CE Manual (XM GB)

automatic vending machine

[XM]

Installation and maintenance manual

Vers. 4 (flash electronics) - 29/04/2004

MAN1400105

Downloaded from www.vendingbar.gr

DISPLAY

KEYPAD

LOCK

CUP STATION

DISPLAY BOARD BUTTON

INSTANT CANISTERS

PRODUCT SLIDES

MIXING BOWLS

FLASH BOX

LIQUID WASTE BUCKET

INCOLLARE QUI LA SECONDA COPIA DELL'ETICHETTA MATRICOLA

INDEX

1 TECHNICAL DATA....5
2 INTRODUCTION....6
3 DESCRIPTION OF THE EQUIPMENT....8
4 ADVICE FOR THE INSTALLER....9
5 BASIC OPERATING PRINCIPLES....10
6 TRANSPORTATION....14
7 UNPACKING....14
8 POSITIONING....15
9 CONNECTION TO THE MAINS WATER SUPPLY AND TO THE ELECTRICAL SUPPLY....16
10 HOW TO ACTIVATE OR DEACTIVATE THE MACHINE....17
11 START-UP OPERATIONS....20
12 PROGRAMMING OF THE MACHINE....28
13 INSTALLATION OF THE PAYMENT SYSTEMS....54
14 CLEANING AND LOADING OPERATIONS....55
15 ORDINARY AND PREVENTION MAINTENANCE....58
16 MACHINE OUT OF SERVICE....65
17 FURTHER ADVICE FOR THE USER....66
18 TROUBLESHOOTING....67

Downloaded from www.vendingbar.gr

1 Technical Data

DIMENSIONS

Height 745 mm – 845 mm

Width 410 mm

Depth 550 mm

WEIGHT

From 44 to 51Kg according to the version

CONNECTION TO THE MAINS WATER SUPPLY

Water inlet pressure between 0,01 MPa and 0,08 MPa (1 - 8 bar);

Mains water connection 3/8" gas

CONNECTION TO THE ELECTRICAL SUPPLY

230 V ~ 50/60 Hz Power consumption: from 1250 W to 1850 W

120 V ~ 50/60 Hz Power consumption: from 1100 W to 1250 W

100 V ~ 50/60 Hz Power consumption: 1250 W

SOUND PRESSURE LEVEL WEIGHING-A

< 70 dB uncertainity 1,5 dB

1.1 Copyright Information

© Rhea Projects S.r.l. - All rights reserved.

This document contains confidential information, which is property of Rhea Projects S.r.l. The content of this document cannot be neither circulated to third parties, nor copied or duplicated in any form, without previous written consent by Rhea Projects S.r.l.

Use, duplication or divulgation of technical information contained in this document can be subject to legal protection by Rhea Projects S.r.l. via Trieste 49, I-21042 Caronno Pertusella (VA), Italia.

THIS MANUAL MUST BE KEPT NEXT TO THE VENDING MACHINE.

2 Introduction

2.1 Welcome

We congratulate you on your choice of a Rhea Projects automatic vending machine. Experts have designed this product and it has been manufactured according to the high quality standards, which have always been a characteristic of all Rhea Projects products. This instruction manual will help you to acquire a better knowledge of your machine. We recommend you to read it with the maximum attention and to follow the advice given in the text.

The present manual includes all information and instructions for loading and cleaning operations of the vending machine, as well as instructions reserved to technical personnel for performing maintenance operations of more complex nature. This is the reason why the manual pages are clearly identifiable with relation to the technical preparation of the user to whom they are destined:

Text with grey background: for any person having access to the interior of the vending machine. These pages consist of an introduction, sections of general interest and sections concerning loading and routine cleaning.

Text with normal background: these are for use by qualified technical personnel only. They include all operations related to installation, adjustment, extra ordinary cleaning and general maintenance.

All information contained in this manual are aimed to obtain from the machine the best performance within the limits of use set by the manufacturer.

This Manual is integral to the equipment and must be available inside the machine until final displacement. Inside the rear door of the machine there is a suitable pocket where the Manual should be kept.
In the event of loss or damaging of the Manual, to obtain an extra copy it will be necessary to supply to the manufacturer all the identification data appearing on the identification sticker.

In compliance with the Company's endeavour to adopt technical improvements whenever possible, Rhea Projects reserves the right to ameliorate future production (and the contents of future Manuals) without prior notice and without any obligation of updating the products on the market.

The Technical service department of Rhea Projects is at your disposal for any further information. Just call or send a fax at the following numbers:

☎ + 39 02 966551
🖹 + 39 02 9655086
or an e-mail to the address rheavendors@rheavendors.com or surf in our web site www.rheavendors.com.

In order to speed up the response to requests it will be necessary to supply:

- All data appearing on the Serial Number Label (glued to the first page of this manual);

CAUTION: Rhea Projects is not liable for any damage that could affect, directly or indirectly, any person or property as a consequence of:

- incorrect use of the machine;
- incorrect installation;
- unsuitable electrical or water supply;
- major shortcomings in maintenance;
- technical interventions or alterations of unauthorised nature;
- adoption of non-original spare parts.

In the event of breakdown, Rhea Projects has got no obligation whatsoever neither to compensate any economical damage deriving from the inactivity of the machine nor too extend the warranty period.

2.2 Safety Regulations

The vending machine has been designed and manufactured in accordance with the following European Regulations:

Directives	73/23 CEE; 98/37/CE; 89/336/CEE
Regulations	EN 60335-1
	IEC 60335-2-75
	EN 5514-2:1997
	EN 61000-3-2:1995+A1:1998+A2:1998
	EN 61000-3-3:1995
	EN 55014-1 :1993+A11997

3 Description of the Equipment

3.1 Use

The XM automatic Vending Machine, in its different versions, is an appliance meant for general use (non professional).

The Automatic Vending Machine is supposed to supply beverages automatically, mixing ingredients with water. The distribution of beverages will take place into suitable cups automatically supplied by the machine itself.

In the model with Coffee brewer (***Version E***) or Tea group (***Version FBT***), the machine will also automatically dispense stirrers for beverage mixing.

3.2 Denomination of the versions

Rhea Projects adopts the following conventional codes for the definition of the different versions:

XM <coffee>/<canisters> [<cold>] [<options>]

where:

<coffee> states the main process for the preparation of coffee:

H.....Instant coffee (from soluble products)
E..... Infusion process through a high pressure Espresso coffee brewer

<canisters> states the number of product canisters except the one for coffee beans. Capacity and variety of types of beverages that can be supplied by the vending machines will depend on this number.

<cold> states the sort of cold beverage obtainable from the machine (if a refrigeration group is present)

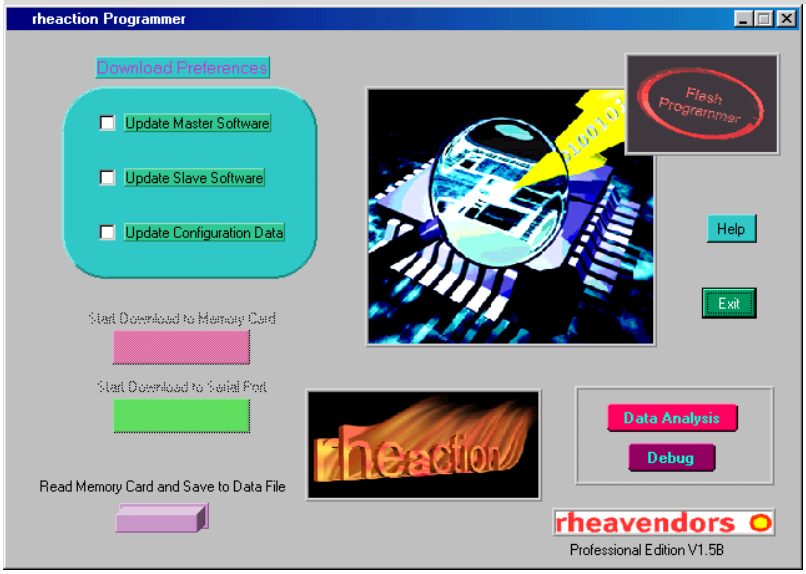
FP..... beverages from powdered products (with natural water).

