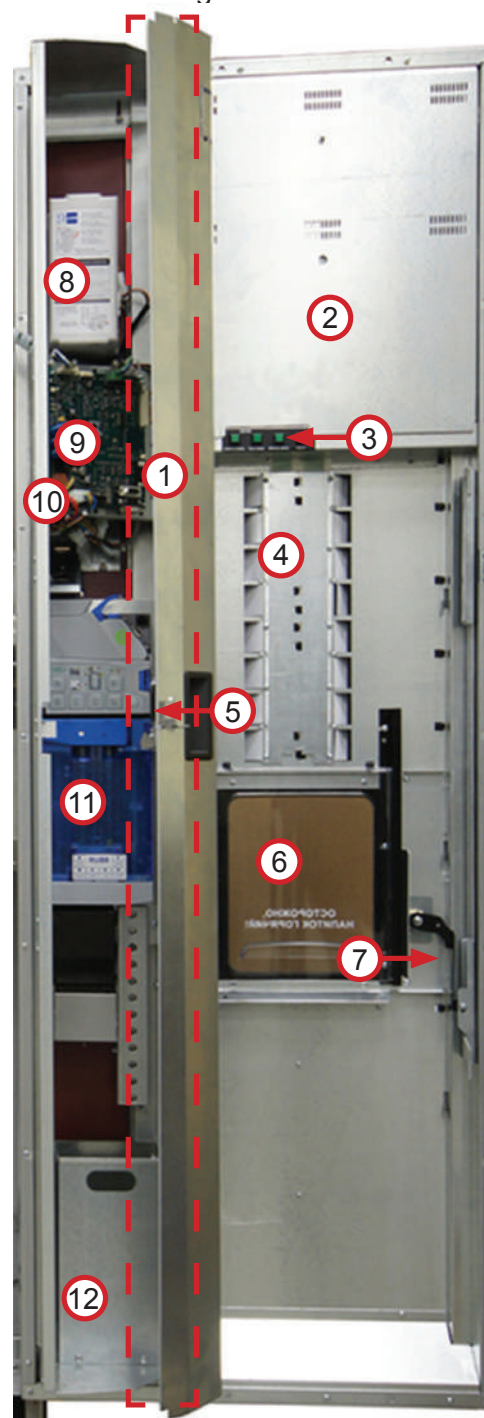


figure 18

c. Power supply (1), power circuit (2)

The power supply and the power supply circuit are located on the rear wall of the body behind the containers with ingredients.

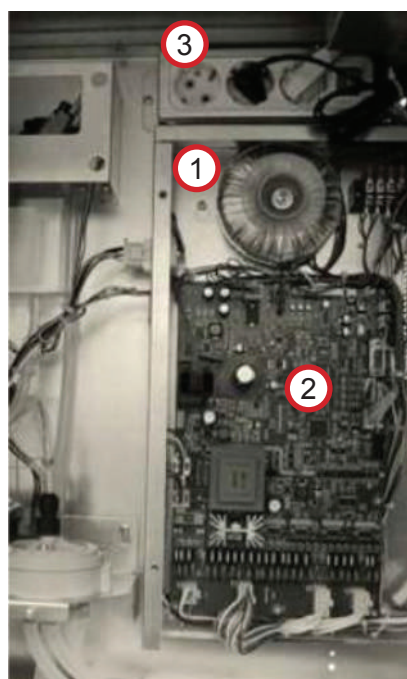


Figure 19

To access the power supply section, please remove the ingredient containers and loosening the screws, remove the protective panel.

The extension block with multiple sockets (3), used to connect accessories (printer, speakers) is located on the top end (optional)



3.4.3 Open door circuit-breaker

A special circuit-breaker turns OFF all power to the electrical and electronic system, when the door is opened, to ensure that all the operations related to the recharging (loading) and cleaning would be carried-out under completely safe conditions. All other operations behind the door, which need to be performed with the running power, must be performed **EXCLUSIVELY** by qualified personnel, who have permission to perform such works and who know all the risks involved in the performance of such works.

To turn ON the power, with the door open, it is necessary to insert the special key (see figures 20 a, b, c) into the breaker and turn it through 90° until it is fixed. Please make sure to remove this key before closing the door.



Figure 20a



Figure 20b



Figure 20c

3.4.4 Containers for ingredients and coffee beans

The drink vending machine has two types of containers: containers for ingredients and sugar (see figure 22) and container for coffee beans (for the ROSSO model) (see figure 21).

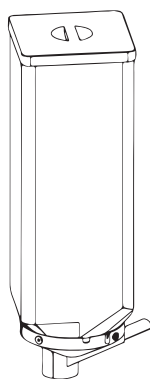


Figure 21

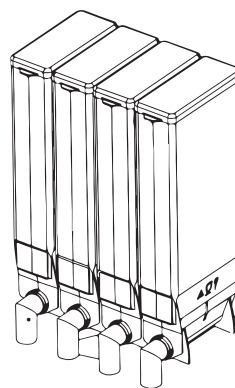


Figure 22

Filling the coffee beans container

To fill the container, please remove the top lid of the container (see figure 23) and fill it with coffee beans (see figure 24).

The coffee bean container has a fixing latch (see figures 25, 26). To remove the container, for example to access the float chamber or water selector, please close the coffee feed holes with the latch and remove the container. After reinstalling the container make sure to fully release the latch to free the passage of coffee beans.



Figure 23



Figure 24



Figure 25



Figure 26

Filling the ingredient containers

The ROSSO vending machine has 4 containers for powdered ingredients (see figure 27), whereas ROSSO INSTANT has 5 containers.

To fill the containers, just pick the lid off the container and fill it from the top (see figure 28).

ATTENTION: Please make sure that no foreign objects go inside the container during refill. Also make sure that the ingredients are not compacted (lumped) during refill.

Please remove the excess of ingredients from the outer walls of the containers and other parts of the vending machine.



Figure 27



Figure 28

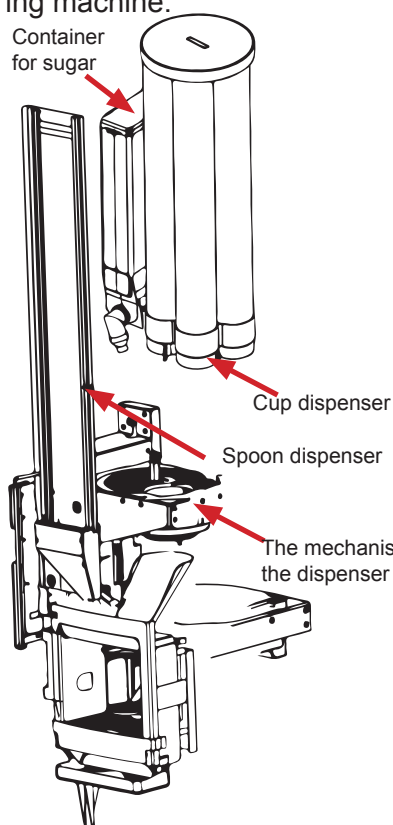


Figure 29

There is a reducer-motor behind each of the containers, which is used to feed the ingredients into the mixer.

The quantity of the ingredient is fixed in the drink's recipe. The quantity means the time of rotation of motor, which is installed behind the container, in tenths (1/10) of seconds.

If needed (for convenience in refilling the containers) the containers can be removed:

Turn the spout upwards and slightly raise the container with the help of the spout to ensure that the container's bottom is free of the holder. Then pull the container out.

The sugar container is located near the cup dispenser (see figure 3.4.4). This container should be refilled in the same manner as the other containers (see above).

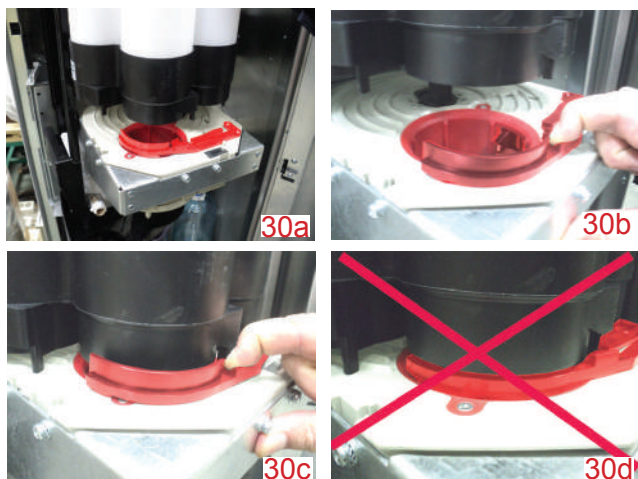
3.4.5 Cup dispenser

The cup dispenser is fitted on a swinging bracket. The dispenser can hold up to 600 cups in 5 tubes (see figure 29). The dispenser sequentially releases cups from all tubes.

Filling the vacant tubes with cups (see figures 31a, 31b):

- Turn OFF the vending machine
- Remove the dispenser's upper lid
- Load the cups (bottom down) only in the tubes, which are not (even partially) above the dispensing cavity

- Turn ON the vending machine and wait till the stack of cups falls into the dispenser following the automatic rotation of tubes and the rotation of tubes stops.
- Make sure that the lowest cup (first to fall) in the new stack is strictly vertical (without any bends or tilts). If there is any vertical tilt, please adjust it by raising the stack from below and then replacing it.
- Add cups to the rest of the vacant tubes and replace the lid.



NOTE: To install the tubes on the cup dispenser mechanism, turn aside the spring (see figure 30b) and install the tubes (see figure 30c).

ATTENTION: Incorrect installation of tubes (see figure 30d) can damage the dispensing mechanism! It is strictly prohibited to rotate the tubes manually, because this would damage the tubes' rotation mechanism!



Figure 31a



Figure 31b

3.4.6 Spoon dispenser (see figure 29)

The spoons are dispensed in accordance with the configurations of the service menu. You can turn OFF the dispensing of spoons or only turn it ON for drinks with added sugar.



Figure 32

The dispenser can be refilled from the top (see figure 32).

Place the spoons in the dispenser's column without packing (see figure 32), then place the two metallic weights on top of the spoons.

These weights are supplied with the vending machine.

The dispenser can hold spoons of the following three lengths: 95mm, 105mm, 115mm.

The dispenser's maximum capacity is 600 spoons.

The vending machine comes with the dispenser set for 105mm spoons.

To adjust it for spoons of 95mm or 115mm, please adjust the guide, as shown in figures 33 and 34.

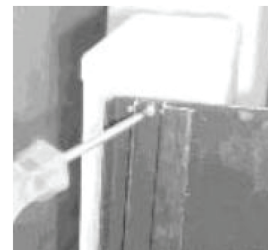


Figure 33



Figure 34



3.4.7 Cup holder (see figure 35)

The cup holder (see figure 35) is installed on the rotating joint of the mechanical arm. After the drink has been selected, the cup falls into the cup holder and then sugar and spoon fall into the cup. After this the cup holder moves the cup into the vending machine's body for safe preparation of drink.

The cup with ready drink is brought out by the rotating arm within the range of the optical sensors (if installed). The optical sensors record the removal of cup by the customer. The use of optical sensors enables the customers to use their own cup for drinks. To do this you must place the cup inside the cup holder before selecting the drink. When the vending machine senses the presence of a cup it will not dispense a new cup.

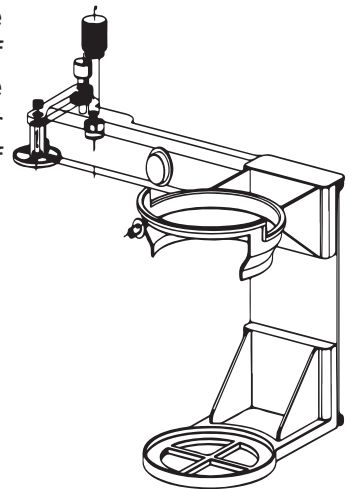


Figure 35

3.4.8 Drink dispensing slot

The body of the dispensing area is made of moulded plastic (see figure 36) and is installed in the front part of the swinging bracket under the cup dispensing cavity.

The dispensing area is equipped with a removable tray with a grill, which is located right under the cup holder. The tray serves as a store for spilt over drinks and liquids. To clean or change the plastic components it is necessary to remove the tray and the grill to wipe out or collect liquid waste (see figures 37, 38, 39).

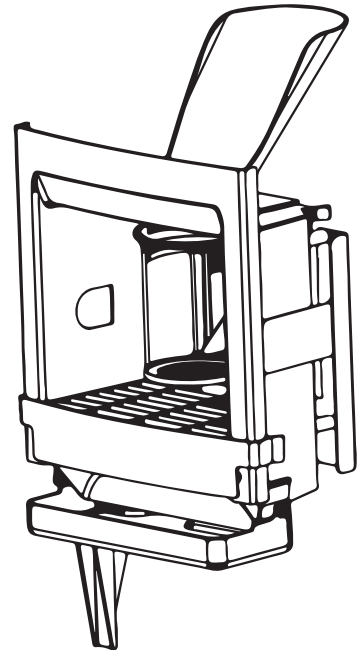


Figure 36

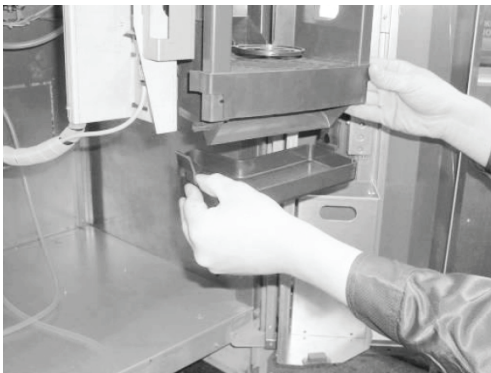


Figure 37



Figure 38

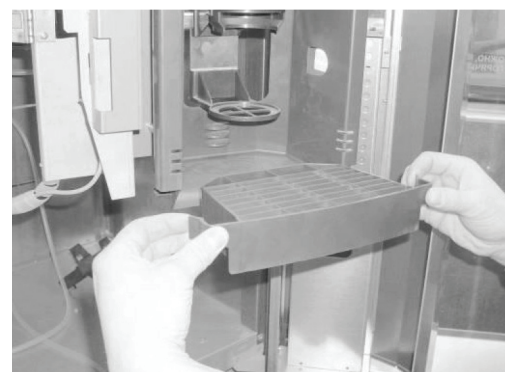


Figure 39

3.4.9 Waste container

The container is located in the bottom of the vending machine (see figure 40). In the bottom of the body there is a special marked area for secure placement of the waste container.

After placing the empty container in the specified spot and fixing it, direct the discharge pipe into the waste container and lower the float into the container. This float will help monitor the level of liquid in the container. The liquid waste results from the making of the drinks and automated flushing of the vending machine.

When the level of liquid in the container reaches its maximum, the sensor connected to the float (see figures 41 a, b) activates and the vending machine is blocked or put offline. To unblock the machine it is necessary to empty the container and dump errors (see section 4.0 "Service mode").



Figure 40

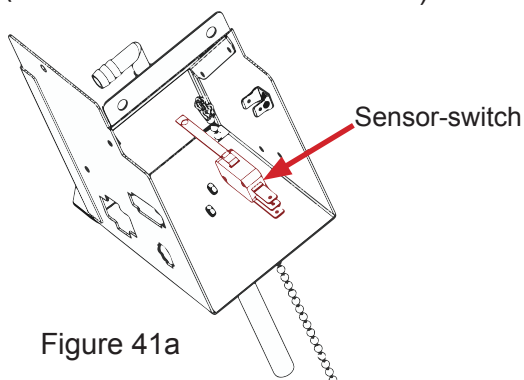


Figure 41a



Figure 42

Apart from liquid waste the vending machine also generates hard waste in the shape of used ground coffee, which results from the preparation of coffee from coffee beans. This waste is sent by the coffee group to the path for hard waste (see figure 42).

A waste bag (not supplied with the product) must be put over this waste discharge path. This can be done by wrapping the bag around the discharge tube and fixing it with a metallic clamp (ring clamp) (see figure 43).

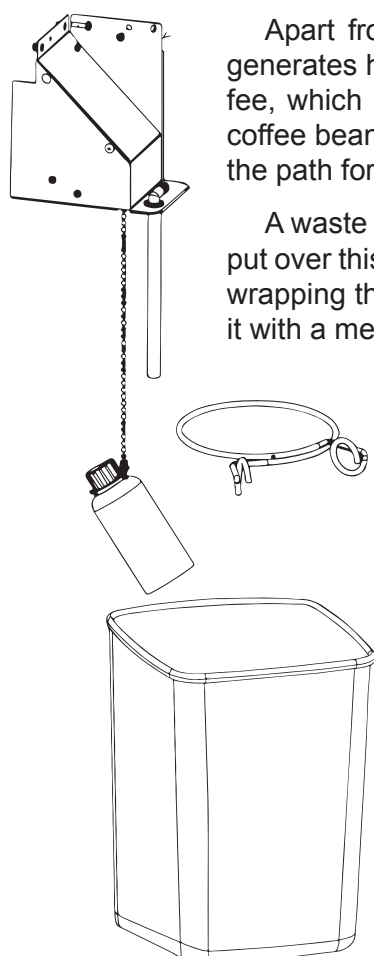


Figure 41b

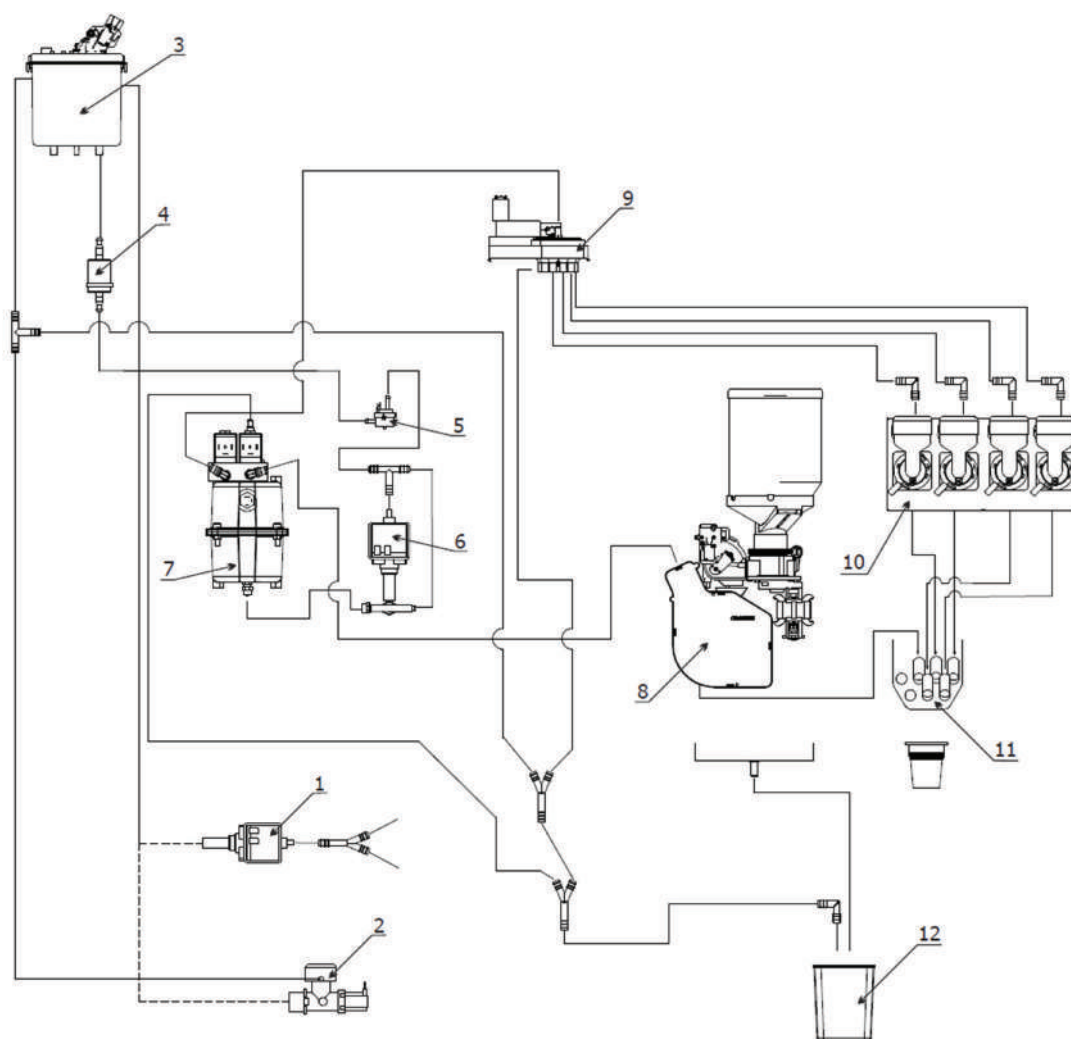


Figure 43

3.4.10 The hydraulic circuit (for ROSSO)

The water feed circuit has the following configuration:

When the vending machine is connected to the water supply, the water runs in through an electromagnetic valve with filter (2), when using the bottles, the water from the bottle is pumped using a primary pump (1). Then the water enters the float chamber (3) and running through the water filter (4), water meter (5) and boiler feed pump (6) reaches the boiler (7), where it is heated to the set temperature level and according to the selected drink option it then runs into one of the two boiler channels: either through the selector (9) to the mixer or to the espresso group (8), where the water is mixed with the required ingredient and the drink is dispensed to the customer through the outlet nozzles (11). The excess of water and drink are then discharged into the waste container (12).



