VENDING MACHINE
ROSSO TOUCH TO GO

USER MANUAL

Version1.1 / November 2017

Document change log

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1.0	10.2017	Document creation	All
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CONTENT

1.0 GENERAL INFORMATION

1.1 Introduction

This user manual (hereinafter called the "Manual") covers drinks vending machines model ROSSO TOUCH (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 vending machine manufacturer denies any responsibility for injuries and damages arising by the following reasons:
- 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 damages. All the expenses on servicing in the case of damages caused by the vending machine misuse are the users' responsibility.

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

• Gaskets;
• Fuses;
• Control board batteries;
• Mixer impellers;
• Hydraulic system tubes.

1.5 Packaging options
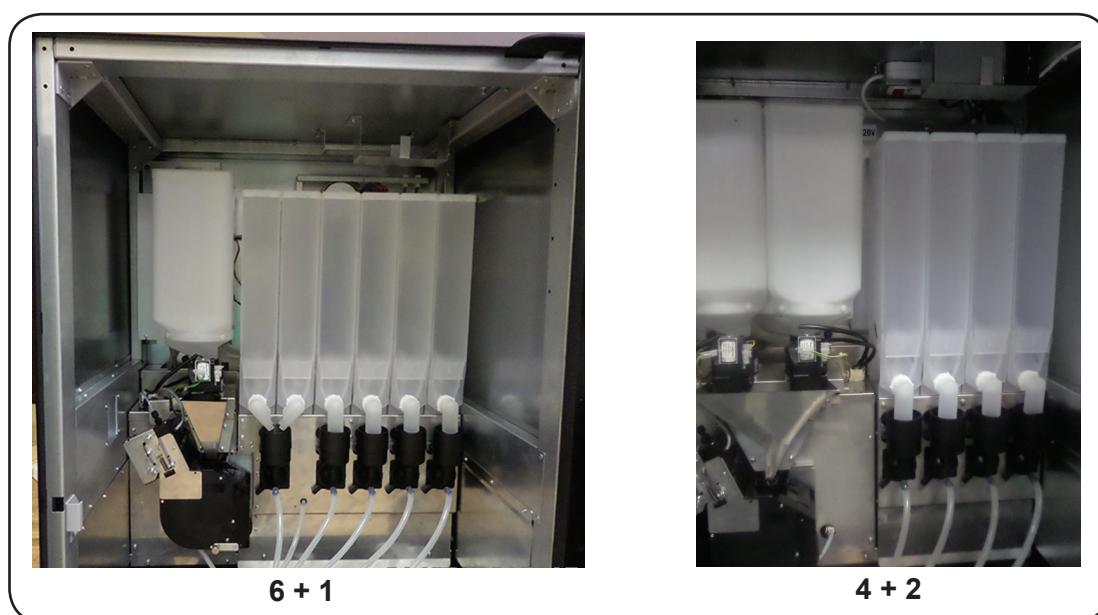

| 6 + 1 | 4 + 2 |

Fig.1

6 + 1 (ROSSO TOUCH TO GO) = with one container for coffee beans + six containers for instant ingredients.

4 + 2 (ROSSO TOUCH TO GO DUO) = = with two containers for coffee beans + four containers for instant ingredients.

2.0 SAFETY

The manufacturer ensures that the vending machine is manufactured in accordance with all generally accepted worldwide safety standards. For safe operation of the vending machine comply with the requirements given in this manual.

2.1 Main provisions

- Before installing and using 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.

- Installation and maintenance operations should be executed by qualified personnel only.

- The vending machines shouldn't be exposed to subzero temperatures during operation and storage.

- The vending machines are not intended for outdoor installation. They should be installed in closed dry premises with air temperature no lower than 5°C.

- For normal vending machine operation, it's necessary to conduct periodical cleaning operations.

- The vending machines should be connected to water and power supply networks in accordance with the requirements of the country where they are installed.

- The vending machines should be installed on the level surface so that the maximum deviation from the vertical plane didn't exceed 2°. If necessary level the vending machines by using the adjustable feet provided with the vending machine.

- The vending machines should be connected to the power supply network with grounding.

- After the vending machine is installed the power cord plug of the vending machine should be accessible.

- In the case of damage, the power cord should be replaced. The vending machine operation with the damaged power cord is PROHIBITED!

- Only qualified technicians may clean, fill and install the vending machines.

- Use genuine spare parts only;

DANGER! Don't touch the power plug with wet hands, don't connect the plug if it's wet!

ATTENTION! Check the quality of the drinking water, used in the vending machine. The vending machine should be connected to the water supply network in accordance with the instructions of all competent services and local rules! Make sure that the power network voltage corresponds with the permissible value indicated on the vending machine nameplate! Before putting the vending machine into operation conduct its washing!

• 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!**

2.2 Service key

When opening the vending machine door the special breaker automatically de-energizes he vending machine hardware and units. Any operations, carried out with the door open, should be performed by *skilled technicians*. The technicians are responsible for the service key safety. Never leave a service key in the vending machine.

The service key is intended for use by skilled technicians only.

To apply a voltage to the vending machine hardware with the door open, insert the service key.

Service key insertion

1. Insert the service key into the door trip (fig. 2) and turn through 90 deg. clockwise until fixation.
2. Service key extraction is carried out in the reverse order.
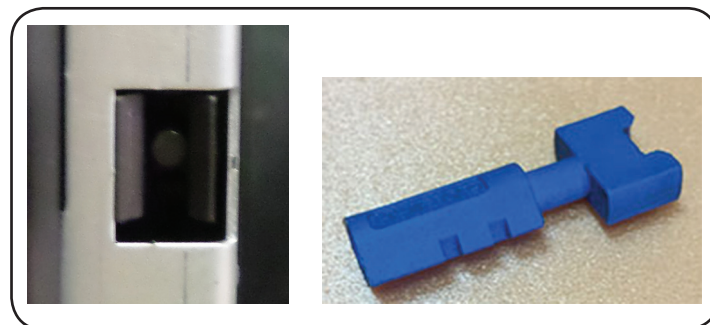
Fig.2

3.0 VENDING MACHINE DESCRIPTION

3.1 Appearance
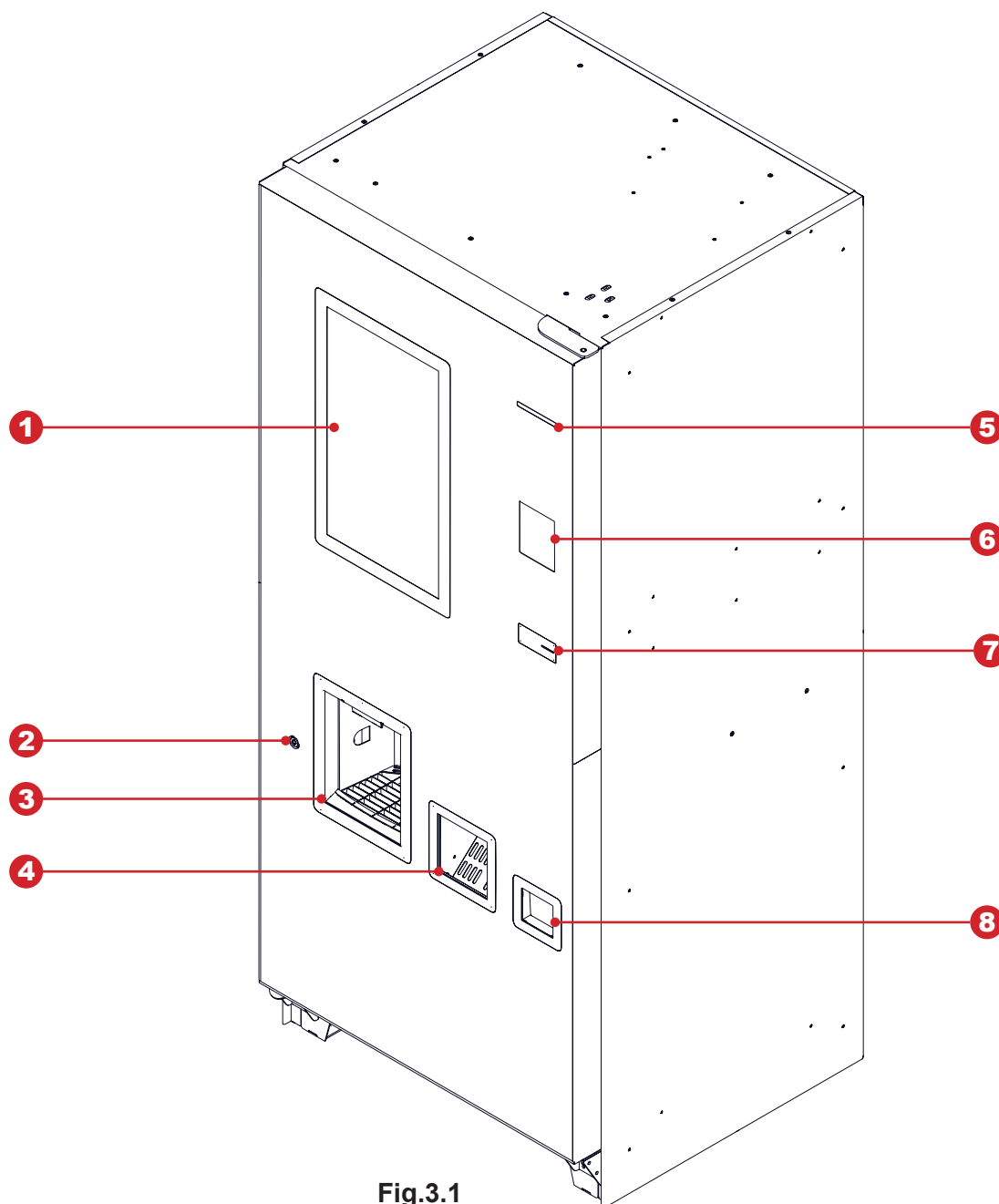
Fig.3.1

1. Touch Screen	5. Receipt printer slot/plug
2. Door lock	6. Cash acceptor slot/plug
3. Beverage dispensing windows	7. Coin acceptor slot
4. Windows of delivery caps	8. Change tray

3.2 Interior
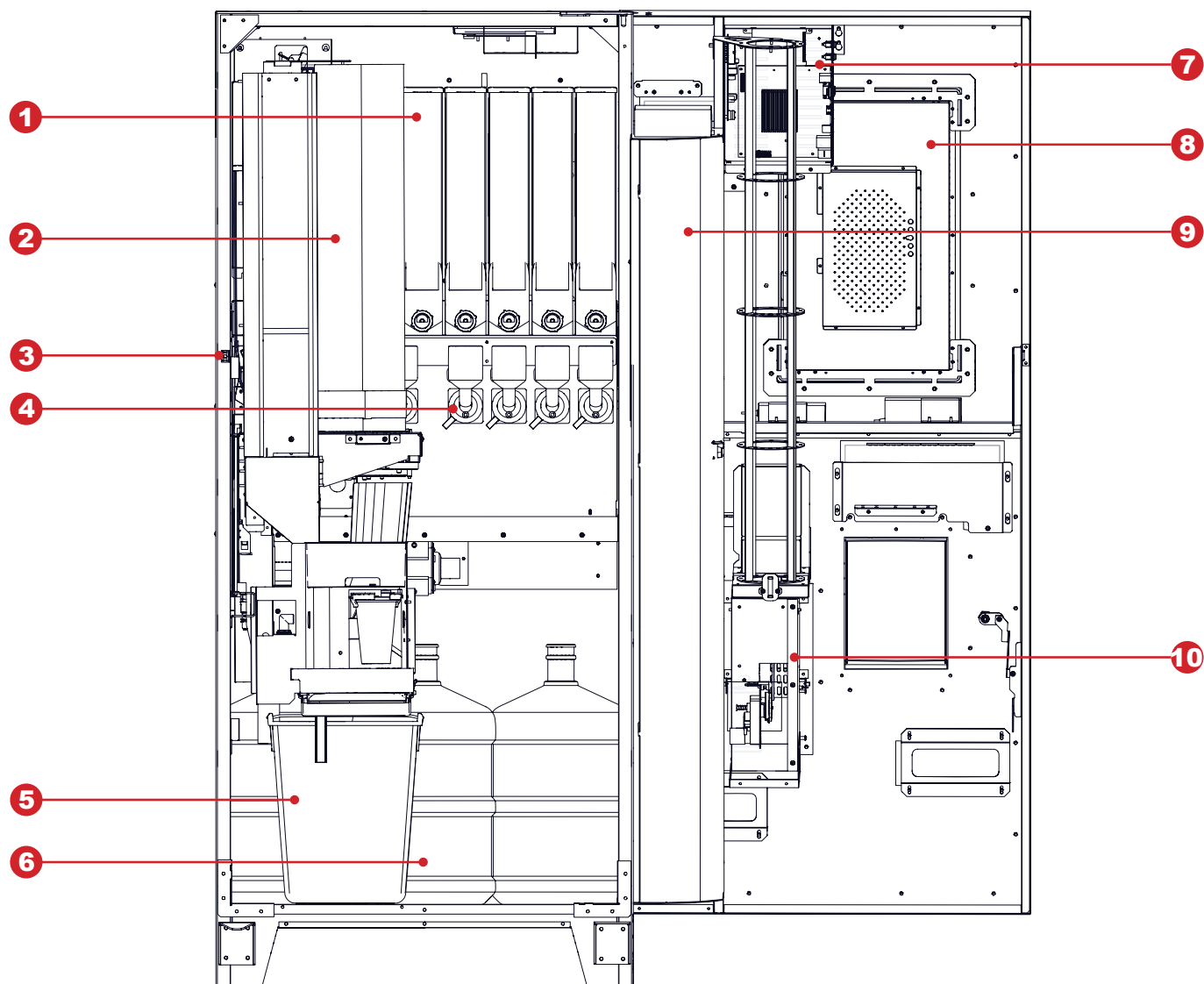
Fig.3.2

1. Product containers
2. Dispenser module (cups, sugar, stirrers)
3. Door trip
4. Mixers
5. Waste bucket
6. Water bottle (up to 3 pcs.)
7. System unit
8. Touch Screen (backside)
9. Door for electronics compartment
10. Lid dispenser
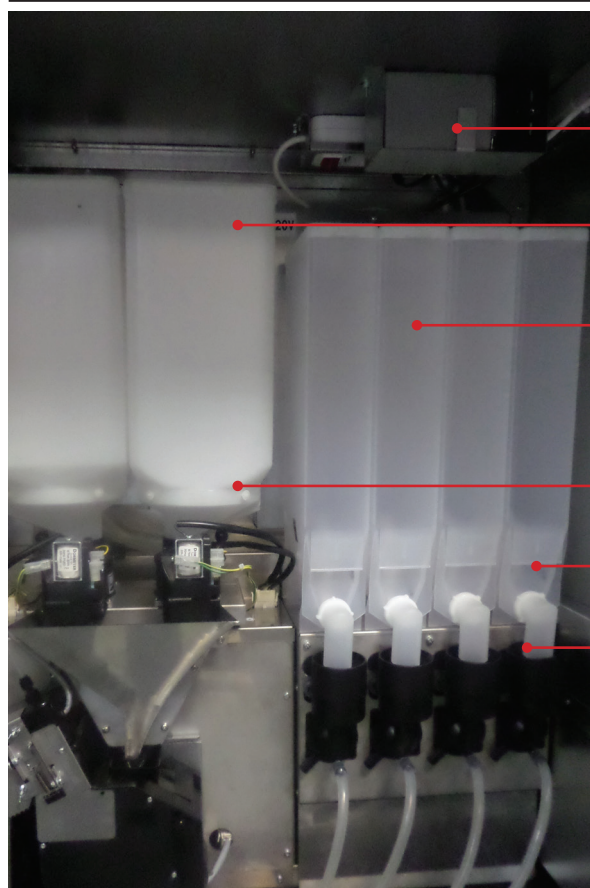
Speaker

Coffee beans container
(1 or 2 pcs. depending on kitting)

Ingredient container
(4 or 6 pcs. depending on kitting)

Coffee grinder and dosing unit

Container lip

Mixer

Fig.3.3

Mains sockets with switch

Dispenser for stirrers

Dispenser for cups

Door trip (service key)

Cup dispensing mechanism

Drink dispensing tray

Fig.3.4
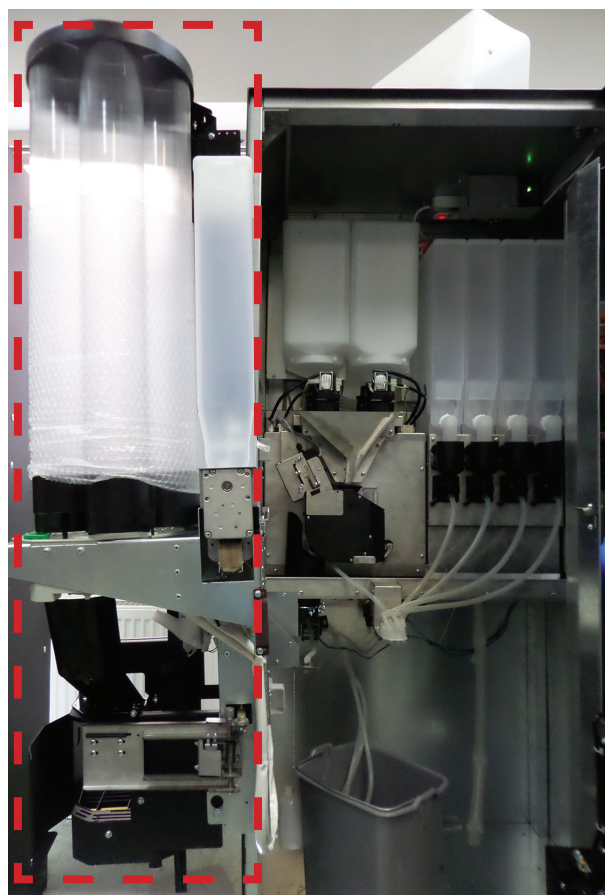
Dispensing module

Sugar container

Stand-alone set water supply pump

Bucket for liquid wastes

Fig.3.5
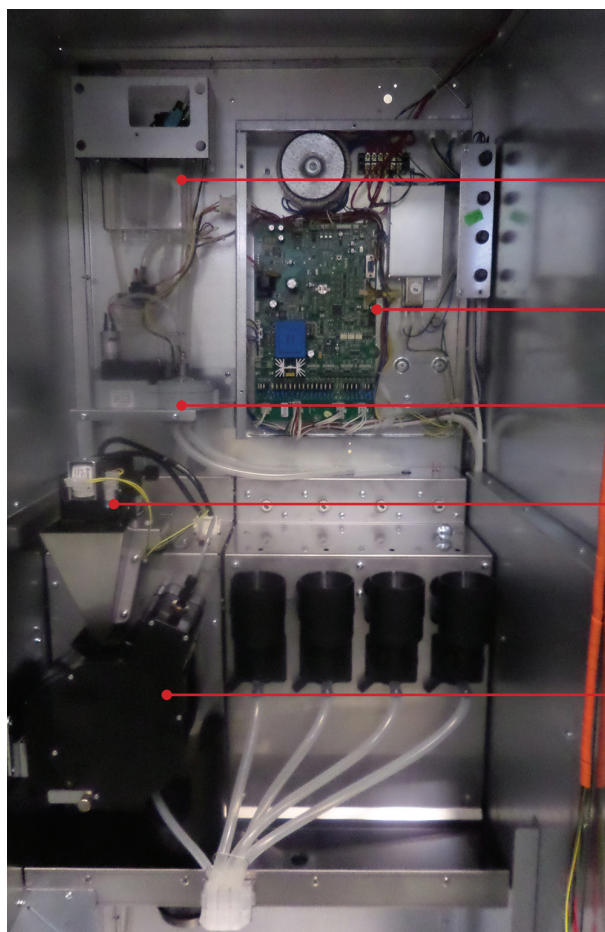
Float chamber
(located behind the coffee beans container)

Power pack with power board
(located behind the ingredients containers)

Selector
(located behind the coffee beans container)

Coffee grinder + dispenser of ground coffee

Vario-brewer

Fig.3.6

System unit

Touch screen with setting keys
(backside)

Door for electronics compartment
Behind the case there are:
- system board (controller)
- service keys
- cash acceptor
- change giving out motor
- coin box
The composition depends on the

Lid dispenser

Lid dropping chute

Box for lids
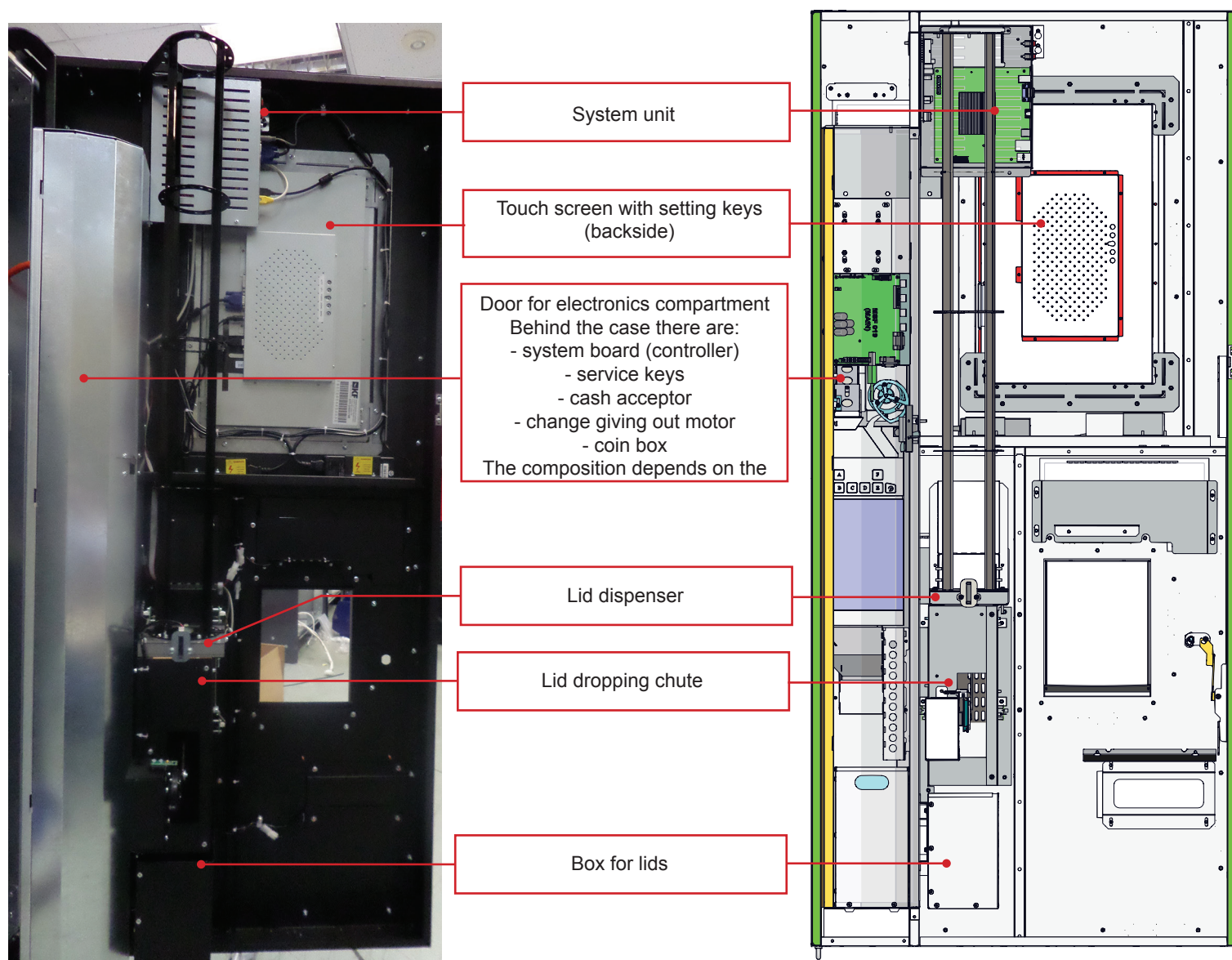
Fig.3.7

3.3 Rear view
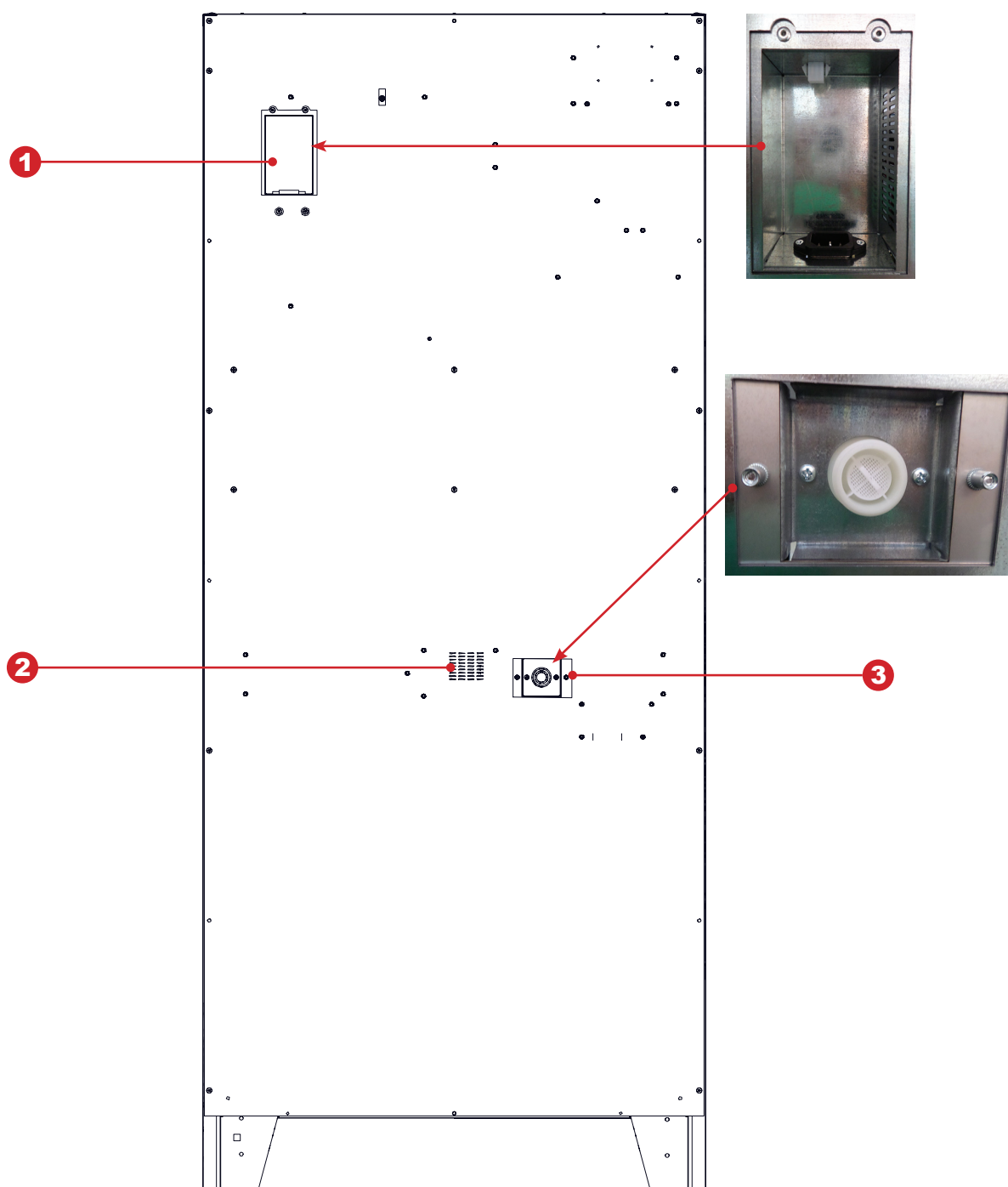
Fig.3.8

1. Power cord connector and CAN-BUS connector for connecting a SLAVE-module
2. Ventilation openings
3. Inlet valve for connecting to the water supply system

3.4 Technical specifications

Basic technical specifications of the vending machines are shown on its nameplate, located at the vending machine rear wall.