FBT …Infusion brewer for Tealeaves.

3.3 Obtainable Drinks

The machine can distribute drinks coming from instant ingredients and/or coffee beans and or tea leaves by the programming functions present inside the machine.

It is possible to program the machine also by **rheaction** software using Rhea flash card or the Rhea serial cable. For further information contact rheavendors Customer Service.



4 Advice for the installer

Installation and maintenance operations described in text with normal background (white) must be carried out only by qualified technical personnel.

WARNING: For a correct operation, the machine must be installed indoors with operating temperature higher than 5° C in normal conditions of use.

WARNING: Forestall the machine and the ingredients freezing.

WARNING: Given the sensitivity of some ingredients used in the machine to excessive temperature and humidity, some malfunctions may occur if the machine is operated at temperature higher than 30° C or with relative humidity exceeding 80%. Under these conditions the components in contact with the powdered ingredients must be cleaned at least once a day.

WARNING: The maximum operation temperature is 95° C.

WARNING: The operations described in Text with normal background must be developed by qualified technical personnel only.

WARNING: Installation in premises where water jets are used (e.g. large kitchens) is to be avoided.

The XM vending machine, that you have bought, has been manufactured according to the norms and regulations related to the non-toxicity of those parts coming in contact with foodstuffs and electric insulation. The machine is mounted inside of an industrial cleaned ambient. The person entrusted with the mounting and the test operations is subjected to frequent sanitary examinations to confirm his attitude. However, freight conditions, period of stay in the warehouse and possible handling due to the installation of the vending machines do not allow using it immediately.

The machines, before their use, must be subjected to a cycle of sanitary tests as per the instructions shown in paragraph "Cleaning and disinfecting of those parts coming in contact with foodstuffs".

WARNING: Do not clean the machine with water jets.

WARNING: Respect the NATIONAL RULES for machines directly connected to the main water supply.

WARNING: The use of the safety key can make in movements internal parts of the machine.

WARNING: Install the machine placing the electrical plug easy accessible.

WARNING: The machine must be installed following the NATIONAL NORMS and only in good airy places.

WARNING: Use only ingredients specific for semi-automatic vending machines.

WARNING: The personnel in charge of the loading of the ingredients must own a valid certificate of good health following local and NATIONAL NORMS and be equipped with specific protections. Furthermore, compliance with any other domestic or local regulations must be checked.

5 Basic Operating Principles

The powered machine is normally in the stand-by mode. When a button is pressed, a vend cycle starts. If a sale price is preset (i.e. the machine is not preset for the free vend mode), before selection the required amount of money must be inserted by means of coins, bank notes or other.

According to the selection required and to the version of the machine, the vend cycle is composed by some of the following procedures.

5.1 Dispensing and positioning of the cups

If it is not disabled by pressing the special pre-selection "Without cup" (if available), this procedure is carried out before all vend operations are started.

1) If programmed, the cup station door moves for the cup fall;

2) Through the action of the unclamping servomotor, the cup is detached and falls in the appropriate support;

3) If programmed, the cup station door comes back.

5.2 Dispensing of sugar

This supply is pre-set only for the models of machine equipped with the sugar-dispensing group in the event sugared beverages being selected. For the other versions, always when the beverage requires it, the sugar is dispensed simultaneously with the preparation of the instant beverages and with the same procedure (see after).

1) The geared motor activates the screw feeder in the sugar canister which pours the correct quantity of sugar in the dispensing unit;

2) The servomotor of the dispensing unit causes the slide movement;

3) The opening of the sugar slide causes the following pouring of the sugar in the cup;

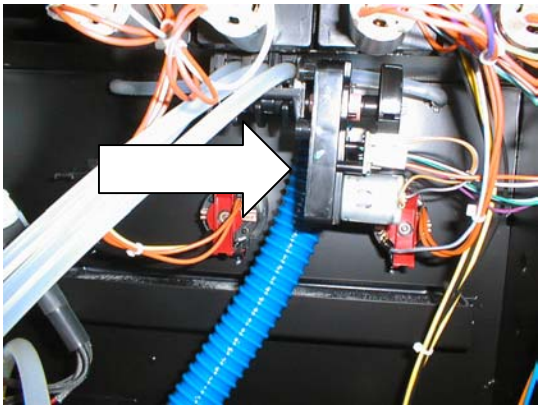
4) The servomotor of the dispensing unit causes the back slide movement

5.3 Preparation of hot drinks from instant ingredients

This procedure is usually carried out after the cup is correctly positioned under the outlet pipes of the beverage. More than one procedure of this sort can be carried out simultaneously or in sequence during a vend cycle.

For instant version (H):

1) The flow selector selects the opening of the water outlet pipe from the boiler corresponding at the mixer to use and close the remaining pipes; and pours the correct quantity of ingredient to dissolve it; the preset quantity of water is poured to dissolve the ingredients;



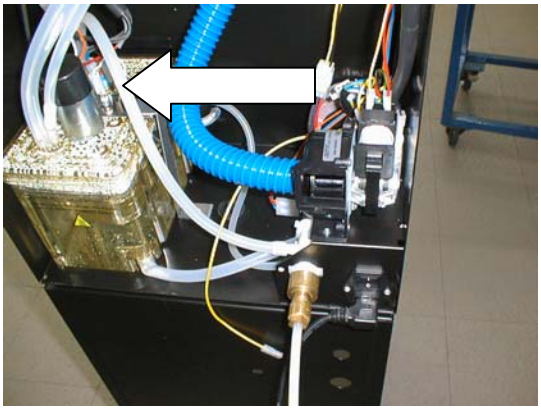
2) The transfer pump into the boiler is activated for a pre-set time depending on the quantity of the required water;

3) If present, the mixer motor is activated;

4) The geared motor activates the screw feeder, in the canister of the corresponding ingredient, which pours the correct quantity of ingredient in the mixing bowl. More than one canister of ingredients can be activated simultaneously for the same mixing bowl;

5) If present, the motor of the mixing bowl is switched off.

6) The transfer pump is switched off.



***For Espresso version (E)**:*

1) The water coming from the water-refilling tank, in which the water level is kept constant, is conveyed under pressure in the boiler by means of a pump

2) When the solenoid valve corresponding is activated, the preset quantity of water is poured to dissolve the ingredients;

3) If present, the mixer motor is activated;

4) The geared motor activates the screw feeder, in the canister of the corresponding ingredient, which pours the correct quantity of ingredient in the mixing bowl. More than one canister of ingredients can be activated simultaneously for the same mixing bowl;

5) If present, the motor of the mixing bowl is switched off.

6) The solenoid valve is deactivated.

5.4 Preparation of the Espresso coffee (Version E)

This procedure is carried out only in the models equipped with the espresso coffee brewer (**Version E**) and after the cup is correctly positioned under the outlet pipes of the beverage. The execution priority between this procedure and the procedure for the preparation of hot beverages from instant ingredients is pre-set by the programme of the machine and varies according to the selection chosen.

1) The coffee grounds are ejected (this can happen also after 10 minutes of rest of the coffee brewer) and the brewer moves to receive the coffee dose;

2) The electromagnet of the coffee throw dispensing unit is activated and the canister is open. The correct quantity of ground coffee flows by gravity in the brewer of the espresso coffee brewer; *

3) The coffee grinder is activated until the pre-set quantity in the throw dispensing unit is restored;

4) The coffee brewer moves to the infusion position: this occurs when the group movement motor is started. The lower filter is moved to close the brewer and press the preset throw the compress of ground coffee*;

5) The water coming from a water-refilling container, in which the water level is kept constant, is conveyed by pressure in the coffee boiler by means of a pump. After the activation of a solenoid valve, the same quantity of warmed up water is then conveyed to the coffee brewer.