1. Feed pump (autonomous operations)
2. Electromagnetic valve (water supply line)
3. Float chamber
4. Water filter
5. Water consumption meter
6. Boiler feed pump
7. Boiler
8. Espresso group
9. Water selector
10. Mixers
11. Drink outlet (discharge) nozzles
12. Waste container



3.4.11 Autonomous operations, water reservoir and feed pump

a. Water reservoir

By default the vending machines are configured to work with autonomous source of water, which comprises of one or two bottles of water (not supplied with the product). The water bottles are located in the lower part of the machine behind the waste container (see figure 44 and 45). The maximum volume of each bottle is 20 litres. The water is drawn using two discharge pipes.

When connecting a new bottle, please put one pipe in each of the water bottles. If you are installing only one bottle, please insert both pipes into this single bottle (see figure 44).



Figure 44



Figure 45

b. Feed pump

When in autonomous operational mode the pump draws water from the bottle(s). The feed pump is located above the waste container and is fixed to the rear wall of the machine's body (see figure 46).

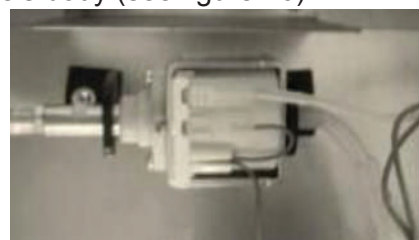


Figure 46

3.4.12 Connection to water supply line (optional)

The vending machine can operate when connected to autonomous water source (as described in section 3.4.11) or when connected to municipal drinking water supply. The inlet connector to connect the machine with the water supply line is located on the rear wall of the machine (see figure 47) and comprises of a $\frac{3}{4}$ " threaded connector.

The water pressure must be in the range of 0.5 to 0.85 MPa. The connection is made using minimum 6mm pipes, suitable for drinking water. The pipe must have a G $\frac{3}{4}$ " joint nut. It is recommended to use additional tap and water filter, installed outside the machine's body, on water supply line (not supplied with the product).

Inside the machine's housing replace the feed pipe from feed pump (autonomous water supply) to electromagnetic valve (see figure 48 and 49). The valve is regulated by the vending machine control software. It automatically regulates the supply of water into the float chamber.



Figure 47

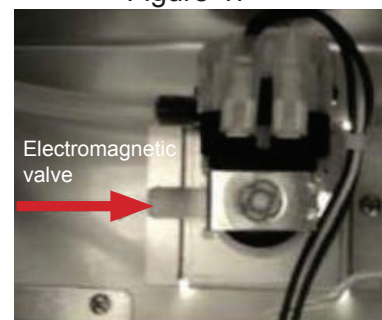


Figure 48

ATTENTION! The vending machine should be connected to the water supply line only by a qualified specialist!

After connecting the machine to the external water supply, you must reprogram the machine, so as to enable the electromagnetic valve. For the purpose you must access the technical service menu.

In menu option "1.9.9 Autonomous operations" select NO. The machine will now shift to operations using external water supply.

To shift the vending machine back to the autonomous water source mode select YES in menu item "1.9.9 Autonomous operations".

In this case you must again shift the pipe from the electromagnetic valve to the feed pump for the autonomous source of water.

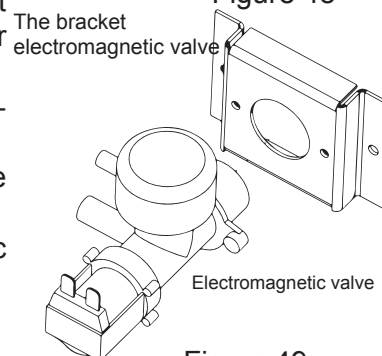


Figure 49



3.4.13 Flot chamber, pump and boiler

The water for the preparation of drinks is supplied by the following group of devices: boiler, which heats the water; boiler pump, which pumps the water into the hydraulic circuit; float chamber, which helps avoid air bubbles and blocks from entering the hydraulic system.

a. Flot chamber

The float chamber (see figures 50 and 51) retains the minimum required quantity of water, which is necessary to keep the hydraulic system alive and to ensure the dispensing of drinks, in case the water supply runs dry.

Equipped with a sensor it determines the state of the chamber: filled or empty. During the functioning of the internal pump, the water level gradually falls inside the float chamber until reaching the set level, where the sensor reads as if the chamber is empty. At this moment the water from external source (the valve is opened) or internal source (the autonomous mode pump turns ON) starts filling the float chamber, until the water level sensor determines that the chamber was full. This also forms a permanent water lock. In case of shut down of external water supply or depletion of water in the internal source, the float chamber will not be filled within the set time interval, which will cause the vending machine to be blocked.

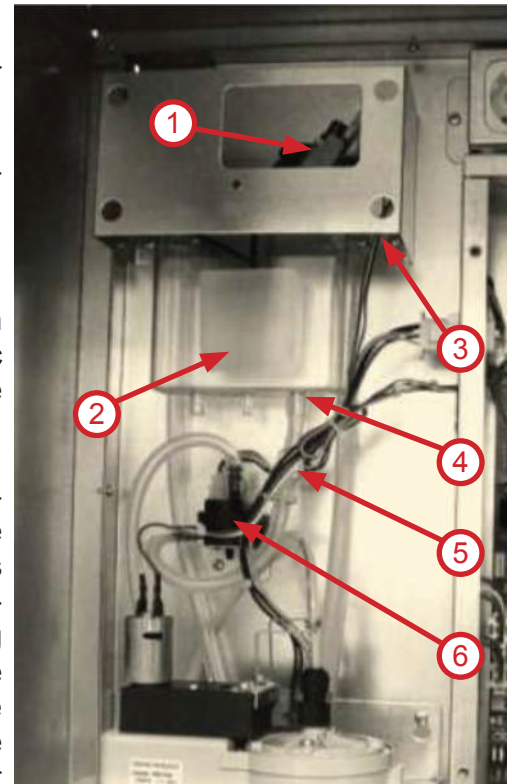


Figure 50

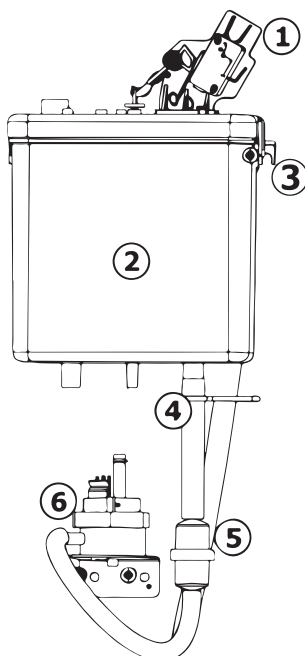


Figure 51

Figure 50 and 51

1. Pin switch of the water level sensor
2. Float
3. Water inlet connector
4. Water outlet to the boiler
5. Consumption meter
6. Water filter

b. Boiler feed pump

The boiler heats the water to a certain temperature, which is set in the configuration menu, for the preparation of hot drinks (see figure 52).

The boiler is fitted with a feed pump, which maintains permanent pressure (see figure 52 position 2) and (see figure 53).

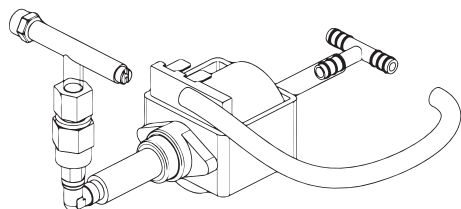


Figure 53

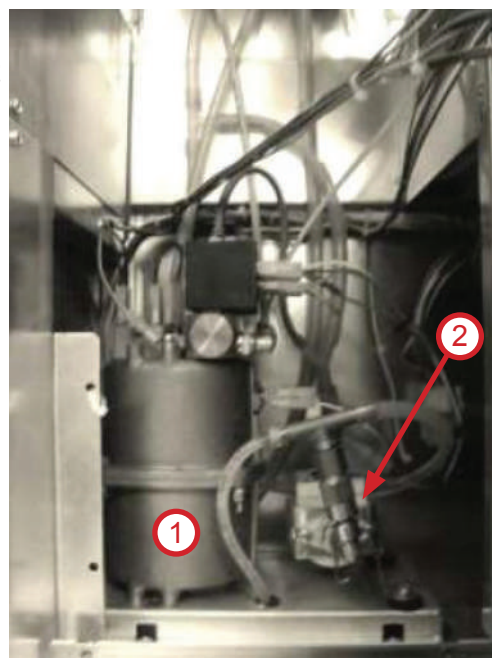


Figure 52

c. The boiler's electromagnetic valves

During the preparation of drinks, hot water enters through one of the two electromagnetic valves, which are located on top of the boiler (see figure 54), depending on the selection (either to espresso group or to the selector and then to the relevant mixer).

d. Boiler

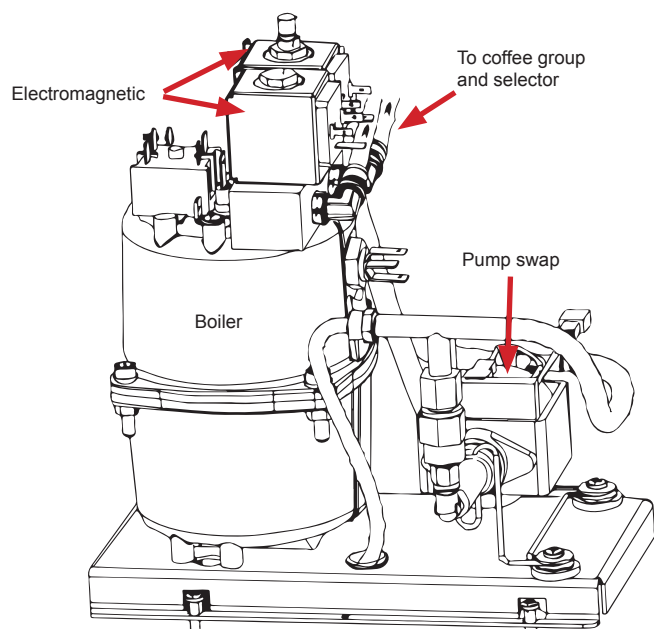


Figure 54

The boiler is used to heat the water to a certain temperature as is set in the machine's configurations.

In the ROSSO model the boiler is located under the protective cover behind the espresso group (see figure 52 position 1 and figure 54).

To access the boiler, please remove the espresso group (see section 3.4.15).

In ROSSO INSTANT model we only use one electromagnetic valve of the boiler (the other one is plugged).

The surface of the boiler can be very hot.

Before starting any routine service or cleaning, it is necessary to cool down the boiler and to empty it (see section 3.6.3).

The water from the float chamber enters the boiler with the help of the boiler feed pump.

From the boiler the water either goes to the selector or to the coffee group.



ATTENTION: It is strictly prohibited to use water, which does not conform to the given standards of hardness and calcium content (see the vending machine's technical features). This can cause rapid deterioration and failure of the machine's electromagnetic valves!



3.4.14 The coffee group

3.4.14.1 Coffee grinder and dosing apparatus (for ROSSO)

The coffee beans are crushed using the coffee grinder, which is located underneath the coffee bean container. When you select a drink, which uses coffee beans, the beans fall into the coffee grinder, where they are ground using the built-in choppers, going further into the dosing apparatus, which is located in front of the coffee grinder. From here the coffee is fed into the espresso group.

The quality of grinding of coffee depends on the rotation of the screw, located on the coffee grinder (see figures 55 and 56 position1). Turn the screw clockwise grind more (smaller particles) or counter clockwise to grind less (larger particles) – (see figure 55). You can set the rotation of the coffee grinder to achieve the required level of grinding.

After setting the grinding quality, check the quality of coffee. If needed please set again to achieve the required level of grinding.

NOTE: the smaller the particle size the longer will be the extract and the drink will be more saturated.



Figure 55

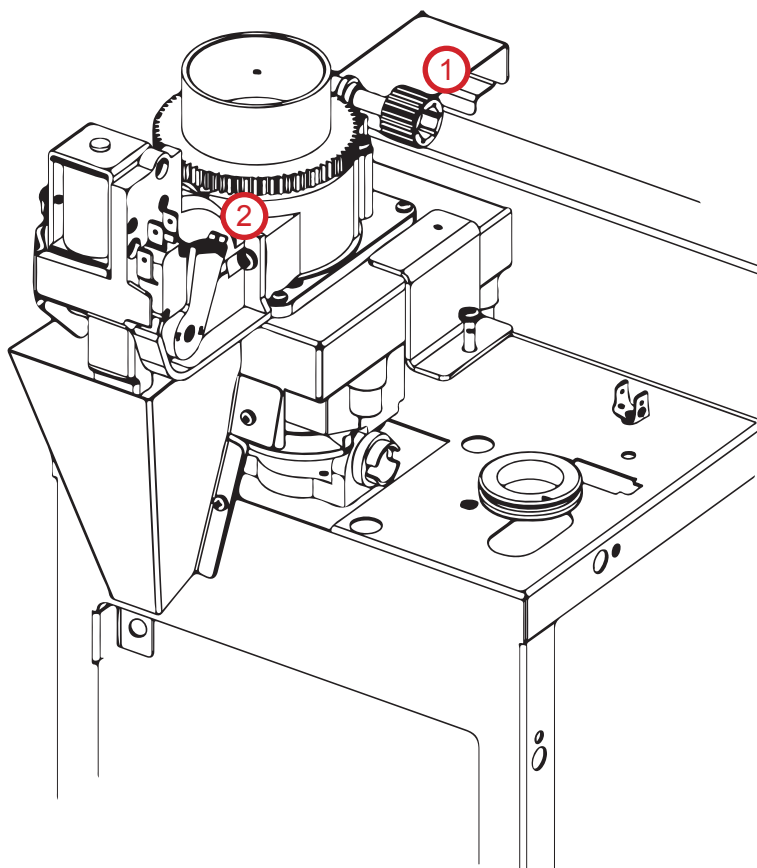


Figure 56



Setting the grinding parameters for the first time:

Turn the regulatory screw clockwise and bring the blades as close as possible (turn all the way). Then turning the screw counter clockwise loosen the upper disk by 540-630 degrees (one and a half turn or one and a half + quarter turn).

For more detailed settings of coffee grinder you can carry out the following actions in the given sequence: change the position of the regulatory screw (to change the position of the upper disk of the coffee grinder to a certain angle) and then make a drink and taste it.

PLEASE NOTE THAT CHANGES IN LEVEL OF GRINDING AND TASTE ARE NOT NOTICED RIGHT AWAY. ONLY AFTER 3 CYCLES YOU CAN FEEL THE DIFFERENCE (after changing the grinding parameters, discard two drinks and taste the third one to feel the difference).

It is highly recommended to change grinding parameters discreetly, turning the coffee grinder's disk by 10-20 degrees each time.

If the level of grinding is too high (very small particles) the water either cannot pass through the ground coffee tablet or passes partially, i.e. the volume of ready drink will be very less. In this case either the coffee output jet will be broken into drops or its thickness will be less than 1.5mm. In this case the time of working of the coffee grinder will be 8-10 seconds from start till stop.

If the level of grinding will be too low (very small particles), the coffee grinder will not be able to ground sufficient amount of coffee, which would lead to "Grinder" error and will block the dispensing of coffee. In such case you should increase the level of grinding. For the purpose you must loosen the upper disk by turning it counter clockwise.

If the particle size is large the coffee will be less concentrated (less saturated). The time of working of coffee grinder will be around 3-4 seconds. The thickness of output jet will be 3-4mm. In this case you can also cause the leaking of the coffee group, because very large particles of coffee damage the gasket of the piston. In such cases you should decrease the particle size – turn the upper disk clockwise.

The optimum time of grinder functioning is: 5-6 seconds if coffee dosage is set to position 3 and 6-7 seconds if the coffee dosage is set to position 4 (see the next section).

The ground coffee is fed into the dosing apparatus, which accumulates ground coffee up to a certain level. When the level is reached the electromagnetic valve opens and the accumulated dose of coffee is sent to the espresso group.

The dosing apparatus helps you set the required amount of coffee for the espresso group according to the desired drink.

The volume of coffee is regulated with the help of the dosing apparatus's cam (see figure 56 position 2 and figure 57). The positions can be from **1 to 6 (MAXIMUM)**. At the same time it is prohibited to set the cam to positions 5 or 6 without increasing the volume of the boiling chamber (see further)! **THIS CAN DAMAGE THE ESPRESSO GROUP!!!**

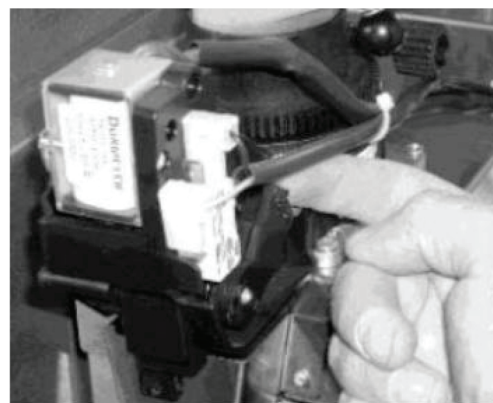


Figure 57

It is STRICTLY PROHIBITED to set the cam to positions 7 or higher!!!

The recommended settings for the cam are positions 3 or 4. This means a dose of 6.5-7.5 grams per portion (per drink).

The weight of the ground coffee inside the dosing apparatus depends on the quality of grinding and type of coffee.

After each re-setting of dosing apparatus, please weigh the amount of ground coffee according to the current manual.

Depending on the weight of the coffee, you might need to regulate (adjust) the volume of espresso group's chamber.



3.4.14.2 Espresso group (for ROSSO)

The espresso group is used to make coffee using ground beans (see figure 58).

1. Hot water inlet from the boiler
2. Ground coffee feed into the coffee maker
3. Reducer-motor of espresso group
4. Path for discharging coffee waste
5. Output pipe for ready drink
6. Fixture for removal/installation of espresso group

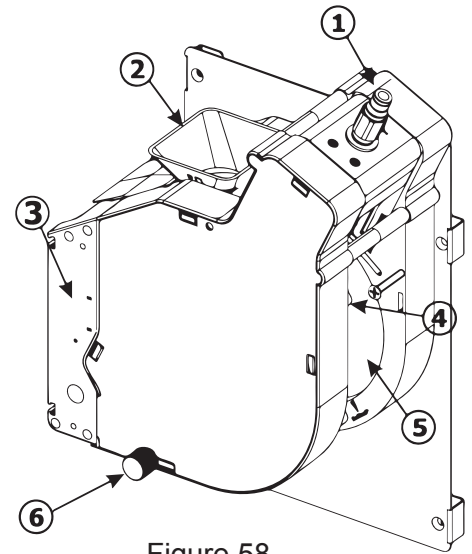


Figure 58

Description of espresso group's functioning:

1. Initially the espresso group is in open position
2. The ground coffee enters the inlet (2), after which the reducer-motor closes the espresso group, pressing the coffee powder.
3. Hot water, from the boiler, is passed through the pressed coffee
4. After passing the set amount of water, the reducer-motor opens up the espresso group, emptying the coffee waste through the waste path (4) into the waste container.
5. The hot water, which passes through the pressed coffee, further goes through the dispensing nozzle into the cup.

To service the boiler, which is located behind the espresso group, it is necessary to remove the whole group. The group can be removed as shown in figures 59...62.



Removing the espresso group:

1. Disconnect the hot water supply pipe, unclamping the fixator (see figure 59)
2. Disconnect the ready drink dispensing pipe together with the nozzle from the holder, lifting the spring used to fix the pipe (see figure 60)
3. Turn the espresso group fixation screw counter clockwise (1) (see figure 61)
4. Lift the right lower end of the espresso group (2) then pull it out (3) (see figure 61)
5. Remove the espresso group (see figure 62)

To install the espresso group carry-out the abovementioned actions in reverse sequence.