Parameter	Value
Dimensions (H x W x D), no more than	1850 x 770 x 730 mm
Weight, no more than	200 kg
Mains voltage	230 V / 50 Hz
Power consumption (max.)	1900 W
External water supply	
Water pressure (min.)	0.5 bar (0.05 MPa)
Water pressure (max.)	8.5 bar (0.85 MPa)
Water supply network connection	G 3/4"
Internal water supply	
Bottle capacity (not included in the scope of supply)	3 x 19 l. (мах.)
Recommended water characteristics	
Hardness	0.9 - 1.0 mg-eq/l
Calcium	18 - 20 mg/l
Cups, stirrers, and lids dispensing module	
Number of cups (max.)	400 pcs.
Cup diameter	80 mm
Cup volume	up to 330 ml
Number of stirrers (max.)	400 pcs.
Stirrer size (*)	115 / 125 mm
Number of lids (max.)	300 pcs.
Number of containers	
Containers for instant ingredients	4 or 6 pcs.
Coffee beans container	1 or 2 pcs.
Sugar container	1 pcs.
Container capacity (**)	
Coffee beans	3.0 kg
Milk	2.2 kg
Chocolate	4.8 kg
Tea	5.2 kg
Vanilla cappuccino	4.8 kg
Sugar	4.0 kg

*) 125 mm standard stirrer setting;
**) Product quantity may deviate from the specified values depending on the products specific weight.

3.5 Designation

The vending machine is meant for making hot drinks by mixing products (coffee, instant ingredients) with water.

The use of products that are dedicated for making drinks in open containers is recommended.

The drinks are made in special cups that are automatically filled by the vending machine after the drink is chosen.

3.6 Operating principle

In normal operation, the vending machine is in a standby mode.

After depositing the specified amount and pressing the button with the drink image the vending machine will propose to choose whether to dispense or not a lid for a cup of drink. Then the vending machine will start performing the operations of the selected drink preparation, including:

Cup dispensing

This is the first operation performed by the vending machine, except for the situation of choosing a drink without a cup.

As an option (at additional cost) 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, 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).

Sugar and stirrer dispensing

After cup dispensing the cup holder moves to the sugar dispensing mechanism, the sugar container motor activates and dispenses the previously adjusted amount of sugar into the cup. Simultaneously with sugar and the stirrer are dispensed.

The conditions of sugar and stirrer dispensing are specified in the vending machine service menu.

Lid dispensing

When selecting a drink the vending machine will offer to make a choice whether to dispense or not a lid for a cup of drink. When choosing the "выдавать крышку" ("dispense a lid") - a lid will be dispensed to the lid dispensing tray from the lid dispenser by using the lid dispensing unit.

If the provided lid is not withdrawn from the lid dispensing tray within 15 seconds, it will be dropped into the lid box (Fig. 3.7).

Instant drinks

This process starts only after a cup, sugar, and stirrer is dispensed.

When making instant drinks the following occurs: the turning gear moves the catcher with a cup deep into the dispensing compartment, placing it under the drinks dispensing nozzles. This operation prevents the customer from any hasty actions that may lead to the contact with a hot drink.

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 beans based drinks

This process starts only after a cup, sugar, and stirrer are dispensed.

When making instant drinks the following occurs: the turning gear moves the catcher with a cup deep into the dispensing compartment, placing it under the drinks dispensing nozzles. This operation prevents the customer from any hasty actions that may lead to the contact with a hot drink.

Coffee beans go from the coffee bean container(into the coffee grinder, where they are ground and fed into the dosing apparatus (when the machine is equipped with two containers of grain coffee - from the container with grain coffee in accordance with the settings of the drink recipe set in the service menu) 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 bucket for waste.

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.

4.0 TRANSPORTATION AND STORAGE

4.1 Transportation

The vending machine is delivered on a pallet. Use a forklift for handling the vending machine.

It is prohibited to:

- Lift the vending machine by using ropes, cords, etc.
- Turn the vending machine upside down or sideways during transportation.
- Shake the vending machine.
- Store the vending machine in wet premises.

Because there's always water in the vending machine water route, drain the water before the transportation, long storage or replacing the individual units of the hydraulic system.
Failure to follow these measures can lead to vending machine damages!

Use an original package of the vending machine transportation.

> ⚠️ *ATTENTION! Always drain water before the vending machine transportation or storage at the ambient air temperature below 1°C! Failure to follow this requirement may lead to vending machine breakdown!*

<u>**Water route draining**</u>

Stop the water supply to the vending machine. Use the suitable container for draining water.
To drain water do the following:

1.   Open the machine door.
2.   Insert the service key into the door interrupter (fig.2).
3.   Open the door of the electronics compartment and on the control board bracket, press and hold the button *MENU TECHNICIAN*.
4.   Cool down the boiler. To do so go to the service menu and press the *Coffee* button on the touch-screen. Then in the open box press the *Cool boiler* button. After starting the boiler cool down process the vending machine will pump an amount of water through the boiler that is necessary for cooling the boiler down to 45 degrees. This operation can be conducted on a vending machine with external and internal water supply.
5.   After the completion of the cool down process, the vending machine screen shows **OK**. Disconnect the vending machine from the external water supply or remove the water intake tube from the water bottle. One should also drain water from the tube used for supplying water from the external water supply valve or stand-alone set pump to the float chamber. To do so remove the tube from the valve or pump and put it into the drain vessel. Fully drain the water from the drain vessel.

> **NOTE:**
> When using the internal water supply one should additionally drain the stand-alone complete set pump, for which, after the cool down process completion and water supply tube removal from the pump, manually lower the float in the float chamber down to the moment of pump activation and hold it in this position for 5 - 10 seconds. Then put the tube back (on the valve or pump).

6. Drain the boiler after it cools down. For this proceed to the service menu and press the ***Coffee*** button. Then in the open box press the ***Empty boiler*** button. The vending machine will start pumping out water from the float chamber and the rest of the boiler water supply route.

7. After the completion of the process, the vending machine display will show the **OK** message. When seeing this message switch the vending machine off.

8. Install the drain vessel under the boiler for draining the remained water and disconnect the tube from the lower part of the boiler by unscrewing the fastening nut. Then switch the vending machine on and wait until the boiler is fully drained (until the water stops running).

9. Switch the vending machine off.

10. Connect the tube back to the boiler by tightening up the fastening nut.

4.2 Storage

Store the vending machine in dry premises within the temperature range from +1 to +40°C.

Stacking the vending machines is prohibited. The vending machine should be stored in the original package in a vertical position as shown by symbols on the package.

5.0 INSTALLATION

5.1 Selection of the installation location

The vending machine is not intended for outdoor installation. The vending machine may only be installed in dry premises with air temperature no lower than +5°C. The vending machine installation is also prohibited in premises, where the water hoses are used for cleaning or perilously close to open fire.

When installing the vending machine against the wall the distance from the wall to the back wall of the vending machine should be no less than 5 cm for ensuring normal ventilation.

Covering the vending machine by cloth or anything similar is prohibited.

The vending machine should be leveled by using the builder's level with supporting feet. Make sure that the vending machine incline is not exceeding 2 degrees.

5.2 Vending machine components

When receiving the vending machine make sure it has no damages that may have occurred during shipping. Contact the supplier if any item is damaged.

Inside the vending machine, there are components that are attached to the vending machine. Bag(s) with components are stored in the plastic waste bucket (fig. 5.1).

Ready-assembled lower bumper   **Guide**

Fig.5.1 - Components

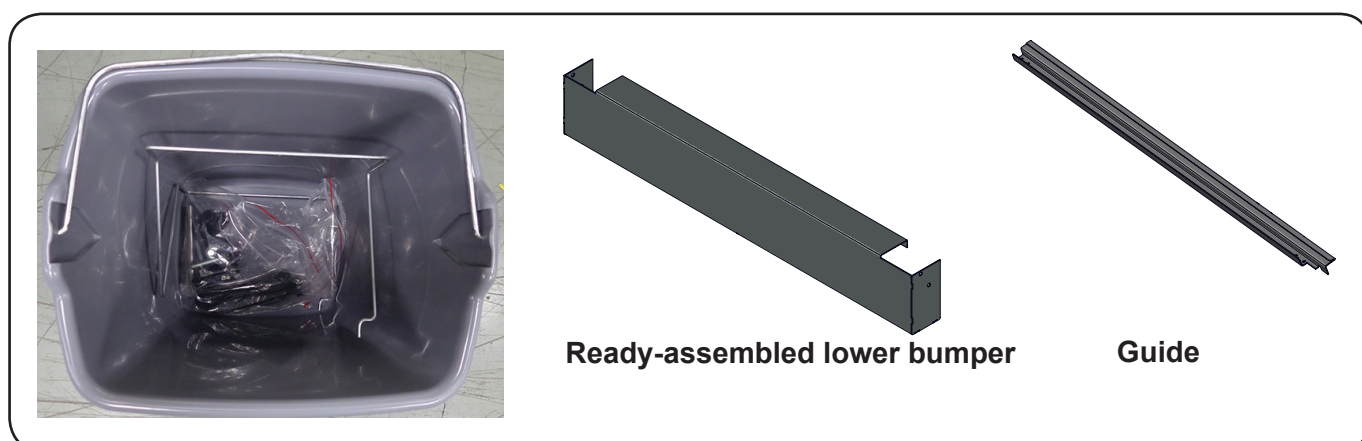The vending machine components:
- Power cord
- Support feet - 4 pcs.
- Vending machine certificate
- Weights for stirrers
- Fuse (6.3x32mm, 10A/250V) - 1 pcs.
- Fuse (6.3x32mm, 3.0A/250V) - 1 pcs.
- Fuse (5x20mm, 8.0A/250V) - 1 pcs.
- Ready-assembled lower bumper (for the vending machine casing)
- Guide (for stirrers dispenser)
- Liquid wastes container fastener
- Service key (blue)
- Hardware (nuts, screws)

5.3 Unpacking

Carefully free the vending machine from packaging material.
Unscrew the fastening screws and remove the vending machine from the pallet by using a forklift.
Remove the keys from the vending machine (the keys are in the drink dispensing tray).
Open the vending machine door.
Extract the vending machine supporting feet from the waste bucket.
Screw the supporting feet into the unscrewed pallet fixing screws positions.
Carefully lower the vending machine from the forklift.
Remove the shipping material inside the vending machine (paper adhesive tape, foil).

In the lower part of the vending machine, there's a waste container that is fixed by using bundle ties. Remove the bundle ties at the attaching points.

Close the vending machine feed by a ready-assembled lower bumper (the bumper is included in the scope of supply, fig. 5.1 and 5.2).

Fig.5.2 - Lower bumper installation

5.4 Water supply system connection

Only drinkable cold water should be used for adding into drinks.

The water pressure should be in the range from 0.05 to 0.85 MPa (0.5 - 8.5 bar).

The connection to the water-supply pipeline networks should be executed by a qualified technician in accordance with this manual.

The connection to the water-supply pipeline networks should conform to regulations in force of the country where the vending machine is installed.

The input connector is located at the vending machine back wall in a form of threaded joint Ø ¾".

The connection is executed by using a tube, capable of withstanding the water-supply pipeline network pressure and suitable for use with food products (min. inside diam. 6 mm).

It's recommended to install a separate cock between a water-supply pipeline network and a pipeline for turning off water supply if necessary.

By default, the vending machine is set up for operating from internal water supply from water bottles placed into the vending machine.

When connecting the vending machine to the water-supply pipeline network execute the following operations:

- Remove the vending machine plug from the wall socket.
- Open the vending machine door
- In accordance with the vending machine hydraulic circuit diagram relocate the water supply tube from the feeding pump to the solenoid valve (fig. 5.3). The pump and the solenoid valve are located on the back wall in the lower part inside the vending machine.
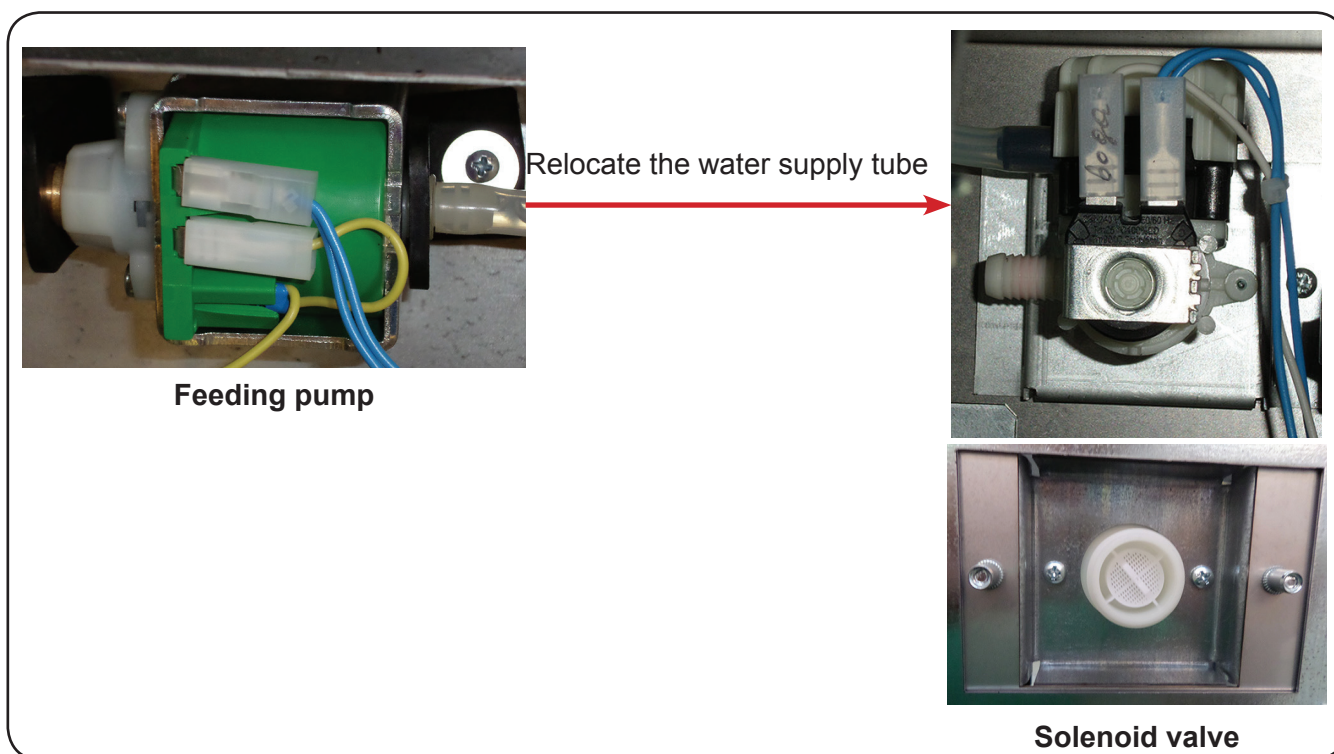
Relocate the water supply tube

Feeding pump

Solenoid valve

Fig.5.3 - Water supply system connection

- Plug the power cord into an electrical outlet
- Insert the service key into the door trip (see section 2.2)
- Open the door of the electronics compartment and on the controller board press and hold the service button *MENU TECHNICIAN* until the audible signal sounds
- Press the *SETTINGS* button in the menu on the vending machine screen
- Select the *COFFEE 1* tab
- In the *WATER CONTAINER* field check the *NOT INSTALLED* option

After the completion of the above operations, the vending machine will switch to the water supply pipe-line network operation mode.

To switch the vending machine back to the self-contained water supply mode check the *INSTALLED* option. Relocate the tube from the solenoid valve to the self-contained water supply pump.

> ⚠️ *ATTENTION! The water-supply pipeline network connection should be executed by qualified personnel!*
> *Water spillage represents the incorrect water piping connection or discrepancy of the required water pressure values!*
> *Use water conforming with the recommended hardness and calcareous content values (see Vending machine specifications).*

5.5 Power network connection

The vending machine operated on the single-phase ~230V network.
Power network voltage jumps should not exceed ±10%.
The power network should have a protective grounding.
The socket should be accessible.

5.6 SLAVE-module connection

One or two SLAVE-modules (model FOODBOX SLAVE or FOODBOX SLAVE LONG) may be connected to the vending machine.

To connect the SLAVE-module do the following:

-      Connect the MASTER vending machine (ROSSO TOUCH TO GO) and SLAVE-modules by the CAN BUS cable (fig.5.4).
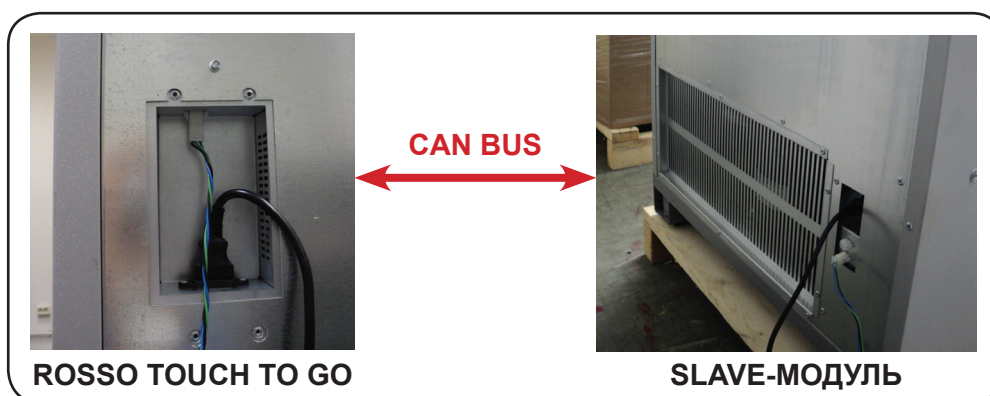

ROSSO TOUCH TO GO   **SLAVE-МОДУЛЬ**

Fig.5.4

- Connect MASTER and SLAVE to the power network in accordance with the operating manual.
- Open the MASTER vending machine and insert the service key into the door trip (see fig.2).
- Open the door of the electronics compartment and hold the service button ***MENU TECHNICIAN*** until the audible signal sounds.
- In the following menu on the vending machine screen press the ***SETTINGS*** touch button.
- At the ***VM*** (Vending machine) tab in the ***SNACKS NUMBER*** field select the number of installed SLAVE-modules (1 or 2).
- The SLAVE-module setup should be executed in accordance with its manual.

> ***ATTENTION!***
> ***If the vending machine has an RT_Interface program the use of SLAVE-module is impossible because the program doesn't support the snack.***

6.0 VENDING MACHINE COMPONENTS

6.1 Containers

The vending machine uses the following types of containers:
- Instant products containers (4 or 6 pcs. depending on kitting);
- Sugar container;
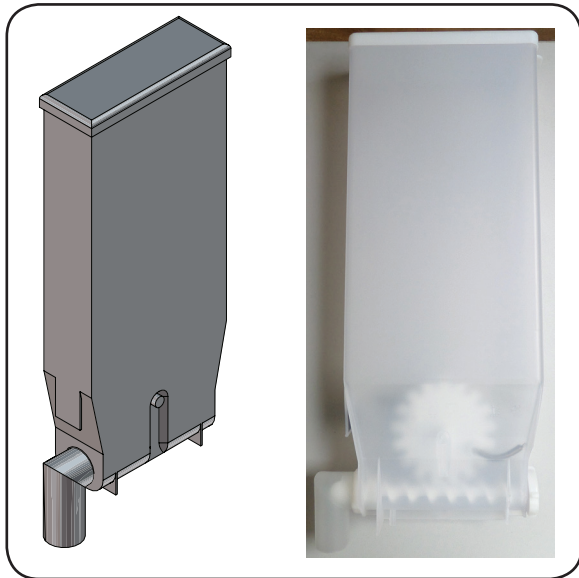- Coffee beans container (1 or 2 pcs. depending on kitting, see fig. 6.2).

Fig.6.1 - Sugar/products container

Figure 6.2 - Coffee container

Filling the coffee beans containers

To fill the container open the vending machine door, remove the container cover and fill the container with coffee beans (fig. 6.3).
To remove the container:
- Fully close the container gate, otherwise, the coffee beans may spill;
- Lift and remove the container.
After putting the container into the vending machine fully open the gate to free the outlet (fig. 6.3).
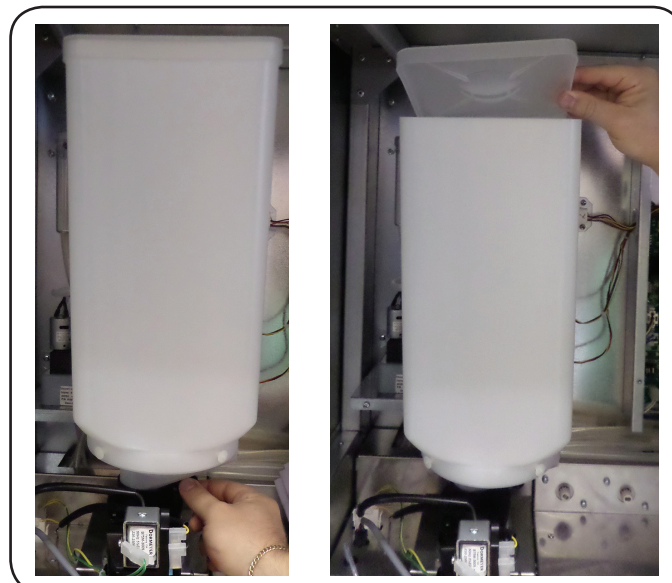

Fig.6.3 - Filling the coffee container

<u>**Filling the product containers**</u>

Each container has a sticker indicating the product.
To fill the container (fig. 6.4):
-     Open the vending machine door;
-     Remove the container cover;
-     Fill the container with product Make sure there are no lumps, don't ram the products, don't pour too much product;
-     Close the cover.

To remove the container:

-     Open the vending machine door;
-     Turn the container spout up
-     Lift the container from the front for it to jump out of mounting holes in the casing;
-     Remove the container by pulling it.

Fig.6.4 - Filling the product containers

> **NOTE:**
> Before the use, after filling the vending machine with products, dispense each instant product 3-4 times to fill the container and spout ullage.

6.2 Cup dispenser

Cup dispenser is meant for dispensing empty cups to which the prepared drinks should be dispensed.

Cup dispenser is located on the dispensing module swivel bracket (fig.6.5). The dispenser executes the successive dispensing of cups from all tubes.
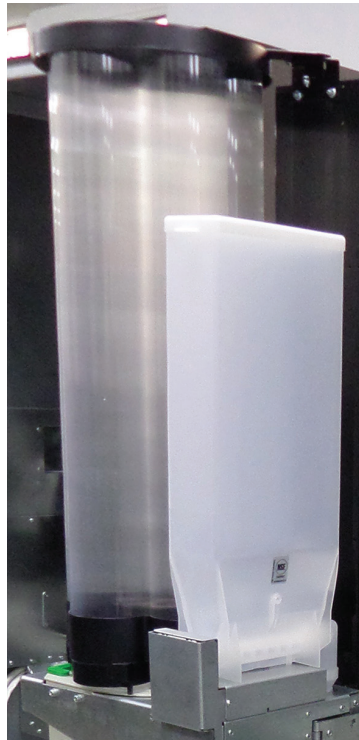

Fig.6.5 - Cup dispenser

Cup loading

It's recommended to use the special cups for vending machines 80 mm in diameter. Before loading the cups make sure they are not rumpled. Don't ram the cups when loading.

To load the cups:
- Open the vending machine door;
- Push the dispenser out of the machine by pulling the bracket towards you;
- Remove the dispenser upper cover;
- Load the cups (bottoms up) only in the tubes that are not above (even in part) over the dispensing outlet;
- Switch on the vending machine by inserting the service key into the door trip and wait for the moment, when after the automatic rotation of the tubes the falling of cup stack into the dispensing outlet occurs and the rotation of the tubes stops;
- Check whether the lower cup in the fallen cup stack is true-vertical, without a skew. In the case of a skew adjust the fallen cup stack by slightly raising it by the lower cup and release;
- Load the cups to the remaining empty tubes and put on the cover.