6) The coffee brewer ends the cycle.

* The operations marked with asterisk may be carried out in a different order according to the electronic presetting of the machine.

5.5 Dispensing of the stirrer

This procedure is carried out only in versions equipped with stirrer feeder, and it is carried out when the cup is correctly positioned under the outlet pipes for the beverage vending. The stirrer can be dispensed before or after the preparation of a beverage, according to the machine programme and selection made. Furthermore, a programmable function allows the user to pre-set selections for which the stirrer is to be dispensed.

1) The unclamping electromagnet detaches the stirrer from the stack in the feeder. The stirrer slides in the cup.

5.6 Preparation of the brewed tea (Version FBT)

This procedure is carried out only in models of machine equipped with tea brewing group (models **FBT**), usually when the cup is correctly positioned under the outlet pipes for the beverage vending.

1) The flow selector selects the opening of the water outlet pipe from the boiler corresponding at the mixer to use and close the remaining pipes;

2) The brewer is positioned upwards: this occurs when the brewer movement motor is started and acts on the special cam;

3) The geared motor activates the screw feeder in the canister containing the tealeaves. The correct quantity of tealeaves is then poured in the tea group;

4) The pump is activated and the pre-set quantity of water is poured into the tea brewer to make the infusion. In reality, two following steps make infusion with a pre-set interval between the two subsequent operations for a better brewing of the tealeaves;

5) The pump is deactivated;

4) The brewer is moved to rest position, upside down. The tealeaves are shaken out of the brewer: this occurs when the motor activating the tea group is started and acts on the special cam.

5.7 Preparation of cold instant beverages (Versions FP)

This procedure is carried out only in the versions of machine equipped with the refrigerating group for natural water inside the base cabinet (**Version FP**), usually when the cup is positioned under the outlet pipes for the beverage vending.

1) The water inlet solenoid valve is activated to load water inside the cold unit;

2) The corresponding solenoid valve in the refrigerating group is activated and the correct quantity of water is poured into the mixing bowl to dissolve the ingredients;

3) The geared motor activates the screw feeder of the canister of the corresponding ingredient, which conveys the correct quantity of ingredient into the mixing bowl. More than one canister can be activated simultaneously for the same mixing bowl;

4) The solenoid valves are switched off;

5) If present, the mixing bowl is activated.

6 Transportation

Qualified personnel must move the machine.

The machine must be carefully transported as any overturning of the machine is to be avoided.

WARNING: The machine must be kept vertically positioned when moved to another location with the topside indicated on the box towards up. DO NOT OVERTURN THE MACHINE to avoid damages to the electronic boards.

The machines are carried on pallet. They must be moved on a dolly, at reduced speed and preventing any excessive bending movement of the machines.

WARNING: the machine weighs from 44 to 51 Kg ca. (according to the version). Take care during transfer to avoid accidents to people (example: muscular rip, hernia, etc.).

If the machine must be stocked for a period before installing it, please keep the machine in a dry place (the relative humidity must not exceed 80%), with temperature between 5°C and 30°C. Do not place on one machine more than another one. Do not overturn the machines.

7 Unpacking

The machine must be unpacked as follows:

1) cut the protection film along one of the protection angle bar around the pallet;
2) remove the pallet from all the machines using the appropriate side holes on the packing of the machines;

WARNING: the machine weighs from 44 to 51 Kg ca. (according to the version). Take care during transfer to avoid accidents to people (example: muscular rip, hernia, etc.)

Each machine must be unpacked as follows:

1) place the machine on a fixed surface;
2) cut the two safe plastic straps;
3) lift up the packing;
4) remove the appropriate bag;
5) lift and place the machine in its working position.

WARNING: the packing materials must be kept out of the reach of unauthorised people, especially children, as potentially hazardous. Qualified waste recovery companies must carry out the disposal of special packing materials.

6) take the keys fixed with adhesive tape at the grid of the cup station;
7) open the door and remove the adhesive tape from the coin box (if it is present);
8) take out the supply cord and connect it to the plug on the backside of the machine without connecting the other end to the mains electrical supply.
9) lift the superior cover and extract the cartoon sheet placed between the canisters and the cover.

8 Positioning

The machine must be installed indoors on a flat and sound plane.

Place the machine at least at 10 cm from the wall to guarantee a suitable air circulation.

Rhea Projects declines all responsibility for any shortcomings caused by non-compliance with installation instructions.

If the machine is installed on delicate or valuable floors, it is advised to lay a carpet under the machine, about 10 cm larger than the machine itself, made of rugged material, resistant to dirt and water (e.g. synthetic laminate). This is to protect the floor and also prevent it to get dirty for the accidental spilling of beverages.

9 Connection to the mains water supply and to the electrical supply

9.1 Connection to the mains water supply

WARNING: respect the NATIONAL NORMS relative to main water supply.

Before proceeding to the connection carry out the following checks on the water to be used:

- Make sure that the water supply is of drinking quality possibly through certificate of a laboratory;
- Make sure that water mains pressure ranges from 1 to 8 bar;
- If the mains pressure is lower than 1 bar, a pump must be installed;
- If the mains pressure is higher than 8 bar, a pressure reducer must be mounted, calibrated at 3 bar, on the water connecting hose of the machine; in any case the mounting of a pressure reducer is advisable in all installations where high-pressure peaks occur.

If not already existing, install a 3/8" gas tap to exclude the machine from the mains source in case of emergency.
Connection of the tap to the machine must be made with a copper or plastic hose which have been approved for food contact use and resistant to operating pressure not lower than 10 bar.

Make sure that the water is free of impurities and does not feature excessive hardness (higher than 20 French Degrees). This shortcoming can be solved using normal water softeners.

The **XM** automatic vending machines models can be provided with a optional filter. Lime scale can be notably reduced by the use of the filter, ensuring a longer life of all components in contact with water and reducing maintenance.

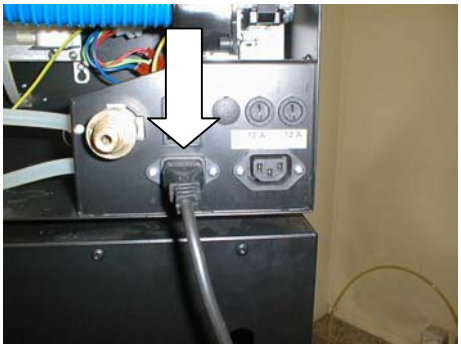
Carry out the connection on the inlet coupling of the water softener or, should the filter not be mounted, directly on the inlet coupling of the water inlet solenoid valve.

The water softener and the water inlet solenoid valve are both provided with a 3/8" gas male inlet coupling.

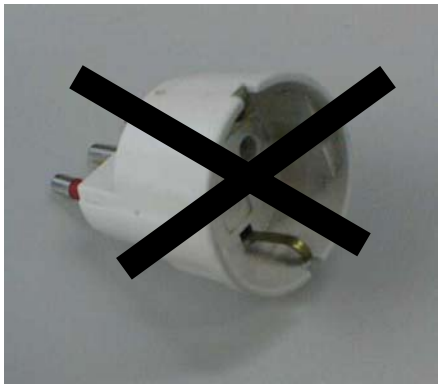
If a water-softening filter is mounted, the water hardness must be taken (special kits are available for sale) in order to define how often the filter shall be regenerated. This depends on the rate of use of the filter and on the grade of water hardness (see section "Regeneration of the water softener filter").