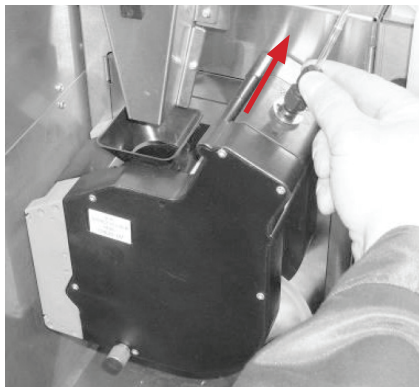


Figure 59

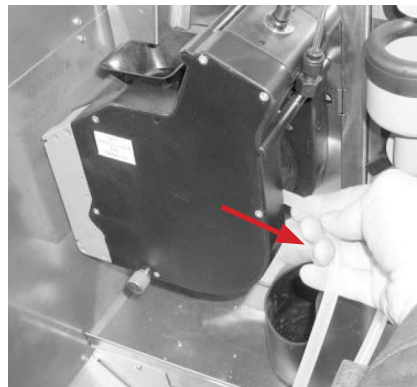


Figure 60



Figure 61



Figure 62



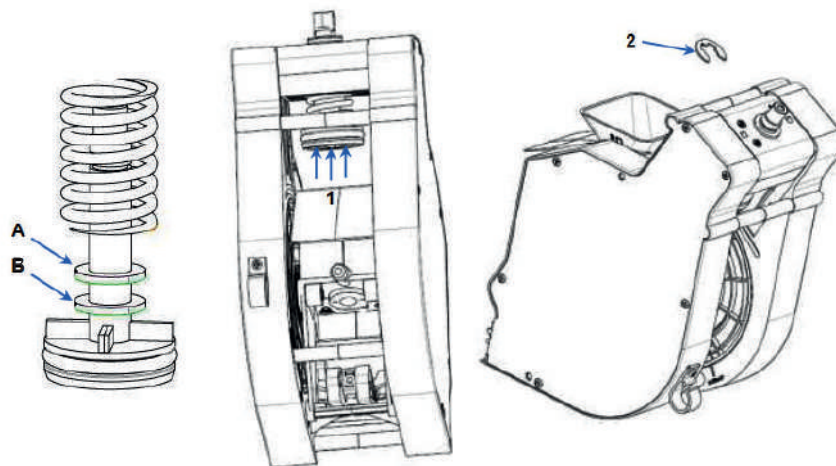
Adjusting the volume group espresso:



Group espresso lets you adjust the volume of the chamber for receiving ground coffee from the dispenser. When you install the dispenser fist to position 5 or 6 or weighing more than 7.5 grams of ground coffee, you must increase the space by installing retaining ring into position B (see figure below).

The adjustment is made in the following order:

1. Remove group of espresso (see above);
2. Retighten piston in the direction of arrow 1 as shown in the figure (see below);
3. Remove the retaining ring 2 from the current position (factory setting A);
4. Install the snap ring in position A to work with a small dose of coffee, or to position B to increase the volume of the chamber;
5. Release the piston;
6. Set the group of espresso in place.



3.4.15 Water selector

The water selector (see figure 63) for making instant drinks, is located behind the coffee bean container. The electromechanical selector helps direct the hot water from the boiler to the relevant mixer, to make the selected drink.

Figure 64 (description):

1. Reducer-motor for positioning
2. Water distribution unit
3. Current position sensors (2 pcs)
4. Inlet for water from the boiler to the selector
5. Outlet openings to feed the water to the mixers

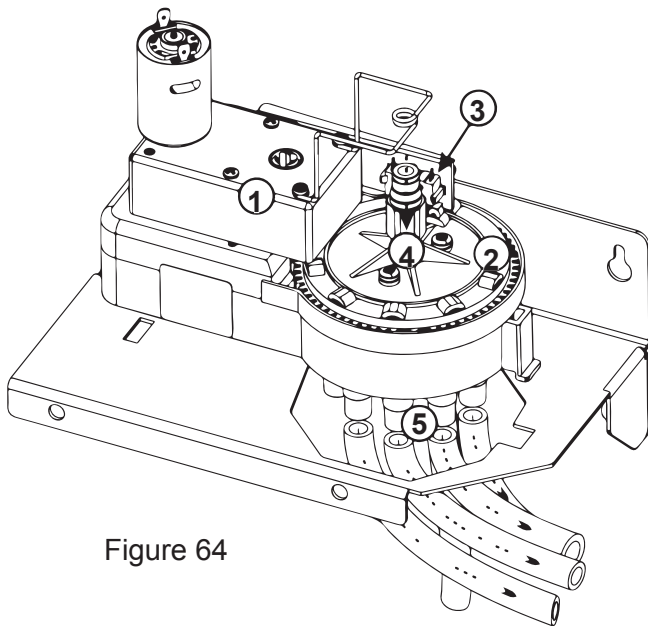


Figure 64

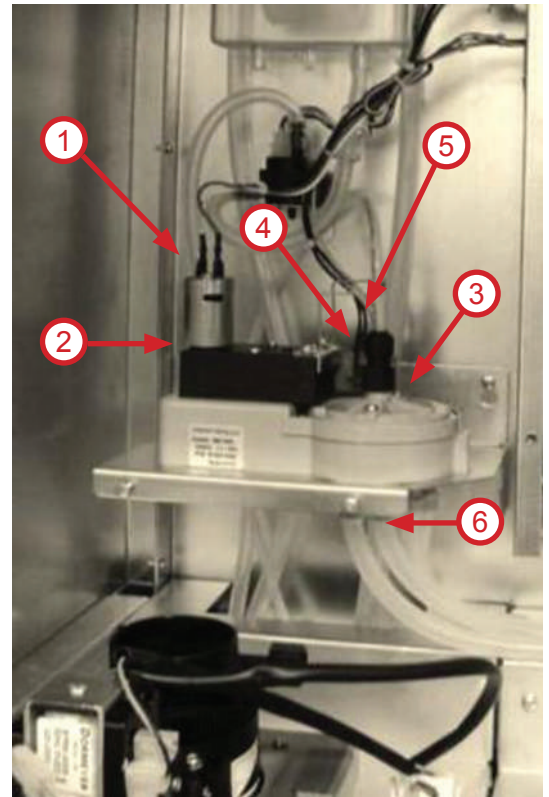


Figure 63

3.4.16 Mixers for instant ingredients

The instant drinks, which are made of instant ingredients, are prepared in the mixers (see figure 65). The ROSSO and ROSSO INSTANT vending machines have 4 mixers each.

Each mixer is installed and connected in front of the container with the relevant ingredient. In the ROSSO INSTANT vending machines, one mixer is used for two ingredient containers: chocolate and powdered milk (basic composition).

The powder (instant ingredient) is fed by the reducer-motor from the container into the mixer's inlet together with hot water.

The mixer's motor mixes the ingredient and water until a uniform mixture is obtained. For further details see section 3.5.3 – Preparation of drinks and section 3.6.4 – Dosage of ingredients, sub-section C.



Figure 65 (description):

1. Lid on mixer's inlet
2. Mixer's motor
3. Mixer's funnel
4. Adapter for drink dispensing pipe
5. Mixer funnel fixator
6. Exhaust hole gasket

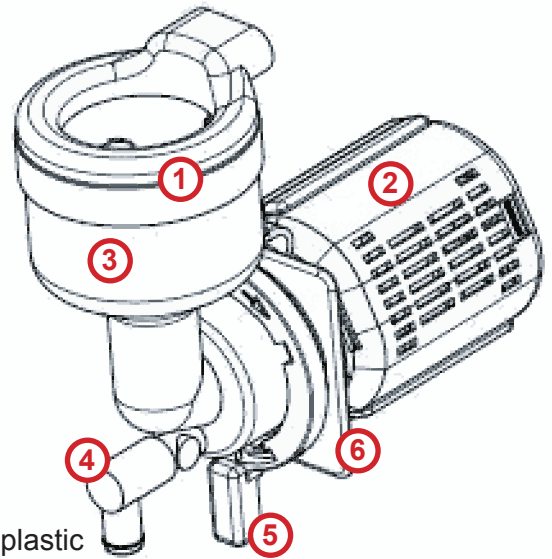


Figure 65

When needed you should remove the funnel and other plastic parts of the mixer, for planned cleaning and perform the actions in the following order:

1. Disconnect the drink dispensing pipe (see figure 66)
2. Turn the handle on the funnel fixator downwards (see figure 67)
3. Carefully pull out the funnel (see figure 68 and 69)

For installation perform the same steps in reverse order.

To remove the mixer's motor, loosen the screw, which holds the mixer to the bracket (see figure 69), and remove the motor. After that disconnect the power connector.



Figure 66



Figure 67



Figure 68



Figure 69

3.4.17 Vending machine control and monitoring device

3.4.17.1 Description

The system of control used for ROSSO and ROSSO INSTANT comprises of the following components:

- Power supply board. This board controls the vending machine's functioning of working parts, reads from the sensors and handles the drink preparation process. The power board contains all the recipes and configurations (see figure 18 section 3.4.2 sub-section b).
- Main board. This board holds statistical data, controls payment systems and operational modes, works with USB flash drives for data transfer, configuration file loading and software updates. This board holds all the configurations except for recipes.

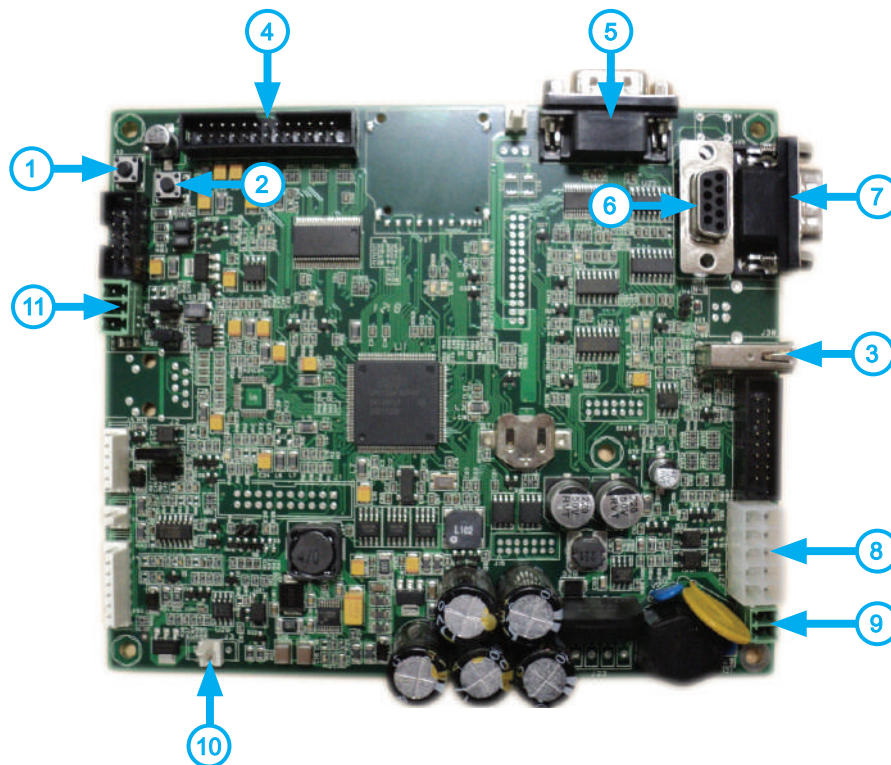


Figure 70 - Main board

1. Operator's menu access button (used as reserve button, for use when regular service button does not work – see 3.4.18.2)
2. Technician's menu access button (used as reserve button, for use when regular service button does not work – see 3.4.18.2)
3. USB connector (socket)
4. Display connector
5. Modem connector
6. Slot for programming and connection of RS-232 cartridge
7. Cash register \ cheque printer connector
8. Modem and MDB power supply connector
9. Main board power supply connector (~24Volts)
10. Change dispensing motor connector
11. CAN-BUS connector

The vending machine's main board offers two operational modes:

- Selling mode (main mode)
- Service mode (for specialists)



In the main mode, which is the selling mode, the vending machine serves the customers and monitors all the components which constitute the machine. Right after turning ON and receiving uninterrupted power supply, the machine functions in the given mode.

The service mode is designed to provide for equipment testing, parameter configuration for units and equipment and monitoring drinks' information (name, price, recipe etc.). To switch to service mode you should press button 2 or 3 on main board and hold for 2-3 seconds or you can switch using the 4 key pad, which is installed on the inner side of the door.

You can switch to the service mode by pressing the relevant button on the 4-key pad, which is located on the inner side of the vending machine's door. If the buttons on the keypad are not responding, you can switch modes by pressing holding down for 2-3 seconds, buttons (1) or (2) on the main board (see figure 70).

3.4.17.2 Quick access keypad

The vending machine has a 4 button keypad, which is located on the inner side of the door on the lid of the upper light-box (see figure 71 and figure 18 position 3). This keypad is used for quick access to the following functions:

- "Operator's menu" - access to operator's menu
- "Technician's menu" - access to service engineer's / technician's menu
- "Flushing" - access to menu option for flushing the vending machine's various units
- "Test" - allows you to make a drink without paying, for purposes of checking drink quality and setting it

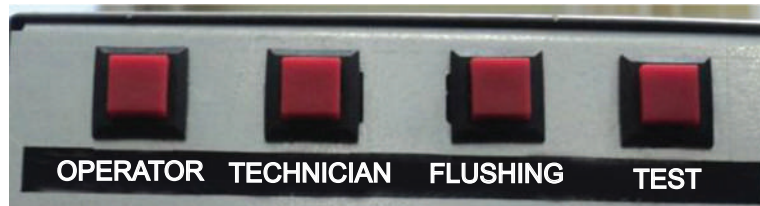


Figure 71

3.4.17.3 Vending machine keypad

The said keypad is located on the front door of the vending machine. The keypad consists of 16 buttons, used to select various drinks (see figure 72). Each button corresponds to one drink as per the vending machine's planogram.

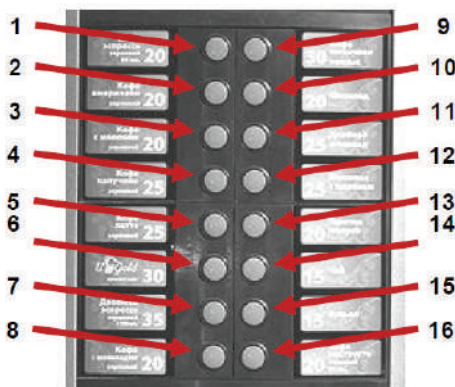


Figure 72

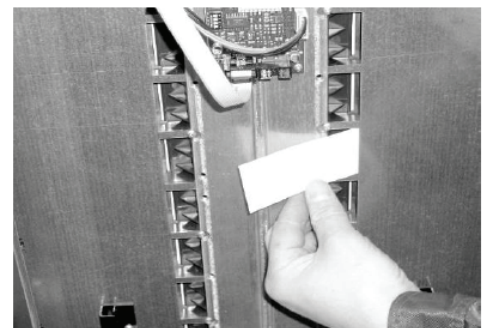


Figure 73

There is a label holder by each button to mark the name of the drink. The table with drink details can be installed on the inner side of the door "see figure 73).

While operating in service mode, when you enter the technician's menu or operator's menu, this keypad is used to navigate, select and change service menu parameters.



3.4.18 RIELDA lock set

Locks type RIELDA allow you to program the lock to the correct set of keys, what makes it possible to use one working key for multiple locks RIELDA and easily change the combination of the lock under the new working key with loss, theft or damage to the old key.

The lock comes complete with three keys (see. figure 75):

- one master key - GOLDEN key is used only for the lock programming;
- two operating SILVER key - used for opening / closing machine door.

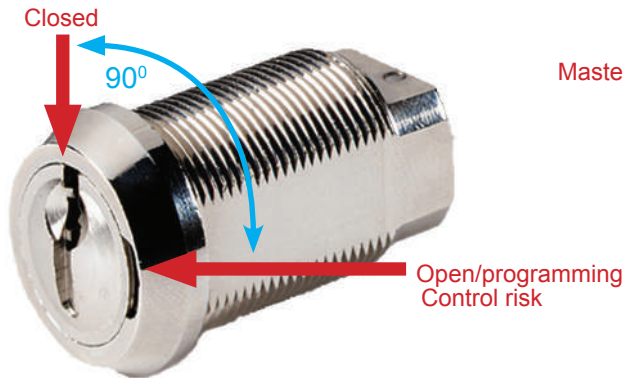


Fig. 74



Fig. 75

The lock can be located in two positions:

- operating position ("closed" position - see figure 74);
- position for the programming (the "open" position - see figure 74);

The machine is supplied with pre-programmed lock. To open / close the door machine, insert the operating SILVER (see figure 75) key lock and turn it in the lock 90 degrees to the right to marry (see figure 74).



WARNING! Programming lock operations must be performed only when the machine door is open! Otherwise, there will be lock (lock) the door latch.
WARNING! Return the switch to the programming can only be the master key to which the lock has been programmed the last time!



To program the lock by other working key (for example, to use one working key for multiple machines or operating loss of key) you must perform the following operations when you open the door machine:

- Insert the master key lock (“closed” position - see figure 74) in which the castle was the last time that programmed or is supplied with a lock (for primary programming). Lock master key in the lock at least one second. Then turn 90 degrees in the direction of the control key risk (see figure 74).
- While holding shutting off device of the door in order to avoid a spontaneous turn of the lock, remove the master key from the lock and insert them into the new master key , which you want to program the lock. If you want to program the lock on the same master key, don't remove the master key from the lock.
- Then turn the master key 90 degrees in the opposite direction (the “closed” position -see figure 74).
- Remove the master key from the lock and put it in a safe place. To open / close the lock, use the operating keys, coming complete with a new master key.



3.4.19 Connecting SLAVE vending machines

It is possible to connect FOODBOX SLAVE AND FOODBOX SLAVE LONG (hereinafter called the SLAVE machine) to ROSSO and ROSSO INSTANT vending machines.

The SLAVE machines are used to dispense snacks and cold drinks as per the main (master) machine's commands.

The SLAVE machines are controlled and managed using the ROSSO / ROSSO INSTANT's main board (setting prices, working temperatures and other SLAVE machine settings).

Connection:

Connect the SLAVE machine in accordance with the "Connecting FOODBOX SLAVE, FOODBOX SLAVE LONG vending machines to ROSSO / ROSSO INSTANT" instructions.

After connecting the SLAVE machine, configure the ROSSO, ROSSO INSTANT main board.

For the purpose perform the following actions:

1. Enter Service engineer's / Technician's menu
2. Open menu option "1.1.13 Quantity of snacks" and set "1"
3. After this the menu will have a new option "1.7 Snack 1"
4. Configure the SLAVE machine according to the instructions in the SLAVE machine's user manual.



3.4.20 Bank Note Acceptor (BNA)

The Bank Notes are accepted through the BNA.

The BNA is installed from the inner side of the door within the management section of the vending machine (see figure 18 position 11).

a. You can remove the BNA and empty the stacker in the following manner (see figures 76 and 77):

1. Press and move the fixator
2. Move the stacker vertically upwards
3. Open the stacker's lid (cover)
4. Remove the banknotes
5. You can put back the stacker in the reverse sequence.

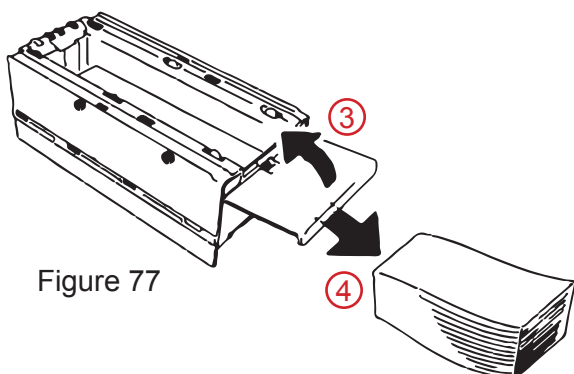


Figure 77

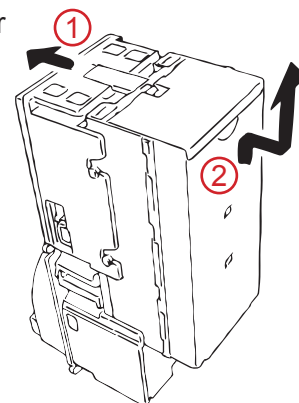


Figure 76

b. Banknotes stuck in the stacker:

1. Remove the stacker (see above clause a)
2. Remove the stuck banknote (see figure 78)

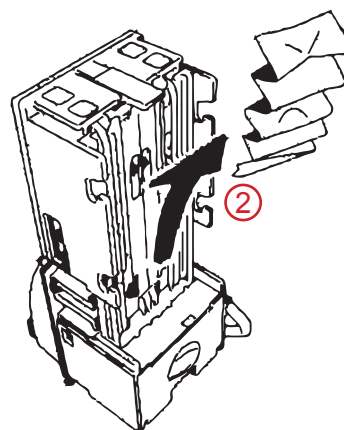


Figure 78

c. Banknotes stuck in the intake slot:

1. Press the handle which blocks the BNA's head
2. Remove the BNA's head (inlet slot)
3. Remove the banknote
4. Place the head back on until you hear the click

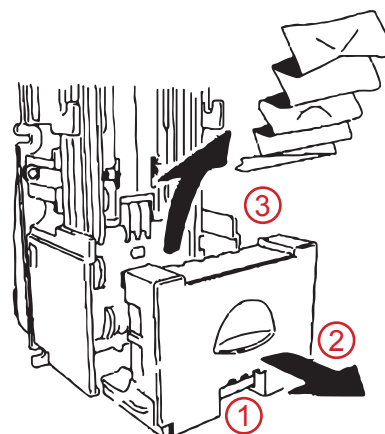


Figure 79



3.4.21 Coin slot with change dispensing function

The vending machine can also have a coin slot with change dispensing function (usually we use model NRI Currenza C² Green or Blue).