> ⚠️ **ATTENTION!**
> **It's strictly prohibited to rotate the tubes by hands because it will lead to the tubes rotation mechanism breakdown!**
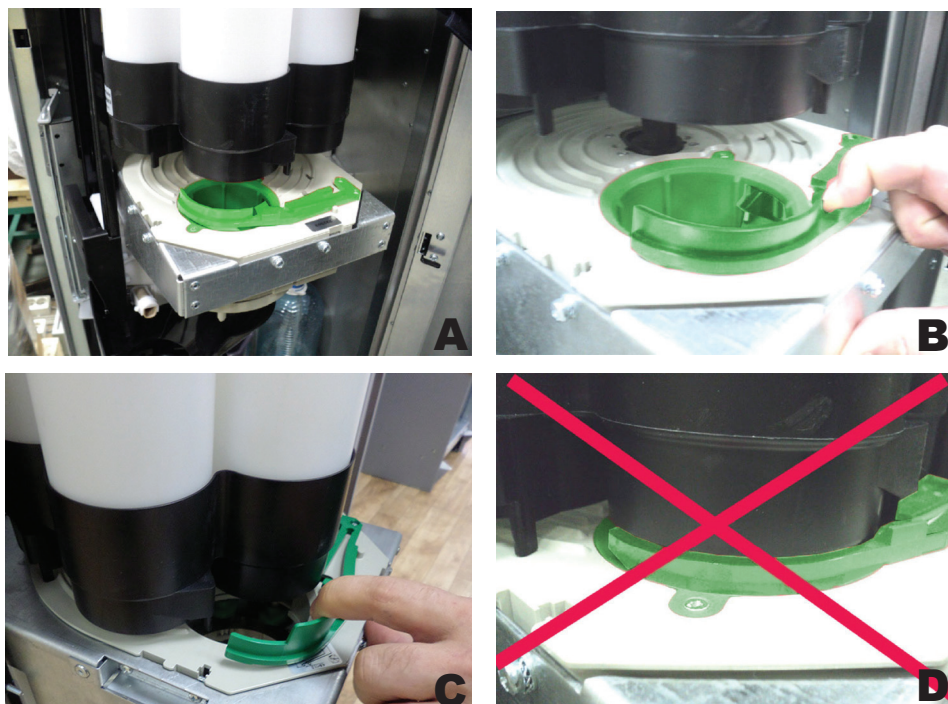
Fig.6.6 - Tubes installation

Installation of tubes on the cup dispensing mechanism:

- Take the clamper aside (fig. 6.6b);
- Install the tubes (fig.6.6 c);
- Make sure that the clamper is not in the position shown on fig. 6.6d when installing the dispensing module into the initial position before closing the vending machine after the maintenance completion.

⚠️ **ATTENTION!**
Wrong tubes installation (see fig. 6.6d) leads to the cup dispensing mechanism break-down!

6.3 Stirrer dispenser

Giving out the stirrers is executed by stirrer dispenser (fig.6.7).
You can adjust the stirrer dispensing algorithm in the vending machine service menu.
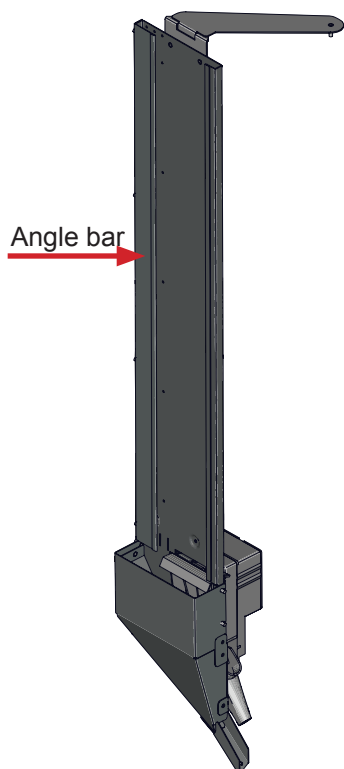
Angle bar

Fig.6.7 - Stirrer dispenser   **Fig.6.8 - Dispenser loading**

 Dispenser loading:

- Open the vending machine door;
- Push the dispenser out of the machine by pulling the bracket towards you;
- Remove the metal weight from the stirrer compartment;
- Insert a pack of stirrers into the compartment, tear the package and carefully remove the wrapping;
- Place the weight on top of the stirrers (the weights are included in the scope of supply);
- Make sure that the stirrers have no unevenness and lay horizontally.

The dispenser may be loaded with stirrers of two lengths: 115 and 125 mm.
The vending machine is supplied with a unit for loading the 125 mm stirrers.

The use of 115 mm stirrers:

-      Open the vending machine door;
-      Pull the dispensing module from the vending machine as shown in fig. 6.9b;
-      Unsnap the lock on the dispenser module hinge and fully unfold the module as shown in fig. 6.9c;
-      Unscrew the four screws of the stirrer dispenser angle bar and remove it (fig. 6.9d);
-      Install a guide from the delivery set in place of the angle bar;
-      Load the stirrers as described above.
-      Place a weight for 115 mm stirrers on top of the stirrers (the weight is included in the scope of supply).
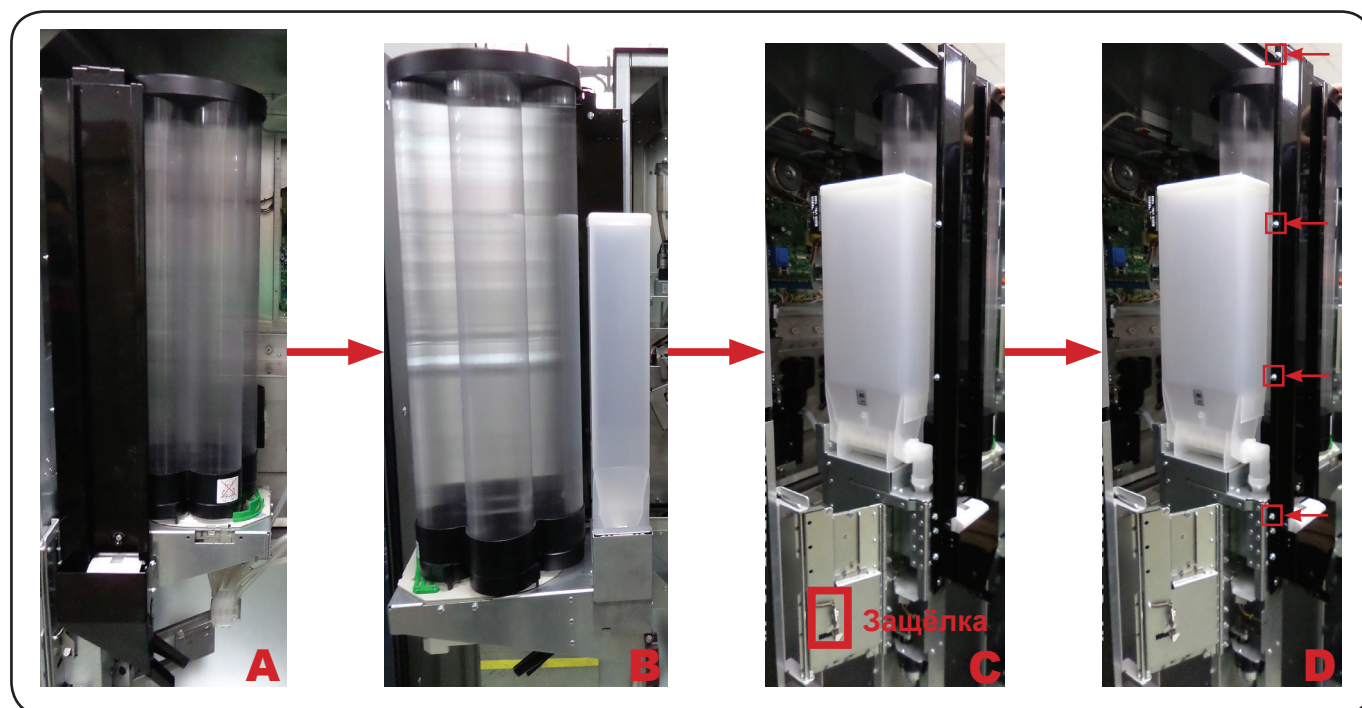

Fig.6.9 - Installation of a guide for 115 mm stirrers

6.4 Cup holder

The cup holder 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.
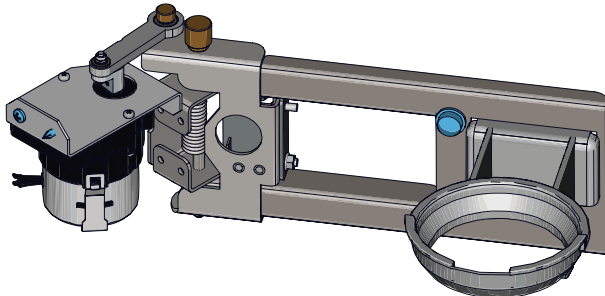

Fig.6.10 - Cup holder

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.

6.5 Drink dispensing slot

The body of the dispensing area is made of moulded plastic 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 (fig.6.11).
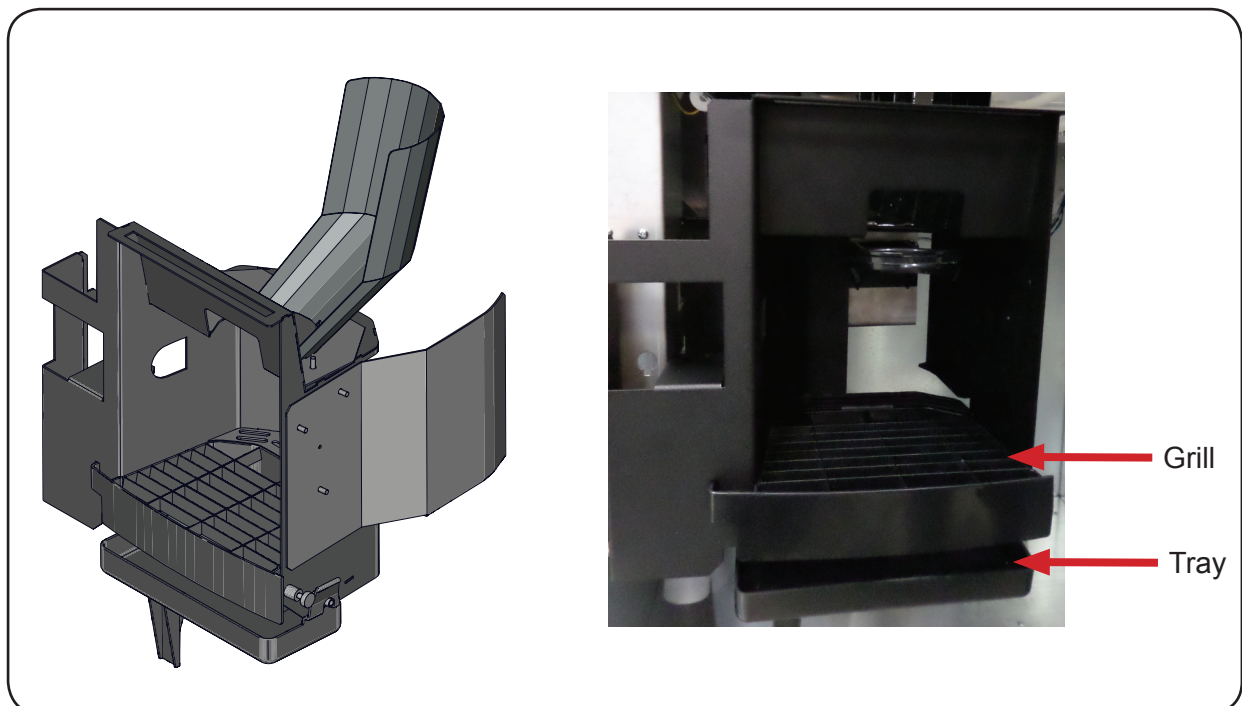

Grill

Tray

Fig.6.11 - Drink dispensing slot

6.6 Lid dispenser

The ready-assembled lid dispenser is located at the inner side of the vending machine door. The ready-assembled lid dispenser includes lid guides, lid dispenser, and lid dropping chute.

The lids are loaded in a stack upside down via the lid guides upper openings down (fig. 6.12). Small lid stacks can be loaded through the lid guides lateral openings.

The lid dispenser gives out a lid to the lid dispensing tray.

The lid dropping chute drops the dispensed lid to the lid box in *15 seconds*. The time is started counting after one of the three following events:

- From the completion of drink dispensing;
- From the moment of cup removal from the hand (if the vending machine has an optional cup sensor installed and it's enabled in the vending machine settings);
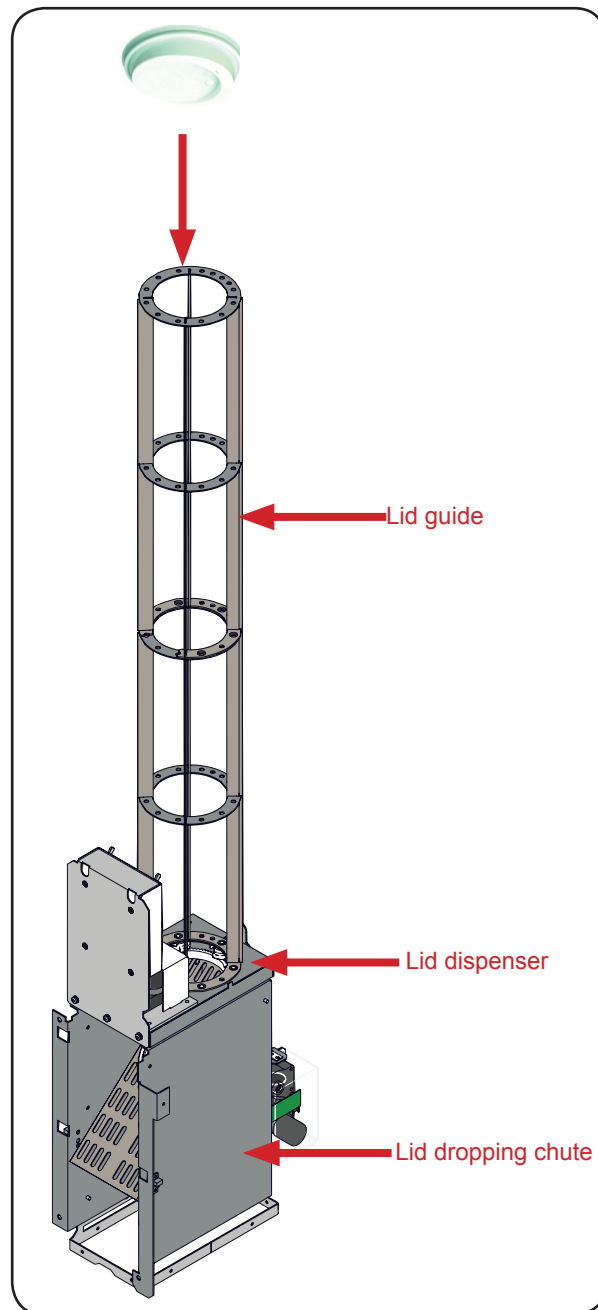- From the moment of lid dispensing completion.

Fig.6.12 - Ready-assembled lid dispenser

6.7 Waste container

The container is located in the bottom of the vending machine (fig.6.13). 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 (fig.6.14) activates and the vending machine is blocked or put offline. To unblock the machine it is necessary to empty the container and dump errors.
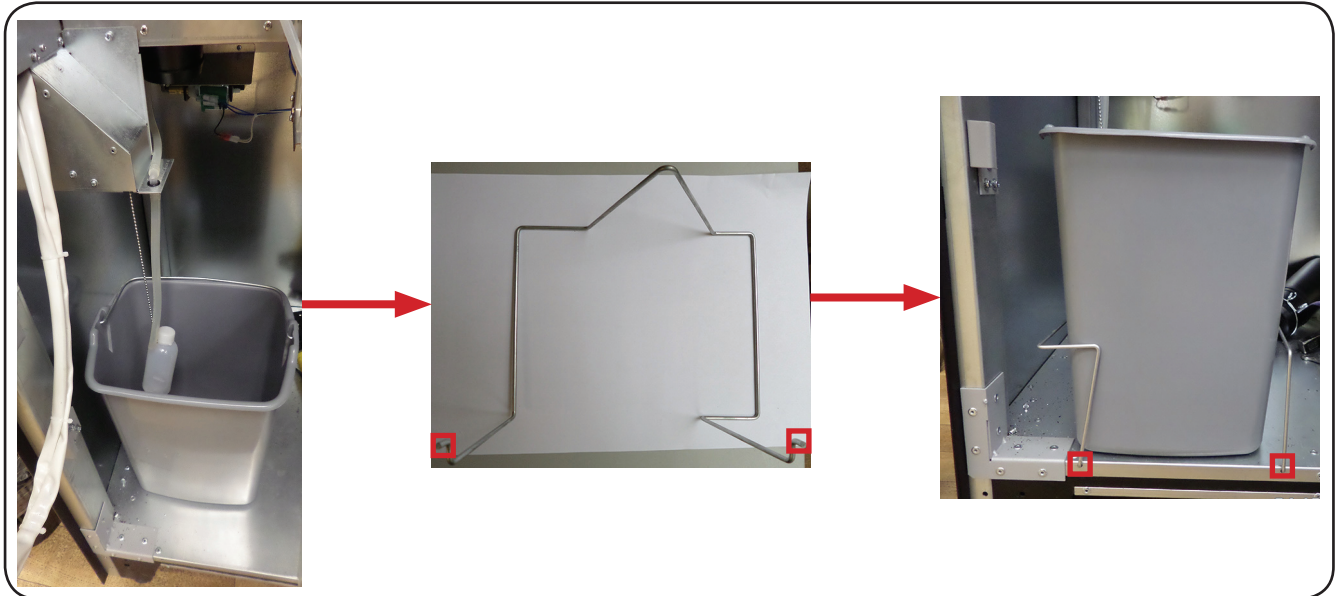

Fig.6.13 - Installation of liquid wastes container
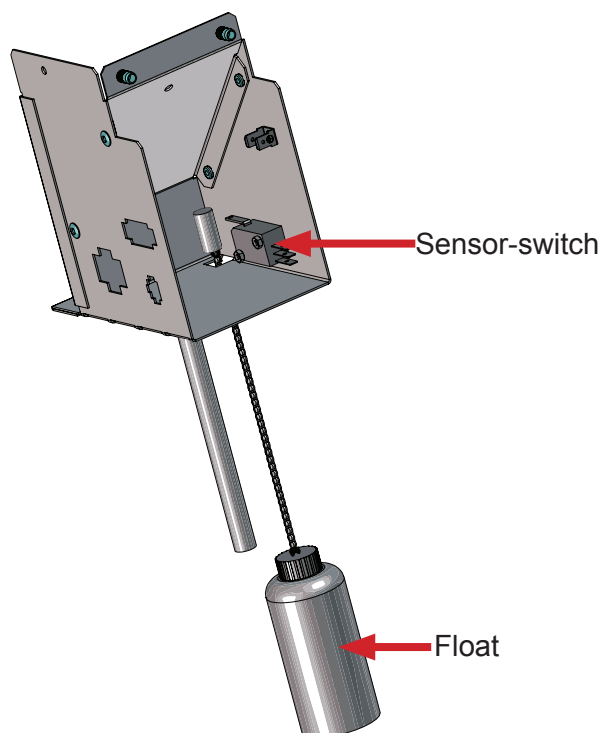
Fig.6.14 - Waste control

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 (fig.6.15).

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 fig.6.15).

Fig.6.15 - Clamping the solid wastes bag

6.8 Stand-alone operation, water bottle, and feed pump

Water bottle
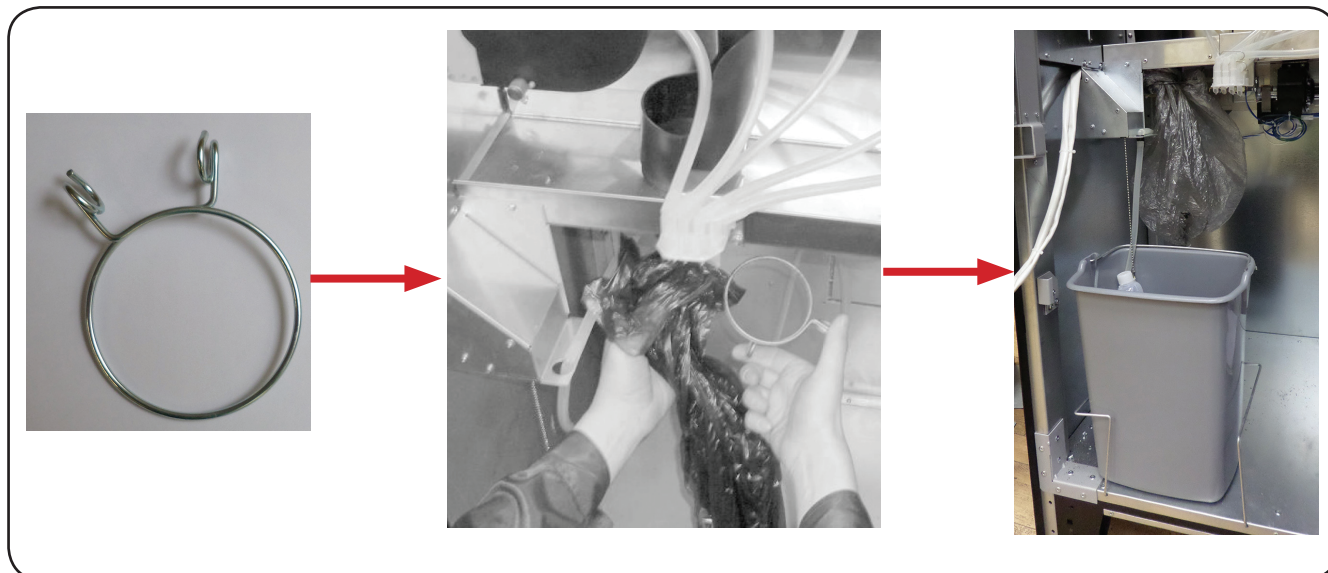
By default, the vending machines are supplied set up for operating from internal water supply by connecting one, two or three water bottles (not supplied).

The water bottles are located in the lower part of the vending machine behind the waste container (fig. 6.16).

The maximum capacity of each water bottle is 19 litres. Water withdrawal from a bottle is executed by using silicone tubes.

When placing the bottles put tubes into each bottle. If only one water bottle is placed put all the tubes into that bottle (fig.6.16).
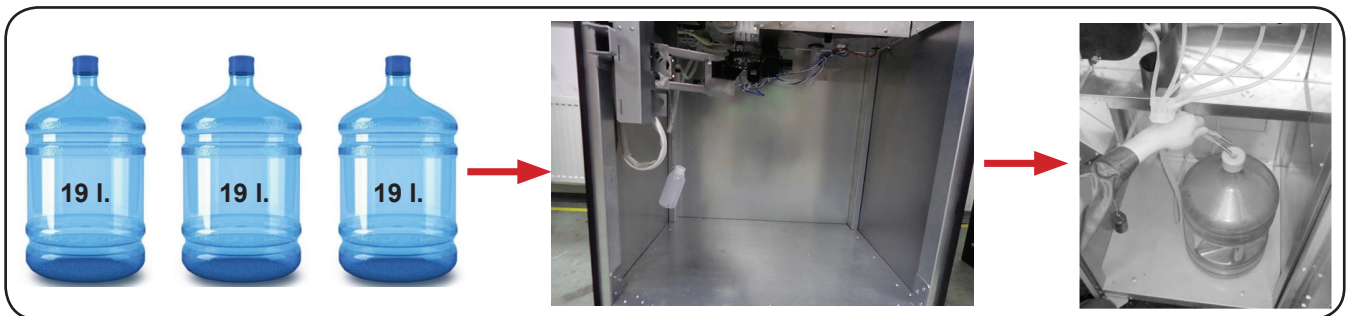

Fig.6.16 - Bottles for internal water supply

Feeding pump

During the autonomous operation, the pump ensures water withdrawal from the water bottles. The pump is located over the liquid wastes container and is installed on the vending machine case back wall (fig. 6.17).
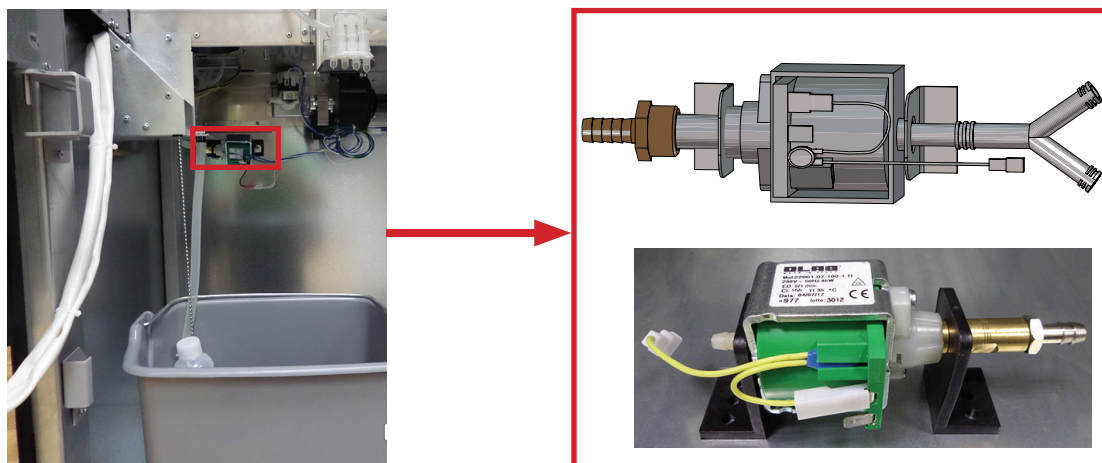

Fig.6.17 - Internal water supply pump

6.9 Float chamber, pump, and boiler

The water supply for making drinks is executed by a group of devices:
- Boiler for heating water;
- Boiler pump for pumping water over the hydraulic system;
- Float chamber for preventing air blocks formation in the hydraulic system.

Flot chamber

The float chamber (fig.6.18) 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.
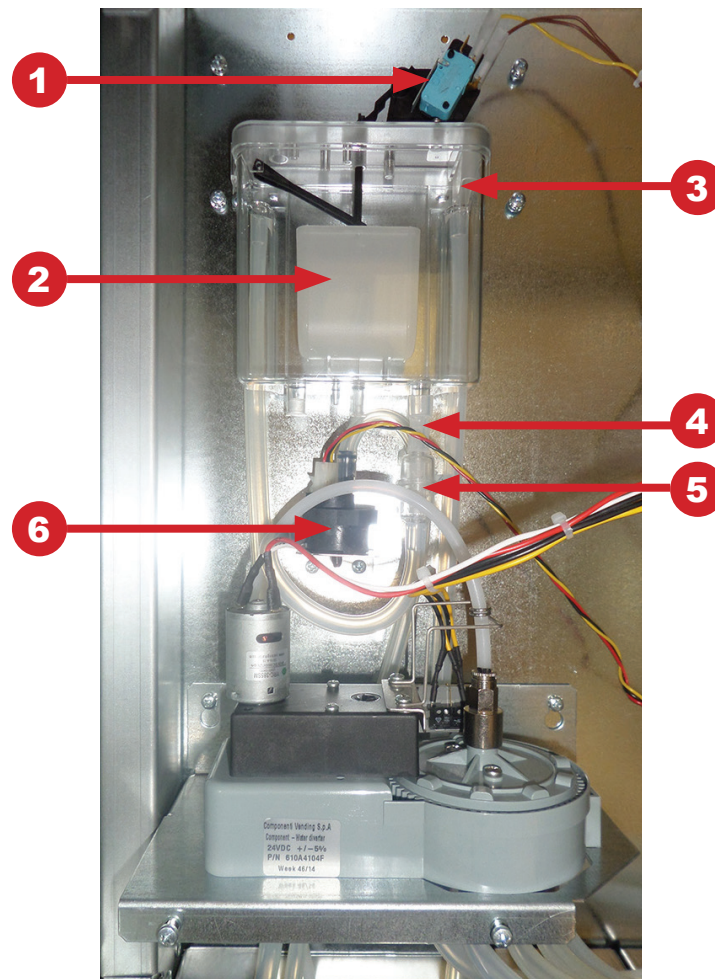

Fig.6.18 - Float chamber

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

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.