9.2 Connection to the electrical supply

Make sure that the grounding of the electrical mains to which the machine will be connected is in good conditions and in compliance with domestic and European standards concerning electrical safety.



The machine is equipped with a power supply cord VII-H50VV-F-3G1.0, 3x1.5 mm^2 with Shucko plug C19.



Make sure that the electrical mains voltage is the same as indicated on the identification sticker of the machine and that the current rating of the plug is suitable for the current absorbed by the machine.

The identification sticker is put inside the machine and can be seen opening the door. For connection, an electric plug, single-phase, 230V - 50 Hz, for a maximum load of 10 A is required.

Any type of plug, which is incompatible with the socket of the machine, must be replaced. **Do not use adaptors or multiple plugs.**

10 How to activate or deactivate the machine

10.1 Starting switch

A starting switch placed in the rear part of the machine cuts the power off all electrical and electronic components in the machine. If a DAMIAN Snack machine is connected with XM, when the switch of the XM is off also the electrical and electronic parts of the DAMIAN Snack are cut off.

WARNING: If required, to switch the machine off push the starting switch in OFF position or unplug it from the electrical mains.

10.2 Safety switch

A **SAFETY SWITCH** is provided in the machine, which cuts the power off all electrical and electronic components in the machine when the door is opened in order to carry out ingredient refilling and cleaning operations.

WARNING: if required, to switch the machine off open the door of the machine or unplug it from the electrical mains.

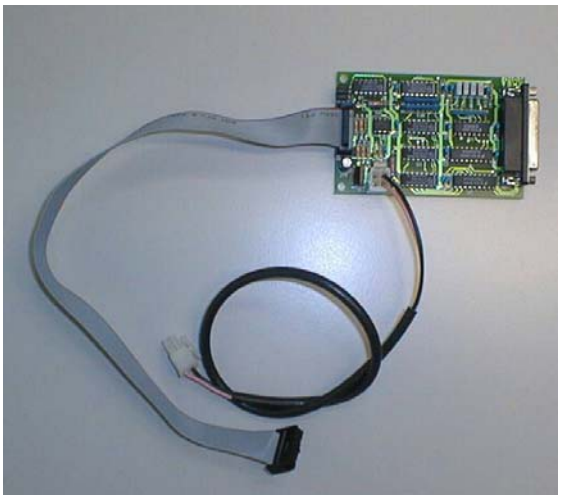
Some operations will require to have the machine switched on and with the door open. To activate the machine with the door open, when specified in the instructions, insert the special plastic key, hanging on a cord near the switch and turn it clockwise by 90°.

WARNING: the opening and switching on of the machine with the door open (unless for cleaning operations) must be carried out only by authorised, qualified personnel. Do not leave the machine open unguarded.

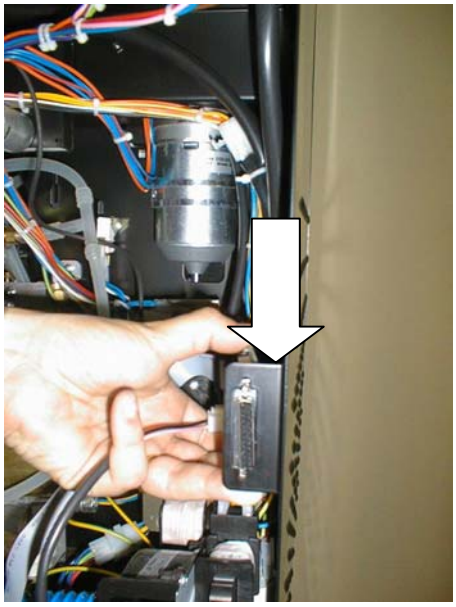
10.3 Electrical connection to DAMIAN Piccola

To electrically connect the Xm vendine machine with Snack machine Damian Piccola proceed as follows:

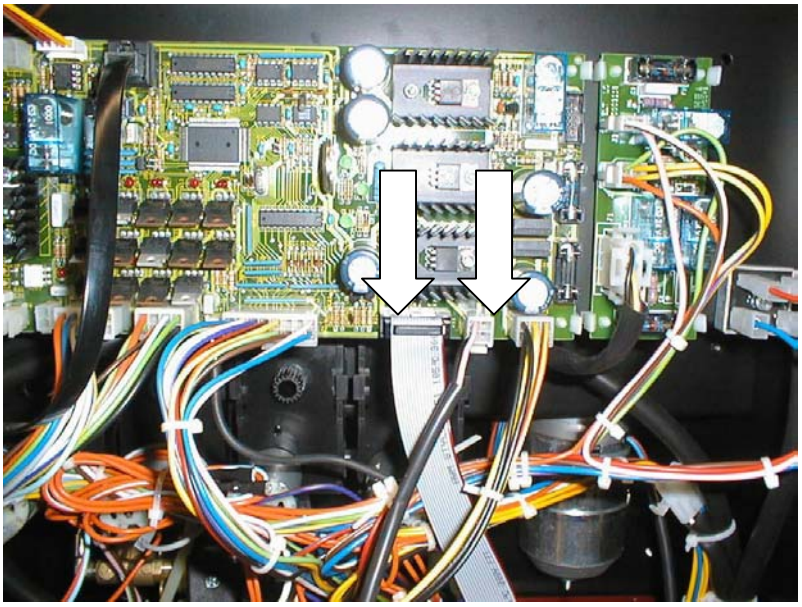
Disassemble the rear wall of the XM machine unscrewing the fixing screws.



Take the Damian Piccola interface board and



Fix it on the rear side of the machine with the proper screws.



Plug into the connectors of the CPU/POWER board of the XM machine the flat cable and the supply connector from the Damian Piccola interface board.

Cut the rear wall to make a hole for Damian Piccola to connect the communication cable. Install again the rear wall of the XM vending machine.

10.4 Diagnostics cycle of the switching up

At the starting the machine carries out a diagnostics cycle to check the position of the mobile components, the correct quantity of some ingredients and the correct water mains supply pressure.

At the end of checks, the standard invitation message will appear on the display, e.g.:

rheavendors group
- - - - - - - - - - - - - - -

XM	
v 2.4	24 - 04 - 03

the date of the update of the software and the version of the master loaded into the machine (e.g.: 2.2)

please wait

Only during the First Installation, at this point, the machine makes some special operations specific for **Versions E** and **H**. These operations are described in the paragraph "**Start up operations**".

Only if the machine is connected with a Damian Snack, the machine begins to make a test to verify all the product motors of the Snack unit. On the display appear the messages of all the checked motors:

test snack 11 yes

At the end of all tests the display shows the message:

rheavendors XM

Take a relax moment

11 Start-up operations

11.1 First installation phase

During the First installation phase water is filled inside the boiler (**Version H**) and the water refilling central tank (**Version E**); then correct boiler's temperature is set.

11.1.1 Loading the boiler

Make sure that the liquid waste bucket and the one for coffee grounds are correctly placed.

Open the tap of the water circuit.

Insert the key in the safety switch.

Only for Espresso versions the machine starts to make automatically the First Installations operations. The display shows:

Installation
button 1 = STOP

The machine starts automatically loading the boiler first the water refilling tank and then the boiler (**Version E**). After about 0,5 litres of water dispensed from the coffee outlet pipe, press **button 1** to stop the filling of the water.

The coffee brewer moves into infusion position and the display shows:

end
installation

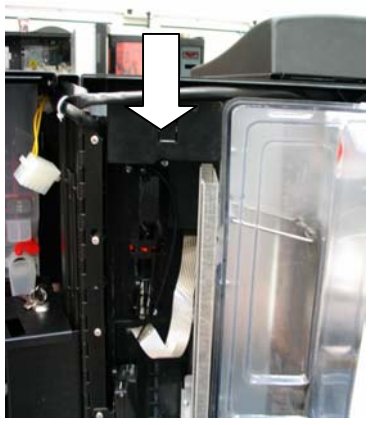
wait temperature

until the boiler reaches the pre-set temperature.