Filling the coin tubes: To fill the tubes of the coin slot, see “Filling the tubes” section 4.2.2.

To fill the coin slot leave the stacker with tubes inside the vending machine and place coins in the loading slot, making sure that the operation is determined by the main board (controller). Any extra coins fall out of the coin tubes into the special storage box (cash box).

To remove coin from the tubes: Press the button corresponding to the selected tube (A, B, C, D...) for a short time.

To completely empty the tube, press and hold the button until 6 coins are released. After this the tube can be emptied. The coins are released automatically. To stop coin drop, press the coin release button for any other tube.

After you have finished refilling or emptying the coin tubes, check the exact number of loaded (remaining) coins and the amount displayed on the vending machine's screen.










Figure 80



Figure 80 - position 7

Description of coin slot Currenza C² Blue

-  • Switch to menu option Configuration and Servicing
- Return to normal mode of operations
-  • Removing coins from tube “A”
- Select “Audit” menu option from the main menu
- Navigating through the menu options
- Increasing parameter value
-  • Discharging coins from tube “B”
- Select menu option “Inventory” from the main menu
- Navigate down the menu
- Decrease settings
-  • Discharging coins from tube “C”
- Select menu option “Service” from the main menu
- Select parameter number
-  • Discharge coins from tube “D”
- Select menu option “Diagnostics” from the main menu
- Select parameter number
-  • Discharge coins from tube “E”
- Select menu option “Installation parameters” from the main menu
- Configuration confirmation
-  • Discharging coins from tube “F”
- Select option “Loading mode” from the main menu
- Return to main menu

1. MDB device connector cable (not shown)
2. Slot for inserting coins
3. Coin return handle
4. Fixator for the validator
5. HENRI interface connector

6. Coin validator
7. User interface
8. Fixator for tube stacker
9. Tube stacker (coin tubes)
10. Specification plate indicating tube configurations



3.5 Vending machine's working principle

This vending machine prepares and sells drinks made of instant ingredients and coffee beans (for ROSSO) / instant coffee (for ROSSO INSTANT). The vending machine prepares and dispenses the selected drink after the customer deposits cash. The operations related to the preparation and dispensing of drinks include the following steps:

3.5.1 Dispensing the cups

The drink dispensing section has a swinging mechanism with cup holder. Before starting the process of making the drink the cup holder gets positioned under the cup dispenser, which dispenses a cup.

As an option (at additional cost) the ROSSO/ROSSO INSTANT vending machines can also be equipped with cup sensors and additional tray. If the vending machine has this option, the customer can use personal glass or coffee mug (maximum volume 200ml), instead of the cup dispensed by the machine. For the purpose you can just place the cup inside the dispensing section (put the cup in the holder on the tray). In this case the optic sensors, scan the presence of a cup and restrict the machine from dispensing a new cup. These sensors are also used by the vending machine to control the process of dispensing the cup from the cup dispenser (if no personal cup is used) and checks if the cup has been removed by the customer (before the customer takes the first cup the vending machine will not allow the customer to order the next drink).

3.5.2 Sugar and spoon

After dispensing the cup the vending machine dispenses sugar according to the machine's configurations and customer's choice. The spoon is dispensed simultaneously with the sugar. You can set the conditions for dispensing sugar and spoon in the machine's service menu.

3.5.3 Preparation of drinks

The swinging mechanism shifts the cup deep inside the vending machine, right under the drink dispensing nozzle. This movement and placement makes sure that the customer cannot interrupt the process by prematurely removing the cup or injuring his/her hands in the process.

Instant drinks:

These drinks are prepared by continuously mixing the instant ingredient (powder) with hot water and then mixing various mixed ingredients in accordance with the drinks recipe, which is set using the vending machine's service menu.

To make the drink the water is pumped into the float chamber, from where it goes into the boiler, until it is filled. The boiler heats the water and maintains it at the temperature level set in the vending machine's configurations.

The required quantity of the ingredient is poured out of the container into the mixer. The quantity of the ingredient is set in accordance with the selected drink's recipe.

The water selector channels the required amount of water from the boiler to the relevant mixer, which is located near the container with the required ingredient.

When the water flows into the mixer, the ingredient is solved into the amount of water set in the recipe.

Water and the ingredient are mixed inside the mixer until the required drink is obtained. From the mixer the drink flows through the dispensing nozzle into the cup.

After the process of preparation of drink is finished the cup is moved out into the dispensing area by the swinging mechanism (position for removing the cup).



Coffee bean drinks (for ROSSO):

Coffee beans go from the coffee bean container into the coffee grinder, where they are ground and fed into the dosing apparatus (if the dosing apparatus will not be filled within 10 seconds the vending machine will automatically block the dispensing of ground coffee drinks).

The dosing apparatus activates, feeds the ground coffee into the espresso group, after which the espresso group closes and the coffee is pressed.

After this hot water release valve is opened towards the espresso group, the internal pump turns ON and hot water from the boiler reaches the espresso group.

The water flows through the pressed coffee tab and flows out into the cup.

After the set amount of water has flown through the espresso group, the flow stops and the used coffee is disposed of into the waste container.

3.5.4 Dispensing the drink

After the drink is ready, the swinging mechanism places the cup in the front area of the dispensing window and it becomes approachable for the customer. Depending on the configurations in the service menu, the optic sensors are read (optional – to be ordered separately) to ensure the removal of cup by the customer. The vending machine remains unavailable until the cup is removed from the dispensing area.



3.6 General technical servicing

3.6.1 Cleaning and disinfection

After the installation of the vending machine it is necessary to carry out complete disinfection of all water tracts and other components that come in contact with the food products, to kill all bacteria that might grow inside during storage.

The sanitation and hygiene norms require the vending machine operators to carry-out complete cleaning and disinfection of equipment and materials, which come in contact with the food products.

The operator must conduct technical servicing of the equipment to prevent the growth of hazardous bacteria, no less than once a week or even more frequently depending on the operating conditions of the vending machine, its location and water quality.

It is recommended to use suitable washing materials, which are permissible for use in the food industry.

Please note that some of the vending machine's components might be damaged because of the use of unsuitable washing materials. The manufacturer of the machine bears no responsibility for damage caused by the use of unsuitable chemical or toxic substances.

Always disconnect the vending machine from the power mains, before starting technical service or change of components.

Following is the list of equipment, which should be cleaned during technical service of the machine:

- Removable mixer heads (funnels) and tracts used for dispensing instant drinks (cleaning and disinfection)
- Pipes and nozzles used for dispensing drinks (cleaning and disinfection)
- Discharging chute for sugar (cleaning and disinfection)
- Dispensing area: plastic parts, tray with grill (cleaning and disinfection)
- Cup holder (cleaning and disinfection)
- Discharge heads of instant ingredient containers (cleaning and disinfection)
- Outer parts of espresso group (cleaning and disinfection)
- Waste container (cleaning and disinfection)
- Coffee disposal tract (cleaning and disinfection)
- Cleaning of the vending machine's body from outside and inside (cleaning and disinfection)

3.6.2 Periodic technical service

It is necessary to clean and disinfect the internal tracts used for supplying food products, once a year or more frequently, depending on the operational conditions and used water, according to the following procedure:

- All components, which come in contact with the food products, including pipes, must be disconnected from the equipment and dismantled into constituent parts;
- All residues and visible stratifications must be removed using, if necessary, sponges and brushes;
- The components must be immersed in disinfectant for 20 minutes;
- The inner surfaces of the equipment must be cleaned with disinfectant;
- You must nicely wash all components under running water and then all of the components must be reassembled;
- Remove loose ingredient containers from the unit;
- Remove product discharge nozzles and remove endless screws from the rear of the containers;
- Clean all parts using water solution of chlorine detergent and nicely dry them all.



3.6.3 Flushing the vending machine's water tract

Since the water tract always contains water during operations, you must flush the water tract before transporting the machine or before changing any of the parts of the machine's hydraulic system.

All of the water must also be flushed before conserving the vending machine.



ATTENTION: You must discharge all water from the machine's water tract before transportation or before storage under conditions where temperature goes below +1°C! Failure to conform to this requirement might seriously damage the vending machine!

Following is the procedure for flushing the water:

1. Cool down the boiler. For the purpose enter the service menu and select sub-clause "1.9.10 Cooling the boiler" and start the cooling process by pressing the OK button. After you start the process the machine will pump sufficient amount of water through the boiler to cool it down to 45 degrees. This process can be executed for machines with external water supply as well as for machines with internal water cans.
2. After the boiler has been cooled the machine's display shows the OK sign, after which you should disconnect the machine from water supply or you should remove the water supply pipes from the cans/bottles. It is also necessary to flush water from the pipe, which supplies water from external water supply valve or autonomous water supply pump, to the float chamber. For the purpose remove the pipe from the valve or pump and direct it to the flush bucket. Make sure that all the water from the pipe is discharged.

NOTE: when using internal water supply from cans/bottles it is also necessary to flush the autonomous function pump. For the purpose, following the cooling process and removal of supply pipe from the pump, it is necessary to manually pull down the float from the float chamber until the pump starts and hold the float for 5-10 seconds. After this you must reinstall the pipe (to the valve or the pump).

3. After cooling, flush the boiler. For the purpose enter the service menu and select sub-clause "1.9.12 Boiler flush" and start the flushing process by pressing the OK button. The machine will start pumping out water from the float chamber and the rest of the water tract, which supplies water to the boiler.
4. When the given process will be completed, you will see the OK sign on the display. This is when you should turn the machine OFF.
5. Place a container under the boiler and remove the pipe from the bottom of the boiler (figures 81, 82) by loosening the fixator screw. Then turn the machine ON and wait until all the water would be flushed from the boiler (until the water stops dripping).
6. Turn OFF the vending machine.
7. Reconnect the pipe to the boiler with the help of the tightening screw.

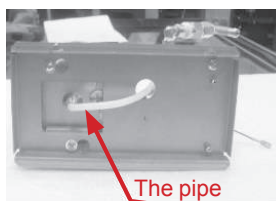


Figure 81



Figure 82



3.6.4 Weighing the ingredients

To maintain proper doses of ingredients, it is necessary to periodically weigh the ingredients, which you use for making the drinks.

Weighing the dose of sugar:

1. Place a cup in the holder
2. Enter the service menu (see section 4.0) and select sub-menu "1.9.7.3.3 Sugar/Spoon"
3. Using the buttons on the keypad set the proper dose (from 1 to 6) and press the OK button
4. Weigh the resulting portion (dose) of sugar.

Weighing the dose of ground coffee: (for ROSSO)

1. Remove the espresso group (see section 3.4.15)
2. Place a container under the nozzle of the dosing apparatus
3. Enter service menu (see section 4.0) and select sub-menu "1.9.7.4.5 Testing ground coffee" and press the OK button
4. Weigh the obtained dose of coffee

NOTE:

1. For exact measurement it is necessary to carry-out 5-10 weight tests and calculate the average value.
2. It is PROHIBITED to set the dosing apparatus to position 5 or 6 without increasing the volume of the coffee making chamber! THIS MIGHT DAMAGE THE ESPRESSO GROUP. It is STRICTLY PROHIBITED to set the dosing apparatus to positions 7 and above!!!

Weighing the doses of ingredients:

1. Remove the lid from the mixer, located under the container with the tested ingredient
2. Place a vessel under the ingredient container
3. Enter service menu (see section 4.0) and select sub-menu "1.9.6 Drinks"
4. Then enter the drinks number, for which you want to test the weight
5. Select sub-clause "1.9.6.9 Testing the ingredients" and press the OK button
6. Weigh the obtained ingredient

3.6.5 Cleaning the BNA

You must clean the BNA at least once a month or as seems suitable. Following is the list of instructions that you must follow while executing preventive cleaning of the BNA:

1. Turn OFF the vending machine
2. To access the BNA open the door to the section with electronic circuitry (see figure 18 position 1) and dismantle the bracket from the main board, loosening the bracket's screws.
3. Remove the stacker from the BNA (see section 3.4.21 clause a)
4. Remove the optic part of the BNA (see figure 84) and using a brush remove dust from the inlet
5. Clean using moist fabric or cotton swab and then dry the following parts: Lenses of the optic sensors (1). The lenses are made of transparent polymers, therefore this process must be executed with utmost care (figure 83). Clean the rollers (2) and belts (3)
6. Then clean the stacker in the same manner
7. Reinstall the optic parts, reinstall the stacker, reinstall the bracket to its prior place and tighten the fixtures

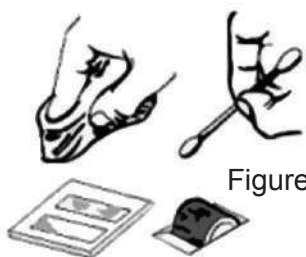
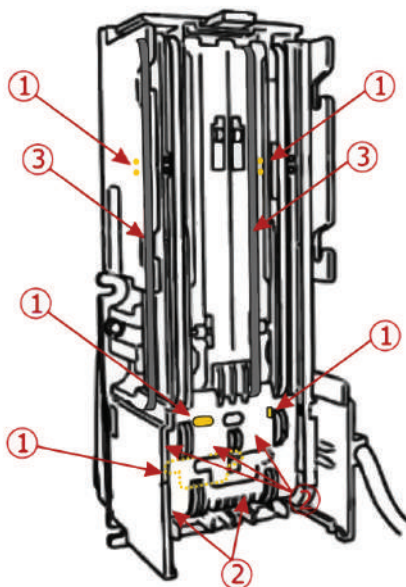
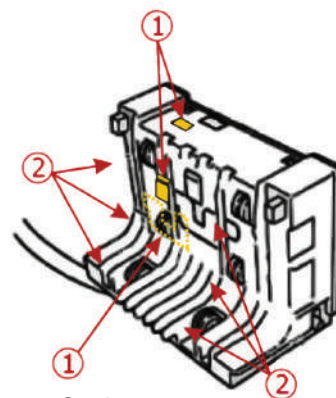


Figure 83

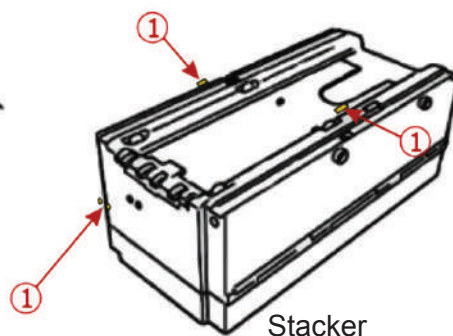


The inside of the BNA

Figure 84



Optic part



Stacker



It is strictly prohibited to use spirit, acetone and any other solvents and corrosive liquids for cleaning!



3.6.6 Cleaning the coin slot

The coin slot must be cleaned once a month or as frequently as the operating conditions demand.

ATTENTION: Do not spray the coin slot with liquid washing materials! You can damage the coin slot's circuit boards! Do not use spirit, acetone, solvents and any other type of corrosive liquids for cleaning! Before cleaning the coin slot disconnect it from the power supply!

Following instructions should be observed to execute preventive servicing of the coin slot:

1. Turn OFF the vending machine
2. Unblock the door of the user interface (the blue latch in the right bottom corner of the display) and open it as shown in figures 88 a and b.
3. Keep the door open
4. Remove all contaminants
5. Remove dust with a brush or compressed air
6. Close the user interface's latch
7. Press the refund handle (figure 80 position 3) and open the validator door (figure 85 c)
8. Clean the validator's coin intake tract completely with lightly moist fabric. The holes for acceptor sensors must be clean (see figure 85 d)
9. Let it dry
10. Close the validator's door
11. Turn ON the vending machine

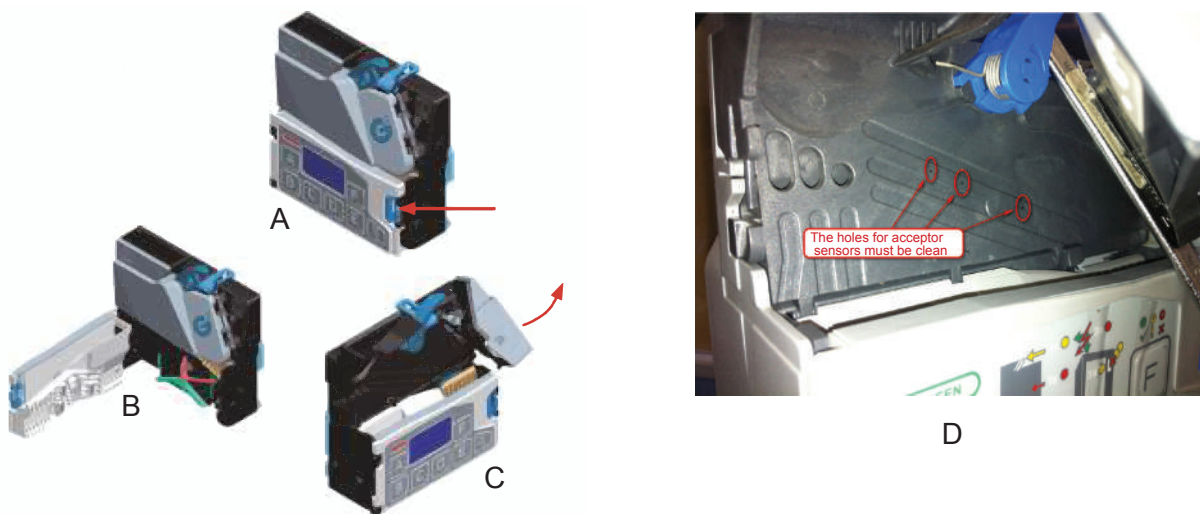


Figure 85



4.0 SERVICE MODE

The vending machine can be serviced in the SERVICE MODE. For optimum service results the vending machine comes with two different types of SERVICE MENUS.

- **Service engineer's / technician's menu:** machine configuration, checking the working of equipment and product management. To access the "Technician's menu" press button №2 from the left hand side of the "Technician" on the quick access keypad. To find the keypad see section 3.4.18.2.
- **Operator's menu:** controlling the equipment's functioning, browse through details information about the machine's condition, controlling cash, product management, statistics and cash removal. To access this mode "Operator's menu" press button №1 from the left hand side of the "Operator" on the quick access keypad. To find the keypad see section 3.4.18.2.

When inside the required menu use the product selection buttons (see figure 86) to navigate through the menu and to edit parameter values.

Navigating through the technician's/operator's menu (see figure 86)

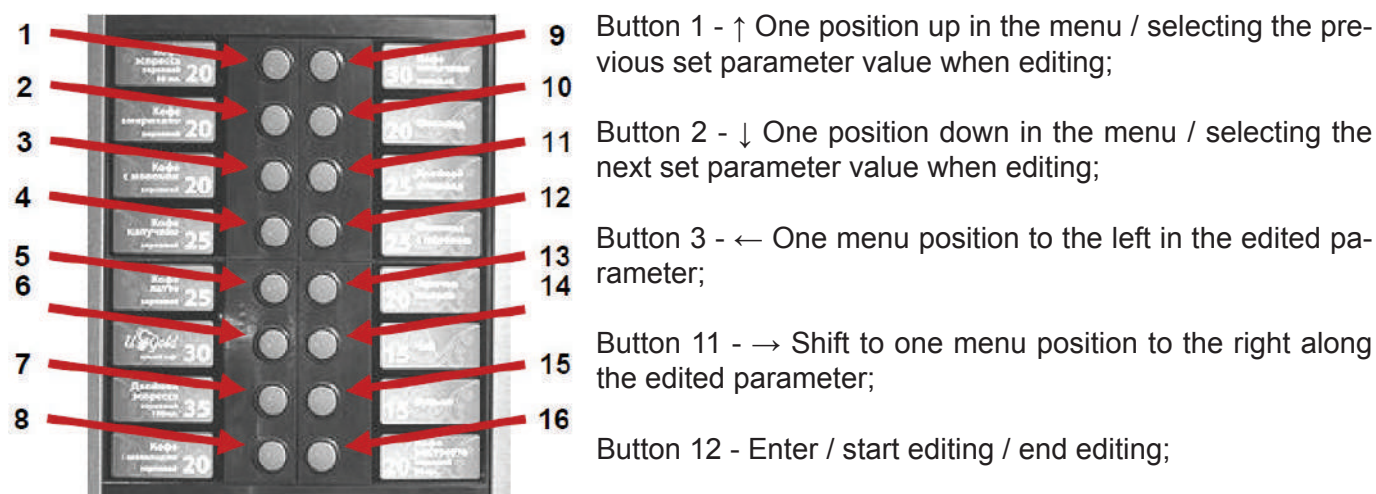


Figure 86

Button 4 - Cancel / end editing and cancel changes / exit current menu selection / exit menu ;

Button 9 - Reset numerical value / delete character when editing a row;

Button 5 - Enter character when editing a row.