The boiler is fitted with a feed pump, which maintains permanent pressure (fig.6.19).
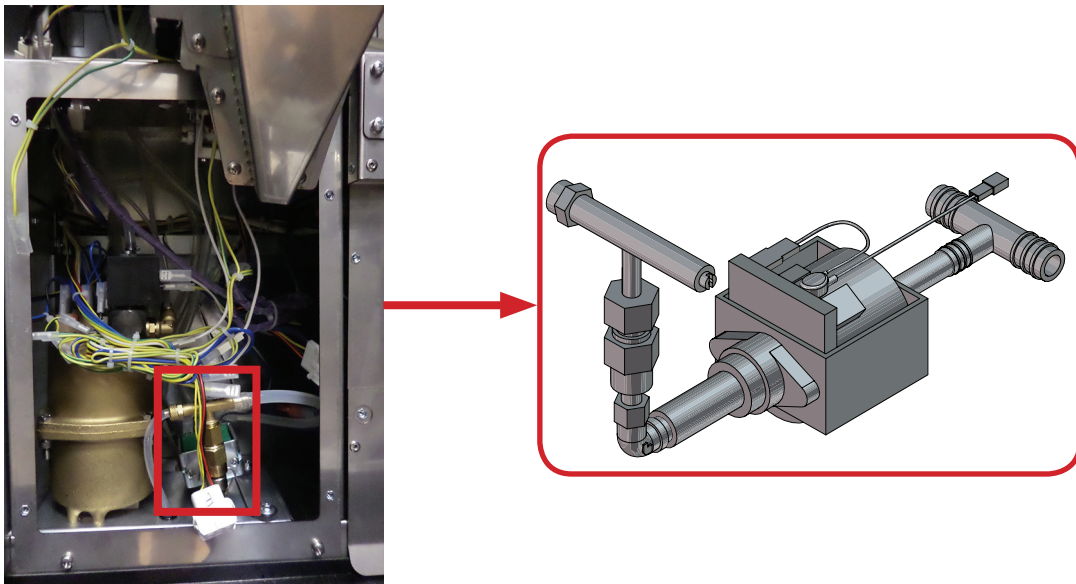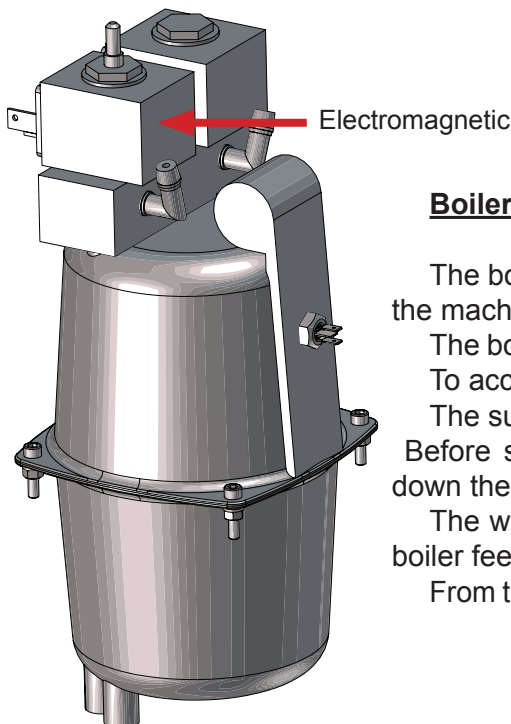

Fig.6.19 - Boiler feed pump

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 (fig.6.20), depending on the selection (either to espresso group or to the selector and then to the relevant mixer.

Electromagnetic

Boiler

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

The boiler is located under the protective cover behind the vario-brewer.

To access the boiler, please remove the vario-brewer.

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.

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 vario-brewer.

Fig.6.20 - Boiler

⚠️ *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!*

6.10 The coffee group

6.10.1 Coffee grinder and dosing apparatus

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 vario-brewer.

The quality of grinding of coffee depends on the rotation of the screw, located on the coffee grinder (see fig.6.21 pos.1). *Turn the screw clockwise grind more (smaller particles) or counter clockwise to grind less (larger particles).*

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.
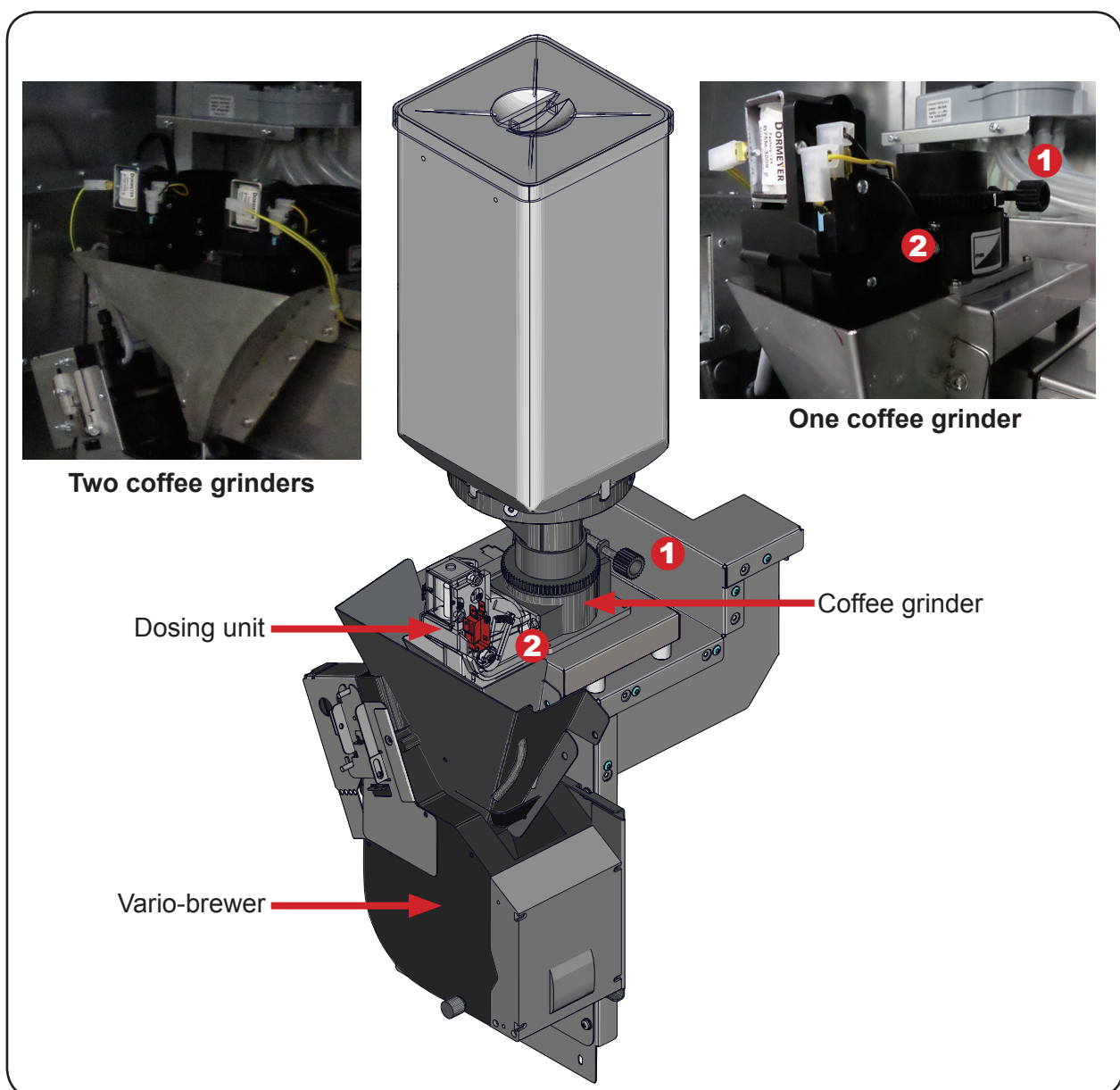
Two coffee grinders

One coffee grinder

Dosing unit

Coffee grinder

Vario-brewer

Fig.6.21 - Grinding quality adjustment

<u>**Setting the grinding parameters for the first time**</u>:

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 I 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 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 vario-brewer.

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

The dosing unit cam (fig. 6.22) should be set to position **NO GREATER THAN 4.**

Setting the cam to a position exceeding 4 IS STRICTLY PROHIBITED - THIS MAY LEAD TO ESPRESSO GROUP BREAKAGE!!!

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 dosing unit adjustment conduct the ground coffee mass weighing via the *Coffee powder* in accordance with this manual (the weighting is conducted with the vario-brewer removed - see the manual).

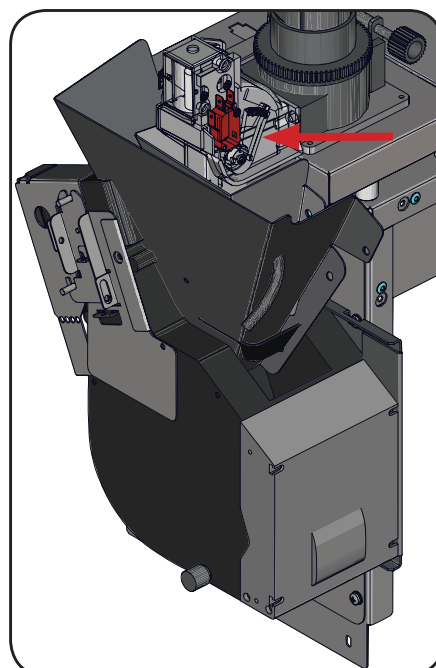If the ground coffee mass exceeds 7 g, adjust the dosing unit cam from 4 to 3.

Figure 6.22 - Dosing unit cam

6.10.2 Vario-brewer

The vario-brewer is used to make coffee using ground beans (fig.6.23).
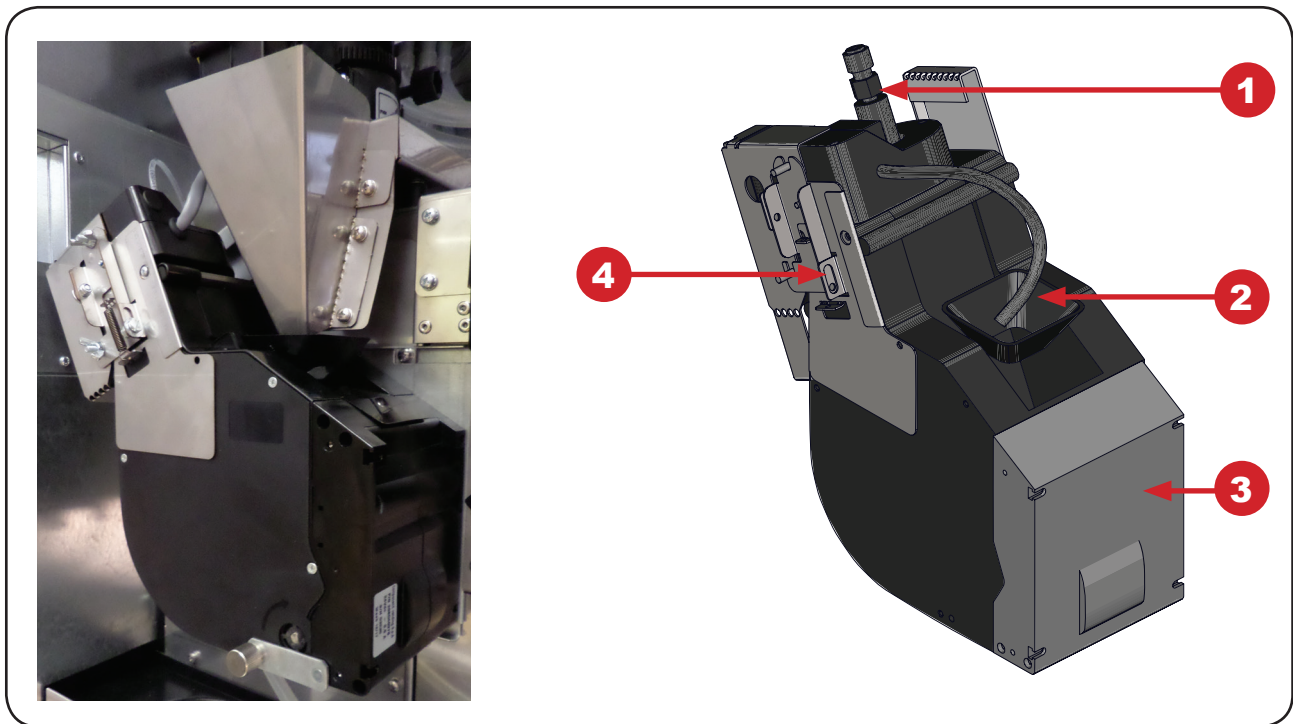
Fig.6.23 - Vario-brewer

1. Hot water supply from the boiler
2. Ground coffee supply funnel to the coffee maker
3. Gear motor
4. Vario-brewer protection

Description of espresso group's functioning:

 Initially the vario-brewer is in open position.

The ground coffee enters the inlet (2), after which the reducer-motor closes the espresso group, pressing the coffee powder.

Hot water, from the boiler, is passed through the pressed coffee.

After pumping specified in the recipe drink water volume -gear motor translates vario-brewer in the open state, unloading coffee grounds along the rail (4) into the pipe dumping of solid waste, and then into the bag.

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 vario-brewer, it is necessary to remove the whole group. The group can be removed as shown in fig.6.24.
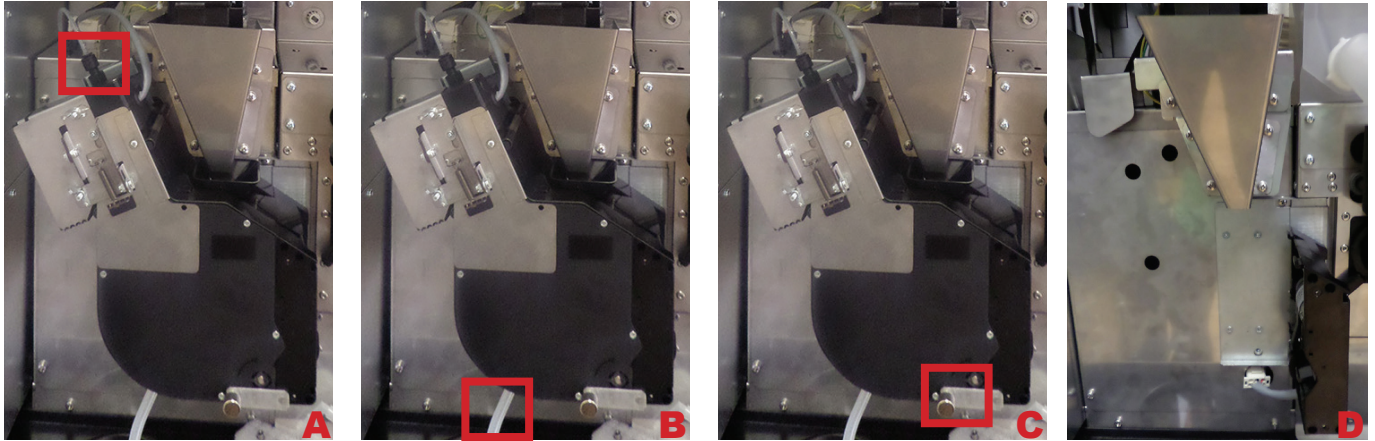
Removing the vario-brewer:

Fig.6.24 - Removing the vario-brewer

1.   Disconnect the hot water supply pipe, unclamping the fixator (fig.6.24a).

2.   Disconnect the ready drink dispensing pipe together with the nozzle from the holder, lifting the spring used to fix the pipe (fig.6.24b).

3. Turn the vario-brewer fixation screw counter clockwise (fig.6.24c).

4. Disconnect the electrical connector of the vario-brewer.

5. Remove the vario-brewer (fig.6.24d).

To install the vario-brewer carry-out the above-mentioned actions in reverse sequence.

Vario-brewer brewing camera volume adjustment:

To adjust the brewing camera volume:

-   Open the vending machine door;
-   Insert the service key into the door trip (see section 2.2);
-   Open the door of the electronics compartment, press and hold till the audible signal sounds the **MENU TECHNICIAN** service button, located on the controller board bracket;
-   Press the **SETTINGS** button in the menu on the vending machine touch screen;
-   In the **VM** (Vending machine) tab set 1 in the **COFFEE NUMBER** field -1;
-   On the **COFFEE 1** tab in the **ADJUSTABLE COFFEE DOSE** field check the **VARIO-BREWER (7..15)** option;
-   In the **COFFEE 1 RECIPES** tab press the **Add** or **Edit** the recipe. In the recipe window in the **INGREDIENT** field choose the **COFFEE 1** or **COFFEE 2** value (in the case the vending machine has two coffee grinders), in the **QUANTITY** field specify the coffee weight in tenths of gram in the range from 70 to 150 (all values smaller than 70 are 7 g, all values larger than 150 are 15 g). Thus, this setting permits regulating the amount of ground coffee added to a drink.

> ⚠️ *ATTENTION! Before activating the Vario-brewer mode, adjust the dosing unit in such a way that one coffee portion will be 7 g sharp (if the dosing unit permits adjusting the values to 6.8 and 7.2, select 6.8 g) for more information contact the service centre.*
> *ATTENTION! This setting should ALWAYS be ACTIVATED! Otherwise, the vario-group misoperation, coffee beans based drinks blockage or vario-group breakage is possible. When replacing the circuit boards first switch the vario-group off, adjust the settings, and only then enable the vario-group (with power supply switched off)!*

For vending machines with vario-brewer without protection (fig.6.25a):

When removing the vario-brewer it's PROHIBITED to switch it back to zero position. If the vario-brewer is not in zero position first you should initialize the vending machine with the disconnected vario-brewer connector (so that the vario-group come to zero position) then switch off power, connect the vario-group connector and switch on the vending machine!

Failure to observe these requirements may lead to the vario-group and vending machine breakdown.

Should you have any questions about the vario-group operation consult the supplier service centre.

For vending machines without vario-brewer without protection (fig.6.25b):

When removing and installing the vario-brewer back into the vending machine, it automatically cancels the protection system.

The protection system principle of operation is the following:

In the event of incorrect installation, the gear motor rises up, and in the initialization mode, the search for "zero" position occurs. When the gears coincide, the gear motor lowers to a regular position. This can rule out the vario-brewer breakages.

Fig.6.25a - Vario-brewer without protection
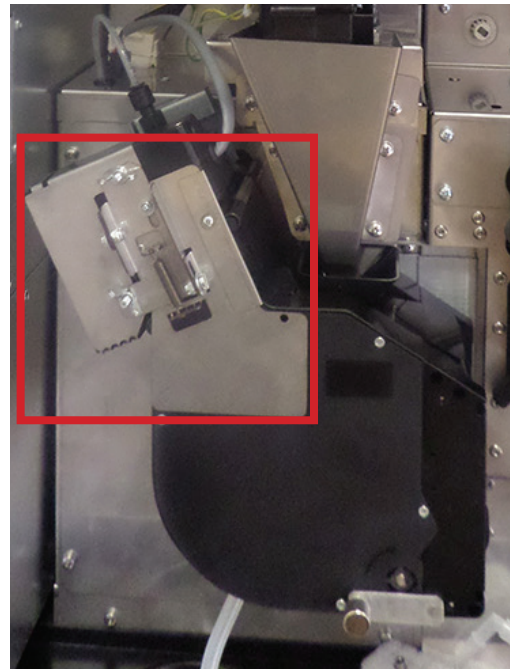
Fig.6.25b - Vario-brewer with protection

6.11 Water selector

The water selector (fig.6.26) 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.

Fig.6.26 - Water selector

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

6.12 Mixers for instant ingredients
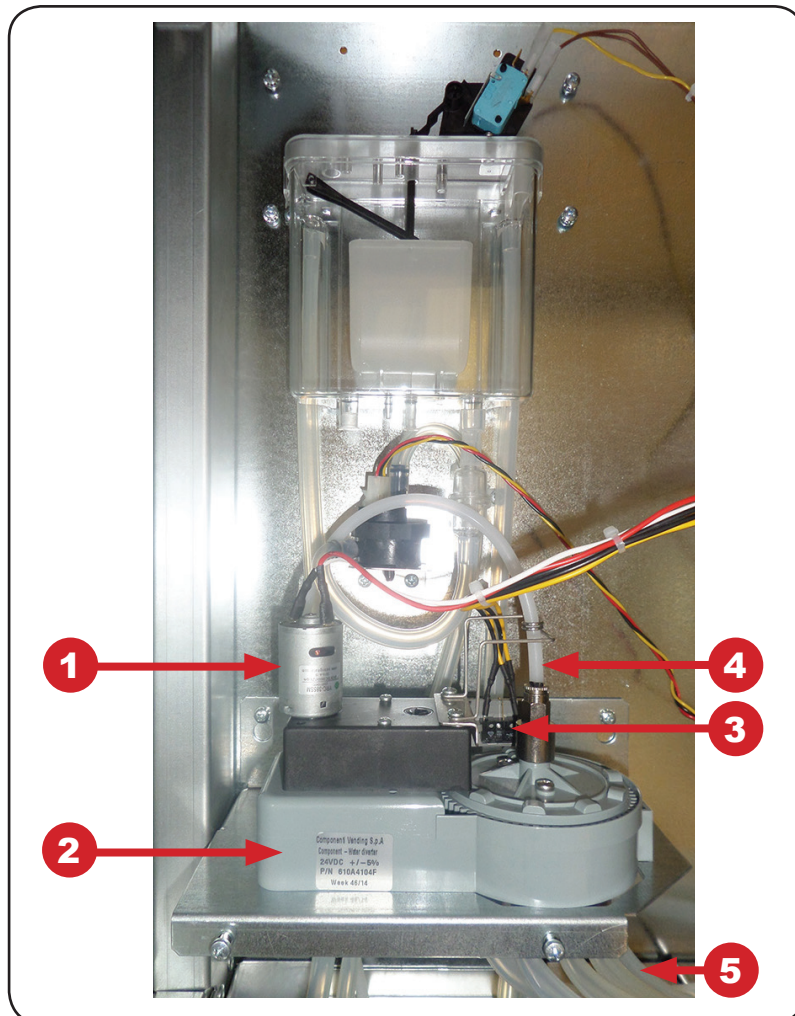
The instant drinks, which are made of instant ingredients, are prepared in the mixers (fig.6.27).

The vending machine, depending on the configuration, has 4 or 5 mixers.

Each mixer is installed and connected in front of the container with the relevant ingredient.

In a **(1 + 6)** configuration, one mixer is used directly on two containers.

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.
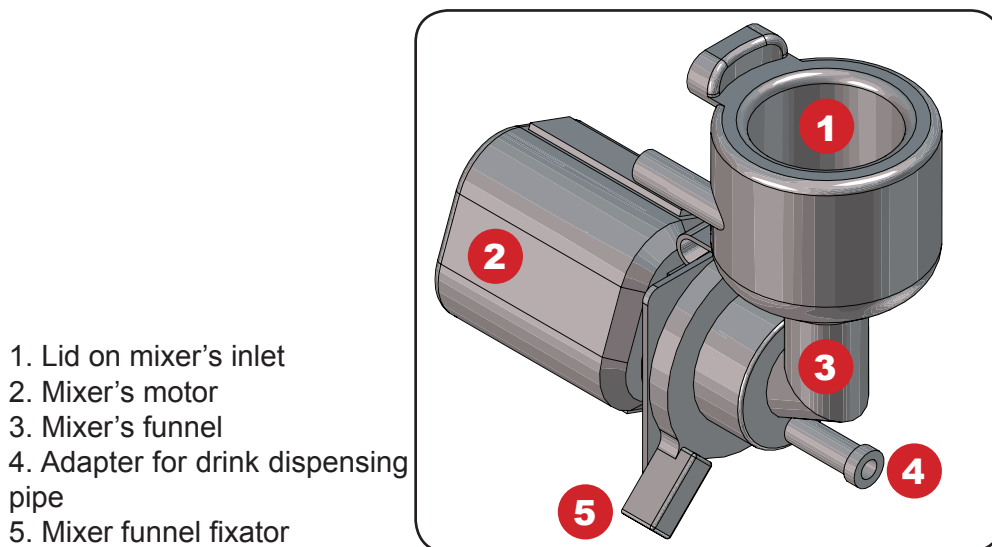

1. Lid on mixer's inlet
2. Mixer's motor
3. Mixer's funnel
4. Adapter for drink dispensing pipe
5. Mixer funnel fixator

Fig.6.27 - Mixer

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. Remove the mixer the funnel (fig.6.28a);
2. Disconnect the drink dispensing pipe (fig.6.28b);
3. Turn the handle on the funnel fixator downwards (fig.6.28c);
4. Carefully pull out the funnel (fig.6.28d).