During this phase the machine is in stand by until the water into the boiler reaches the correct value. At the end of this phase the machine starts to test the Snack as described at the paragraph "**Diagnostics cycle of the switching up**".

Only for Instant Versions after the switching on messages, the display shows:

water refilling



The machine starts automatically loading the boiler with water. The boiler is filled up in about 3 min. At the end of this phase the machine starts to test the Damian Snack as described at the paragraph "**Diagnostics cycle of the switching up**".

If the load is sufficient, by pressing the **key** inside the machine on the display board, it is necessary to make some washings of the mixing bowls and of the

coffee brewer (**Version E**).

The display shows:

1=PROG
3=FREE

2=DATA 4=CLEAN
5=MAINT.

Press **button 4**; the display shows:

CLEANINGS
1 - 2 - 3 - - - - - - - - - - -

Pressing **buttons 1**, **2**, and **3** the machine pours water from one of the beverage outlet spouts. Press the **key** inside the machine on the display board to exit from CLEANINGS mode.

Press the **key** inside the machine on the display board to exit from CLEANINGS mode.

11.1.2 Modification of the operating temperature

Only for Versions H, to modify the temperature threshold, **after loading water inside the boiler**, insert the key in the safety switch and wait until the display shows

rheavendors
XM

TAKE A RELAX
MOMENT

Press the **key** inside the machine on the display board and the **button 1**.

The display shows:

1=PROG
3=FREE

2=DATA 4=CLEAN
5=MAINT.

PROGRAMMING- - - -
-BUTTON 1 - - - - - - - -

Press **button 1** until the display shows:

PROGRAMMING - - -
TEMPERATURE - - -

Pressing **button 2** the display shows:

TEMPERATURE
Boiler 10

Pressing **button 4** and **5** set the correct value (the suggested values are 85°C for Instant machines and 92°C for Espresso machines).

Press **button 1** to confirm the data and then the **key** inside the machine on the display board to exit from PROGRAMMING.

Switch off and on the vending machine using the safety switch.

At the end of the operation the display will shows:

rheavendors
XM

TAKE A RELAX
MOMENT

11.2 Second installation phase

The second phase of the installation of the vending machine contains the cleaning of the parts in contact with foodstuff, the loading of the food products and the installation of some accessories.

11.2.1 Washing and disinfecting of components in contact with foodstuff.

With the vending machine switched on, make sure that the display shows:

RHEA VENDORS
- - - - - - - -XM - - - - - -

Open the door. The display shows:

1=PROG
3=FREE

2=DATA 4=CLEAN
5=MAINT.

Make the cleanings of the mixing bowls pressing the **button 4**; the display shows:

Downloaded from www.vendingbar.gr

CLEANINGS

SEL 1-2-3- - - - - - -

Press the **buttons 1**, **2** and **3**. With all these three buttons use about 3 litres of water altogether (the button 1 makes the cleaning of the group; the other ones the cleaning of the existing mixing bowls). This will remove any possible trace of dirt from the boiler. Press the internal key on the display board inside the machine.

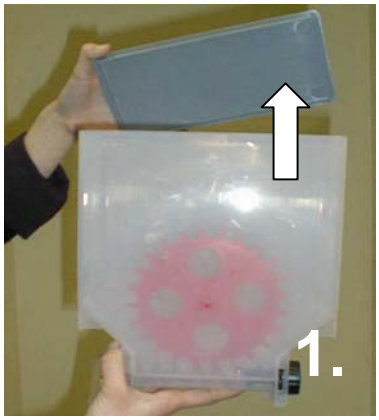
Switch off the machine.

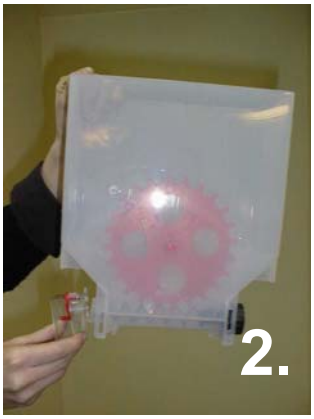
Wash hands thoroughly.

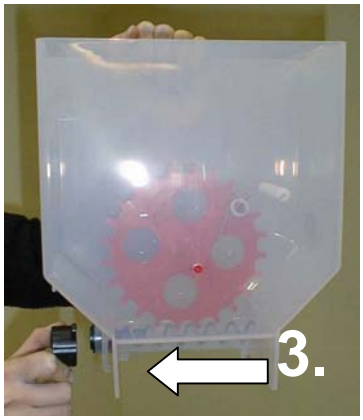
Prepare separately, in a suitable container, a disinfecting antibacterial solution of chlorine, according to the instructions enclosed in the chemical.

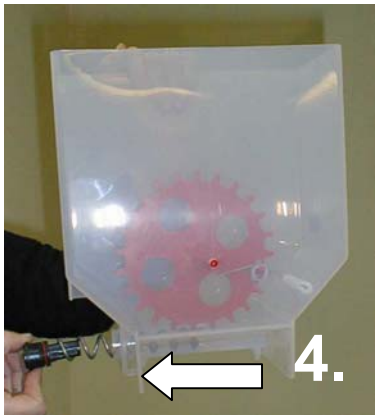
Remove the upper cover.

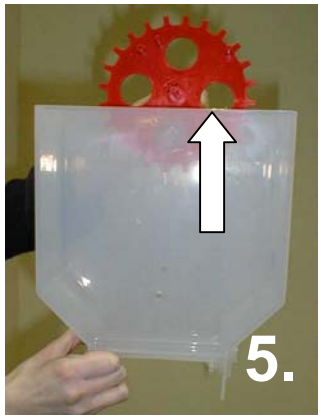
Remove all the ingredients canisters from the machine and disassemble completely the canisters



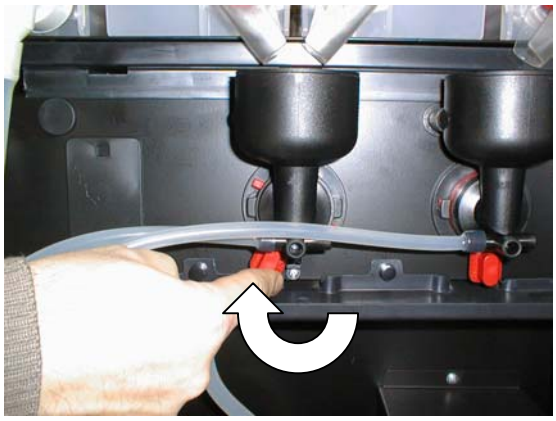


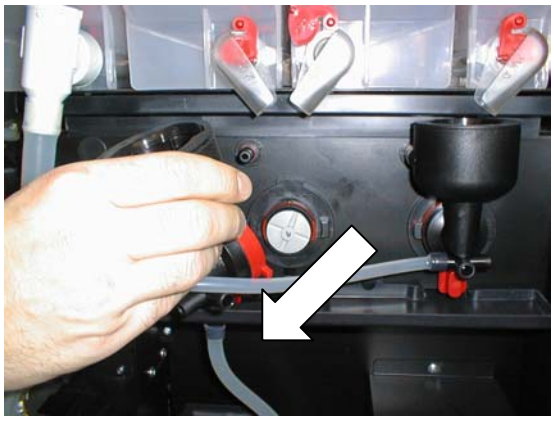




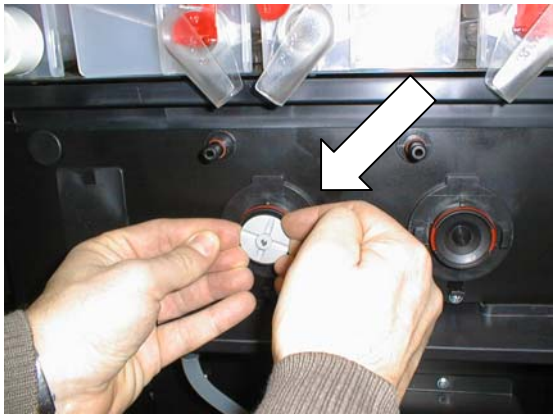


immerse all parts in the solution previously prepared.