4.1 Technician's menu (Service engineer's menu)

This menu provides access to all functional parameters of the Regulator's software. This menu is marked as "1" among the menu items to clearly mark the menu item as Technician's menu.

4.1.1 Menu item "1.1 SYSTEM"

Sub-menu	Description	Value
1.1.1 Language	The language of display	English Russian Italian French
1.1.2 Machine Number	Arbitrary number to identify the Machine. This number is used to name the configuration files, which makes it possible to consider this number as the number of the given group of Machines. Numbering several machines with a single number enables you to create configuration files for the given group of Machines.	Digit entry
1.1.3 Time / Date	Setting the internal clock (this menu item is hidden if franchising is activated, see sub-section 1.1.7)	
1.1.3.1 Set clock	Setting time/date for the internal clock	
1.1.3.2 Daylight saving	Summer/Winter time shift parameters: <ul style="list-style-type: none"> No daylight; Western Europe; Central Europe; Eastern Europe; CIS; C.Europe / Russia 	
1.1.3.3 Date format	Date formats: <ul style="list-style-type: none"> YYYY/MM/DD (Year / Month / Day) DD/MM/YYYY (Day / Month / Year) 	
1.1.4 Password Tech	Password to access the Technician's menu	Entering numbers 0 - No password
1.1.5 Password Filler	Password to access the Operator's menu	Entering numbers 0 - No password
1.1.6 Filler rights	Access to set Operator's privileges	
1.1.6.1 Enable filler price	Access to price alteration in the Operator's menu/ clause 2.9 "Prices/planograms"	Yes / No
1.1.6.2 Enable filler reset	Privilege to reset temporary meters from Operator's menu/ clause 2.8	Yes / No
1.1.6.3 Coins dispense	Allowing Operator's access to coins through Operator's menu	Yes / No



Sub-menu	Description	Value
1.1.7 Franchising	Machine rental parameters	
1.1.7.1 Expiring date	Date until which the Machine can be used (on the given date the Machine will cease to operate until the extension of rental period)	
1.1.7.2 Set new	Entering date in encoded format	16 characters 0...F
1.1.8 Volume buzzer	Level of volume of Machine's in-built speaker	Number entry 0...4
1.1.9 Enter after sel.	If set to "Yes" – the product is dispensed from the cell upon pressing the "PRODUCT" button If set to NO, product will fall after entering product number.	Yes / No
1.1.10 Coffee double sel. (for Coffee servers)	If set to YES to select drink it is necessary to press the selection key, on the keyboard, twice	Yes / No
1.1.11 Selection time out	Time, during which the information about your selection is displayed	Number entry 0...30 seconds
1.1.12 Snack number	The number of connected SLAVE - machines	0...2
1.1.13 Hot number	The number of used machines for drinks (coffee pots)	1 or 2
1.1.14 Reset	Nullification of all statistical data	
1.1.14.1 Reset interim Data	Reset temporary audit statistics	Yes / No
1.1.14.2 Re-configure	Reset to factory defaults	Yes / No
1.1.14.3 Re-Initialize	Password required after which it is possible to reset all configurations and data to factory default (it is not recommended to use this)	Yes / No
1.1.14.4 Reset Total Data	Password required after which it is possible to reset all data and clear history	Yes / No
1.1.15 Power saving	Setting power saving parameters	No Yes - to sub-menu
1.1.15.1 Start time	Time when the Machine automatically switches to power saving mode	0:00:00 (hh:mm:ss)
1.1.15.2 End time	Time when the Machine automatically switches out of power saving mode	0:00:00 (hh:mm:ss)
1.1.15.3 Key wakeup	Allow the Machine to escape power saving mode upon the press of any key on the keyboard	Yes / No



Sub-menu	Description	Value
1.1.16 EVA settings	Parameters of statistical data	
1.1.16.1 Reset interim Data	Reset temporary data after saving (copying) of files to USB drive	Yes / No
1.1.16.2 Switch Ids	If set to YES, the output (configuration and audit) files will carry the Machine number set in 1.1.2 instead of the Machine's serial number	Yes / No
1.1.16.3 Load CONF_GEN only	- NO enables loading all files from USB; - YES enables loading only CONF_GEN extension files	Yes / No
1.1.16.4 Enable USB prices	Allow/prohibit change of prices using a USB drive	Yes / No
1.1.16.5 Audit file version	Selecting the version of EVA-DTS file	6.0 6.1
1.1.17 Header message	Header caption, which is displayed on the LCD	Line entry
1.1.18 LAN	Internet access configuration	No Yes - to sub-menu
1.1.18.1 Local MAC	Allow/restrict the use of MAC address	No Yes - to sub-menu
1.1.18.1.1 Local MAC	Setting MAC address. The MAC address is set using the menu. It can comprise of any values with only two limitations: 1) The first digit must be less than 8 (best practice is to set it to 0). If the first character will be 8...F the Machine cannot go online. 2) Within the LAN to which the Machine is connected, the given MAC address must be unique. Violation of this requirement can cause the LAN to malfunction	Enter 12 characters 0...F
1.1.18.2 IP address	Setting IP address for the Machine. This displays the internal IP, assigned by the network administrator. Within the LAN this address must be unique. The leading part of the address (which is determined by the subnet-mask, see below) must be the same as the leading part of addresses of all connected devices.	12 characters



Sub-menu	Description	Value
1.1.18.3 Subnet mask	<p>Setting the subnet-mask.</p> <p>Here we set the subnet-mask, from which the Machine understands if any given IP address is local (part of LAN with direct communication) or if it is external (Out of the LAN. Communication through the gateway, see below).</p> <p>The subnet-mask is set by the network administrator.</p> <p>For example if the subnet-mask is 0.0.0.0 all the IP address would be treated as external. If the subnet mask is 255.0.0.0 only the IP addresses which will have the same number as the first number of the Machine's IP address will be treated as local. Different LANs use different subnet-masks, but usually one of the following is used:</p> <p>255.255.0.0 (large LAN which can comprise of up to 65536 devices)</p> <p>255.255.255.0 (medium size LAN which can comprise of up to 256 networking devices)</p> <p>255.255.255.128 (small LAN, which can comprise of up to 128 devices)</p>	<p>Four numbers</p> <p>0...255</p>
1.1.18.4 Gateway	<p>Setting the gateway address.</p> <p>Here we set the IP address of the Gateway, through which the Machine will access the external IP addresses.</p> <p>This is set by the network administrator.</p> <p>Except for accessing external IP addresses the Machine will ping the Gateway for its MAC address every 10 seconds after coming online, until it gets a response from the Gateway.</p> <p>Therefore, even if you don't intend to allow access to the outside world, it is recommended that you set this address, pointing it to some computer which is always available in the LAN.</p> <p>Without this IP address the Machine will keep on dispatching waste packets every 10 seconds</p>	
1.1.18.5 Remote IP	<p>Here we set the Server's IP address which is used to handle card data, saving balance information on the server (not on the card).</p> <p>When such card is swiped (and when it is recharged or when used for purchases) the Machine connects to the given server and asks for permission to perform the action (or will check current balance).</p> <p>This address can be local (for the Machine) or external. If we don't use card system with balance information on the server, we do not set this field</p>	<p>3 digits</p> <p>0...9</p>
1.1.18.6 Remote port	<p>Setting the Server's port.</p> <p>Here we set the port for the Server, which was set in the previous section</p>	<p>5 digits</p> <p>0...65535</p>
1.1.18.7 Allow eth. control	<p>Here we can set YES for touch screen or NO for other Machines.</p> <p>If set to YES the Machine opens port 999, through which the Machine can be controlled, similarly as done with the touch-screen computer.</p> <p>If set to YES, when the Machine is hooked to LAN, which is not limited to the Machine, it is recommended that you hook up a router to the Machine, which will remote access to the Machine.</p> <p>Otherwise the Machine can be hacked from the LAN (access to Machine's status, execute sales etc.)</p>	



Sub-menu	Description	Value
1.1.19 Snack cell input	Method of entering product cell. It is used to connect SLAVE machine	2 digits/letters 3 digits
1.1.20 Secondary language	The second language of display in addition to the main language (clause 1.1.1)	No English Russian Italian French
1.1.21 Auto-collections	Settings to configure automatic dispatch of collection data to the server	
1.1.21.1 Monday	Execution of Automatic-collection on Monday	No Yes - to sub-menu
1.1.21.1.1 Start time	Time when Automatic-collection starts on Monday	00:00:00 (hh:mm:ss)
1.1.21.2 Tuesday	Execution of Automatic-collection on Tuesday	No Yes - to sub-menu
1.1.21.2.1 Start time	Time when Automatic-collection starts on Tuesday	00:00:00 (hh:mm:ss)
1.1.21.3 Wednesday	Execution of Automatic-collection on Wednesday	No Yes - to sub-menu
1.1.21.3.1 Start time	Time when Automatic-collection starts on Wednesday	00:00:00 (hh:mm:ss)
1.1.21.4 Thursday	Execution of Automatic-collection on Thursday	No Yes - to sub-menu
1.1.21.4.1 Start time	Time when Automatic-collection starts on Thursday	00:00:00 (hh:mm:ss)
1.1.21.5 Friday	Execution of Automatic-collection on Friday	No Yes - to sub-menu
1.1.21.5.1 Start time	Time when Automatic-collection starts on Friday	00:00:00 (hh:mm:ss)
1.1.21.6 Saturday	Execution of Automatic-collection on Saturday	No Yes - to sub-menu
1.1.21.6.1 Start time	Time when Automatic-collection starts on Saturday	00:00:00 (hh:mm:ss)
1.1.21.7 Sunday	Execution of Automatic-collection on Sunday	No Yes - to sub-menu
1.1.21.7.1 Start time	Time when Automatic-collection starts on Sunday	00:00:00 (hh:mm:ss)


4.1.2 Menu item "1.2 PAYMENT SYSTEMS"

Sub-menu	Description	Value
1.2.1 Decimal posit.	Determines the number of decimal places in prices and amounts of sale	Enter digits 0...3
1.2.2 Overpay time	Number of seconds after which the deposited credit is nullified	Enter number 0...65535
1.2.3 Refund	Sets the operational algorithm in case of cancellation of transaction – refund/not refund the deposit	Yes / No
1.2.4 Unknown state refund	Sets the operational algorithm in case of loss of connection to the power board during execution of sales – refund/no-refund of deposit. If using FOODBBOX SLAVE it is recommended to set this to NO to avoid theft of products by turning power off at the moment of release of product	Yes / No
1.2.5 Protocol	Selecting the protocol for the system of payment	None MDB Executive Executive PH
1.2.6 Coin acceptor	Configuring the coin slot without the option of dispensing change (if set). For the normal functioning of the MD-coin slot this must be set to NO	No Yes - to sub-menu
1.2.6.1 Type	Set the type of coin slot	Parallel Binary
1.2.6.2 Interface	Setting coin slot's interface	Italian German
1.2.6.3 Inhibit	Restriction	Standart Reverse
1.2.6.4 Coin Type	Here we set the coin denomination	Yes / No
1.2.6.4.1 Coin Type (16 coins)	Permission/restriction of 16 coins of PARALLEL coin slot. Does not affect the MDB coin slot	Coin selection 0...15 And entering its value/price
1.2.7 Option	Sales configuration	
1.2.7.1 Exact change	Determines the algorithm of acceptance of payment by the Machine, when set to "No change": <ul style="list-style-type: none"> • "Accept all" – accept money without limits • "Only in tube" – accept only the coins, which can find free space in tubes, while the acceptance of bills and cash box is restricted. • "Quantity in tubes" – Acceptance of coins and bills for an amount equivalent to the amount of coins in the tubes of the coin slot 	All Only tube Tubes value



Sub-menu	Description	Value
1.2.7.2 Max exchange value	Only when set to "No change" + "Quantity in tubes". Limit the acceptable amount of money to the amount equal to the set value plus the amount of coins in the tubes	Enter amount
1.2.7.3 Ex Change Condition	Determines the condition in which the Machine switches to NO CHANGE state: <ul style="list-style-type: none"> • Standard – if at least one of the tubes contains less than 10 coins • As per the Max Change level – If it is not possible to dispense maximum amount of change and the tube with the highest denomination of coins has less than 3 coins in it (see s.c.1.2.8.2) 	Standart Max change
1.2.7.4 Country code	Currency code in MDB format	4 characters 0...F 0 or FFFF - no checking
1.2.7.5 No change	Disallow dispensing change	Yes / No
1.2.7.6 Commit to vend	Not allow dispensing change without the selection of purchase (loose change)	Yes / No
1.2.7.7 Bill with card	Only accept banknotes if have card (cashless)	Yes / No
1.2.7.8 Coin with card	Accept coins only when have card (cashless)	Yes / No
1.2.7.9 Multi vend	<ul style="list-style-type: none"> • NO – Machine automatically dispenses change after dispensing the product • YES – no automatic change dispensing. To finish the transaction you must press the "CHANGE" button 	Yes / No
1.2.7.10 Immediate change	Enables the dispensing of change during the execution of sale. This shortens the time of service. If you want to disable the dispensing of change in case of malfunction, this must be set to NO	Yes / No
1.2.7.11 Change motor	Enables the use of change motor	No Yes - to sub-menu
1.2.7.11.1 Every time	Set the mode of operation of change motor: <ul style="list-style-type: none"> • YES – at any time after the pressing of the CHANGE button • NO – only when dispensing of change is allowed 	Yes / No
1.2.7.12 Payout method	Determines the algorithm of dispensing of change by the Machine: <ul style="list-style-type: none"> • "Standard" (default) – Minimum number of coins are selected for change, to match the amount of change (the largest available denomination if dispensed first) • "As per quantity" (equal tube level) – the Machine dispenses change trying to maintain an equal amount of coins in each of the tubes. • "Considering the empty tubes" (min coin) – similar to the "As per quantity" algorithm taking the missing denominations into account. • "Alternative" – The Machine dispenses change as per the built-in algorithms of the coin slot 	Standart As per quantity Considering Alternative



Sub-menu	Description	Value
1.2.7.13 Single coin	<ul style="list-style-type: none"> YES – the amount of change is dispensed as per the set algorithm (s.c.1.2.7.12) by sending commands in a sequence to the coin slot. This increases the time of dispensing change, but reduces the chances of errors in calculation 	Yes / No
1.2.7.14 MDB peripherals	Connection/disconnection of MDB devices	
1.2.7.14.1 Disable change giver	Connection/disconnection of coin slot. If the coin slot is installed you must select NO, otherwise select YES	Yes / No
1.2.7.14.2 Disable bill valid.	Connection/disconnection of Bank Note Acceptor (BNA). If the BNA is installed you must select NO, otherwise select YES	Yes / No
1.2.7.14.3 Disable cashless	Connection/disconnection of card reader for contactless cards (smart cards). If the card reader is installed you must select NO, otherwise select YES	Yes / No
1.2.7.14.4 Disable cashless 2	Connection/disconnection of card reader 2 for smart cards. If it is installed you must select NO otherwise select YES	Yes / No
1.2.8 Cash option	Configuration of parameters for credit	
1.2.8.1 Max. credit	Maximum amount of acceptable deposit	Enter amount
1.2.8.2 Max. change	Maximum amount of change that a customer can get for each transaction	Enter amount
1.2.8.3 Coin all enabled	<ul style="list-style-type: none"> YES – accept coins of all denominations. If restricted, you can set criteria for acceptable coins (16 coins) according to denominations 	No Yes - to sub-menu
1.2.8.3.1 Coin Type	Coin selection (0-15) and entering its value	
1.2.8.4 Bill all enabled	<ul style="list-style-type: none"> YES accept all denominations of banknotes. If restricted you can separately configure acceptability for each type of banknote according to denomination 	No Yes - to sub-menu
1.2.8.4.1 Bill type	Selection of banknotes (0...15) and entering their values/prices	0..15
1.2.8.5 Tokens	Token configuration	No Yes - to sub-menu
1.2.8.5.1 Token 1	Configurations for Token 1	
1.2.8.5.1.1 Enable	Allow/restrict the use of tokens	Yes / No
1.2.8.5.1.2 Free vend	<ul style="list-style-type: none"> NO – the Machine will recognize the token as a coin (denomination) YES – the Machine will recognize the token without any denomination 	No Yes - to sub-menu
1.2.8.5.1.2.1 Max. price (YES s.c.1.2.8.5.1.2) Value (NO s.c.1.2.8.5.1.2)	<ul style="list-style-type: none"> Maximum price for free tokens: If the price of the product is higher than the indicated price of the token the sale will not be executed Value – For paid tokens you have a denomination of the token 	Number



Sub-menu		Description	Value
	1.2.8.5.1.2.2 Use for change (NO s.c.1.2.8.5.1.2) Snack 1 - for SLAVE (YES s.c.1.2.8.5.1.2)	<ul style="list-style-type: none"> For paid tokens – use for change For free tokens – use to dispense one product (for snacks vending machines) 	Yes / No
	1.2.8.5.1.2.3 Snack 2 - for SLAVE (if YES to s.c.1.2.8.5.1.2)	This item is displayed if s.c.1.1.12=2 It used to connect two SLAVE-machines	Yes / No
	1.2.8.5.1.2.4 Hot 1 (if YES to s.c.1.2.8.5.1.2)	For free tokens - used for issue of the name of the drink	Yes / No
	1.2.8.5.1.2.5 Hot 2 (if YES to s.c.1.2.8.5.1.2)	For free tokens - used for issue of the name of the drink. It used to connect a second drink vending machines	Yes / No
Note: sub-clause 1.2.8.5.2 ...1.2.8.5.4 are similar to s.c.1.2.8.5.1 for tokens 2...4 respectively.			
1.2.9 Card option		Machine's configurations to work with payment cards	
	1.2.9.1 Disable recharge	Restriction to recharge balance using non-cash payments	Yes / No
	1.2.9.2 Max.Card rech.	Maximum amount of recharge of balance for non-cash payment cards. Limit of total credit for the card, which can be reached after recharge. For expel if it says 100 euro and the card still has 80 euro in balance, the card cannot be recharged for more than 20 euro. The amount in this section must be no more than the amount in clause 1.2.9.3	Enter amount
	1.2.9.3 Max.Card Value	Maximum amount that can be used with a card. in case of over draft the card will be blocked	Enter amount
	1.2.9.4 Bonus rec threshold	Amount of card recharge after which you get bonus	Enter amount
	1.2.9.4.1 Bonus rec percentage	The percentage of bonus against the amount of funds added to the card using coins and banknotes	Enter number 0...100
	1.2.9.5 Request timeout	The waiting time during which the Machine awaits card reader's response regarding withdrawal of funds	5 seconds 1 minute 5 minutes
	1.2.9.6 Transaction	<ul style="list-style-type: none"> YES – Combines all purchases into one transaction. To purchase several products you just need to swipe your card once NO – One transaction for each product. It is necessary to swipe the card to pay for each purchase 	Yes / No



Sub-menu	Description	Value
1.2.10 Serial cashless	Allow/disallow the use of external card system	No Yes - to sub-menu
1.2.10.1 Ethernet key	Secret key for access to Machine's interaction with the service. The server and Machine key should be the same	Enter 16 characters 0...F
1.2.10.2 Ethernet vector	Secret key for access to Machine's interaction with the service. The server and Machine key should be the same	Enter 16 characters 0...F
1.2.10.3 Card system type	Selection of the card payment system used. Each selection leads to a different sub-menu	Ethernet based NFC Sberbank
1.2.10.3.1 Hold phone (for NFC)	Determines if it is needed to hold the phone near the card reader during the whole duration of transaction (Hold) or short time holding of phone for deduction of funds before the sale and repeat short holding after the purchase to return change (Not hold)	Yes / No
1.2.10.3.1 Terminal number (for SBERBANK)	Enter SBERBANK terminal's identification number	No Yes - to sub-menu
1.2.10.3.1.1 Terminal number	Enter the SBERBANK terminal's identification number for correct exchange of information between the terminal and the Machine. This is to be entered only if the number was not upgraded in the SBERBANK terminal before its installation in the Machine.	Enter 8 digits
1.2.10.3.2 Merchant number (for SBERBANK)	Enter merchant number for the SBERBANK terminal	No Yes - to sub-menu
1.2.10.3.2.1 Merchant number (for SBERBANK)	Enter the SBERBANK terminal's merchant number for correct exchange of information between the terminal and the Machine. This is to be entered only if the number was not upgraded in the SBERBANK terminal before its installation in the Machine.	Enter 12 digits
1.2.10.3.3 Port number (for SBERBANK)	Enter SBERBANK terminal's server port number	No Yes - to sub-menu
1.2.10.3.3.1 Port number	Enter SBERBANK terminal's server port number	Enter number 0...65535
1.2.10.3.4 Greeting string (for SBERBANK)	Enter welcome message, which will be displayed on SBERBANK's terminal	Enter text
1.2.10.3.5 Greeting string (for SBERBANK)	Enter second welcome message, which will be displayed on SBERBANK's terminal. Displayed under the first welcome message. Usually entered in a language other than the language of the first welcome message	Enter text
1.2.10.3.6 Make select. string (for SBERBANK)	Enter a caption requesting the selection of product (purchase). Displayed on SBERBANK terminal in place of the welcome message, after the customer will insert his card in the terminal	Enter text



Sub-menu		Description	Value
	1.2.10.3.7 Make select. string (for SBERBANK)	Enter second caption requesting product selection. Placed under the first caption. Usually entered in a language other than the language of the first caption. Displayed on SBERBANK terminal instead of the welcome message after the customer inserts his card into the terminal	Enter text
	1.2.10.3.8 Check summary (for SBERBANK)	Summary collation by the SBERBANK terminal. Usually done at least once a day automatically. This menu item performs this function manually. Manual summary collation must be performed only if needed under the terms dictated by SBERBANK	No Yes - to sub-menu
	1.2.10.4 Price list number	Selection of price list number for payment card	Enter digits 0...3
	1.2.10.5 Overpay time	Setting time after which the deposited credit is nullified	Enter number 0...65535



4.1.3 Menu item “1.3 TIME INTERVALS”

Menu item “1.3 Time intervals” determines time intervals during which a product can be sold through the vending machine at a discount, be available for sale or blocked as per the parameters (discounted products, blocking of cell) presented in clause “1.6 Price”.