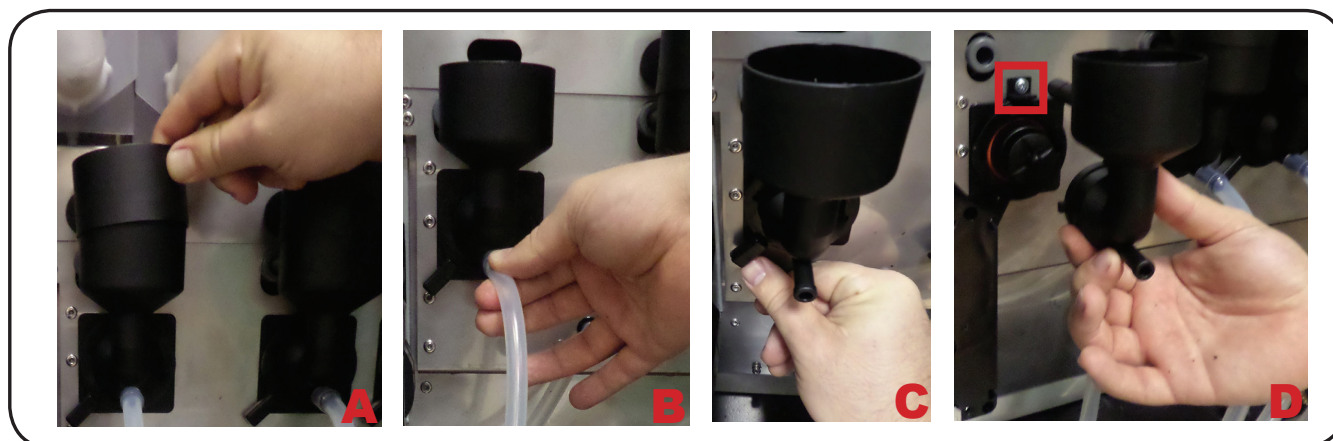For installation perform the same steps in reverse order.

Fig.6.28 - Removing the mixer

To remove the mixer's motor, loosen the screw, which holds the mixer to the bracket (fig.6.28d), and remove the motor. After that disconnect the power connector.

6.13 Vending machine control and monitoring device

6.13.1 Description

The control system and control the machine consists of the following electronic components:

• Power supply board. Performs automatic actuating device management functions, interrogates sensors and controls the beverage preparation process. The power board contains all the recipes and configurations.

• 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.

• The interface computer. Full fills the functions of the information display and interacts with the customer. The computer keeps the pictures of all the products and their names/descriptions in the different languages. The computer operates the Main Board, while being connected to it through Ethernet.

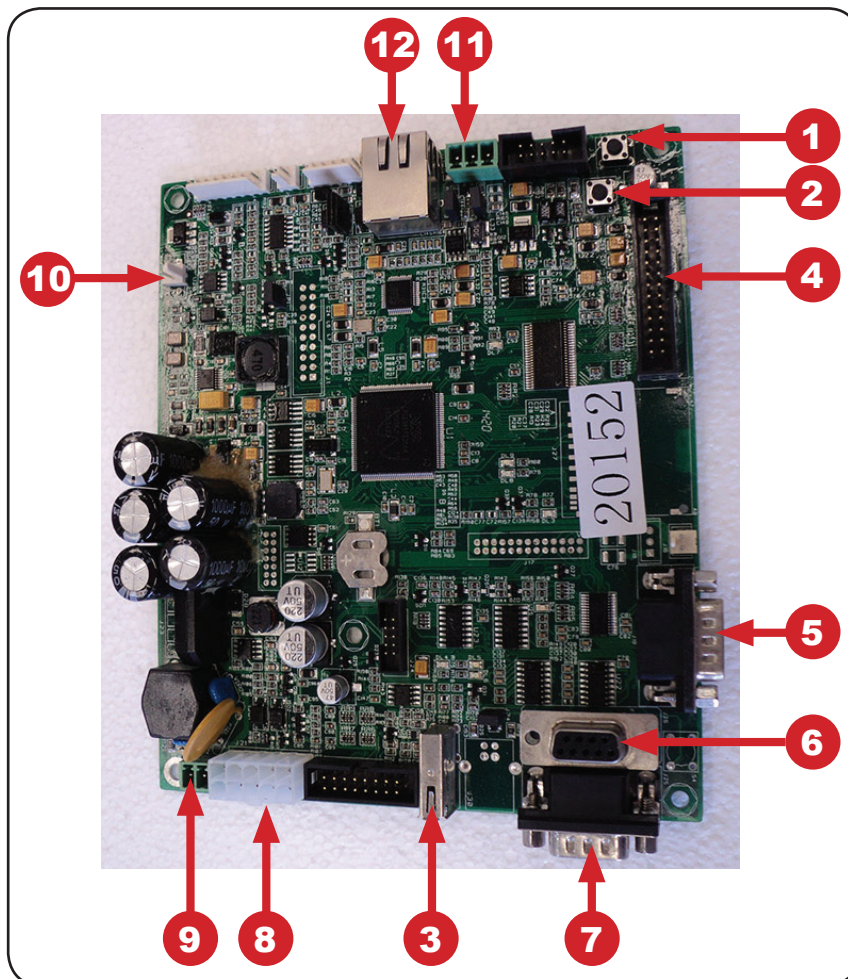**Fig.6.29 - Main board (controller)**

1.   Operator's menu access button (used as reserve button, for use when regular service button does not work).
2.   Technician's menu access button (used as reserve button, for use when regular service button does not work).
3.   USB connector (socket).
4.   Touch screen 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.
12.   Slot Ethernet.

The main operating mode of the machine is the sales mode, in which the customer service and control of the units and devices included in the machine are carried out. The transition to this mode is carried out immediately after switching on the controller of the machine.

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 enter service mode, it is necessary to open the door of the machine, insert the service key into the breaker, then open the closed door of the electronics compartment and on the bracket of the controller card, press, holding down to the beep, the service button to go to the desired menu.

The machine may be connected to the outer net through Ethernet, for which purpose a router must be additionally installed in the machine, fulfilling the following functions:
  • Assignment of the static IP-address to the Main Board (this board does not support the DHCP protocol and cannot get a dynamic IP-address from DHCP- server when initializing);
  • Protection from the intruders (without router, the intruder can connect to the Main Board and perform any actions to it).

This connection may be needed in case the cashless payment systems are used and the cards' credits are being kept on the outer server.

> ⚠️ *__WARNING! As the computer is connected to the Main Board through Ethernet, the net settings are kept on the Main Board. The settings being changed, the machine's work will be violated. Thus it is recommended to clean up all the settings from the Ethernet tab in the configuration files used for the ROSSO TOUCH TO GO. If the settings, nevertheless, were changed, it is needed to restore them (see the part The Start up of the Ethernet Settings in the Main Board, as follows).__*

6.13.2 The Start up of the Ethernet settings in the Main Board

If wrong Ethernet settings are chosen in the Main Board, the machine will not be able to be operated through the sensory display. The error **OUT OF ORDER** will be displayed on the screen and the operation will be unavailable.

This phrase may also appear in the following cases:

• The Main Board is de energized (the service door is open and the service key is not inserted)..
• The Ethernet cable is unplugged or plugged in the wrong way.
• False Ethernet settings in the computer.

To restore the Ethernet settings, one should have a USB-flash storage device, formatted in the FAT-16 or FAT-32 systems.

The root folder of this device should contain the configuration file with the name of CONF_GEN.DTS, which contains the right settings. That is a text file in the ANSI-encoding. The contents of the file for the factory Ethernet settings follows:

• MC5˙0˙PERIPH˙˙˙1

• MC5˙1˙LAN˙0˙1˙005047589658

• MC5˙2˙LAN˙1˙172˙21˙22˙193

• MC5˙3˙LAN˙2˙255˙255˙255˙0

• MC5˙4˙LAN˙3 ˙172˙21˙22˙90

• MC5˙5˙LAN˙5˙1

Details of the operation of the controller board Ethernet settings:

• Open the service door, without inserting a service key (controller board must be de-energized);
• Open the door of the electronics compartment and insert the storage device USB-flash drive (fig.6.29 pos. 3) into the USB port of the controller board;
• To press both black buttons of entering the menu at the same time on the Main Board (the buttons on the board, not on the panel), and while keeping them pressed to insert the service key (fig.6.29 pos.1 and 2). To hold the buttons;
• Insert the service key in the door lock, hold down the button. Hold down the button until you hear a melody;
• After the tune is finished, the buttons may be let go. The start up of the configuration file will start;
• After the start up is finished, the second tune will play;
• Wait until LEDs stop flashing;
• Before removing USB stick wait until green led on main board will stop flashing;
• To remove the storage device.

6.13.3 Installing and running of the interface program

The program ***RBT_Interface or RT_Interface*** must be installed on the computer. It is necessary to install DirectX 9 and Flash-player for this program to work (program RT_Interface does not support the Flash-player). The program itself does not need to be installed. It consists of five files (or, of six files in case of both versions at once was installed), and the folder, which must be installed in one common folder.

The RT_Interface program is a crippled version of the RBT_Interface program, and it has the following differences:

- There is only one screen;
- Does not support a snack;
- Does not support a combo sale;
- It will not play video during dispensing (does not support the Flash-player);
- In all modes (except for the menus) plays video (including the time of sale);
- It has a different format of drinks pictures;
- Small and large images have a similar format, so the software will automatically use the small one instead of the big one, or, vice versa, - in the absence of a corresponding image.

The following files must be in the folder:

- File RBT_Interface.exe and/or RT_Interface.exe
- File Unicum_Confgurator.dll
- File Unicum_Audit.dll
- File zlib1.dll
- File rbt_unlock.exe
- Folder "Products" which will contain the pictures, names and descriptions of the products. At the first start up, the folder may be left empty

After the installation of the program it is necessary to create a shortcuts on the desktop for its start up, which will contain the starter settings.
For this the computer keyboard must be connected.

The consequence of actions:

- To touch the file RBT_Interface.exe once to highlight it;
- To press the ***Menu*** button (fig.6.30) or ***(Shift + F10)*** combination
- To select the menu ***Create a shortcuts*** in the window opened;
- To press the created shortcuts once;
- To press the ***Menu*** button or ***(Shift + F10)***;
- To select the menu ***Properties***;
- Within the field ***Object***, immediately after the file name ... \RBT_Interface.exe (\RT_Interface.exe), add a space, and then enter the settings.
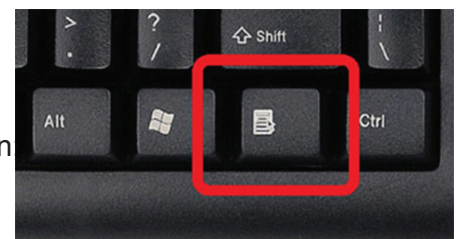
At that, input parameters must be separated by a space character. The sequence of input parameters can be arbitrary. Parameters, except the parameter /I, are optional. The parameters are entered in the following format (example):

Fig.6.30 - Button Menu

/I space 172.21.22.193 space /L space 1 space /P space password space /B space 1 space /LD space 0 space 3 space / LE space 0 space 3 space /? space /T space 0 space /R space 0

In this line:

- **/?** no parameters. It causes the program to display Help for parameters;

- **parameter /I** – after the parameter, being separated with space, the IP-address of the Main Board card is specified;

- **parameter /L** - after the parameter, being separated with space, the starting language is specified from which the program will start (0 - English, 1 - Russian, 2 - French, 3 - German, 4 - Kirghiz, 5 - Romanian, 6 - Norwegian);

- **parameter /P** - after the parameter, being separated with space, the password (from 6 to 16 symbols) is specified, which will be used to exit the program into Windows, from the main window;

- **parameter /B** - after the parameter, being separated with space, 0 or 1 is specified. /Bspace0 - denotes the black background. /Bspace1 - denotes the background type ''beehive'';

- **parameter /LD** - allows to restrict the selection of one or more languages. After LD, a list of prohibited languages should go, separated by spaces (their numbers are specified similar to those in the parameter /L). For example, /LD 0 3 disables the English and German languages. If the parameter leaves only one language allowed, the language selection button will be disabled. If the parameter /L is being used, the language specified therein should not be banned;

- **parameter /LE** - the parameter is the inverse of the parameter /LD (may not be used in conjunction with the /LD). After the parameter, being separated with spaces, is specified, list of allowed languages. For example, /LEspace 0space3 disables all languages, except English and German. If the parameter leaves only one language allowed, the language selection button will be disabled. If the parameter /L is being used, the language specified therein should not be banned;

- **parameter /T** - after the parameter, a number from 0 to 60,000 is specified being separated with space, or symbol N. The time (in seconds) is set after which the vending machine automatically returns to the main screen. The parameter is valid only for RBT_Interface. The value N totally excludes return to the main screen (it will be impossible to get there using buttons). The value 0 denotes that the vending machine never switches to the main screen. Other values indicate the time of user inactivity;

- **parameter /R** - after the parameter, a number from 0 to 60,000 is specified being separated with space. In the presence of this parameter, the computer unit will automatically reboot if within the time specified in the parameter (in seconds) there was no communication with the Main Board controller.

- To press **OK**;
- To move the shortcuts on the desktop with a finger;
- To highlight the shortcuts (once) and to press the **Menu** button or **(Shift + F10)**;
- To select the menu **Copy**;
- To enter the **Start** menu **(Ctrl + Esc)**, then select **All programs** -> Auto start up and to press the button **Menu** or **(Shift + F10)**;
- Select the menu **Open**. The Auto start up folder will open;
- To select in this folder **Edit**-> **Insert**. The shortcuts of the program's start up will be copied in the auto-start up folder, and now the program will automatically start up at the start of Windows;
- At this point the installation of the program is finished and it may be started by pressing on the short-cuts on the desktop twice.

6.13.4 The names and the pictures of the products

The basic product names on the main language are kept in the settings of the Main Board. They may be read from the board of recorded on the board through the configuration file or through the technician's menu.

To edit/browse the names through the technician's menu it is necessary (the RBT_Interface or RB_Interface program must be running):

• To open the vending machine door;

• Open the door of the electronics compartment;

• To insert the service key to energize the Main Board;

• To wait until the initialization is finished;

• To enter the technician menu (to press and hold for 1 seconds the button *Technician menu* until you hear the signal);

• The screen will display home menu technique. If the password is installed on entering the technician menu, a password window will appear instead of the menu. Enter the password;

• In the technician menu press the button *Settings* on the display. The window with the Main Board settings will open;

• Select the tab *Coffee 1 Plan*. If there is no such a tab , select the tab *VM*, set up there *Coffee number* in 1, and remove the choice *Don't change*;

• The names of all the beverages kept on the Main Board are shown on the tab *Coffee 1 Plan*. If necessary, they may be changed. All the names must be saved, as they will be used for the files with the names and the descriptions in different languages and for the files with the pictures of the products as well;

• To press the button *Exit*. If the settings were changed, the program will ask if these changes should be saved on the Main Board. If you press Yes, all the settings will be saved on the board. The button *Settings* will be inactive during the time of saving. After the saving is finished, it will activate;

• To create/copy the files with the names/descriptions/pictures it is necessary to exit the program. There is a button *Exit* in the right lower corner in the menu mode. One should press this button, after which a question will be asked if you really want to exit into Windows. Press *Yes*.

6.13.5 Indication in foreign languages and product images

Product names stored in the settings of the controller board are used for searching for files that contain names / descriptions / images of the products in foreign languages. For this, the folder "Products" is used that is located within the same folder where the program is installed.

In this folder, up to 16 files for each product could be located, including names of each product, images for the select buttons of the vending machine drinks, and product images that would appear at connecting to the vending machine ROSSO TOUCH TO GO of the SLAVE-module (FOODBOX SLAVE or FOODBOX SLAVE LONG).

7 files are used for the product names designation in seven languages. If any files for any languages are absent, then, the name stored in the controller board (Main Board) will be used as a product name for these languages.

In each file, a name could contain up to three lines, and 249 symbols for the program RBT_ Interface, and up to two lines for the program RT_Interface.

Other 7 files are used for description of the products for sale in seven languages. In the case of a description file absence in some language / languages, this description will not be displayed for this product in this(these) language / languages. The description in each file could contain up to 7 lines, and 1024 symbols.

One file is used for an picture that is displayed on the sensor button with the product image (small picture). For snacks, this file is not required.
The aspect ratio of the image should be 1:1 (square) for RBT_Interface, or 42:55 for RT_ Interface.
The format of the image is .png, 140 x 140 (35 pixel/cm); dimensions in the screen 4 × 4 cm for RBT_Interface, or 170 × 223 - for RB_Interface. Please pay attention that the image is scaled automatically.

The last file is used for a large picture that is displayed when the certain product is selected (coffee, snacks).
The aspect ratio of the image should be 3:4 for RBT_Interface, or 42:55 for RB_Interface.
The format of the image is .png, 180 × 240 pixels, dimensions in the screen 5.14 × 6.86 cm for RBT_Interface, or 504 x 660 for RT_Interface. Please pay attention that the image is scaled automatically.

Files with the product names and descriptions are the text files. They could be created using the standard application - program *Notebook*.

> *NOTE: The images must be stored in the format PNG, they could contain the so-called "alpha-channel" (transparent, semi-transparent, non-transparent zones).*

> **ATTENTION!**
> *The files must be stored in UNICODE! In the notebook, the coding is specified within the file saving window. Any other coding being selected, the names / descriptions will be displayed incorrectly.*

All files are designated according to the name of the product stored in the controller board (Main Board). These designations could contain up to 20 symbols.
In the file name, none of the following symbols could be used: \ / : * ? " < > |

To the resulting file name, the appropriate extension is attributed. There are 16 possible extensions for each file type (15 extensions for snacks):

.nm0.txt - For name in English

.nm1.txt - For name in Russian

.nm2.txt - For name in German

.nm3.txt - For name in French

.nm4.txt - For name in Kirghiz

.nm5.txt - For name in Romanian

.nm6.txt - For name in Norwegian

.ds0.txt - For description in English

.ds1.txt - For description in Russian

.ds2.txt - For description in German

.ds3.txt - For description in French

.ds4.txt - For description in Kirghiz

.ds5.txt - For description in Romanian

.ds6.txt - For description in Norwegian

.png   - For picture on the drink selection button (do not being used for snacks)

.full.png - For picture in the product description

For example:

If the product is named *Espresso* in the controller board (Main Board), so its name in English must be stored in the file Espresso.nm0.txt

The files containing names / descriptions / pictures are, as a rule, prepared beforehand on the stationary computer or notebook.

Then, the files are copied to the USB flash drive. On the vending machine, the USB flash drive is necessary to connect to the USB-port of the computer unit (fig.6.29 pos.3), whereupon simply copy the folder contents to the folder Products.

When passing from the RBT_Interface to the RT_Interface, it is necessary to draw again all pictures of the drinks (see below).

Picture requirements for the RT_Interface:

The main elements of the picture should contain:

1. Bottom layer - represents a 2d surface on which the cup «stands» + «glow» around the cup. The size and position of the bottom layer elements:

a. Surface - size 504 × 30 px. Position - 160 px from the lower edge. The surface layer is located above the layer of the drink cup.

b. Glow – size 431 × 321 px. Position: along X-axis – by the screen center, along Y-axis – 160 px from the lower edge. The surface layer is located below the layer of the drink cup.

2. Drink cup.

a. Size - arbitrary, depending on a drink, but no more than 441 px in altitude, and 494 px in width.

b. Position: along X-axis – by the screen center, along Y-axis – 160 px from the lower edge. The surface layer is located above the layer of the drink cup glowing.

> ⚠️ **ATTENTION!**
> **At locating the drink cup (made of transparent glass) image, it is necessary to edit the image in such a way as to see the background through the glass surfaces. It is inadmissible that the glass cup image does not preserve the glass texture transparency.**
> **The drink cup picture must be "2d" (two-dimensional). It is inadmissible that the drink cup picture is located "angularly".**
> **The area in the upper right angle of the button, 200 × 84 px in size, should be free of the image elements.**

3. Drink cup reflection.

Position: along X-axis – by the screen center, along Y-axis – 160 px from the lower edge, the lower edge - 70 px from the lower side. The reflection is formed by means of the drink cup layer duplicating, its vertical reflection, transparency mask using, and gradient fill of the mask. Additionally, the transparency of 30% is used to the whole layer.

4. General background of the image - transparent.

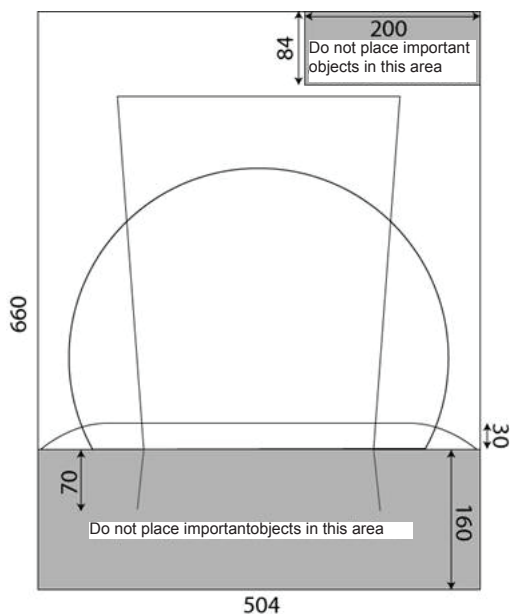5. Diagrammatic view of the main elements:

Image size (W x H): 504 x 660 px.

Resolution - 96 px / inch

Color scheme - RGB

Final format of the file - .png

> ⚠️ **ATTENTION! These requirements are obligatory for application only if new pictures are added along with already existing ones. If ALL the pictures are changed, while the old ones are deleted, then the own arrangement and layout of elements are possible, depending on the artistic taste of the vending machine owner.**
> **PLEASE NOTE! It is recommended not to place important elements of the image in the bottom of the picture – the area of 160 px from the lower edge, - as in this area the text of the drink name is located. In this area, the images with high transparency could be located that does not affect the readability of the text imposed on them.**

6.13.6 Service keypad

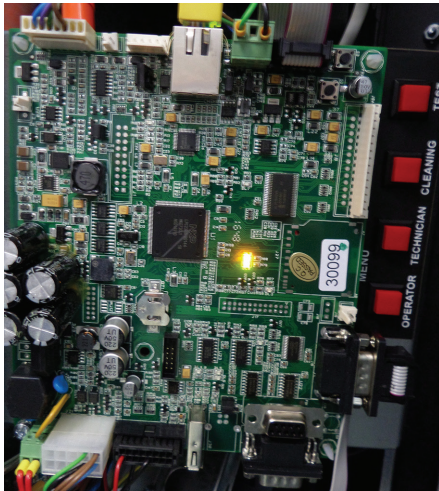The vending machine is equipped with a service keypad located on the bracket of the controller board:

Fig.6.31 - Service keypad

- *Operator menu* - entry into the operator menu;

- *Technician menu* - entry into the service engineer (technician) menu;

- *Cleaning* - activation of the automatic washing of machine units;

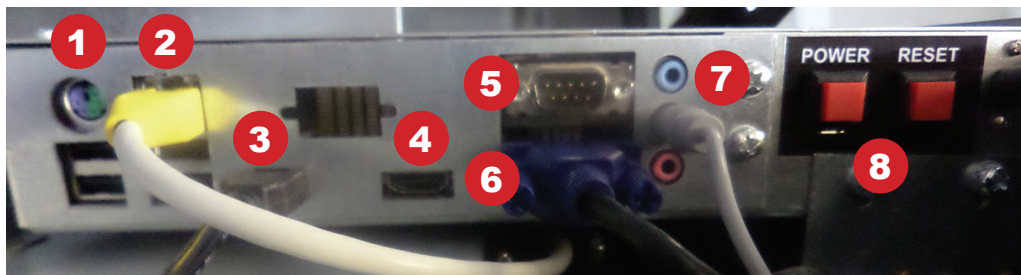- *Test* - the mode of beverage making without money acceptance, for checking up the process of beverage making.

6.13.7 System unit

Fig.6.32 - System unit

1. 2USB+keyboard sockets
2. Phone socket (LAN-port)
3. USB 3.0 socket
4. HDMI socket
5. DB-9F socket
6. DBRH-15F socket
7. Audio connector
8. Button system unit

- *POWER* - The button of correct completion of work of OS of the automatic device and shutdown of power supplies of the system unit;

- *RESET* - Reset button hardware. It used if there was a failure of the operating system (for example, operating system crash).

6.13.8 Playing the video files in the main window mode

When the machine is in standby mode, the default touch screen displays the main window. At the top, you can broadcast videos clips .

If your machine is set program RT_Interface broadcast video clips available in all modes (except for the menu), including at the time of sale.

Location and installation of video files

The program includes a video file named ''Adverts'', which is located on the folder in the system unit *C:\Adverts*.

All the videos clips that are broadcast on the screen to be copied to this folder.

Clips are played in alphabetical order of the cycle.

Supported video formats

All videos must be prepared in 4: 3 format with progressive scanning (border less). The recommended resolution of 1024 x 768 px. Fields (also known as half-frames or Interlacing Format) - a special format for storing video information, where each video frame belongs to the second line of the next frame.

Typically, video files with the fields produced when the video camera is removed, having non-progressive scan (2: 1 interlaced). Showing similar video will be distorted.

Video format must be maintained ''DirectShow'': formats AVI, WMV, MOV, MPG4 ... etc ...

If you copy the video file is not supported ''Direct Show'' or uses a video codec that is not installed on the computer unit machine, the file will not be televised.

Stop the video translation

To stop the translation one or more videos that you want to delete or move videofile(s) in the folder *C: \ Adverts.*

> **WARNING!**
> **Folder ''Adverts'' should only contain video files!**

6.13.9 Games in the selling mode

During the preparation of a beverage (or choice) machine allows us to offer the customer a video game.

If the machine is installed the program RT_Interface - video games can not be played (not supported Flash-player).

Location and installation game files

Files compatible games to be installed in a folder "Games" that is on the system machine unit C.
To install the game(s), copy the file to a folder with the game *C: \ Games*.
Each order is placed to delivery, the customer will be offered a video from the folder *C: \ Games*.
The next time you order, the client will be offered to the next game.
Games are offered in alphabetical order the names of game files on a cycle.

Supported game formats

Video games should be compatible with the version Flash-player installed in the machine.
Resolution supported SWF. Games with the extension does EXE not support automatic.

Stop playing video game

To stop the broadcasting of one or more video games, you must delete or move them to the file (s) from a folder *C:\Games*.