Remove the mixing bowls and the mixing fan.



Remove the silicone beverage outlet pipes and pertaining supports. Immerse all parts in the solution.

Using a cloth soaked in the solution, proceed to clean also the attachment bases of the mixers, which remain fixed to the machine.

The time of permanence in the solution, in order to obtain a full disinfecting, is stated on the packaging of the chemical

At the end of the disinfecting, recover canisters and covers, dry them very carefully (using compressed air, a hair dryer or perfectly clean and sterile cloths) and reassemble them in the machine. Recover all other parts from the solution and put them back in the machine in opposite sequence with respect to disassembly.

Switch on the machine and wait for the message:

RHEA VENDORS
- - - - - - - -XM- - - - - - -

Carry out repeatedly washing cycles of the mixing bowls pushing twice the internal **key** on the display board inside the machine until is displayed the message:

1=PROG
3=FREE

2=DATA 4=CLEAN
5=MAINT.

Push the **button 4**; the display shows:

CLEANINGS
SEL 1-2-3

Use **buttons 1**, **2** or **3**.

Use about 2 litres of water altogether. This will remove all traces of disinfecting solution from the outlet pipes.

Press the internal **key** on the display board inside the machine.

11.2.2 Refilling of ingredients

Read on the canister the indication of the ingredient to be loaded into the machine.

Fill up the canister of the ingredients, after having removed the cover.

Use a quantity of product suitable for a period between two refilling, and in any case do not exceed the quantities shown in the table here below.

INGREDIENTS	QTY
Cups	180
Stirrers	250
Coffee beans	1.5 Kg
Instant coffee (small)	0.5 Kg
Milk (small)	0.7 Kg
Chocolate (small)	1.5 Kg
Chocolate (big)	3.1 Kg
Tea (small)	2.0 Kg
Sugar (small)	2.0 Kg

This will prevent deterioration of the quantity of product in excess. Canisters for soluble ingredients can be removed from the machine, in order to facilitate refilling.

Rotate the slide lock in order to avoid to spill powder and make sure that the closing tongue of the exit of the coffee beans canister is pushed right in.

After having refilled, refit the canister and open the slide lock and pull the tongue of the coffee beans canister out.

11.2.3 Refilling of cups

It is recommended to use only cups specifically designed for automatic vending machines. Cups must not be transparent or of light absorbing dark material. Diameter under the rim must be between 65.5 and 66.0 mm. The distance between the rims of two cups stacked and positioned side by side must be between 2.6 and 3.2 mm. Should it be necessary to adopt cups having different sizes with respect to the above specifications, the Technical service Department of Rhea Projects should be contacted in advance.

ATTENTION: carry out the loading of cups only when the machine is switched off.

Before loading make sure, checking through the transparent protection of the cups compartments, that the central stack of cups is in a position suitable for filling (that is to say with the hollow side facing the operator). Should this not be the case, then rotate manually in clockwise direction the column.

Proceed to the loading as follows:

open the upper cover of the cup feeder;

pull the two mobile sides towards the outside, until they are blocked;

slide the stacks of cups towards the inside of the machine, keeping them in vertical position.

The edge of the upper cup of each stack must reach a height between the limits indicated on the sticker of instructions placed inside the cup feeder.

This allows a regular operation of the inside mechanisms of the cup feeder itself; close the cup feeder with the upper cover.

11.2.4 Refilling of stirrers

It is recommended to use only stirrers suited to automatic vending machines. The thickness of the stirrers must range between 1.2 and 1.8 mm and their length must be approx. 89 mm.

If stirrers with different dimensions from those specified must be used, please contact the technical service of Rhea Projects.

When the machine is open and off, release and rotate the cup feeder. Remove the metal weight. Slide along the guide track the stirrers still hold together with the packing band and, once they have reached the end of the guide, rip the band off. Insert the weight again. Refit the cup feeder.

11.2.5 Inserting the selection labels

The selection labels are supplied in the special pocket in the Manual. When the machine if open and off, release and turn the cup feeder.

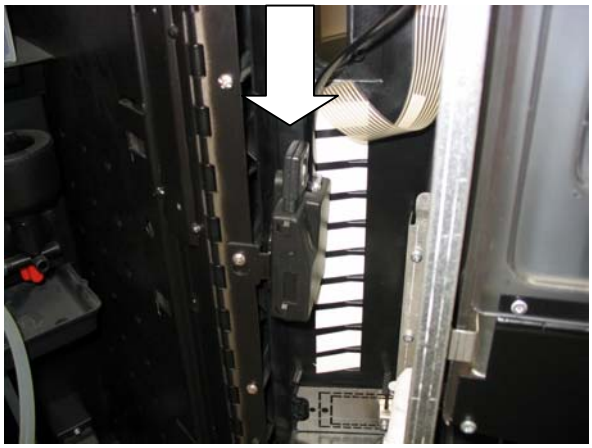
Loosen the screws to remove the protection of the area for the slipping of labels.

Slip the labels in the special slots following the diagram on the Memory Configuration Chart attached to the Manual. Check their correct position from outside the machine.

12 Programming of the machine

12.1 Memory

The machine is controlled by a programme stored in the microprocessor of the FLASH memory, installed on the CPU board.



The program stored in the memory can be updated with a FLASH serial card or with a serial cable connected with a PC where is installed the **Rheaction** Program.

At the switching on of the machine a message will display the latest version of the software loaded into the machine.

12.2 Factory set parameters

The machine is supplied already pre-set for the most common operation parameters. In particular:

- configuration of the version;
- throw of coffee, powdered ingredients, tea and quantity of water required;
- vend prices (set to 0: the machine is in the free vend mode);
- pre-setting for the use of the system of parallel payment;
- the clock function disabled;

The programming of the machine must be modified only if the pre-set factory parameters are not complying with the required use.

12.3 How to enter and exit from the programming mode

To modify the operation parameters of the machine it is necessary to enter in the programming mode.

To enter press the internal **key** on the display board inside the machine. The display shows:

1=PROG
3=FREE

2=DATA 4=CLEAN
5=MAINT.

PROGRAMMING
BUTTON 1 - - - - - - - -

Once the parameters have been modified, press again the **key** on the display board inside the machine to exit from the programming. The display shows:

END PROGRAMMING

- - - - - - - - - - - - - - - - -

12.4 Buttons used in the programming mode

Programming is carried out by pressing the buttons on the selection keypad. Notably:

- with **button 1** the sequence of programming sub-menus is visualised;
- with **button 6** the sequence of programming sub-menus is visualised in the reverse direction;
- with **button 2** the sequence of specific programming functions for the chosen sub-menu is visualised;
- with **button 3** the sequence of specific programming functions for the chosen sub-menu is visualised in the reverse direction;
- with **button 4** the value of the visualised function is increased or selected;
- with **button 5** the value of the visualised function is decreased or selected.

12.5 Programming sub-menus

Access to the programming sub-menus is possible at any time, after entering the programming mode and pressing the **button 1** on the selection keypad. These sub-menus are repeated cyclically after the last one has been displayed.