The Machine can handle 7 time intervals. each interval has its own end time.

The start time of an interval coincides with the end time of the previous interval.

The start time for an interval is set at the ned of the previous interval or at 00:00:00.

Sub-menu	Description	Value
1.3 Time zones	Configuration of time intervals (see above)	
1.3.1 Time zone 1	Configuration of time for interval 1	Enter time
1.3.2 Time zone 2	Configuration of time for interval 2	Enter time
1.3.3 Time zone 3	Configuration of time for interval 3	Enter time
1.3.4 Time zone 4	Configuration of time for interval 4	Enter time
1.3.5 Time zone 5	Configuration of time for interval 5	Enter time
1.3.6 Time zone 6	Configuration of time for interval 6	Enter time

Example:

Interval 1 - 10:00:00

Interval 2 - 18:30:00

Intervals 3,4,5,6 - 00:00:00

The machine will function during three time intervals from 00:00:00 to 10:00:00 – interval 1, then from 10:00:01 till 18:30:00 – interval 2 and Interval 3 from 18:30:01 to 00:00:00.



4.1.4 Menu item “1.4 CASH REGISTER”

The menu item “1.4 Cash register” enable you to use a cash register (cheque printer) as part of the Machine. Before configuring it, please read the manual for the cash register.

This menu item is not available if the Machine’s configuration includes printer password, which was wrongly entered or if the cash register was not installed.

Sub-menu		Description	Value	
1.4 Printer menu		Configurations for the cash register (printer checks)	No Yes - to sub-menu	
	1.4.1 Printer protocol	Installation of cash register's functional protocol	ATOL DATECS RU.OFD	
	1.4.2 Printer baud rate (for ATOL, DATECS)	Data transfer rate for exchange with the cash register	ATOL 1200 2400 4800 9600 14400 38400 57600 115200	DATECS 9600 19200 57600 115200
	1.4.3 Printer access code (for ATOL)	Enter code for access to the cash register's special functions	Enter 4 digits	
	1.4.4 Cashier password	Enter password to access the main operational mode of the cash register	Enter 8 digits	
	1.4.5 Admin password	Enter password for additional operational modes of the cash register	Enter 8 digits	
	1.4.6 Print Z-report(s)	Displays the cash register's status, with touch on the ENTER key – closes the shift/ prints Z-reports		
	1.4.7 Delayed Z-reports (for ATOL)	Displays the status/memory support for deferred Z-reports		
	1.4.8 Scaling(zeros count) (for ATOL, DATECS)	Configuration of number of zeroes in prices and printed cheques	Enter digits 0...3	
	1.4.9 Auto print Z-reports (for ATOL)	• YES – the cash register automatically prints Z-reports	Yes / No	



4.1.5 Menu item "1.5 MODEM"

Menu item "1.5 Modem" enable you to use the modem with the Machine for data transfer to telemetry server. Available in Machines with modem. In case of permission to use modem, the transferred data is nullified after each emptying of stacker.

Sub-menu	Description	Value
1.5 GPRS menu	Modem configuration	No Yes - to sub-menu
1.5.1 SMS Password	Enter an 8 digit code, using which the server can carry out initial connection through SMS (manual connection). In case of manual connection of the Machine the server asks for access code. The entered code must correspond with the code indicated in this menu item, otherwise connection will not be established	Enter an 8 character code (strict)
1.5.2 ServerIP address 1	Enter IP address and port number for server to which the Machine would connect. For the first manual connection to the server (via SMS) this parameter is set automatically by the server	Enter IP address and port number
1.5.3 ServerIP address 2	Enter IP address of the server to which the Machine would connect in case of inability to connect to server 1. If the server does not have reserve line the second address must be the same as the first one. When making first manual connection to the server this parameter is set automatically by the server	Enter IP address
1.5.4 SIM-cadr PIN code	Enter SIM's PIN code. This parameter does not change SIM's PIN code. If the SIM's PIN code is activated, you must enter the PIN code here, which corresponds with the SIM's PIN code. It is not recommended to use PIN code, because in case of wrong PIN entry the SIM can be blocked	Enter up to 8 characters
1.5.5 GPRS APN	This parameter sets the access point, which will be used to establish internet connection. The value of this parameter can be known from the mobile operator	Enter up to 40 characters
1.5.6 GPRS login	Sets login for connection to the mobile provider's access point. You can ask for this parameter from your provider	Enter up to 20 characters
1.5.7 GPRS password	Sets the password to connect to the access point of your mobile provider. You can know the value for this parameter from your operator	Enter up to 20 symbols
1.5.8 Conn.initiat. phone	Sets the telephone number. Which will be dialled to establish server connection. To make this parameter effective you must turn on CLI for the Machine's SIM card	--ANY PHONE NUMBER-- Enter up to 16 characters



Sub-menu	Description	Value
1.5.9 Machine GUID	This parameter is read only. It allows the reading of GUID assigned to the given Machine by the telemetry server. In scrolling mode the GUID menu is not fully displayed. To see complete GUID menu it is necessary to enter sub-menu	Displays 32 characters 0...F
1.5.10 Modem IMEI	This menu item is read-only. Shows IMEI (Unique identifier) of the modem connected to the Machine. With IMEI you can identify the Machine from the server side	Display of the modem's serial number or error message
1.5.11 Modem SW version	This menu item is read-only. If the modem is ON it displays the modem's type and it's software version	Displays modem's version or error message
1.5.12 Signal quality	Menu item is read-only. Shows the Cellular signal's strength and availability of GPRS net.	Displays the state of connection and signal strength



4.1.6 Menu item “1.6 PRICES”

Menu item “1.6 Prices” is used to configure product price and placement parameters.

Making use of the Regulator’s extended capabilities to handle slave devices, there are several menu items: “All prices”, “Hot 1”, “Snack 1”.

Use menu item s.c. “1.6.2 Snack 1” (s.c.”1.6.3 Snack 2”) for detailed configuration of price of each product. (It is used to connect SLAVE - machines).

Use menu item s.c. “1.6.4 Hot 1” (s.c.”1.6.5 Hot 2”) for detailed configuration of price of each drink.

When you enter the menu “1.6.4 Hot 1” (“1.6.5 Hot 2”) must enter the number of the beverage (1 to 16) for editing. The entry is made by pressing ‘Enter’ and select the number of drink buttons ↑ ↓.

After selecting the desired drink will be available sub-menus, the transition to which is carried out by pressing the button →.

Sub-menu	Description	Value
1.6 PRICES	Configuration of product prices	
1.6.1 All Prices	To set similar prices for the products sold from the Machine	
1.6.1.1 Name	The name of the drink. This name is displayed on the LCD after the relevant button is pressed on the selection keyboard	Enter text
1.6.1.2 Cash Price	Setting price for cash sales	
1.6.1.2.1 Price	Drink price	Enter amount
1.6.1.2.2 Discount	Discount on drink price in percentage points. When this value is set then the value in s.c.1.6.1.2.3 is overridden	0...100
1.6.1.2.3 Surcharge	Retail margin in percentage points. When this value is set the value in s.c.1.6.1.2.2 is overridden	0...100
1.6.1.2.4 Time zone%	Time intervals for which the discount or retail margin is calculated for the given price list and the given product. Example: NNYNNN The discounts or margins are effective for this price list in the 3 rd and 5 th time intervals	Selection of seven positions from the given line NNNNNNN YYYYYYY
1.6.1.2.5 Day	The days of the week for which the discount is effective for the given pricelist and for the given position. Example:0000011 Discount or margin for the given pricelist is effective on Saturday and Sunday	
1.6.1.2.6 Time zone block	Restriction on time intervals	
1.6.1.2.6.1 Always blocked	Not sold under the given pricelist	Yes / No
1.6.1.2.6.2 Time zone	Not sold under the given pricelist in the given interval. Set 0 or 1 in each time interval. Example: NNYNNN Not sold under the given price list in the 3 rd and 5 th time intervals	Selection of 7 symbols from the following line NNNNNNN YYYYYYY



Sub-menu		Description	Value
	1.6.1.2.7 Day block	Not sold under the given price list on the given days of the week. Example: 0000011 Not sold under the given price list on Saturday and Sunday	Selection of 7 symbols from the row smtwtfs SMTWTFS
	1.6.1.3 Cashless Price 1	Set product price for sale using card 1 (s.c.1.6.1.3.1...1.6.1.3.7 are similar to s.c.1.6.1.2.1...1.6.1.2.1)	
	1.6.1.4 Cashless Price 2	Set product price for sale using card 2 (s.c.1.6.1.3.1...1.6.1.3.7 are similar to s.c.1.6.1.2.1...1.6.1.2.1)	
	1.6.1.5 Cashless Price 3	Set product price for sale using card 3 (s.c.1.6.1.3.1...1.6.1.3.7 are similar to s.c.1.6.1.2.1...1.6.1.2.1)	
	1.6.1.6 Expiring date	Set product validity date	No Set Date
	1.6.1.7 Not installed	Switching OFF of motor and product cell. The sale of the given product is blocked	Yes / No
	1.6.1.8 Article identifier (for snack)	Set product article number which should be from 1 to 65535. This article number is used to track the product in the database (to display product name in various languages, information about the product etc.). The cells with similar products are connected to each other (if the product is depleted in one cell, it is sold off the other cell)	Enter a number from 1 to 65535
	1.6.1.9 Selection priority (for snack)	Set priority for cells with same product (article). The products from different cells will be sold turn by turn (evenly). The products out of the cells with different priority levels will be sold in the order of least priority cells first (lowest number goes first). For example: if for one of the cells the priority level is set to 1 and for the other it is 2, then the cell with priority level 1 will be sold out first	Enter a number 0...255
	1.6.1.10 Fresh product (not used)	<i>This s.c. is shown on the display but is not use</i>	
	1.6.1.11 Icon ID (not used)	<i>This sub-clause is displayed on the monitor, but it is not working</i>	
	1.6.2 Shack 1	Similar to s.c.1.6.1 "All prices", but used only for snacks. This menu item is hidden if the number of snacks in s.c.1.1.12 = 0. Menu items 1.6.2.1...1.6.2.10 are similar to relevant s.c. of menu 1.6.1.1...1.6.1.10	
	1.6.3 Shack 2	<i>This menu item is displayed only if s.c. 1.1.12 = 2. It is only used when connecting slave vending machine snacks</i>	
	1.6.4 Not 1	Similar to sub-clause 1.6.1 "All prices", but used only for drink (coffee maker) vending machines. The menu is hidden if the number of coffee makers in sub-clause 1.1.13 = 0. Menu positions 1.6.4.1...1.6.4.10 are similar to relevant menu sub-positions 1.6.1.1...1.6.1.10	
	1.6.5 Not 2	Similar to sub-clause 1.6.1 "All prices", but used only for drink vending machines, when two machines are connected to configure the second machine. The menu is hidden if number of coffee makers in sub-clause 1.1.13 is less than 2. Menu positions 1.6.5.1...1.6.5.10 are similar to the relevant menu sub-positions 1.6.1.1...1.6.1.10	



Sub-menu	Description	Value
1.6.6 Double selection 99	Configuration for the first combinational sale (sale of several products in one transaction)	No Yes - to sub-menu
1.6.6.1 Button not	Setting the number keys on the keyboard of choice, when clicked, will be a combo sale	Enter the number 1...16
1.6.6.2 Product 1 type	Configuration of the type of product 1, which is part of the combinational sale. Snack, you can select when you connect SLAVE-machine.	Snack 1 Snack 2 Hot 1 Hot 2
1.6.6.3 Product 1 number	Configuration of the button number, which holds the first drink, which is sold as part of the combinational sale. Configuration of the cell number - for SLAVE machine	1...15 (drinks) 10...8B (snack)
1.6.6.4 Product 2 type	Configuration of the type of second product, which is sold as part of the combinational sale. Snack, you can select when you connect SLAVE-machine.	Snack 1 Snack 2 Hot 1 Hot 2
1.6.6.5 Product 2 number	Configuration of button number, which holds the second drink, which is sold as part of the combinational sale Configuration of the cell number - for SLAVE machine	1...15 (drinks) 10...8B (snack)
1.6.6.6 Product 3 type	Configuration of the type of the third product, which is sold as part of the combinational sale.	Snack 1 Snack 2 Hot 1 Hot 2 No
1.6.6.7 Product 3 number	Configuration of the button number, which holds the third product, which is sold as part of combinational sale. Configuration of the cell number - for SLAVE machine This menu item is not shown if s.c.1.6.6.6 = NO	1...15 (drinks) 10...8B (snack)
1.6.6.8 Product 4 type	Configuration of the type of the fourth product, which is sold as part of the combo-sale. This item is hidden if s.c.1.6.6.6=NO	Snack 1 Snack 2 Hot 1 Hot 2 No
1.6.6.9 Product 4 number	Configuration of the button number, which holds product four which is a part of the combo-sale. Configuration of the cell number - for SLAVE machine This item is hidden if s.c.1.6.6.6=NO	1...15 (drinks) 10...8B (snack)
1.6.6.10 Price	Similar to s.c.1.6.1...	
1.6.7 Double selection 98	Configuration of the second combo-sale (sale of several products in one transaction) s.c.1.6.7...1.6.7.10 are similar to the relevant s.c.1.6.6...1.6.6.10	No Yes - to sub-menu
1.6.8 Double selection 97	Configuration of the second combo-sale (sale of several products in one transaction) s.c.1.6.8...1.6.8.10 are similar to the relevant s.c.1.6.6...1.6.6.10	No Yes - to sub-menu
1.6.9 Double selection 96	Configuration of the second combo-sale (sale of several products in one transaction) s.c.1.6.9...1.6.9.10 are similar to the relevant s.c.1.6.6...1.6.6.10	No Yes - to sub-menu



4.1.7 Menu item “1.7 SNACK 1”

Menu item “1.7 SNACK 1” is used for configuring SLAVE - machine, which is connected to the drink vending machine.

This menu item is hidden if s.c. “1.1.12 Snack number ” = 0.

Sub-menu	Description	Value
1.7 Snack 1	Setting SLAVE - machine	
1.7.1 Cooling control	Configuration of the type of control of the refrigeration unit of the given machine: <ul style="list-style-type: none"> • Triac (SVM-2, slave) – Regulation of the refrigeration unit using the Machine's regulator; • Danfos (SVM-1) – In case of connection of SVM-1 with the fitted FOODBOX Regulator. The refrigerator unit is controlled with the autonomous thermo-regulator. • Outdoor (Thermo-box) – for Machine model FOODBOX STREET 	Triac Danfos Outdoor
1.7.2 Temperature min	Set the minimum temperature for the lower area of the dispensing compartment	Enter temperature -10...+60
1.7.3 Temperature max	Set maximum temperature for the lower part of the dispensing compartment	Enter temperature -10...+60
1.7.4 Evaporator min temp	Set minimum temperature for the evaporator in the refrigeration unit	Enter temperature -10...+60
1.7.5 Evaporator max temp	Set maximum temperature for the evaporator in the refrigeration unit	Enter temperature -10...+60
1.7.6 Control Sensor	Select the sensor, which will be used as bench mark to control refrigeration unit's temperature	Sensor 1-3 Sensor 3
1.7.7 Defrost time	Set time (duration) for the defrosting of the refrigeration unit (in minutes)	Enter number 0...255 0-no defrost
1.7.8 Defrost period	Set the interval between defrosting (in hours)	Enter number 0...255 0-no defrost
1.7.9 Outdoor machine (not used)	<i>Set temperature range for the management compartment of the Machine, in case of outside use (only for Machines type FOODBOX STREET)</i>	
1.7.9.1 Box min temperature	<i>This menu item is not used</i>	
1.7.9.2 Box max temperature	<i>This menu item is not used</i>	



Sub-menu	Description	Value
1.7.10 Fan control	Select the operational mode of the refrigeration unit's fan: <ul style="list-style-type: none"> Always ON – working always Only when cooling – works only when in cooling mode Cooling and defrosting – works when cooling and de-freezing 	Always on Only cooling Cooling & defrosting
1.7.11 Temp events	Set range of monitored values for temperature sensors	
1.7.11.1 Temp 1 min	Set minimum temperature for sensor 1, upon reaching which the event is logged	Enter temperature -10...+60
1.7.11.2 Temp 1 max	Set maximum temperature for sensor 1, upon reaching which the event is logged	Enter temperature -10...+60
1.7.11.3 Temp 2 min	Set minimum temperature for sensor 2, upon reaching which the event is logged	Enter temperature -10...+60
1.7.11.4 Temp 2 max	Set maximum temperature for sensor 2, upon reaching which the event is logged	Enter temperature -10...+60
1.7.11.5 Temp 3 min	Set minimum temperature for sensor 3, upon reaching which the event is logged.	Enter temperature -10...+60
1.7.11.6 Temp 3 max	Set maximum temperature for sensor 3, upon reaching which the event is logged.	Enter temperature -10...+60
1.7.11.7 Fresh temp. time out (not used)	<i>This sub-menu item is displayed on the LCD, but is not used (inactive)</i>	
1.7.12 Optical sensor	Configures optical sensors, used to record the dispensing of products	No Yes - to sub-menu
1.7.12.1 Max failure	Set the number of failures in attempting to dispense the product from all cells in the Machine, upon reaching this number the Machine reacts as per the settings in s.c.1.7.12.1.1	Enter number 0...255 0=turns OFF the option
1.7.12.1.1 Max failure option	The Machine's reaction to failures set in s.c.1.7.12.1: <ul style="list-style-type: none"> Machine block – restrict sales from all the cells; Disable refund – No refund of deposited credit 	Machine block Disable refund
1.7.12.2 Max sel. failure	Set the maximum number of failures to dispense product from a single cell. Upon reaching this number the Machine reacts, as per the settings of 1.7.12.2.1	Enter number from 0...255 0=Disable option
1.7.12.2.1 Max failure option	Machine's actions upon reaching the maximum number of failed attempts at dispensing the product set in s.c.1.7.12.2: <ul style="list-style-type: none"> Machine block – stop sales from the given cell; Disable refund – no refund of credit deposited 	Machine block Disable refund
1.7.12.3 Additional turn max	Maximum additional turn of spiral in case of failure (to dispense product)	1/2 3/8 1/4 1/8
1.7.12.4 Additional turn step	The step of additional turn of spiral monitored by the optical sensors	1/2 1/4 1/8



Sub-menu	Description	Value
1.7.13 Alarms	Configuration of Machine's siren (alarm)	
1.7.13.1 Optical sensor alarm	<ul style="list-style-type: none"> YES – Sound alarm in case of blockage of optical sensors, when not dispensing products 	Yes / No
1.7.13.2 Tilt sensor alarm	<ul style="list-style-type: none"> YES – Sound alarm if the sensors indicate that the machine had been hit or tilted 	Yes / No
1.7.13.3 Alarm last	The time length of alarm (in seconds)	Enter number 0...60000
1.7.14 Door lock system	Determines the presence of electromagnetic lock of the dispensing compartment	Yes / No
1.7.15 Vend time out	If there is an electromagnetic lock (YES – s.c.1.7.14), then this parameter determines the duration of time, during which the given compartment would be open for product retrieval	Enter number 0...255
1.7.16 Wide extension	<ul style="list-style-type: none"> YES – for wide Machines of type LONG NO – for all other models 	Yes / No
1.7.17 Lift (not used)	<i>This menu item is displayed but not active The configurations must be set to NO</i>	No
1.7.18 Retry blocked motor	<ul style="list-style-type: none"> YES – permission to give extra rotation to the motor of the blocked cell 	Yes / No
1.7.19 Debug	<ul style="list-style-type: none"> YES – Machine debugging mode, with an option to record the last actions (for few hours of operations) to a USB drive. Usually used in case of malfunctions, operational errors etc. To log events and to transfer data to the manufacturer's technical support (maintenance personnel) 	Yes / No
1.7.20 To menu when opened	<ul style="list-style-type: none"> YES – Automatically displays maintenance menu, when its door is open 	Yes / No
1.7.21 Keyboard test	Keyboard testing. Displays each key press on the Machine's LCD	Value of the pressed key

In the case of connection of a second vending machine, in s.c. "1.1.12 Snack number", set value to = 2. Then go to menu item s.c.1.8 "Snack 2" and configure it just like s.c.1.7 "Snack 1".