> **WARNING!**
> **The folder "Games" should contain only the files of video games!**

6.13.10 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 (fig.6.33):

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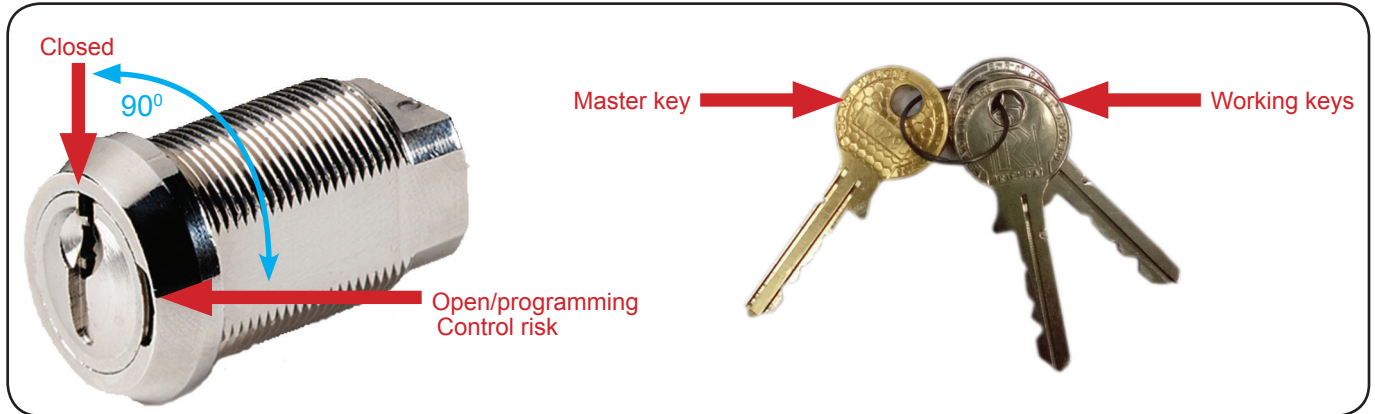- Two operating **SILVER** key - used for opening / closing machine door.

Fig.6.33 - Lock RIELDA

The lock can be located in two positions:

- Operating position ("closed" position - fig.6.33);

- Position for the programming (the "open" position - fig.6.33).

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

> **WARNING!**
> **Programming lock operations must be performed only when the machine door is open! Otherwise, there will be lock (lock) the door latch.**
> **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 - fig.6.33) 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.

- 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 -fig.6.33).

- 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.

7.0 USER MENU

7.1 Switching-on

Each time when switching on the vending machine executes the equipment check and heats the boiler up to the temperature set in the vending machine settings (see fig. 7.1).

When heating the boiler up to the preset temperature the *HOT DRINKS* touch button becomes available.

The vending machine is ready for operation. If for any reason the vending machine can't reach the operating condition the corresponding message is shown on the touch screen.
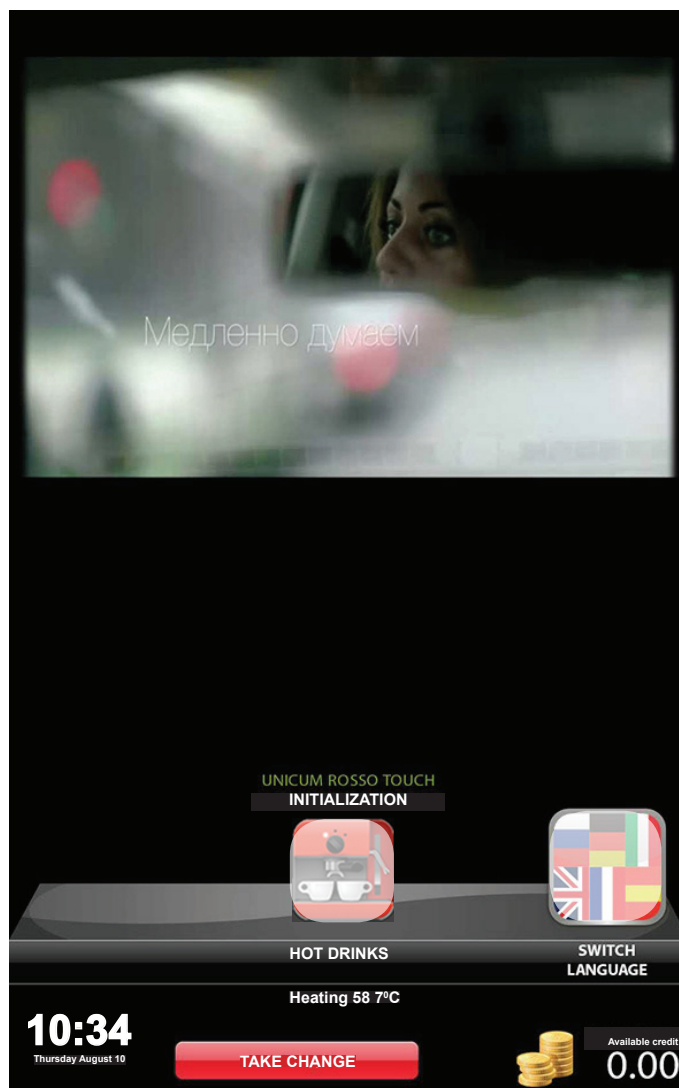

Fig.7.1 - Initialization

7.2 User menu

After the successful equipment initialization and heating the boiler up to the preset temperature the vending machine switches to vending operation. At the same time, the **HOT DRINKS** button on the vending machine screen becomes available (fig. 7.2).

The user should select the language, which will be used for menu display, by pressing the **SWITCH LANGUAGE** button and selecting the desired language in the drop-down menu (fig.7.2).
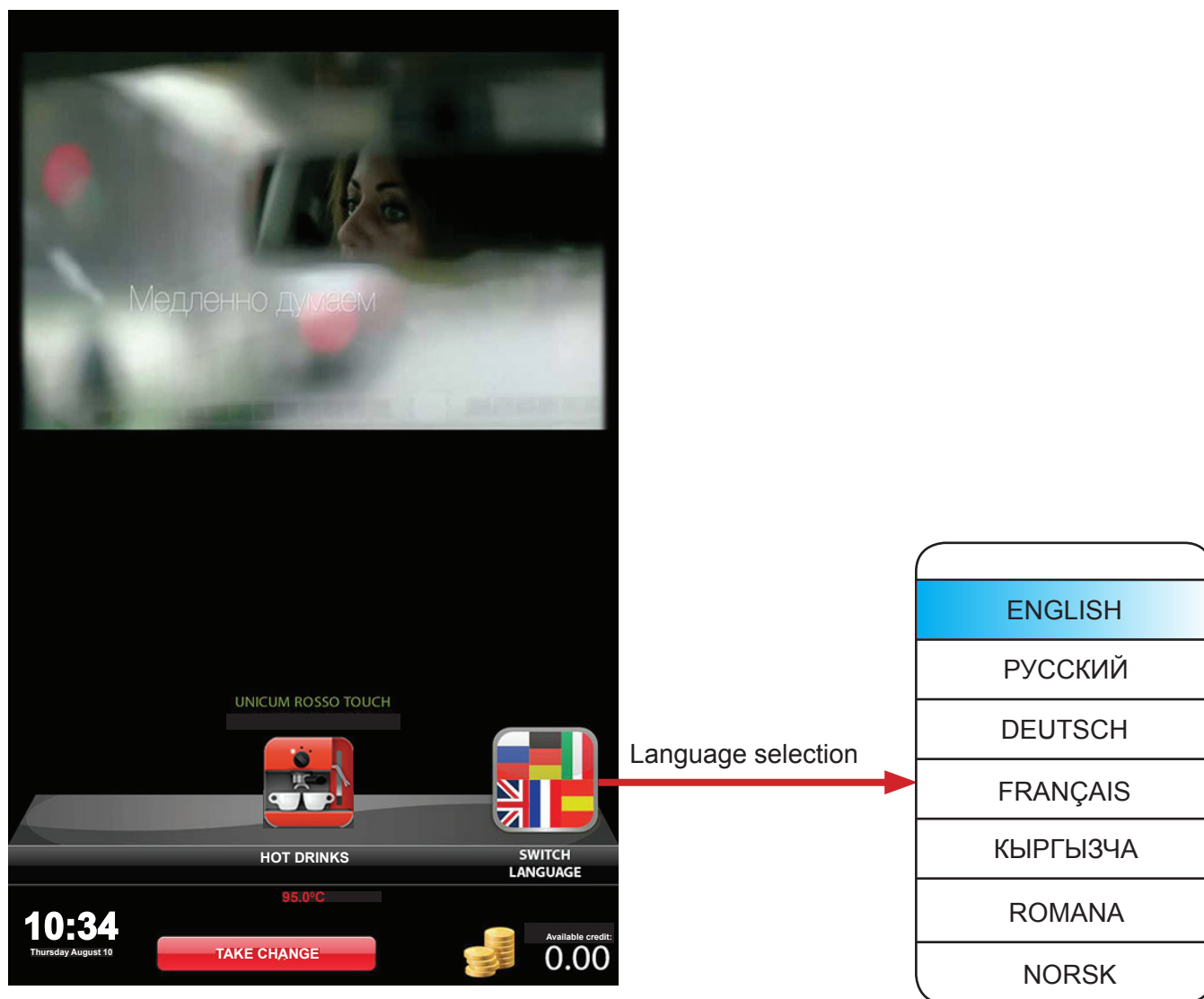
Fig.7.2 - Language selection

After choosing the desired language, proceed to the menu to choose the desired drink by pressing the **HOT DRINKS** button. The vending machine screen will show a page with drinks images as shown on fig. 7.4 if the RBT_Interface is installed, or a page with drinks images as shown on fig. 7.5, if the RB_Interface is installed.

Fig.7.3 - Drink selection (RBT_Interface)

Page description:

1. Main menu navigation button
2. The vending machine internal clock time and date indication
3. A button for giving out change
4. A window with the selected product description and a choice whether to dispense a lid or not
5. The adjustment of the amount of sugar dispensed to the drink
6. Selection buttons (drink image, name, price)
7. Menu language selection button
8. Indication of: entered credit, boiler temperature, system messages
9. Selected drink image and price

Fig.7.3 - Drink selection (RBT_Interface)

Page description:

1. Video clip
2. The vending machine internal clock time indication
3. A window with the selected drink image and name, the adjustment of the amount of sugar dispensed to the drink, and a choice whether to dispense a lid or not (the window will appear when selecting a drink)
4. Menu language selection button
5. Selection buttons (drink image, name, price)
6. Welcome, boiler temperature

7.3 Product selection

Enter a credit, which will be enough for buying a drink, by using the vending machine payment systems.

Press the **HOT DRINKS** button (when the SLAVE-module for snacks and cold drinks is connected, on the home page in addition to and next to the **HOT DRINKS** button there will be a **SNACKS & DRINKS** button (fig.7.5).

Fig.7.5

Snack or cold drink selection (with SLAVE-module connected):

Enter a credit, which will be enough for buying a product, by using the vending machine payment systems.

On the menu home page press the **SNACKS & DRINKS** button.

Enter the desired product cell number by using the touch keypad (fig.7.6).

Then click the button **SELECT** (fig.7.6).
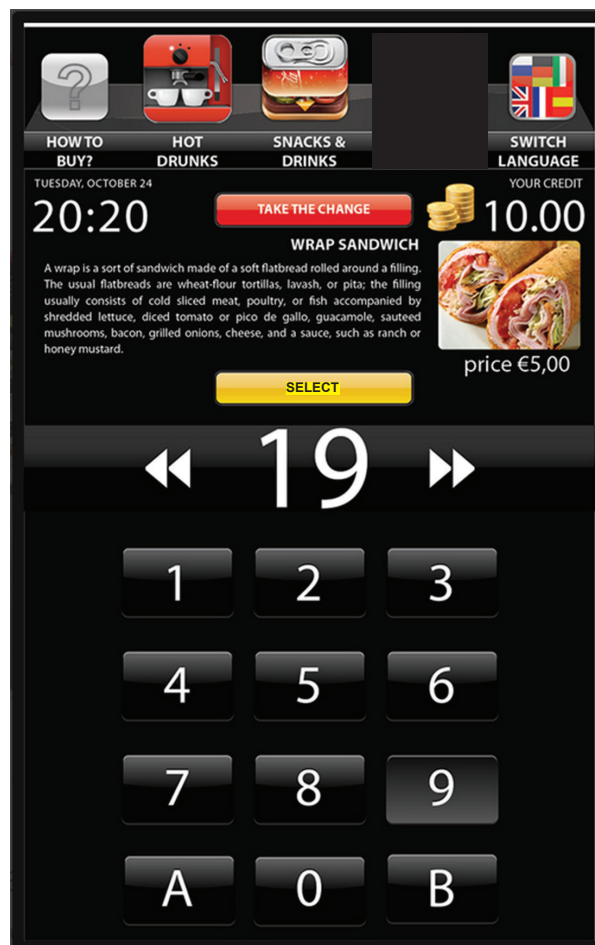
Fig.7.6 - Snack or cold drink selection for SLAVE-module

Hot drink choice

Enter a credit, which will be enough for buying a drink, by using the vending machine payment systems.

On the menu home page press the **HOT DRINKS** button.

Select the amount of sugar dispensed into the drink (from 0 to 6).

Press the button with the desired drink.

In the appeared window make a choice whether to dispense or not a lid for a cup of drink.

While the vending machine is making you drink you can play a mini-game (if the RBT_ Interface is installed) (fig.7.7).

To give out the change press the **TAKE CHANGE** button.

Fig.7.7 - Drink preparation

8.0 SERVICE MENU

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/technician menu:** provides the access to all controller software functionality. To enter the menu open the vending machine door, insert the service key into the door trip, open the control compartment protective casing, and press and hold till the audible signal sounds the **MENU TECHNICIAN** button, located on the controller board bracket.

• **Operator menu:**   provides the access to the vending machine functionality during periodic maintenance, such as the event log, information about the equipment operation and access to setting up the information about the drinks, and the viewing of the sales statistics. To enter the menu open the vending machine door, insert the service key into the door trip, open the control compartment protective casing, and press and hold till the audible signal sounds the **OPERATOR MENU** button, located on the controller board bracket.

After entering the required menu use the buttons on the touch screen to navigate the menu and edit the parameter values.

8.1 Menu technician (service engineer)

After entering the menu the menu home page will be displayed (fig.8.2).

> **NOTE:**
> *The password enter page will be displayed only if the password is set (fig. 8.1).*
> *By default, the password is not set.*

Fig.8.1 - Password
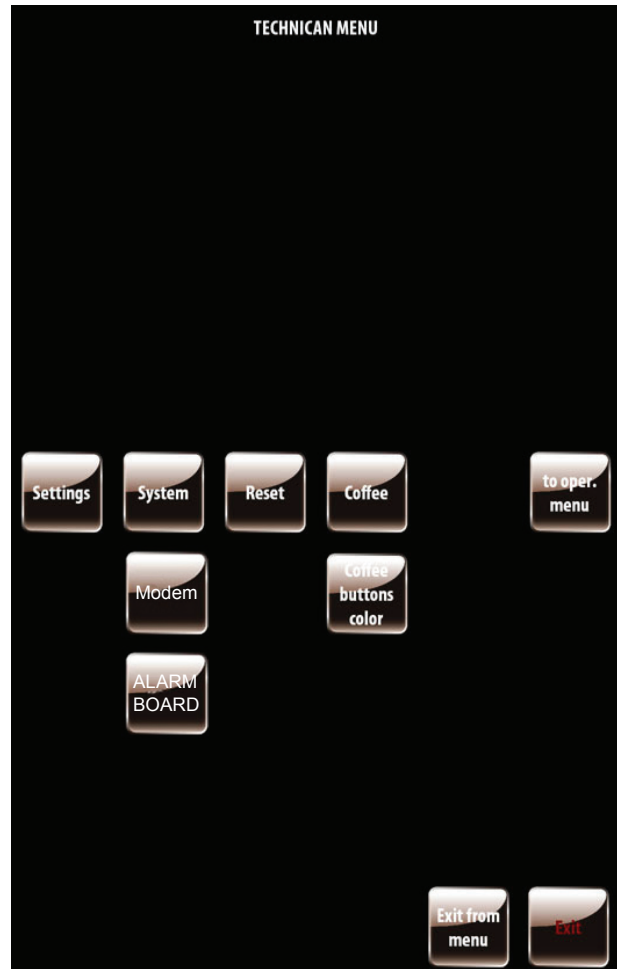
Fig.8.2 - Main page

Buttons of the main page:

- **Settings** - access to vending configurator with corresponding tabs and settings;
- **System** - access to the system settings menu machine;
- **Modem** - access to modem screen with corresponding information (if installed);
- **ALARM BOARD** - access to watchdog settings;
- **Reset** - access the menu discharged counters reset machine;
- **Coffee** - access to the menu function test machine;
- **Coffee buttons colour** - access the menu selection buttons to change colors drinks;
- **To oper. menu** - go to the main page of the operator menu;
- **Exit from menu** - exit menu Equipment menu user mode (of Commerce);
- **Exit** - output from the menu on the desktop machines of the operating system machine

8.1.1 Button [Settings]

Here you can change the vending machine basic settings. The vending machine settings are changed in the special **CONFIGURATOR** program.

After pressing the **SETTINGS** button the vending machine will display the **CONFIGURATOR** program with the vending machine basic settings tab (see fig. 8.3).

When the SLAVE-module (up to 2 pcs.) is connected, here you can make the SLAVE-module basic settings.

The instruction with the description of all settings you can download from our web-site:**http://www.unicum.ru/en/support** (CONFIGURATOR program operating instruction).

You can download the latest version of our CONFIGURATOR program for installing on the vending machine from our web-site: **http://www.unicum.ru/en/support** (Software - Configurator & Audit).

When using the CONFIGURATOR program be careful and use only the settings that are actual for your vending machine (see the description of the setting items).

If the vending machine has the RTJnterface program installed, the following configurator tabs: *Combo-product, Snack, Snack Cool./temp., Snack Plan.* - **ARE IRRELEVAN**T, because the program doesn't support combo-sales and snack.
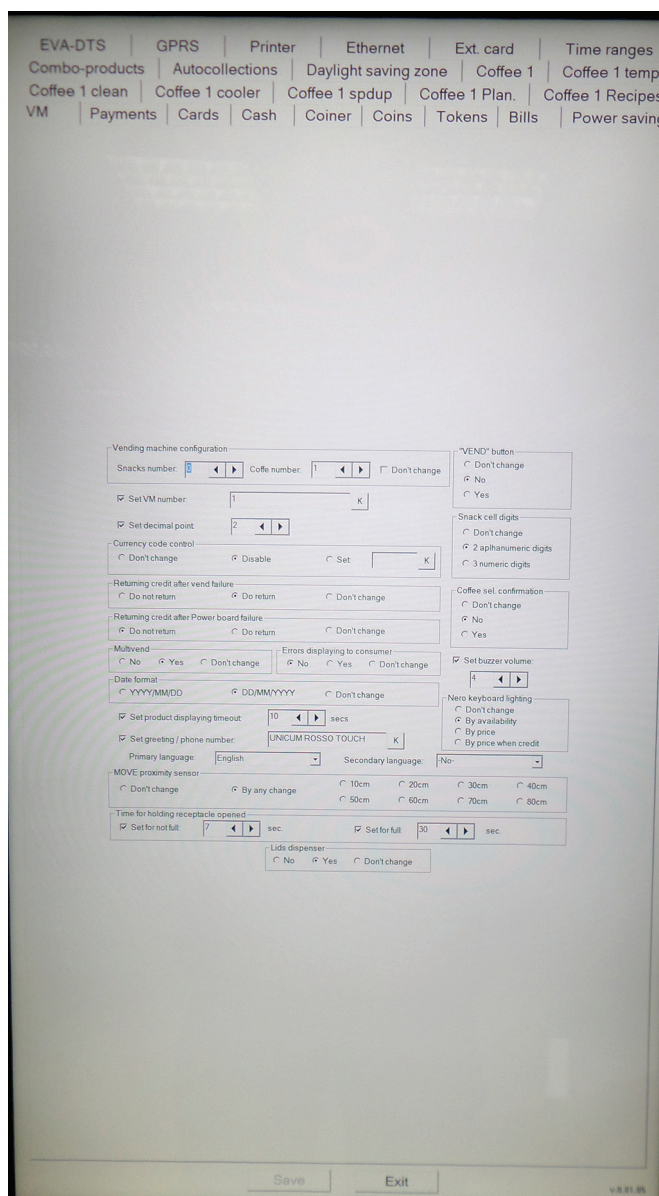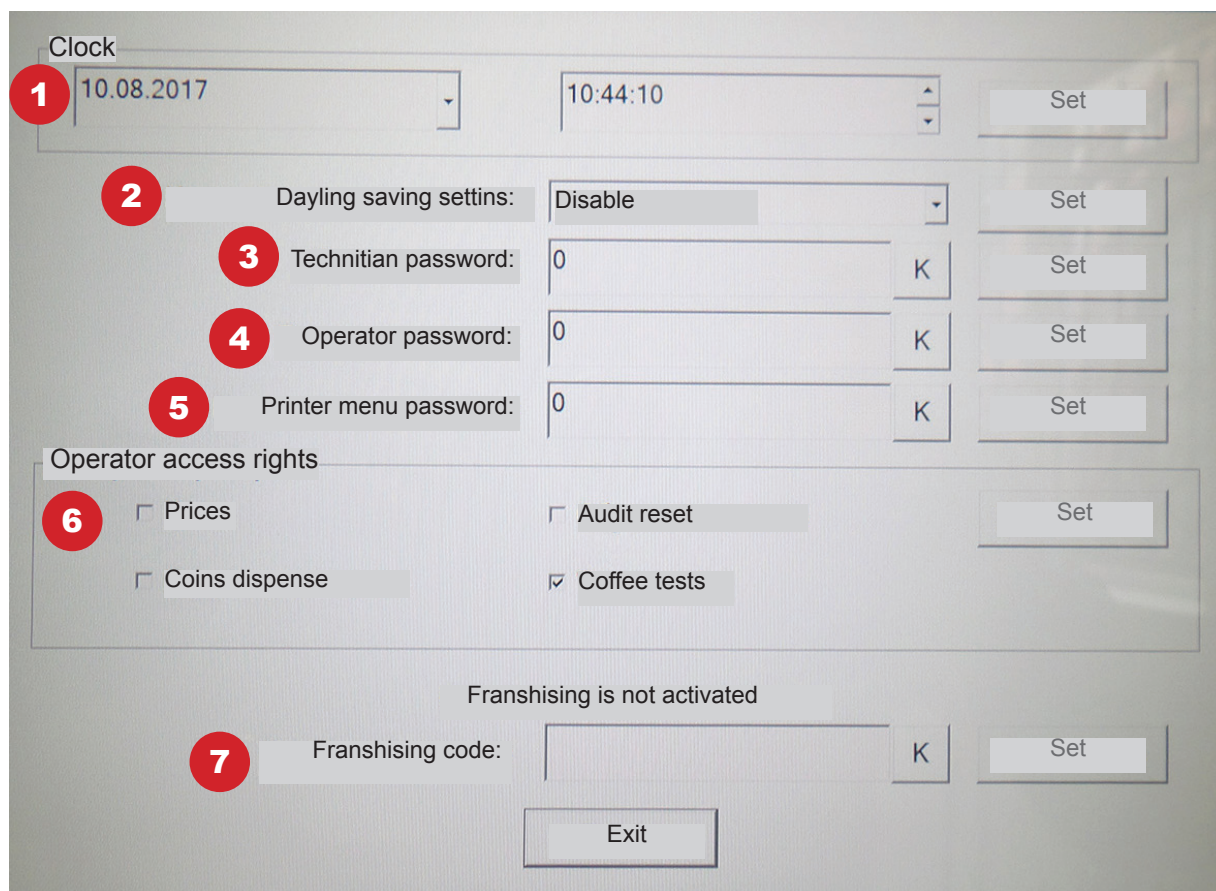
Fig.8.3 - Configurator

8.1.2 Button [System]

Here the system settings of the vending machine are.

Fig.8.4 - System

№	Field name	Description	Value
1	Clock	Setting the internal clock of the machine • Date (dd.mm.yyyy) • Time (hh.mm.ss)	
2	Daylight saving settings	Chooses terms of transferring from winter to summer time mode: • **Disabled** • **Western Europe** • **Central Europe** • **Eastern Europe**	
3	Technitian password	Enter / change the password technology. When entering a password will be prompted when entering the menu appliances (fig.8.1). To enter the password using the virtual keyboard by pressing the '' K '' in front of the input field.	8 digits, 0 .. 9 «0» - password not set
4	Operator password	Enter / change the password of the operator. When entering a password will be prompted when entering the operator menu. To enter the password using the virtual keyboard by pressing the '' K '' in front of the input field.	8 digits, 0 .. 9 «0» - password not set
5	Printer menu password	Enter / change the password to access the settings of the printer checks (if installed). To enter the password using the virtual keyboard by pressing the '' K '' in front of the input field.	8 digits, 0 .. 9 «0» - password not set

№	Field name	Description	Value
6	Operator access rights	Setting operator access rights from the operator menu: • *Prices* - enables editing prices in the Operator menu; • *Audit reset* - enables resetting audit temporary counters in the Operator menu; • *Coins dispense* - enables coin dispense by operator in the **Manual fill menu**; • *Coffee tests* - access from the operator menu to the functional tests of the machine.	
7	Franshising code	Date entry in the encoded form, before which the vending machine operation is possible (upon the expiration of the indicated date the vending machine stops the operation until the renewal of lease). To enter the code using the virtual keyboard by pressing the '' K '' in front of the input field.	16 characters 0...F

> **ATTENTION!**
> *After setting the desired parameters, press the confirm button Set opposite the modifiable parameter. Without pressing the ''Set'' option does not change.*

8.1.3 Button [Modem]

Here the information about the vending machine modem is displayed. The modem is installed optionally.
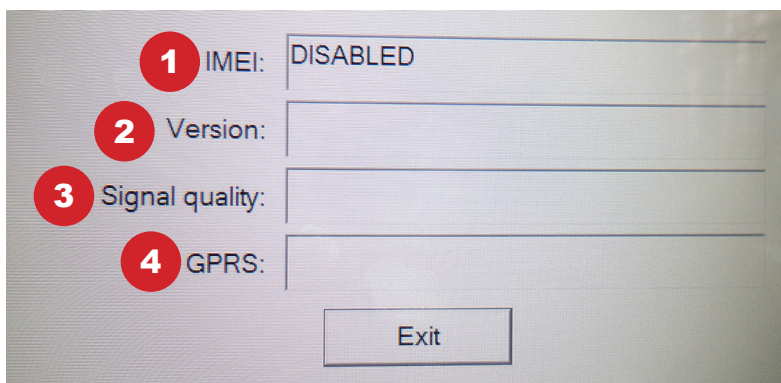

Fig.8.5 - Modem

№	Field name	Description
1	IMEI	Shows IMEI (id) of the connected modem. According to IMEI the machine can be identification on the server.
2	Version	Displays the version of the modem software and the type of modem.
3	Signal quality	Quality of the received signal.
4	GPRS	Connected or not to GPRS.