The sub-menus and their display order are as follows:

PROGRAMMING- - - - -

- BUTTON 1 - - - - - - -

PROGRAMMING - - - -

- BUTTON 2- - - - - - - -

PROGRAMMING - - - -

- BUTTON 10 - - - - - - -

PROGRAMMING - - - -

- PRICES - - - - - - - - -

PROGRAMMING - - - -

- COINS - - - - - - - - - -

PROGRAMMING - - - -

-TEMPERATURE - - - -

PROGRAMMING - - - -
-MISCELLANEOUS - -

DIAGNOSTICS - - - - - -
- - - - - - - - - - - - - - - - -

SALES AUDIT - - - - - -
- - - - - - - - - - - - - - - - -

PROGRAMMING- - - - -
-MDB- - - - - - - - - - - - -

PROGRAMMING- - - - -
-CLOCK- - - - - - - - - - -

REGISTRATION
OUT OF ORDERS

PRODUCT
DECOUNTERS - - - - -

PROGRAMMING- - - - -
SNACK PRICES - - - - -

SALES AUDIT - - - - - -
- SNACK - - - - - - - - - -

PROGRAMMING- - - - -
SNACK MISCELLANEOUS

REGISTRATION
OUT OF ORDERS
SNACK

12.5.1 Pre-setting of the buttons

The modification of throws is a delicate operation as the good operation of the machine can be affected. As a general rule, it is recommended to keep in mind that when instant ingredients are dissolved in

water, a brief interval to rinse the mixing bowl must be foreseen at the end of the powdered ingredient vending. This is provided by programming a dispensing time for water about 2 sec. longer than the dispensing time for the instant ingredients.

To each of the 10 buttons it is possible to associate the recipe of any drinks.

To proceed at the pre-setting of each button, in the programming mode, press **button 1** until the display shows:

PROGRAMMING- - - - - -BUTTON 1- - - - - - - -

Press **button 2** to visualise one of the following functions:

FUNCTIONING

INHIBITED

PRE SELECTION

Only for FP versions the display shows also the function:

FUNCTIONING COLD

Only for FBT versions the display shows also the function:

FUNCTIONING FBT

Scroll the functions pressing **buttons 4** and **5**.

To inhibit the button, which is going to be programmed, confirm **INHIBITED** pressing **button 1**.

Setting of a selection

To associate a **selection** to the button, which is going to be programmed, confirm **FUNCTIONING**.

Only for FP versions it is possible program cold drinks selecting the function **FUNCTIONING COLD**.

Only for FBT versions it is possible program drinks made with tealeaves selecting the function **FUNCTIONING FBT**.

Press **button 2**. The display shows one of the following options:

PROGRAMMING: COMPLETE

PROGRAMMING:
REDUCED

Use **buttons 4** and **5** to visualise the options. Choose PROGRAMMING COMPLETE if you want the possibility to programme all the parameters of each product, otherwise choose PROGRAMMING REDUCED.

Only for E Versions pressing **button 2**, the display shows:

COFFEE WATER
0=inhib. cc:

This parameter is present only in machines with the coffee brewer. Use this parameter to adjust the coffee beans water quantity. Activate this parameter only if you want to associate to this button a drink made with coffee beans. Increase or decrease the value pressing respectively the **buttons 4** and **5**. To inhibit this function programme the value 0.0.

Only for E Versions pressing **button 2**, the display shows:

opt. coffee-milk
(0-1) X

Use this parameter to set the priority of starting between milk and ground coffee for drinks made with these ingredients. Increase or decrease the value pressing respectively the **buttons 4** and **5**. Set this parameter at 0 if you want that milk starts before ground coffee and the value 1 for the opposite.

Pressing in sequence the **button 2** the display shows:

PRODUCT X
0=inhib. .0

The number of the product shows the position of the canister inside of the machine starting to count from the left the possible positions of the product motors.

If the PRODUCT X is necessary for the drink that is being set, increase or decrease until the desired value, pushing respectively the **buttons 4** and **5**; otherwise inhibit the ingredient setting its value to 0.0. ***Only for FBT Versions*** *the tealeaves quantity must be associated only to PRODUCT 1.*

Pressing again **button 2** the display shows:

start delay
PRODUCT 1 .0

Pressing respectively **buttons 4** and **5** increase or decrease the ingredient's pouring delay after the beginning of the selection. ***Only for FBT Versions*** *program this value at 0.*

Pressing again **button 2** the display shows the same items for other products that can be set as the previous one following the recipe of the desired drink.

Pressing again **button 2** the display shows:

WATER X time
0=inhib. .0

The number of the WATER shows the position of the mixer starting from the left. Increase or decrease the value pressing respectively the **buttons 4** and **5**; otherwise inhibit WATER setting its value to 0.0. ***Only for FBT Versions*** *the tealeaves quantity must be associated only to WATER 1.*

Pressing again **button 2** the display shows:

start delay
WATER 1 .0

Pressing **buttons 4** and **5** increase or decrease respectively the water pouring delay after the beginning of the selection. ***Only for FBT Versions*** *this parameter represents the time between the two tealeaves infusions.*

Only for H Versions pressing again the **button 2** the display shows:

flow WATER X
slow

Pressing **buttons 4** and **5** it is possible to choose among the three parameters "**slow**", "**medium**", "**quick**" to increase or decrease the correspondent water flow.

Pressing again **button 2** the display shows:

MIXER X
0=inhib. .0

Increase or decrease the value of the time of working of the mixer pressing respectively the **button 4** and **5**; otherwise inhibit the MIXER setting its value to 0.0.

Pressing again **button 2** the display shows:

start delay
MIXER X 1.0

Pressing **buttons 4** and **5** increase or decrease respectively the mixer start delay after the beginning of the selection.

Pressing again **button 2** the display shows:

speed MIXER X
0

Downloaded from www.vendingbar.gr

Pressing **buttons 4** and **5** increase or decrease respectively the mixer speed of the selection.

Pressing again **button 2** the display shows:

selection name:
standard

Pressing **button 4** and **5** it is possible to modify the message shown in the display during the preparation of the drink. If you select the value **standard**, the display will show:

drink number N
preparing

otherwise if you select one of the available selection names the display will show:

selection name
preparing

Press **button 1** to programme the following button.

ATTENTION: selecting the name NO CUP, the drink programmed in this selection button will be dispensed without cup.

ATTENTION: if all the parameters of a button set as FUNCTIONING are programmed at 0, the vending machine will dispense ONLY CUP.

ATTENTION: ***only for FBT Versions***, every time that a tea leaf selection is activated or deactivated, after exiting from PROGRAMMING, switch off and on the machine. Without this operation the tealeaves selection setting will be ignored.

Setting of a pre-selection

To associate a **pre-selection** to the current button, choose PRESELECTION pressing **buttons 4** and **5**.

Pressing again **button 2** the display shows:

presel. message
DECAFFEINATED

Pressing **buttons 4** and **5** the display shows all the other available pre-selections:

presel. message
BARLEY

presel. message
NO CUP

presel. message
EXTRA MILK

presel. message
SHORT

presel. message
NO SUGAR

presel. message
EXTRA SUGAR

DECAFFEINATED/BARLEY

To associate to the current button the pre-selection DECAFFEINATED/BARLEY, choose it in the menu and press **button 2**.

The display shows:

canister
DECAFF./BARLEY nr: 0

Press **buttons 4** and **5** to increase or decrease the position of the canister in which decaffeinated/barley coffee is present.

Pressing again **button 2** the display shows:

ev-mixer
DECAFF./BARLEY nr: 1

Press **buttons 4** and **5** to increase or decrease the position of the solenoid valve to associate to decaffeinated canister.

Pressing again **button 2** the display shows:

price decaf/barley
0 = + 1 = - X

Pressing **buttons 4** and **5**, set 0 for a price increasing or 1 for a price decreasing; the price will be modified of the value of the price associated at the current button.