4.1.8 Menu item “1.9 HOT 1”

The menu item “1.9 Hot 1” is used to configure drink vending machine.
This menu item is hidden if s.c. ”1.1.13 Hot number” = 0.

Sub-menu	Description	Value
1.9 Hot 1	Configuration of drink vending machine	
1.9.1 Temperature option	Temperature settings	
1.9.1.1 Min. temp coffee	The minimum water temperature for making coffee	Enter temperature +5...+110
1.9.1.2 Max. temp coffee	The maximum water temperature for making coffee	Enter temperature +5...+110
1.9.1.3 Time to increase	The time in minutes after the preparation of the previous drink, during which the water will be heated to the value set in 1.9.1.2	Enter number 0...60
1.9.1.4 Delay to increase	Time in minutes during which after the preparation of the previous coffee the temperature as per algorithm of s.c.1.9.1.3 will not exceed	Enter number 0...10
1.9.1.5 Pre-heating	Flow of water through the coffee group to preheat the coffee making chamber before making coffee	
1.9.1.5.1 Delay	Time interval. If the time since the making of the previous cup of coffee exceeds the set time, the hot water is flushed to pre-heat the machine before making the next portion	Enter number 0...240
1.9.1.5.2 Quantity	Quantity of water for preheating	Enter number 0...30
1.9.1.6 Min. temp. Sol.	Minimum water temperature for making instant drinks	Enter temperature +5...+110
1.9.1.7 Sensor 2 installed	• “Yes” – the sensor is read to proportionally change the temperature of drinks depending on the outside temperature (if installed)	No / Yes
1.9.1.8 Sensor 3 installed	• “Yes” – the sensor is read to proportionally change the drink’s temperature depending on the outside temperature (if installed)	No / Yes
1.9.1.9 Display temperature	Display temperature on the screen of the vending machine	No / Yes
1.9.1.10 Cooler	<i>This menu item is shown but not used</i>	



Sub-menu		Description	Value
	1.9.1.11 Timings	Set pause time between the preparation and dispensing of drinks	
	1.9.1.11.1 Delay to dry	Interval needed to obtain a drier tablet, as well as to keep the cup edged clean of drops, if s.c.1.9.1.11.1 is set to YES	Enter number 0...240
	1.9.1.11.2 Delay after brewer	Interval needed to keep the cup's edges clean, if s.c.1.9.1.11.3 is set to NO	Enter number 0...240
	1.9.1.11.3 Cup before brewer	<ul style="list-style-type: none"> • "YES" – allow cup dispensing before opening the coffee group (see s.c.1.9.6.2) 	No / Yes
	1.9.1.11.4 Delay after soluble	Interval after the preparation of the instant drink, to keep the cup's edges clean	Enter number 0...240
	1.9.2 Spoon	Configure the dispensing of spoons: <ul style="list-style-type: none"> • "Single selection" - dispensing parameters are set separately for each drink; • "Sugar" - dispensed only when sugar should be added to the drink; • "Always" - always dispense 	Single selection Sugar Always
	1.9.3 Sugar	Configure quantity of sugar per portion (the customer can select from 0 to 6 portions). Set in tenths of seconds of motor rotation	Enter number 0...6
	1.9.4 Remaining cups	Number of available cups after the cup sensor reads end of cups	Enter number 0...5
	1.9.5 Photocell	Options for checking the availability of cup	
	1.9.5.1 Photocell before cup	<ul style="list-style-type: none"> • "YES" – check presence of cup before dispensing a cup. Can also use customer's cup 	No / Yes
	1.9.5.2 Photocell after cup	<ul style="list-style-type: none"> • "YES" – check the presence of cup after dispensing a cup from the cup dispenser 	No / Yes
	1.9.5.3 Photocell after vend	<ul style="list-style-type: none"> • "YES" – after dispensing the drink the machine checks if the customer has removed the cup from the delivery tray 	No / Yes



Sub-menu	Description	Value
1.9.6 Selection	Configure drink recipes and make test drinks. After entering the drink button the sub-menu also corresponds to the selected button	Enter number of drink button 0...16
1.9.6.1 Sugar	<p>Configure addition of sugar to the drink:</p> <ul style="list-style-type: none"> • "Preselection" - the customer can independently choose the amount of sugar before the preparation of the given drink: <p><u>Fixed configurations:</u></p> <ul style="list-style-type: none"> • "Sugar Quantity 0" - do not add any sugar; • "Sugar Quantity 1" - app 1.8 g of sugar; • "Sugar Quantity 2" - app. 3.6 g of sugar; • "Sugar Quantity 3" - app. 5.4 g of sugar; • "Sugar Quantity 4" - app. 7.2 g of sugar; • "Sugar Quantity 5" - app. 9 g of sugar; • "Sugar Quantity 6" - app. 10.8 g of sugar <p><u>Adjustable configurations:</u></p> <p>Unlike the fixed configurations the adjustable configurations assume that the customer can adjust the quantity of added sugar. In this case unless the customer selects option, the machine automatically adds the quantity of sugar in accordance with the set option:</p> <ul style="list-style-type: none"> • "Sugar Quantity 0 sel" - do not add any sugar; • "Sugar Quantity 1 sel" - app 1.8 g of sugar; • "Sugar Quantity 2 sel" - app. 3.6 g of sugar; • "Sugar Quantity 3 sel" - app. 5.4 g of sugar; • "Sugar Quantity 4 sel" - app. 7.2 g of sugar; • "Sugar Quantity 5 sel" - app. 9 g of sugar; • "Sugar Quantity 6 sel" - app. 10.8 g of sugar 	<p>Preselection</p> <p>Sugar Quantity 0...6</p> <p>Sugar Quantity 0...6 sel</p>
1.9.6.2 Spoon	<p>Spoon dispensing settings:</p> <ul style="list-style-type: none"> • "Sugar" - Dispense only if sugar is added to the drink; • "Always" - Dispense spoon always 	Sugar Always
1.9.6.3 Ingredient 1	Configurations for the first added ingredient	
1.9.6.3.1 Ingredient	<p>Ingredient to be added in the drink:</p> <ul style="list-style-type: none"> • "None" - means the end of recipe (the following ingredients are not processed); • "Coffee" - use coffee beans; • "Soluble 1...5" - Instant ingredient from containers № 1...5 ; • "Soluble 1...5 cold" - not used 	<p><u>For ROSSO INSTANT</u></p> <p>None</p> <p>Soluble 1...5</p> <p>Soluble 1...5 cold</p> <p><u>For ROSSO</u></p> <p>None</p> <p>Coffee</p> <p>Soluble 1...4</p> <p>Soluble 1...4 cold</p>



Sub-menu		Description	Value
	1.9.6.3.2 Water	Amount of water used to make the given drink, in ml	Enter number 0...255
	1.9.6.3.3 Quantity	Amount of instant ingredient. Not used for coffee. Set as tenths of a second of the time of powder dispensing motor's rotation	Enter number 0...255
	1.9.6.3.4 Powder delay	Shows the tenths of seconds that the motor will start after the flow of water	Enter number 0...255
	1.9.6.3.5 Delay	If the drink is made of several ingredients, the interval between the addition of each ingredient	Enter number 0...255
	1.9.6.4 Ingredient 2	Settings for the second added ingredient. S.c.1.9.6.4.1...1.9.6.4.5 are similar to s.c.1.9.6.3.1...1.9.6.3.5	
	1.9.6.5 Ingredient 3	Settings for the third added ingredient. S.c.1.9.6.5.1...1.9.6.5.5 are similar to s.c.1.9.6.3.1...1.9.6.3.5	
	1.9.6.6 Ingredient 4	Settings for the fourth added ingredient. S.c.1.9.6.6.1...1.9.6.6.5 are similar to s.c.1.9.6.3.1...1.9.6.3.5	
	1.9.6.7 Test selection	When you enter this sub-menu the machine makes the test drink	
	1.9.6.8 Test water selection	When you enter the sub-menu the machine makes the test drink without the added ingredient (just water)	
	1.9.6.9 Test powder sel.	When you enter the sub-menu the machine makes the test drink without added water (only ingredient)	
	1.9.7 Functional test	Testing the functionality of main units of the vending machine	
	1.9.7.1 Powder motor	Testing the motor supply instant ingredients	
	1.9.7.1.1 Soluble 1	When you enter this option the machine dispenses the powder in the amount set in s.c.1.9.7.1.7	
	1.9.7.1.3 Soluble 2	When you enter this option the machine dispenses the powder in the amount set in s.c.1.9.7.1.7	
	1.9.7.1.4 Soluble 3	When you enter this option the machine dispenses the powder in the amount set in s.c.1.9.7.1.7	
	1.9.7.1.5 Soluble 4	When you enter this option the machine dispenses the powder in the amount set in s.c.1.9.7.1.7	
	1.9.7.1.6 Soluble 5	When you enter this option the machine dispenses the powder in the amount set in s.c.1.9.7.1.7	
	1.9.7.1.7 Quantity	Sets the amount of powder. You enter the time of rotation of powder dispensing motor	Enter number 1...255
	1.9.7.2 Mixer motor	Checking the mixer's functioning	
	1.9.7.2.1 Soluble 1	When entered the motor turns ON for 0.2 seconds	
	1.9.7.2.3 Soluble 2	When entered the motor turns ON for 0.2 seconds	
	1.9.7.2.4 Soluble 3	When entered the motor turns ON for 0.2 seconds	
	1.9.7.2.5 Soluble 4	When entered the motor turns ON for 0.2 seconds	



Sub-menu		Description
	1.9.7.3 Test sugar	Sugar and spoon dispensing mechanism
	1.9.7.3.1 Sugar motor	Test the sugar dispensing motor
	1.9.7.3.2 Spoon motor	Test the spoon dispensing mechanism
	1.9.7.3.3 Sugar/Spoon	Test the dispensing of sugar and spoon
	1.9.7.3.3.1 Sugar Quantity 0	When entered it dispenses the spoon
	1.9.7.3.3.2 Sugar Quantity 1	When entered the machine dispenses one portion of sugar
	1.9.7.3.3.3 Sugar Quantity 2	When entered the machine dispenses two portions of sugar
	1.9.7.3.3.4 Sugar Quantity 3	When entered the machine dispenses three portions of sugar
	1.9.7.3.3.5 Sugar Quantity 4	When entered the machine dispenses four portions of sugar
	1.9.7.3.3.6 Sugar Quantity 5	When entered the machine dispenses five portions of sugar
	1.9.7.3.3.7 Sugar Quantity 6	When entered the machine dispenses six portions of sugar
	1.9.7.4 Test coffee (for ROSSO)	Testing the functioning of espresso group
	1.9.7.4.1 Open group	When entered the espresso group is opened in initial state to grind coffee
	1.9.7.4.2 Close group	When entered it closes the espresso group in coffee making state
	1.9.7.4.3 Test grinder	When entered it turns ON the coffee grinder for 0.5 seconds provided that the dosing apparatus is not full
	1.9.7.4.4 Test doser	When entered it opens the dosing apparatus twice (if it contains ground coffee, it is dropped into the nozzle)
	1.9.7.4.5 Test coffee powder	When entered it passes ground coffee into the nozzle
	1.9.7.5 Test cup	Check the cup dispensing mechanism
	1.9.7.5.1 Cup arm in	When entered it turns the arm with the cup inside the machine (in drink preparation mode)
	1.9.7.5.2 Cup arm out	When entered it turns the arm with the cup out of the machine (in drink dispensing position)
	1.9.7.5.3 Dispense cup	When entered it dispenses the cup into the holder from the cup dispenser
	1.9.7.6 Test Sol.Selector	Test selector's functioning
	1.9.7.6.1 Reset position	When entered it shifts the selector into zero position
	1.9.7.6.2 Soluble 1	When entered it shifts the selector into position 1 of instant drinks
	1.9.7.6.3 Soluble 2	When entered it shifts the selector into position 2 of instant drinks
	1.9.7.6.4 Soluble 3	When entered it shifts the selector into position 3 of instant drinks

ROSSO / ROSSO INSTANT

Sub-menu		Description	Value
	1.9.7.6.5 Soluble 4	When entered it shifts the selector into position 4 of instant drinks	
	1.9.7.6.5 Soluble 5 (for ROSSO INSTANT)	When entered it shifts the selector into position 5 of instant drinks. This menu item is hidden if the machine is other than ROSSO INSTANT	
	1.9.7.7 Test pump	Testing the functioning of boiler's pump	
	1.9.7.8 Test EV soluble	Test the functioning of the valve of instant ingredients	
	1.9.7.8.1 Test EV 1 soluble	When entered it shifts the selector to position 1 and opens the valve (or opens the first valve)	
	1.9.7.8.2 Test EV 2 soluble	When entered it shifts the selector to position 2 and opens the valve (or opens the second valve)	
	1.9.7.8.3 Test EV 3 soluble	When entered it shifts the selector to position 3 and opens the valve (or opens the third valve)	
	1.9.7.8.4 Test EV 4 soluble	When entered it shifts the selector to position 4 and opens the valve (or opens the fourth valve)	
	1.9.7.9 Test EV coffee	Test the ground coffee valve. When entered it switches the espresso group to coffee making condition, opens coffee valve, closes coffee valve and switches the espresso group back to initial state (open state)	
	1.9.7.10 Test cooling pump	Switches selector to position 1, starts the cold water pump for a second, turns OFF the pump and switches the selector back to position 0	
	1.9.7.11 Test water	Test water flow	
	1.9.7.11.1 Coffee	Flush the amount of water set in s.c.1.9.7.11.7 through the espresso group	
	1.9.7.11.2 Soluble 1	Flush the amount of water set in s.c.1.9.7.11.7 through the 1 st mixer	
	1.9.7.11.3 Soluble 2	Flush the amount of water set in s.c.1.9.7.11.7 through the 2 nd mixer	
	1.9.7.11.4 Soluble 3	Flush the amount of water set in s.c.1.9.7.11.7 through the 3 rd mixer	
	1.9.7.11.5 Soluble 4	Flush the amount of water set in s.c.1.9.7.11.7 through the 4 th mixer	
	1.9.7.11.6 Soluble 5 (for ROSSO INSTANT)	Flush the amount of water set in s.c.1.9.7.11.7 through the 5 th mixer. This menu item is hidden for machines other than ROSSO INSTANT	
	1.9.7.11.7 Water	Amount of water used for testing. Set in ml	Enter number 0...250
	1.9.7.12 Test input	Testing the machine's sensors	
	1.9.7.12.1 Air break	Shows the state of air-separation tank	Empty Full
	1.9.7.12.2 Cup	Shows the state of the cup availability sensor	Empty Full
	1.9.7.12.3 Cup arm	Shows the position of the cup holder arm	Outside Inside
	1.9.7.12.4 Doser	Shows the state of the dosing apparatus	Empty Full



Sub-menu		Description	Value
	1.9.7.12.5 Photocell	Shows the state of the optic cup sensor. If the sensor is not installed it always shows FULL	Empty Full
	1.9.7.12.6 Waste	Shows the reading of the liquid waste sensor	Empty Full
	1.9.7.12.7 Group	Shows espresso group position sensors' readings	Open Close Out of position Missing
	1.9.7.12.8 Selector	Shows the readings of selector position sensors	0 position i position 0 position error Out of position
	1.9.7.12.9 Cups dispenser	Shows the readings of cup dispenser sensor	Out of position 0 position
	1.9.7.12.10 Stirrer / sugar	Shows the state of spoon dispenser	Out of position 0 position
	1.9.7.12.11 Coffee waste full	Shows the readings of the coffee waste sensor	Out of position 0 position
	1.9.7.12.12 Coffee waste number	Shows the readings of the current state of coffee waste meter	
	1.9.7.13 Debug	<ul style="list-style-type: none"> "Yes" – Machine debugging mode, with an option to log the latest (past few hours of functioning) events to a USB flash drive. It is normally used in case of system failures and errors to log and transfer this data to the service center of the supplier 	No/Yes
	1.9.7.14 Debug quantity	<ul style="list-style-type: none"> "Yes" – Machine debugging mode, with an option to log the latest (past few hours of functioning) events to a USB flash drive. It is normally used in case of system failures and errors to log and transfer this data to the service centre of the supplier 	No/Yes
	1.9.7.15 Test loop	Let's you perform cyclical preparation of two drinks simultaneously to test the machine	
	1.9.7.15.1 Test sel 1	Enter number of first tested drink	1...16
	1.9.7.15.2 Delay sel 1 s	Enter the period of pause in seconds after the preparation of drink 1	0...59
	1.9.7.15.3 Delay sel 1 m	Enter the period of pause in minutes after the preparation of drink 1	0...59
	1.9.7.15.4 Test sel 2	Enter number of second test drink	1...16
	1.9.7.15.5 Delay sel 2 s	Enter the period of pause in seconds after the preparation of drink 2	0...59
	1.9.7.15.6 Delay sel 2 m	Enter the period of pause in minutes after the preparation of drink 2	0...59
	1.9.7.15.7 Number of tests	Enter number of test cycles	0...250 0 = infinite
	1.9.7.15.8 Start test	Start cyclical test. To prematurely stop the test turn the machine OFF and then switch it ON again	No/Yes
	1.9.7.16 Keyboard test	Keyboard test – displays all pressed keys on the screen	All buttons on the keyboard



Sub-menu	Description	Value
1.9.8 Cleaning	Configure automatic flushing of mixers	
1.9.8.1 Automatic clean	Enable/disable automatic flushing of the machine. If the current item is set to NO the rest of the items are dysfunctional	No/Yes
1.9.8.2 Clean soluble 1	Sets the parameters for automatic flushing of mixer 1	
1.9.8.2.1 Elapse time	Sets the time interval between the flushing and the preparation of the last drink (in hours)	Enter number 0...24
1.9.8.2.2 Water	Amount of water to be used for flushing (in ml)	Enter number 0...200
1.9.8.3 Clean soluble 2	Sets the parameters for automatic flushing of mixer 2. Clauses 1.9.8.3.1...1.9.8.3.2 are similar to clauses 1.9.8.3.1...1.9.8.2.2	
1.9.8.4 Clean soluble 3	Sets the parameters for automatic flushing of mixer 3. Clauses 1.9.8.3.1...1.9.8.3.2 are similar to clauses 1.9.8.3.1...1.9.8.2.2	
1.9.8.5 Clean soluble 4	Sets the parameters for automatic flushing of mixer 4. Clauses 1.9.8.3.1...1.9.8.3.2 are similar to clauses 1.9.8.3.1...1.9.8.2.2	
1.9.8.6 Clean soluble 5 (for ROSSO INSTANT)	Sets the parameters for automatic flushing of mixer 2. Clauses 1.9.8.3.1...1.9.8.3.2 are similar to clauses 1.9.8.3.1...1.9.8.2.2. this menu option is hidden for machines other than ROSSO INSTANT	
1.9.9 Tank	<ul style="list-style-type: none"> “Yes” – in case of autonomous water supply for the machine using bottles/cans 	No/Yes
1.9.10 Cool boiler	Selection – cools down the boiler by pumping water through it to bring the temperature down to 45 degrees	
1.9.11 Fill boiler	Selection – fill the boiler. If the boiler is not filled during the 30 second working cycle of the pump, the action is repeated until the water overflows into the liquid waste tank	
1.9.12 Empty boiler	Selection – empty the boiler. After emptying the boiler the vending machine must be turned OFF. Then remove the pipe from the bottom of the boiler and turn the machine ON (the next switching ON of the machine would take you to service mode, where the valve opens and all the remaining water is drained out of the boiler through the bottom hole)	
1.9.13 Cooler	No used	
1.9.14 Doser micro inverted	<ul style="list-style-type: none"> “Yes” – if the dosing apparatus’s micro switch is connected to open contacts “No” – if the dosing apparatus’s micro switch is connected to closed contacts <p>If the given parameter is set incorrectly you will not get any coffee</p>	No/Yes
1.9.15 Fan control	<p>Enables you to reduce speed of the drier fan when dispensing powder:</p> <ul style="list-style-type: none"> “50% at vend” – the fan slows down to half speed when dispensing powder; “OFF at vend” – the fan is turned OFF when dispensing powder; “Always on” – do not reduce speed when dispensing powder 	50% at vend OFF at vend Always on
1.10 Hot 2	Tis menu item is used when there is a second machine connected (s.c.1.1.13=2). All the menu items are similar to menu “1.9 Hot 1”	
1.11 MAINTENANCE	Entry to operator’s menu through the technician’s menu (all numbers for the operator’s menu start with a 2)	



4.2 Operator's menu - version 0.49

This menu provides access to functional features of the Machine during periodic servicing. These features include event logs, information regarding equipment functioning and errors, access to configure information about drinks and browse through sales statistics. The menu item numbers include the digit "2", which helps clearly mark the type of maintenance menu as – Operator's menu.