8.1.4 Button [Alarm Board]

Here the Alarm Board settings are displayed. The Alarm Board is installed optionally.
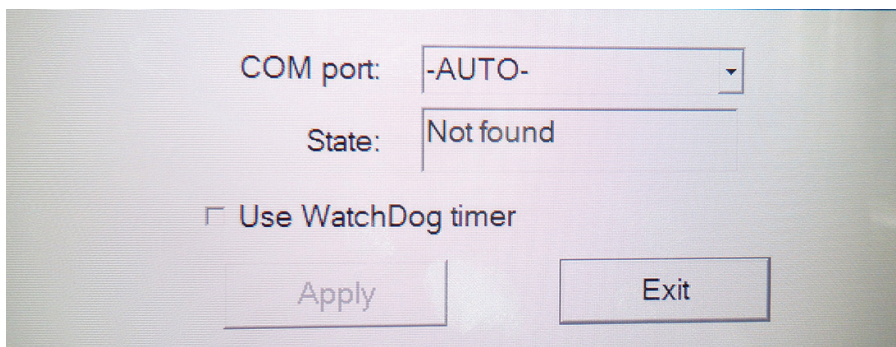
Fig.8.6 - Alarm Board

Set the **COM port** to **-AUTO-** and click the **Apply** button.

The program must determine to which port the ALARM BOARD is connected and indicate it in the COM port field. In this case, the **OK** field should appear in the **State** field.

If you want the system unit to automatically restart when the software hangs, check the **Use WatchDog timer**. After changing the settings, click the **Apply** button.

Click the **Exit** button.

> ⚠️ **ATTENTION!**
> *This setting only makes sense if there is an optional Alarm2 watchdog timer in the vending machine.*

8.1.5 Button [Reset]
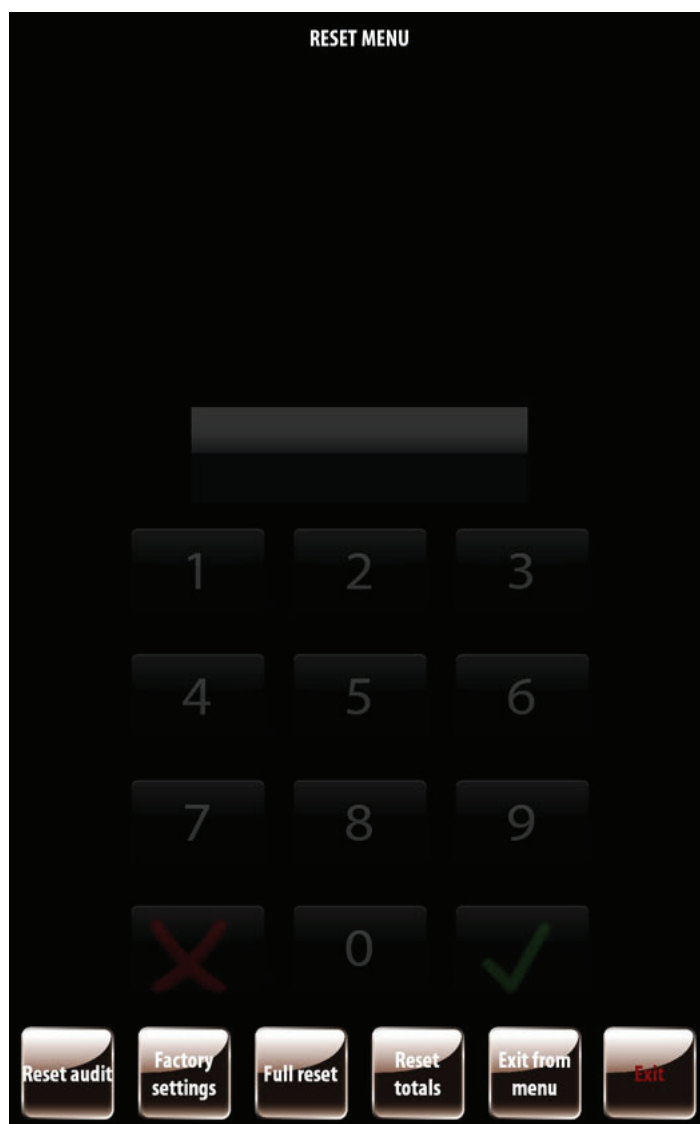
Fig.8.7 - Reset

Button name	Description
Reset audit	Zeroing of the vending machine resettable counters.
Factory settings	Reset the vending machine settings to default values.
Full reset	Secret password request, after which the choice (No-Yes) is possible. When choosing (Yes) the vending machine is zeroed completely (all audit and settings). The use of this setting is not recommended.
Reset totals	Secret password request, after which the choice (No-Yes) is possible. When choosing (Yes) the vending machine is zeroed completely (all audit).
Exit from menu	Jump to the menu technician home page.
Exit	Jump to the vending machine OS desktop.

8.1.6 Buttom [Coffee]

Access to machine test.

Fig.8.8 - Coffee functional test

Button name	Description
Powder 1...6	When pressed pours the powder from the container that corresponds with the button.
Mixer 1...6	When pressed switches on the mixer motor that corresponds with the button for approx. 0,2 sec.
Arm in	When pressed turns the cup "Arm" inside the vending machine (to the drink making position).
Arm out	When pressed turns the cup "Arm" outside the vending machine (to the drink giving out position).
Dispense cup	When pressed gives out an empty cup to the "Arm" from the cup dispenser.
Sugar	When pressed gives out 3 sugars.
Stirrer	When pressed gives out the stirrer, pours the given out sugar to the cup.
Open brewer	When pressed opens the vario-brewer to the initial position (coffee grinding position).
Close brewer	When pressed closes the vario-brewer to the coffee brewing position.

Button name	Description
Grinder	When pressed switches on the coffee grinder for 0.5 sec on the condition that the dosing unit is not filled.
Doser	When pressed pours the ground coffee from the dosing unit to the vario-brewer.
Coffee powder	When pressed grinds coffee (until the dispenser actuation) and then pours it to the vario-brewer. Operates only with the vario-brewer removed.
Selector home	When pressed turns the selector to the zero position.
Selector to 1...4	When pressed turns the selector to the 1...4 position of the instant drink depending on the button pressed.
Sugar 0	When pressed gives out a stirrer.
Sugar 1...6	When pressed gives out sugar 1...6 depending on the button pressed and pours it into the cup with the stirrer.
Water to coffee	When pressed washes the vario-brewer.
Water to 1...4	When pressed washes the mixer 1...4.
Pump test	When pressed switches on for a second the hot water boiler pump.
Soluble valve	When pressed the selector is turned to position 1...4 (depending on a choice) and opens the valve (or opens the first valve).
Coffee valve	When pressed turns the vario-brewer to brewing position, opens the coffee valve, closes the coffee valve, returns the vario-brewer to home position.
Cold pump	When pressed turns the selector to position 1, starts the cold water pump for a second, returns the selector to zero.
Cool boiler	When pressed the vending machine cools down the boiler by pumping the cold water through it down to the temperature of 45 deg.
Fill boiler	When pressed the vending machine fills the hot water boiler. If the boiler fails to fill up during the pump operation - 30 sec., the cycle is repeated until the water discharge into the liquid wastes tank.
Empty boiler	When pressed the vending machine empties the boiler, after the boiler is emptied switch off the vending machine, unscrew the hose from below and switch the vending machine on (the following vending machine activation will bring it to the service mode, in which the valve will be opened, and the remaining water will be drained through the boiler bottom).
Fill cooler	The vending machine fills the older type cooling module (option). The new type module is filled automatically (if installed).
Beverages / inputs (fig.8.9)	Permits online viewing a page with the vending machine sensor parameters readings and testing the drinks.
Cycle test (fig.8.13)	Permits starting the cyclic test of simultaneous making of two drinks in the vending machine test mode.
Exit from menu	Jump to the menu technician home page.
Exit	Jump to the vending machine OS desktop.

Button [Beverages / inputs]

To view real-time sensor readings of the machine and carrying out tests beverage click on the *Coffee functional test menu* (fig.8.8) the *Beverages / inputs* which will open next page.
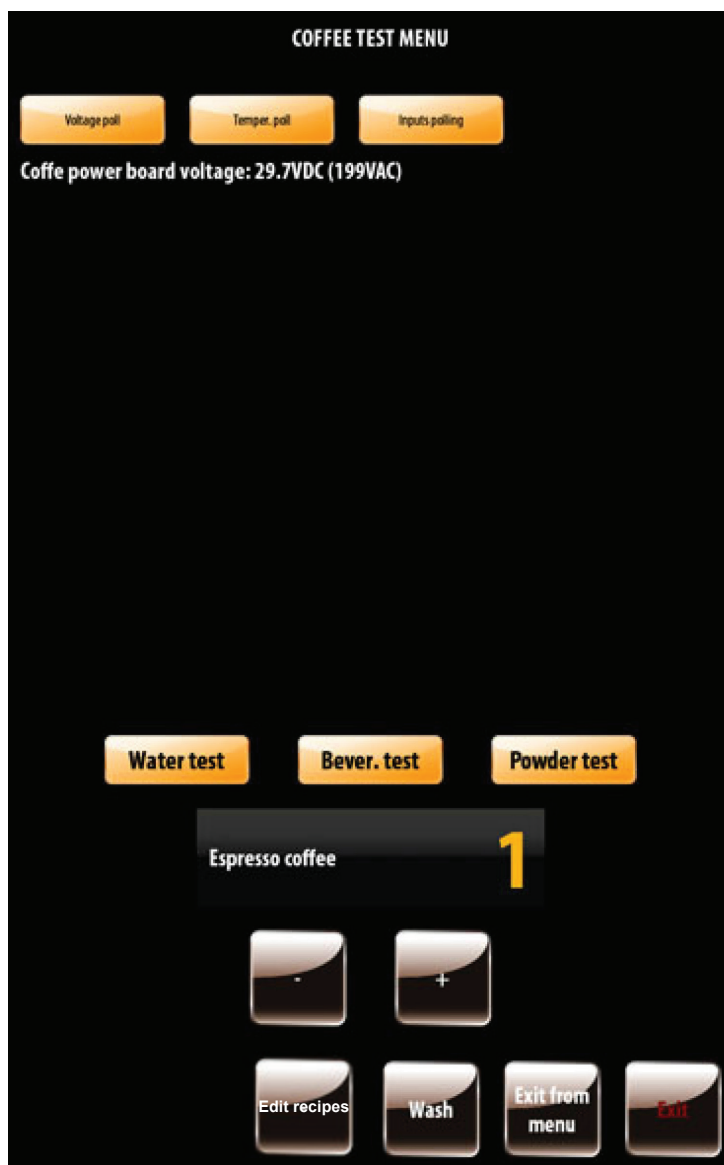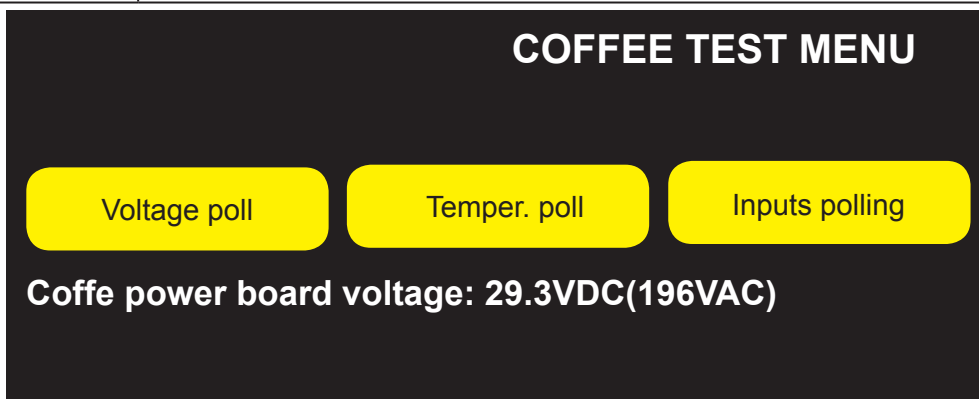

Fig.8.9 - Beverages / inputs

Button name	Description
Volltage poll	Displays voltage power board.
Temper. poll	Displays information from the temperature sensors machine.
Inputs polling	Displays information from the machine sensors designed to pick-up readings.
Water test	The machine performs the operations for the preparation of a beverage under the selected number with no added ingredients, except for sugar dosage 3.
Bewer test	The machine performs drinks the selected number.
Powder test	The machine performs Drinks the selected number without adding water. This test allows removing mixer weighed amount of powder, which is used for the preparation of a beverage.

Button name	Description
+ (plus) - (minus)	Tested drink selection buttons.
Edit recipes	Access to **COFFEE RECIPES** tab of the CONFIGURATOR program.
Wash	Access to the vending machine washing menu.
Exit from menu	Jump to the menu technician home page.
Exit	Jump to the vending machine OS desktop.

COFFEE TEST MENU

Voltage poll   Temper. poll   Inputs polling

Coffe power board voltage: 29.3VDC(196VAC)

Fig.8.10a - Volltage poll

COFFEE TEST MENU

Voltage poll   Temper. poll   Inputs polling

Boiler temperature: 95.2^{0}C
Sensor 2 temperature: ERROR
Sensor 3 temperature: ERROR
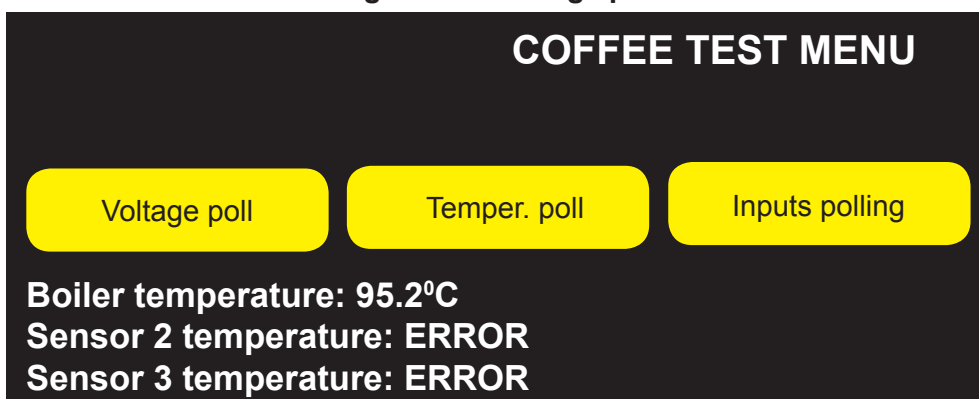
Fig.8.10b - Temperature poll

COFFEE TEST MENU

Voltage poll   Temper. poll   Inputs polling

Air removing tank: filled
Cups tubes: empty
Cups dispenser: in home
Cup arm: in home
Coffee doser: empty
Cup optical sensor: cup in arm
Stirrer dispencer: in home
Waste bin: not full
Selector: in home, in position
Brewer: opened (grinding position)
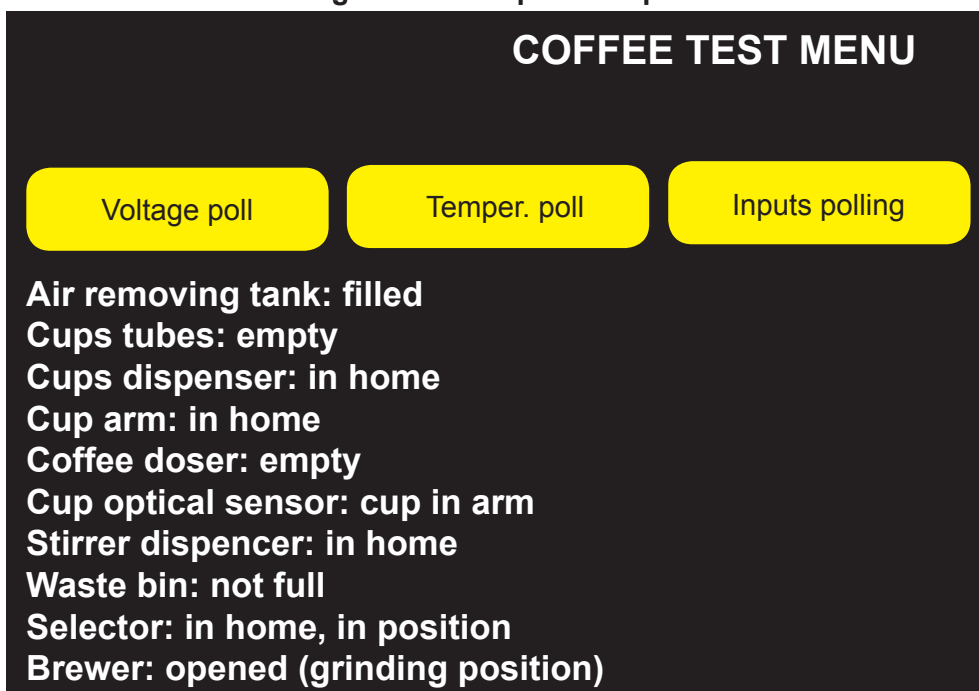
Fig.8.10c - Inputs polling

Button [Edit recipes]

Access to CONFIGURATOR program tab - COFFEE RECIPES. The tab displays the drinks making information and settings (fig.8.11).

Note: Download more information from the web-site: http://www.unicum.ru/en/support (CONFIGURATOR program operating instruction).

Fig.8.11 - Edit recipes

Button [Wash]

Access to the cleaning menu of the machine.
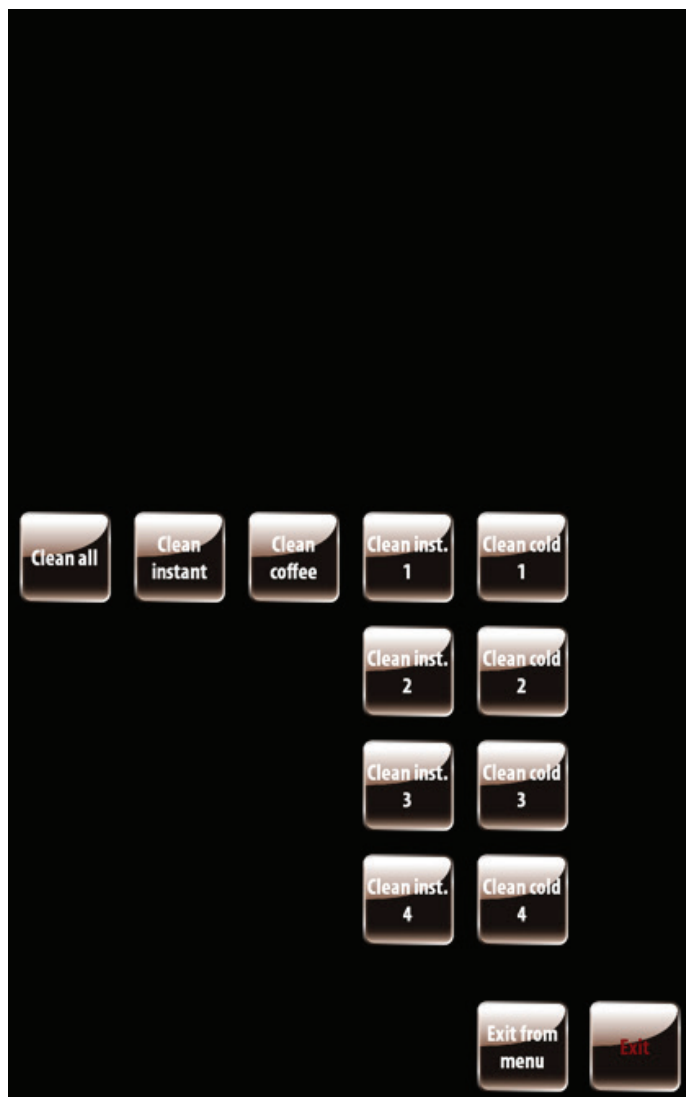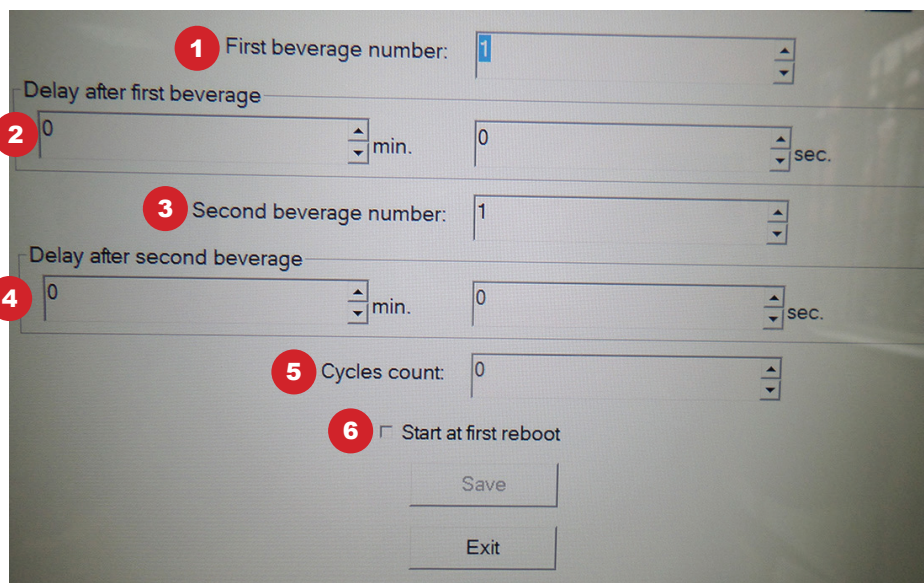
Fig.8.12 - Wash

Button name	Description
Clean all	Cleaning the drink preparation and dispensing systems.
Clean instant	Start flushing of instant drink dispensing system.
Clean coffee	Start flushing the ground coffee feed system.
Clean inst.1...4	Start flushing the instant drink 1...4 dispensing system.
Clean cold.1...4	Start flushing the cold drink dispensing system 1 ... 4. It is used only when installing the refrigeration module in the machine (option).

Button [Cycle test]

Start a cyclic test of the simultaneous making of two drinks to test the vending machine operation. When pressing the button the vending machine screen displays the settings window (fig.8.13).
To stop the test cycle switch off and on the vending machine or enter the service menu, or fully spend the used ingredients, or complete the number of cycles as specified in the setting No.5.

Fig.8.13 - Cycle test

№	Field name	Description
1	First beverage number	Enter the first drink number.
2	Delay after first beverage	Enter minutes and seconds after making the first drink.
3	Second beverage number	Enter the second drink number.
4	Delay after second beverage	Enter minutes and seconds after making the second drink.
5	Cycles count	Enter the number of test cycles.
6	Start at first reboot	Start the cyclic test at the vending machine reboot.

8.1.7 Button [Coffee buttons color]

To change the color of the beverage selection buttons click on the main menu page, click on **Coffee buttons color**. From the drop-down list next to each button, select the desired color selection buttons. Upon completion of the settings, click **Exit**.

Button 1 color:	Green ▼	Button 17 color:	Green ▼
Button 2 color:	Blue ▼	Button 18 color:	Blue ▼
Button 3 color:	Orange ▼	Button 19 color:	Orange ▼
Button 4 color:	Red ▼	Button 20 color:	Red ▼
Button 5 color:	Green ▼	Button 21 color:	Green ▼
Button 6 color:	Brown ▼	Button 22 color:	Brown ▼
Button 7 color:	Gray ▼	Button 23 color:	Gray ▼
Button 8 color:	Chocolate ▼	Button 24 color:	Chocolate ▼
Button 9 color:	Pink ▼	Button 25 color:	Pink ▼
Button 10 color:	Yellow ▼	Button 26 color:	Yellow ▼
Button 11 color:	Yellow ▼	Button 27 color:	Yellow ▼
Button 12 color:	Red ▼	Button 28 color:	Red ▼
Button 13 color:	Green ▼	Button 29 color:	Green ▼
Button 14 color:	Blue ▼	Button 30 color:	Blue ▼
Button 15 color:	Orange ▼	Button 31 color:	Orange ▼
Button 16 color:	Red ▼	Button 32 color:	Red ▼

Exit

Fig.8.14 - Coffee buttons color

8.1.8 Other buttons

To navigate the menu appliances in the operator menu, click on the main menu page, click Equipment *to oper. menu* . Operator menu described below.

To navigate from the menu, custom menu technology click on the main menu page, click on ***Exit from menu***.

To go from a menu to the desktop machines of the operating system machine, click on the main menu page technique the ***Exit*** . Normally, this button is used in cases unresponsive software machine.

8.2 Operator's menu

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.