4.2.1 Menu item "2.1 STATUS"

This menu item provides a look into Machine's operational errors. Most of the errors are nullified after you exit the maintenance menu. Some of the errors need to be liquidated manually and shift to menu item 2.1.2.

Sub-menu	Description	Value
2.1 Status	Display of operational errors	
2.1.1 Show error	Shows a list of errors (current and previous) upon entry to the menu item, indicating the type of equipment, number of failures, date and the time of last error, as well as the current state of error (active or not)	List of errors
2.1.2 Reset error	Resets errors upon entry	
2.1.3 Temperature	Shows the temperature of two temperature sensors of SVM-1, which was fitted with a new Regulator. This menu item is hidden if the number of snacks is 0 or if there is no temperature sensor connected to keypad 021 of SVM-1	
2.1.4 Voltage DC	Shows the DC voltage on main board (regular reading, when fed from a 220V source is 32.6V). This menu item is hidden if the first version of main board is installed	


4.2.2 Menu item “2.2 CASH”

Sub-menu	Description
2.2 Cash	Machines configurations to handle cash
2.2.1 Manual Coin In	<p>Upon entry it is allowed to load coins in tubes manually through coin entry slots, located on the front of the management compartment and loading banknotes to recharge change availability.</p> <p>At the same time the LCD shows information regarding the selected tube: denomination of the loaded coin. Letter “F” indicates that the tube is full.</p> <p>After recognizing the loaded coins, you will see information about the tube to which that given coin was deposited</p>
2.2.2 Manual Coin Out	<p>This menu item is hidden if the Machine is in Operator’s menu, but Operator’s privileges do not give access to coin discharge (privileges are set in technician’s menu).</p> <p>In the given mode the LCD shows information about the tube selected for discharge (withdrawal) of coins: coin denomination, number of coins.</p> <p>For discharge of one coin from the selected tube press “→”</p>
2.2.3 Change motor test	At the entrance test is performed motor delivery
2.2.4 Bill cash box (provided if the modem is installed)	When entered sends a simulated stacker emptying signal to the server (collection signal) in cases when there is no Bank Note Acceptor (BNA), or the stacker sensor is broken
2.2.5 Print Z-report(s)	<p>If you press the enter key the Z-report is printed/ shift is closed (if there is a cheque printer connected to the Machine).</p> <p>Show cheque printer’s status</p>



4.2.3 Menu item “2.3 SNACK 1”

Menu item “2.3 Snack 1” is designed for maintenance and monitoring of SLAVE - Machine’s main parameters. This menu item is hidden if s.c. “1.1.12 Snack number” = 0.

Sub-menu	Description
2.3 Snack 1	Testing and monitoring of vending machine's main features
2.3.1 Automatic	Upon entry all motors are reset to initial state, as well as unblocking of all blocked spirals is performed (which were blocked after failure). It is MANDATORY to select this menu item before each Machine servicing and zero position adjusting.
2.3.2 Test all	On entry tests all cells
2.3.3 Test motor	Enter cell number. When you enter, a test sale is executed from the given cell
2.3.4 Temperature	Shows temperature readings from all three sensors of FOODBOX
2.3.5 Voltage DC	Shows the Voltage reading from the power supply circuit (normal value when on 220V – 29.8V)
2.3.6 Lift voltage DC (not used)	<i>In this software version the menu item is shown, but has no parameters</i>
2.3.7 Lift (not used)	<i>This menu item is shown but not used</i>
2.3.8 Test input	Testing the Machine’s sensors
2.3.8.1 Optical sensor	Shows the state of optical sensors
2.3.8.2 Door	Shows the state of door’s sensor
2.3.8.3 Tilt	Shows the state of impact/tilt sensor
2.3.9 Test siren	For the SLAVE machines item is not used
2.3.10 Keyboard test	Testing the keypad – shows the result of each key press on the Machine’s LCD

When you connect a second vending machine snacks in s.c. “1.1.12 Snack number”, set = 2. Then select s.p. “2.4 Snack 2” and make check and control similiary s.c. “Snack 1”.



4.2.4 Menu item “2.5 HOT 1”

Menu item “2.5 Hot 1” is designed to service and control the basic parameters of the drink vending machine.

This menu item is hidden if s.c. “1.1.13 Hot number” is set to 0.

Sub-menu	Description	Value
2.5 Hot 1	Configuration of drink vending machine	
2.5.1 Cleaner	Cleaning the drink preparation and dispensing systems	
2.5.1.1 Clean all	Start complete flushing of all systems	No/Yes
2.5.1.2 Clean solubles	Start flushing of instant drink dispensing system	No/Yes
2.5.1.3 Clean coffee	Start flushing the ground coffee feed system	No/Yes
2.5.1.4 Clean soluble1	Start flushing the instant drink №1 dispensing system	No/Yes
2.5.1.5 Clean soluble 2	Start flushing the instant drink №2 dispensing system	No/Yes
2.5.1.6 Clean soluble 3	Start flushing the instant drink №3 dispensing system	No/Yes
2.5.1.7 Clean soluble 4	Start flushing the instant drink №4 dispensing system	No/Yes
2.5.1.8 Clean soluble 5 (for ROSSO INSTANT)	Start flushing the instant drink №5 dispensing system, this menu item is hidden if the machine is other than ROSSO INSTANT	No/Yes
2.5.1.9 Soluble 1 cold	Starts the flushing the system of dispensing drink №1 with cold water	No/Yes
2.5.1.10 Soluble 2 cold	Starts the flushing the system of dispensing drink №2 with cold water	No/Yes
2.5.1.11 Soluble 3 cold	Starts the flushing the system of dispensing drink №3 with cold water	No/Yes
2.5.1.12 Soluble 4 cold	Starts the flushing the system of dispensing drink №4 with cold water	No/Yes
2.5.1.13 Soluble 5 cold (for ROSSO INSTANT)	Starts the flushing the system of dispensing drink №5 with cold water. This menu item is hidden if the machine is any other than ROSSO INSTANT	No/Yes
2.5.2 Temperature	Shows the readings from three temperature sensors installed in the machine	
2.5.3 Voltage DC	Shows the voltage of the power supply (normal value at #220V – 29.8V)	
2.5.4 Test input	Displaying the information of the machine’s sensors	
2.5.4.1 Airbreak	Displays the state of the air-separation tank	Empty Full
2.5.4.2 Cup	Displays the information from the cup sensor	Empty Full
2.5.4.3 Cup arm	Shows the position of the cup dispensing arm	Outside Inside



Sub-menu	Description	Value
2.5.4.4 Doser	Shows the state of the dosing apparatus	Empty Full
2.5.4.5 Photocell	Shows the state of the optic cup sensor. If the sensor is not installed this is always FULL	Empty Full
2.5.4.6 Waste	Shows the state of the waste sensor	Empty Full
2.5.4.7 Group	Shows the state of the espresso group's position sensor	Open Close Out of position Missing
2.5.4.8 Selector	Shows the readings of the selector position sensor	0 position 0 position error i position (working) Out of position
2.5.4.9 Cups dispenser	Shows the state of the cup dispenser sensor	Out of position 0 position
2.5.4.10 Spooner/sugar	Shows the state of the spoon dispenser sensor	Out of position 0 position
2.5.4.11 Coffee waste full	Shows the state of the coffee waste container's sensor	Out of position 0 position
2.5.4.12 Coffee waste number	Shows the reading of the coffee waste meter	
2.5.5 Keyboard test	Testing the keypad – displays all pressed keys	
2.6 Hot 2 (s.c.1.1.13=2)	Configuring the second connected drink vending machine. Menu options 2.6...2.6.5 are similar to menu items 2.5...2.5.5	



4.2.5 Menu item “2.7 STATISTICS”

Menu item “2.7 Statistics” is designed to display detailed sales data (audit).

Sub-menu		Description
2.7 Statistics		Displays sales data
2.7.1 Totals		Access to detailed info sub-menu
2.7.1.1 Vend number		Shows information regarding the quantity of sales (number of transactions)
2.7.1.2 Vend value		Shows the information about the amount of revenues
2.7.1.3 Cash box		Shows information about the amount of money in the cashbox
2.7.1.4 Cash box(coins)		Shows information about the quantity of coins in the cashbox
2.7.1.5 Cash box (bills)		Shows information about the number of banknotes in the stacker
2.7.1.6 Cash tubes		Shows information about the quantity of coins in the coin slot tubes
2.7.1.7 Cash vend number		Shows information about cash sales
2.7.1.8 Cash vend value		Shows information about the amount of cash sales
2.7.1.9 Card recharge		Shows information about number of card recharges performed
2.7.1.10 Cash overpay		Shows information about over payments
2.7.1.11 Cashless vend number		Shows information about the number of card sales
2.7.1.12 Cashless vend value		Shows information about the revenue from card sales
2.7.1.13 Cashless incentive		Shows information about the quantity of bonuses, granted to card holders
2.7.1.14 CL discount number		Shows information about the number of products sold on discounted rates
2.7.1.15 CL discount value		Shows information about the amount of sales revenues from card sales at discounted rates
2.7.1.16 Test vend number		Shows information about the number of sales tests performed
2.7.2 Details		Details of some of the items
2.7.2.1 Cash details		Detailed information about banknotes and coins
2.7.2.1.1 Tube level		Shows information about the received coins
2.7.2.1.1.1 Tube level		Shows information about accepted coins
2.7.2.1.2 Bills in		Shows information about the quantity of received banknotes
2.7.2.1.2.1 Bills in		Shows information about the quantity of accepted banknotes



Sub-menu		Description
	2.7.2.2 Snack 1 (for SLAVE machine)	Shows information about sales from each cell. This menu item is hidden, if s.c.1.1.12=0
	2.7.2.2.1 Vend number	Shows information about the quantity of sales
	2.7.2.2.2 Vend value	Shows the amount of sales revenues
	2.7.2.2.3 Cash vend number	Shows information about cash sales
	2.7.2.2.4 Cash vend value	Shows information about the amount of cash revenues
	2.7.2.2.5 Cashless vend number	Shows information about the number of card sales
	2.7.2.2.6 Cashless vend value	Shows information about the amount of card sales
	2.7.2.2.7 Test vend number	Shows information about the number of performed test sales
	2.7.2.3 Snack 2	Display information about the sale of each cell of the second connected snack vending machine. This menu item is hidden if s.c.1.1.12=0 or 1 Menu items 2.7.2.3...2.7.2.2.7 are similar to corresponding items in menu 2.7.2.2...2.7.2.2.7
	2.7.2.4 Hot 1	Displays the information about the sale of each drink. This menu item is hidden if s.c.1.1.13=0 Menu items 2.7.2.4...2.7.2.4.7 are similar to corresponding items in menu 2.7.2.2...2.7.2.2.7
	2.7.2.5 Hot 2	Displays the information about the sale of each drink for the second connected drink vending machine. This menu item is hidden if s.c.1.1.13=0 or 1 Menu items 2.7.2.5...2.7.2.5.7 are similar to corresponding items in menu 2.7.2.2...2.7.2.2.7
	2.7.3 Reset	This menu item is not available in operator's menu if in technician's menu the "Operator's access privileges" are set to "reset disabled". If reset is allowed – all readings are reset to zero



4.2.6 Menu item “2.8 DATA”

Menu item “2.8 DATA” is designed to display equipment related information.

Sub-menu	Description
2.8 Data	Shows information about the Machine's equipment
2.8.1 Serial Number	Shows the Regulator's serial number
2.8.2 Version	Shows Regulator software's version
2.8.3 ChkSum	Shows Regulator software's checksum (to identify Machine's equipment)
2.8.4 Changer S/N	Shows the serial number of the Bank Note Acceptor (BNA)
2.8.5 Changer Version	Shows the version of the coin slot's software
2.8.6 Changer Model	Shows the type (model) of the coin slot
2.8.7 Bill Serial Number	Shows the Bank Note Acceptor (BNA)'s serial number
2.8.8 Bill Version	Shows Bank Note Acceptor (BNA) software's version
2.8.9 Bill Model	Shows the type (model) of Bank Note Acceptor (BNA)
2.8.10 CashLess S/N	Shows the card reader's serial number
2.8.11 CashLess Version	Shows the version of card reader's software
2.8.12 CashLess Model	Shows the type (model) of card reader
2.8.13 Snack 1 S/N	<i>This menu item is displayed if s.c.1.1.12=1 (only used when connected SLAVE-machine)</i>
2.8.14 Snack 1 Version	<i>This menu item is visible if s.c.1.1.12=1 (only used when connected SLAVE-machine)</i>
2.8.15 Snack 1 ChkSum	<i>This menu item is visible if s.c.1.1.12=1 (only used when connected SLAVE-machine)</i>
2.8.16 Snack 2 S/N	<i>This menu item is displayed if s.c.1.1.12=2 (only used when connected SLAVE-machine)</i>
2.8.17 Snack 2 Version	<i>This menu item is visible if s.c.1.1.12=2 (only used when connected SLAVE-machine)</i>
2.8.18 Snack 2 ChkSum	<i>This menu item is visible if s.c.1.1.12=2 (only used when connected SLAVE-machine)</i>
2.8.19 Hot 1 S/N	Shows the serial number of the Machine's power board. This menu item is hidden if s.c.1.1.13=0
2.8.20 Hot 1 Version	Shows the software version of the Machine's power board. This menu item is hidden if s.c.1.1.13=0
2.8.21 Hot 1 ChkSum	Shows checksum for the Machine's software (to identify the Machine's equipment). This menu item is hidden if s.c.1.1.13=0



Sub-menu	Description
2.8.22 Hot 2 S/N	Shows the serial number of the Machine's power board. This menu item is hidden if s.c.1.1.13=0 or 1. It is used to connect a second drink vending machines
2.8.23 Hot 2 Version	Shows the software version of the Machine's power board. This menu item is hidden if s.c.1.1.13=0 or 1. It is used to connect a second drink vending machines
2.8.24 Snack 2 ChkSum	Shows checksum for the Machine's software (to identify the Machine's equipment). This menu item is hidden if s.c.1.1.13=0 or 1. It is used to connect a second drink vending machines

4.2.7 Menu item “2.9 PRICES”

Menu item “2.9 Prices” is designed to let you configure information about the drink(s) and is accessible from the operator's menu. This menu item is disabled if s.c.1.1.6.1 is set to NO.

Information about the given item can be found in section 4.1.6 of this manual.



5.0 WORKING WITH USB FLASH DRIVE

The machine's Regulator allows Machine's configuration, software updates and data recovery by exchanging files using a USB drive (flash drive).

The drive is connected to the USB connector on the Regulator's board (see figure 70, position 3). The USB must be connected while in sales mode. When you connect the USB drive the Machine's display will show relevant information about the drive.

ATTENTION! To work with the machine is only suitable USB-flash drives! Disk drives and flash drives are not supported. Supports USB-flash drives with FAT16 or FAT32. Other file systems (including NTFS) not supported.

Information that can be read on the USB-flash drive with the machine:

- **Statistical data (Audit):** Information about the Machine's operations, sales, equipment functioning and logs. Stored in a file format EVA-DTS, file name: Axxmmddi.DTS. If the Machine's clock's not working the file name will be Axx_i.DTS.
 - xx = last two digits of the serial number, set in clause 1.1.2 of the Technician's menu.
 - mm = Month (if date and time are set for the Machine)
 - dd = Day (if date and time are set)
 - i = digit from 0 to 9. You can save up to 10 files with different names in 24 hours.

To read the information you want to insert USB-flash drive into the connector of the controller board in the trade regime and approve the request: **"Save audit?"**

- **The current configuration:** File format EVA-DTS. File name: Cxxxxxxx.DTS, C then the 7-digit serial number of the machine, specified in clause 1.1.2 of the Technician's menu (for example: C0000123.DTS).

This file contains equipment configuration information, as well as information about the names, placements and prices of products.

To read the information you want to insert USB-flash drive into the connector of the controller board in the trade regime and approve the request: **"Write Configuration?"**

Information that can be downloaded from the USB-flash drive into the machine:

- **Configuration of a certain Machine:** File format EVA-DTS. File name: Cxxxxxxx.DTS, C then the 7-digit serial number of the machine, specified in clause 1.1.2 of the Technician's menu. The file will be loaded into the machine only when the coincidence of numbers specified in clause 1.1.2 and in the file name. This allows you to load from one USB-flash drive different configurations for different machines.

To download the information you want to insert USB-flash drive into the connector of the controller board in the trade regime and approve the request: **"Load Configuration?"**



- **General configuration:** File format EVA-DTS. File name: CONF_GEN.DTS. The file can be downloaded to the machine with any number specified in clause 1.1.2.

To download the information you want to insert USB-flash drive into the connector of the controller board in the trade regime and approve the request: **“Load Gen. Config.?”**

“Update Config.?” - Confirm the command to update or create a new configuration file from machine to USB-flash drive in technical mode. This command appears when you put USB-flash drive into the controller board in technical mode.

- **Software update:** To update the machine software should visit the manufacturer’s website under the link <http://www.unicum.ru/en/support> and on the next page, choose the appropriate model for automatic software updates. Then, on the next page, select the link FIRMWARE CONTROLLER, after which the starts the automatic download of files to your computer. The files are downloaded to the archive folder, for write files on USB flash drive, unzip the folder and save the contents of a folder in the root directory of USB flash drive. The archive folder contains software update files machine with explanatory text files.

To update software the machine you want to insert USB flash drive with saved the files in the USB connector of the controller board machine. When these files are stored on a USB-stick determined by the controller is displayed proposal to update the software.

To download the power board must approve the request: **“Load Hot Firmware?”**

To download the software of the main board machine must approve the request: **“Load Firmware?”**

Editing configuration files, and view audit files by using a special program “Unicum Vending Machine Tools, which can be downloaded here:

<https://uonline.unicum.ru/ef/tools/uVMTools.msi>


6.0 RECOMMENDED DRINK CONFIGURATIONS

The machine starts working with default configurations as shown in the following table:

№	Drink	Com- position	Water for coffee	Ingredient №1		Ingredient №2		Ingredient №3		Ingredient №4		Portion of sugar
				Water	Unit	Water	Unit	Water	Unit	Water	Unit	
1	Espresso	K000	75									3
2	Americano	K000	120									3
3	Coffee with milk	K100	75	60	22							3
4	Cappuccino	1K00	75	60	32							3
5	Coffee Latte	1K00	70	65	34							3
6	U-Gold	K000	100									3
7	Double espresso	KK00	60									3
8	Coffee with chocolate	K300	75			65	19					0
9	Moccacino	1K30	58	58	29			38	18			0
10	Chocolate	3000						100	40			0
11	Double chocolate	3000						100	45			0
12	Chocolate with milk	1300		55	22			55	19			0
13	Hot milk	1000		100	43							0
14	Tea	2000				120	22					0
15	Vanilla cappuccino	4000								120	36	0
16	Coffee ristretto	K000	55									3

K = Coffee beans (ROSSO) / Instant coffee (ROSSO INSTANT)

1 = Ingredient №1 (milk)

2 = Ingredient №2 (tea)

3 = Ingredient №3 (chocolate)

4 = Ingredient №4 (vanilla)

Note: Settings drinks specified in the table above are the factory (basic) settings for most machines and can vary depending on the conditions for each specific order. In the operation of the machine to factory settings can be changed.