> **NOTE:**
> *The password enter page will be displayed only if the password is set (fig. 8.15).*
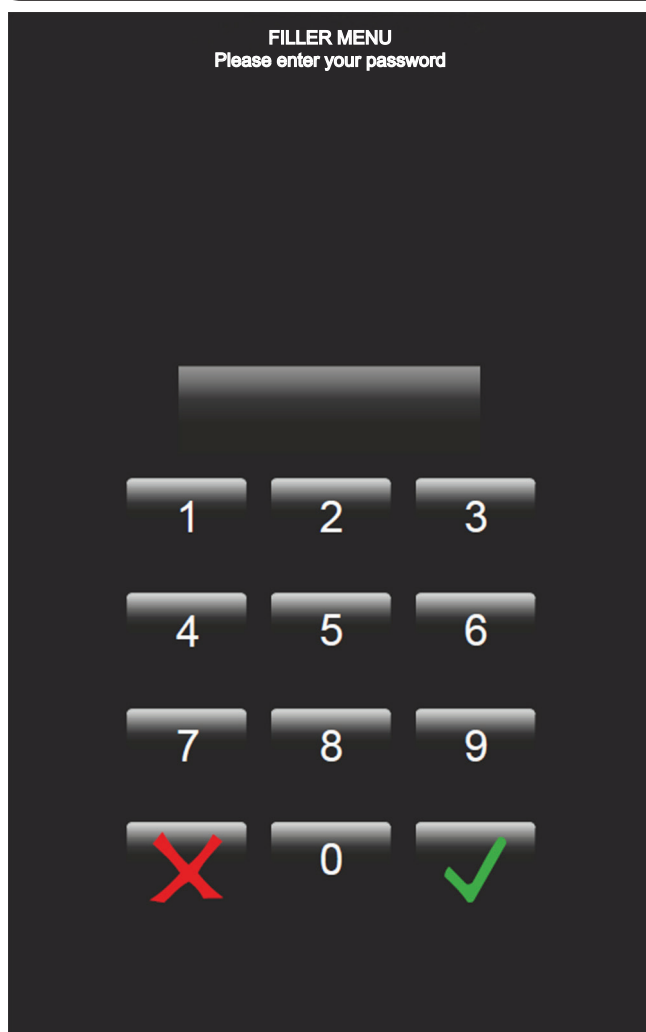> *By default, the password is not set.*
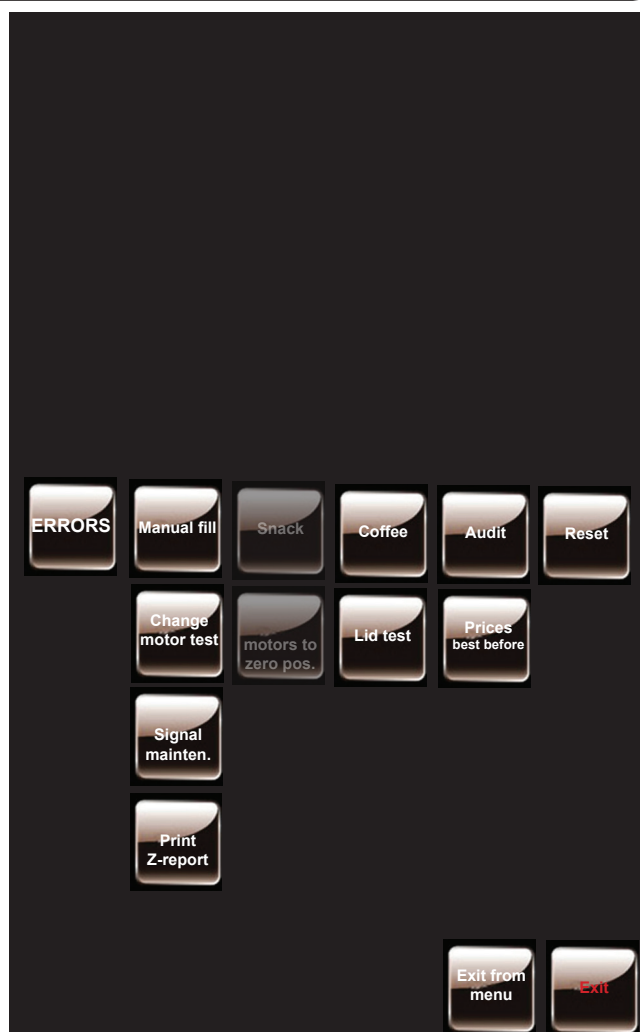

Fig.8.15 - Password

Fig.8.16 - Main page

Buttons of the main page:

- *Errors* - access to the page with the operation of the machine errors;
- *Manual full* - access to the download page of coins;
- *Change motor test* - to test the operation of the motor putting machine press *Change motor test*. Check for clarity to better fulfill the. The test for clarity is best performed when the machine door is open;
- *Signal mainten.* - Telemetry button, is used to send collection data to the server. There is usually no need to press this button, because the collection data is sent to server automatically when loading coin acceptor, removing cash box, removing stacker. This button is used only when the machine is operating without payment systems or cash box/stacker sensors are not installed or out-of-order;

Buttons of the main page:

- **Print Z-report** - Print Z-report cash register (if installed), click 'Print Z-report' '. Typically, Z-reports removed the cash register at the end of shifts / working day;

- **Snack** - To select the settings for the SLAVE-module (if connected) press Snack. If the machine installed the program RT_Interface - button not relevant;

- **Motors to zero pos**. - To reset all cells to zero position, and also to unlock all locked SLAVE-module spirals (if connected), press the Motors button in the start position. position. If the machine installed the program RT_Interface - button not relevant;

- **Coffee** - access to the menu function test machine (see section 8.1.6);

- **Lid test** - when pressing the button the vending machine gives out the lid into the lid dispensing tray. Then the lid is discharged to the special box;

- **Audit** - access to the program audit machine;

- **Price best before** - access to the page setup of prices and expiration dates of the product;

- **Reset** - to reset the counters discharged click button. The button is only active. Run resets the counters to perform possible only when the human operator to reset the statistics menu equipment (see section 8.1.5);

- **Exit from menu** - exit menu Equipment menu user mode (of Commerce);

- **Exit** - output from the menu on the desktop machines of the operating system machine.

8.2.1 Button [ERRORS]

To view the Registered machine error during operation, press the '' errors '' on the home page of the operator menu.

After clicking on the machine screen page is displayed with a list of machine errors . Errors are displayed by type of equipment, the number of failures, date and time of the last recorded fault, as well as the current status of the error. Actual errors are displayed in red tsetom, irrelevant (past) - green.

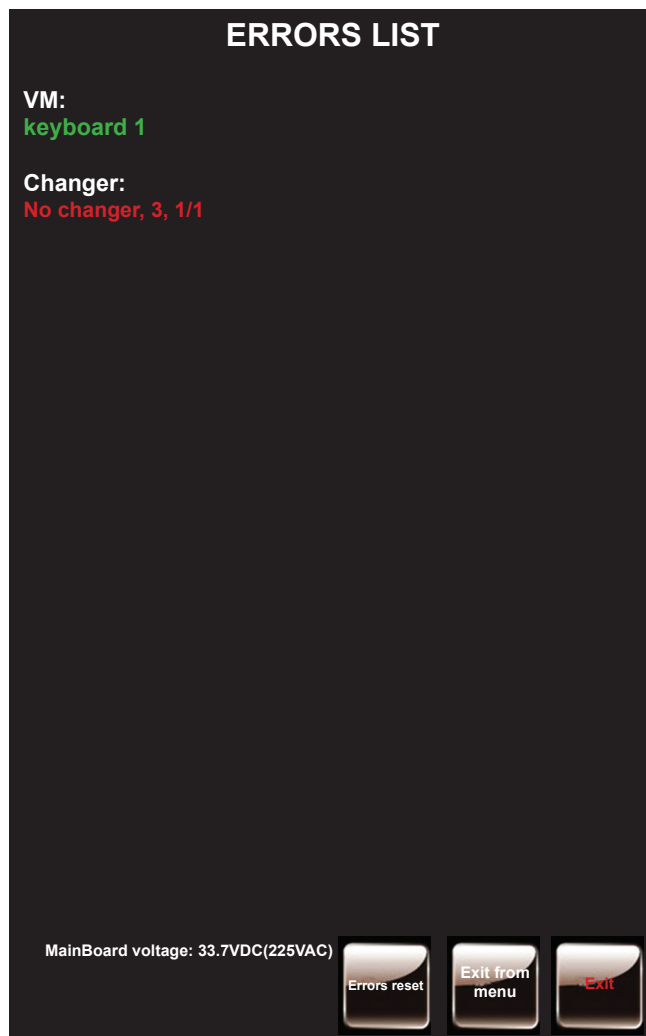To reset the current error, click *Errors reset* at the bottom of the page.

Fig.8.17 - ERRORS LIST

8.2.2 Button [Manual full]

To view the information on coin acceptor and performing operations on manual loading/unloading coins click on the ***Manual fill*** on the main menu page of the operator. After clicking on the screen machine information page appears on coin (if connected): tubes with coins of the appropriate denomination, number of coins in each tube.

Coins must be loaded into the machine through the coin insertion slot located on the door of the machine. To unload the coins from the coin-operated machine in the cash box in front of the tube required, click '' returns. After loading / unloading the coins on the screen information is immediately updated. Inscription in green indicates that the tube is completely filled with coins. The inscription in red indicates that an error occurred and to correct the error envelope is faulty. In this case, you must correct the error. By eliminating the error information on the screen immediately updated.
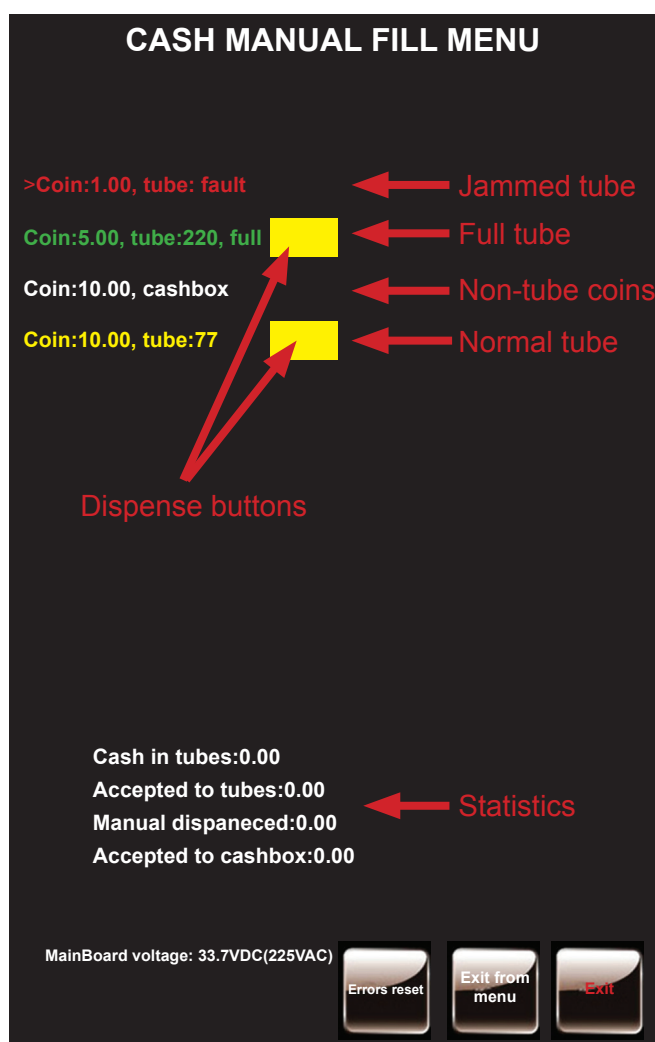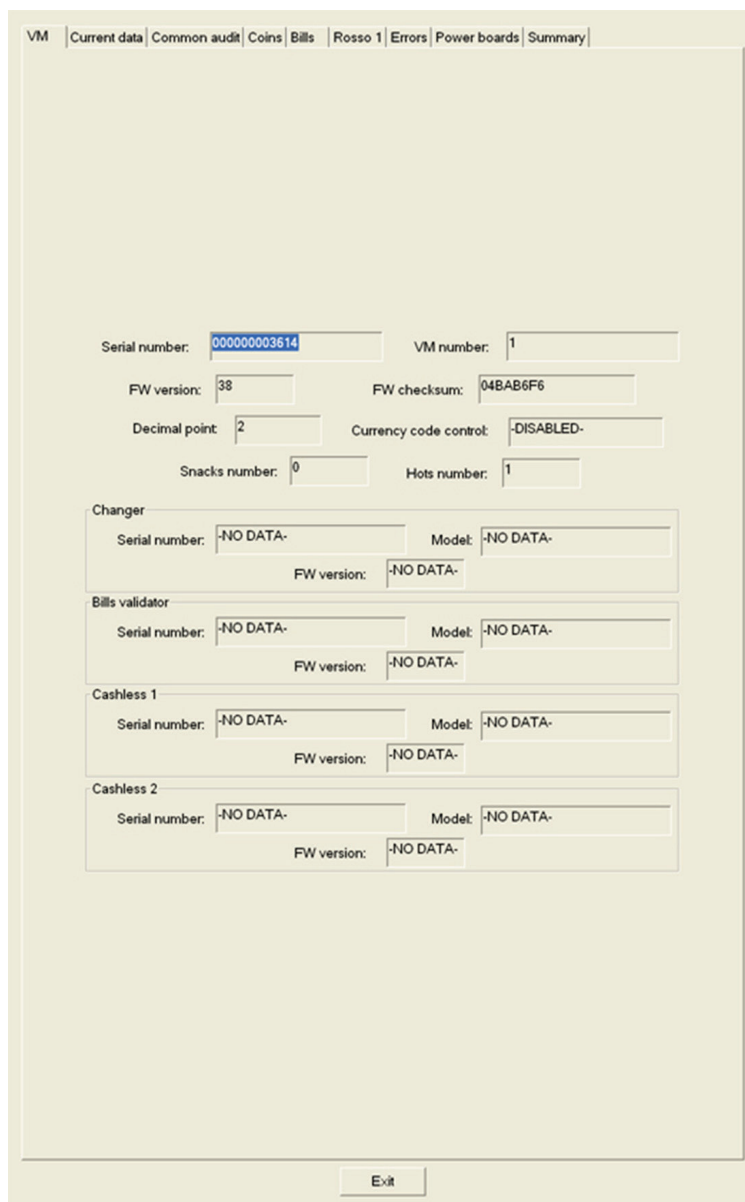

Fig.8.17 - Cash manual fill menu

8.2.3 Button [Audit]

Access to AUDIT program.
Download the Audit program operating instructions from the web-site: http://www.unicum.ru/en/support (Audit program operating instructions).

Fig.8.18 - Audit

User manual for ROSSO TOUCH TO GO

9.0 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 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 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 the Technician's menu. The file will be loaded into the machine only when the coincidence of numbers specified 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.

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.?***

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 sowtware 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*

10.0 TECHNICAL SERVICING

10.1 Cleaning and disinfection

After the installation of the vending machine it 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

• Pipes and nozzles used for dispensing drinks

• Discharging chute for sugar

• Dispensing area: plastic parts, tray with grill

• Cup holder

• Discharge heads of instant ingredient containers

• Outer parts of espresso group

• Waste container

• Coffee disposal tract

• Cleaning of the vending machine's body from outside and inside

10.2 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.

Daily cleaning

The vending machine daily cleaning includes the following operations:

1. Mixer washing by using the vending machine washing program (see the Manual).

2. The replacement of the coffee grouts bag

3. Cleaning of the liquid wastes container
-   Empty the waste container and wash with water;
-   Then wipe with moistened cloth

4. The vending machine case and front facing
-   Clean with moistened cloth;
-   Then wipe dry be clean dry cloth

5. Drinks dispensing tray pan and grill
-   Extract the pan and grill from the dispensing tray (see the Manual);
-   Wash them with water;
-   Dry clean and re-assemble

Weekly cleaning

The vending machine weekly cleaning includes the following operations:

1. Clean mixers (cleaning frequency depends on the ingredient used)
-   Open the vending machine door
-   Take the container spouts aside so that they do not interfere
-   Disconnect the drink dispensing tube coming out of mixer (fig. 10.1)
-   Shift down the mixer funnel retaining clip (fig. 10.2)
-   Remove the funnel by carefully pulling it on (fig. 10.3)
-   Disassemble the funnel (fig. 10.4)
-   Remove the mixer impeller by carefully pulling it on (fig. 10.5 and 10.6)
-   Remove the mixer funnel clip and pull out the gasket (fig. 10.7)
-   Carefully clean and wash all mixer parts in warm water and wipe them dry
-   Assemble the mixer funnel in the reverse order.

Fig.10.1

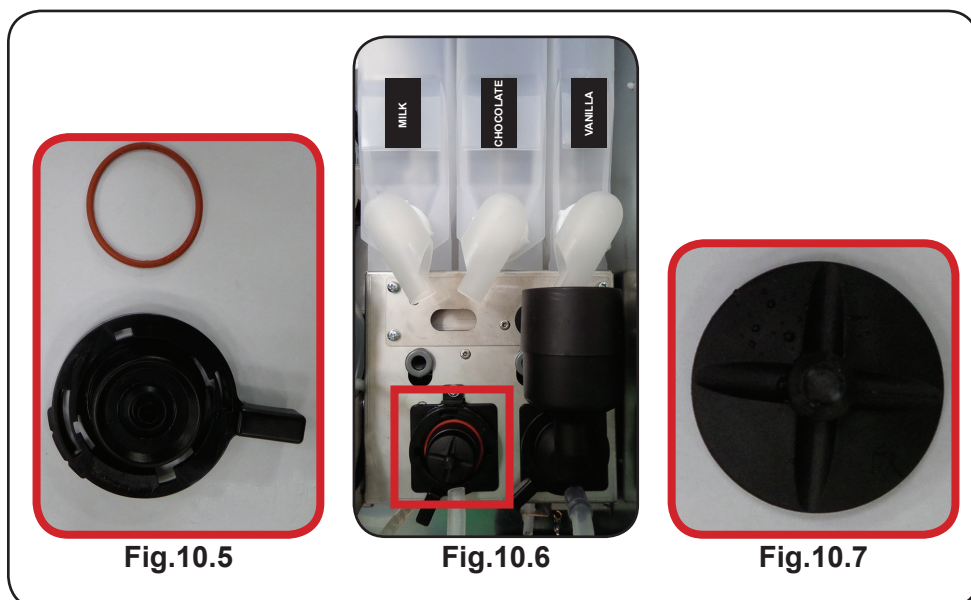**Fig.10.2**

Fig.10.3

Fig.10.4

Fig.10.5

Fig.10.6

Fig.10.7

NOTE: When assembling make sure that the arrow on the impeller is directing the mixer motor groove (fig. 10.8). Otherwise, the impeller wouldn't fit in place.
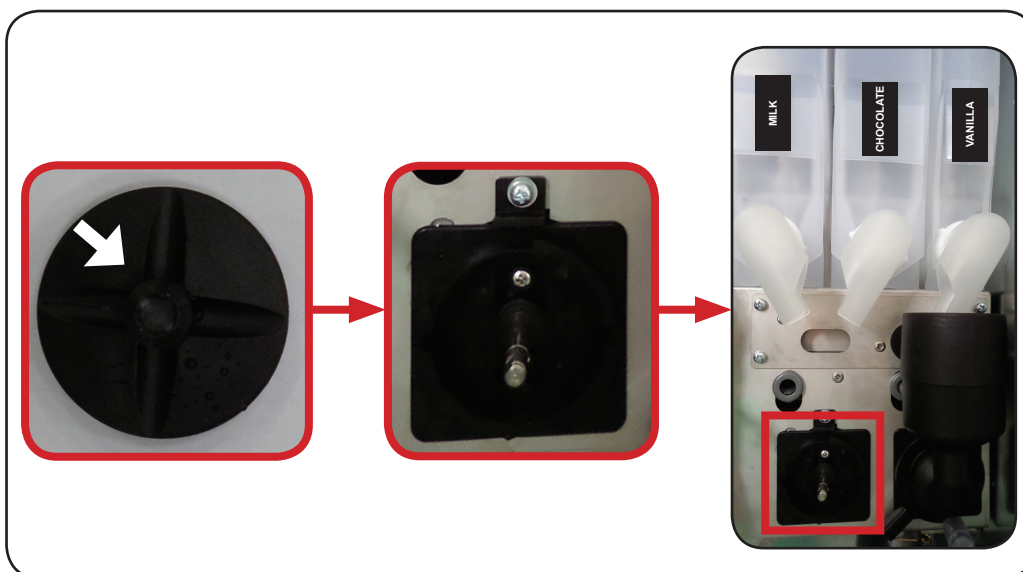

Fig.10.8

2. Vario-brewer cleaning

- Extract the espresso group from the vending machine (see the manual and fig. 10.9)

- Loosen two butterfly screws and disconnect the gear motor from the vario-group (fig. 10.9)

- Wash the espresso group by water

- Wipe the vario-group by dry cloth (only dry vario-group may be installed back into the vending machine)

- Connect the gear motor to the vario-group

- Install the espresso group back into the vending machine and make the electrical connection

NOTE: Washing the gear motor is strictly prohibited, otherwise it may be damaged.
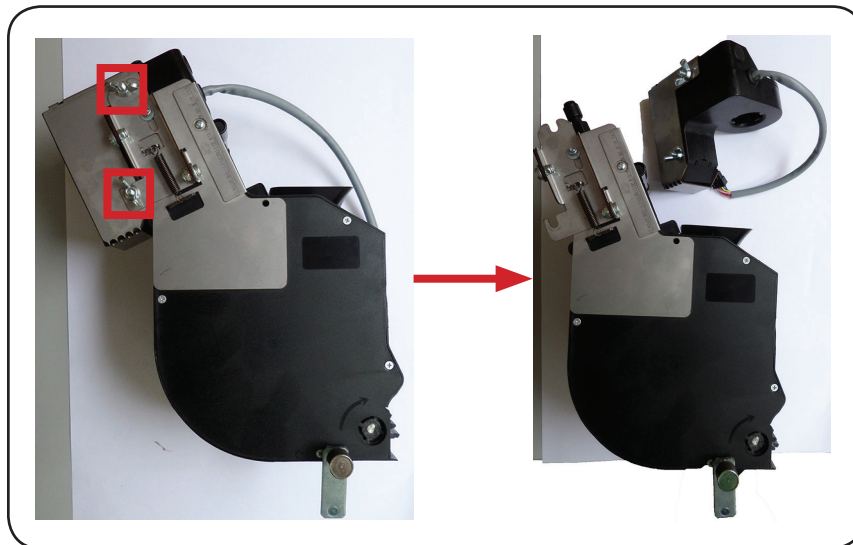

Fig.10.9 - Vario-brewer cleaning

Monthly cleaning

The vending machine monthly cleaning includes the following operations:

1. Coffee container cleaning

- Extract the container from the vending machine (see the Manual)

- Pour the remaining beans from the container and thoroughly wipe it with moistened cloth

- Wipe the container by dry cloth

- Place the container back into the vending machine

- Fill the container with beans

2. Product containers cleaning

- Extract the container from the vending machine (see the Manual)

- Unscrew the front and the rear clamping ring

- Extract the auger from the container

- Thoroughly wipe the container with moistened cloth

- Thoroughly wipe the container parts by moistened cloth

- Wipe the container parts by dry cloth

- Replace the auger and the clamping rings

- Place the container back into the vending machine

- Fill the container with the ingredient

10.3 Ingredients weighing

To ensure precise ingredients dosage it's necessary to conduct periodical weighing of the ingredients, used for making drinks.

Sugar dosage weighting:

- Put a cup into the holder

- Proceed to the menu technician or operator and press the **COFFEE** button on the vending machine screen.

- Select the sugar dosage that is necessary for weighting by pressing the corresponding 1...6 **SUGAR** 1...6) button

Ground coffee dosage weighing:

- Remove the vario-brewer (see manual)

- Place a container under the dosing unit funnel

- Proceed to the menu technician or operator and press the **COFFEE** button on the vending machine screen

- Then press the **COFFEE POWDER** button

- Conduct the coffee weighing

NOTES: To conduct a more correct measurement make 5 - 10 weightings and calculate the mean.

Instant ingredients dosage weighing:

- Remove the mixer funnel, located under the container with the verified ingredient (see manual)

- Place a container under the container with the ingredient

- Proceed to the menu technician or operator and press the **COFFEE** button

- Then press the **BEVERAGES / INPUTS** button

- Then set the number of a drink, for which the weighting by using the "+" and "-" buttons is made

- Then press the **POWDER TES** button

- Conduct the ingredient weighing

Hydraulic circuit (for 6 containers + 1 coffee grinder packaging
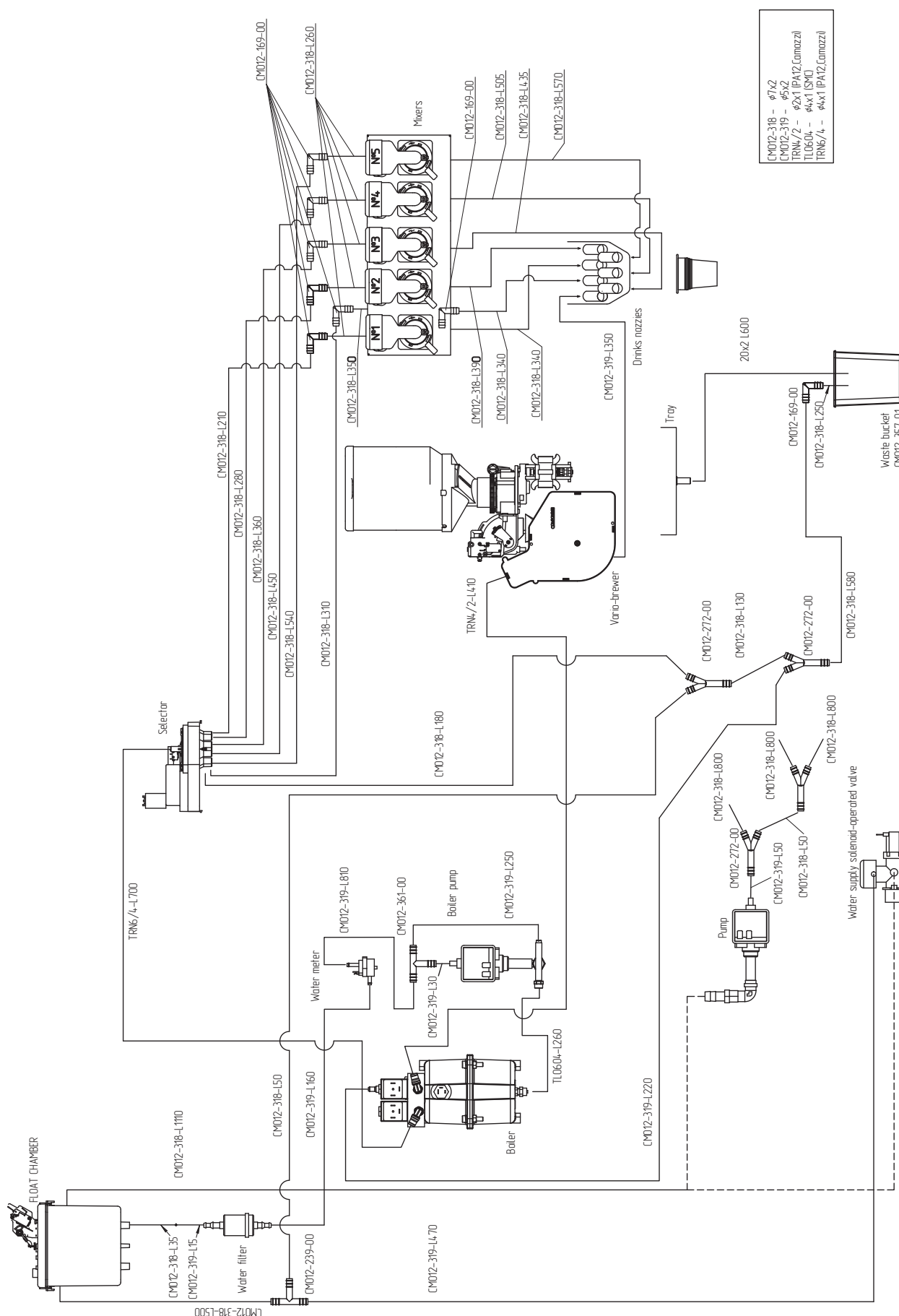
Hydraulic circuit (for 4 containers + 2 coffee grinders packaging)