Pressing again **button 2** the display shows:

enab. presel.
for button 1 YES

Choose the buttons to which associate the pre-selection that is going to be programmed. Press **buttons 2** and **3** to visualise all buttons and choose YES or NO with **buttons 4** and **5** to set or to inhibit the pre-selection at the button shown on the display.

ATTENTION: ***Only for E Versions*** during the setting of the drinks with coffee beans, you have to programme also the parameters of the drink with decaffeinated/barely coffee (PRODUCT, MIXER, EV); ***Only for H Versions*** during the programming of the drinks with instant coffee, set the parameters of both coffees; the two instant coffee canisters must go through the same mixing bowl.

NO CUP

To associate to the current button to the pre-selection NO CUP, choose it in the menu and press **button 2**.

The display shows:

enab. presel.
for button 1 YES

Proceed as for previous pre-selections.

EXTRA MILK

To associate to the current button the pre-selection EXTRA MILK choose it in the menu and press **button 2**.

The display shows:

canister
MILK nr: 0

Pressing **buttons 4** and **5** to increase or decrease the number of the product motor correspondent to the canister in which milk is present.

Pressing again **button 2** the display shows:

quantity EXTRA
MILK + .0

Pressing **buttons 4** and **5** set the extra quantity milk wanted.

The display shows:

enab. presel.
for button 1 YES

Proceed as for previous pre-selections.

SHORT

To associate to the current button the pre-selection SHORT choose it in the menu and press **button 2**.

The display shows:

presel. message
SHORT

Pressing again the **button 2** the display shows:

WATER quantity
SHORT - .0

Pressing **buttons 4** and **5** set the percentage (%) of water quantity to decrease from normal water quantity for short drinks.

Pressing again the **button 2** the display shows:

enab. presel.
for button 1 YES

Proceed as for previous pre-selections.

NO SUGAR

To associate to the current button the pre-selection NO SUGAR choose it in the menu and press **button 2**.

The display shows:

canister
SUGAR nr: 0

Pressing **buttons 4** and **5** to increase or decrease the number of the product motor correspondent to the canister in which sugar is present.

Pressing again **button 2** the display shows:

enab. presel.
for button 1 YES

Proceed as for previous pre-selections.

EXTRA SUGAR

To associate to the current button the pre-selection EXTRA SUGAR choose it in the menu and press **button 2**.

The display shows:

canister

SUGAR nr: 0

Pressing **buttons 4** and **5** to increase or decrease the number of the product motor correspondent to the canister in which sugar is present.

Pressing again **button 2** the display shows:

quantity EXTRA
SUGAR + .0

Pressing **buttons 4** and **5** set the extra quantity sugar wanted.

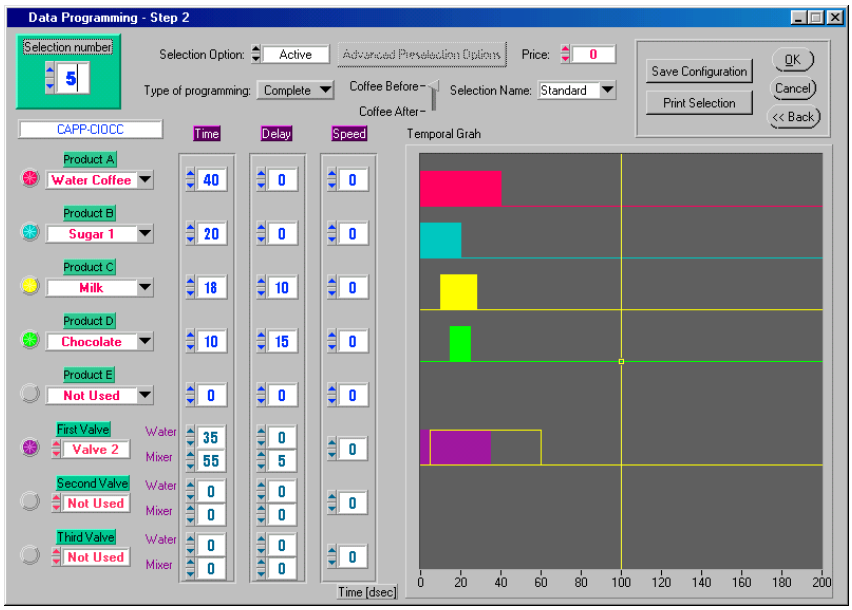
The display shows:

enab. presel.
for button 1 YES

Proceed as for previous pre-selections.

At the end of the setting of the buttons, press **button 1** to confirm the set data.

All the settings described in this and in following paragraphs can be set in a easier way using **rheaction** software. For further information contact rheavendors Customer Service.



12.5.2 Pre-setting of the normal sale prices

One price for each selection available can be memorised in the machine. When a selection is matched to a price set to zero, the selection is in the free vend mode.

To modify sale prices, in the programming mode, press **button 1** until the sub-menu

PROGRAMMING - - - -
PRICES - - - - - - - - - -

is visualised.

Press **buttons 2** and **3** and select the price to be modified. For example:

PRICE X
XXXX

will appear on the display. Press **buttons 4** and **5** to modify the value of the price displayed.

Press **button 1** to confirm the set data.

When the invitation message is visualised and with machine open and switched on, the pre-set sale prices can be by-passed by entering the selection test mode (free-vend). To have access to this mode, press the **key** on the display board inside the machine, then press **button 3**.

The display shows:

1=PROG
3=FREE

2=DATA 4=CLEAN
5=MAINT.

FREE VEND

At this point the machine is able to dispense any selection, without charge. Selection sales in the selection test mode are counted in a separate counter (see "Reading of sales data").

To exit from the selection test mode, press the **key** on the display board inside the machine.

12.5.3 Presetting of coin-set

The set of values that the machine assigns to each signal (canal) received from the payment system is called *coin-set*.

Press **button 1** until to visualize the sub-menu:

PROGRAMMING- - - - -
-COINS- - - - - - - - - -

Pressing **button 2** the display shows from:

COIN A
0

to:

COIN F
0

Pressing **buttons 4** and **5** change the value of the visualised coin.

Press **button 1**, exit from the programming mode, and switch the machine off and on. The machine will use the new coin-set.

For further information see the paragraph " Modifying other operation parameters (Miscellaneous)" the parameter "single or multi vend".

12.5.4 Modification of the operating temperature

The machine defines and regulates water temperature in the boiler.

To modify the temperature thresholds, in the programming mode, press **button 1** until the sub-menu

PROGRAMMING
TEMPERATURE

is displayed.

Pressing **button 2** the display shows:

TEMPERATURE	
Instant Boiler	XXX

Pressing **button 4** and **5** set the value.

Only for E Versions , pressing **button 2** the display shows:

TEMPERATURE	
Espresso Boiler	XXX

Pressing **button 4** and **5** set the value.

Only for E Versions , pressing **button 2** the display shows:

DEF. FIRST COFFEE
N

Use this parameter to obtain drinks made with coffee beans at a right temperature also after long periods of inactivity of the coffee brewer. When this parameter is set (it is indicated in minutes) if for N consecutive minutes the machine does not make any selection with coffee beans, before making the next selection with coffee beans the machine will wait that the temperature inside the boiler will reach the value set at the parameter "TEMPERATURE first coffee". Press the **buttons 4** and **5** to increase and decrease the value.

Only for E Versions , pressing **button 2** the display shows:

Use this parameter to obtain drinks made with coffee beans at a right temperature also after long periods of inactivity of the coffee group. This value indicates the temperature that the water inside the boiler should reach before making a drink made with coffee beans if for a time (in minutes) equal or superior to the one set at the parameter DEF. FIRST COFFEE the machine has not made any drinks made with ground coffee. To disable this function, set the parameter DEF. FIRST COFFEE at a value equal or lower than the one set at the parameter COFFEE T. Press the **buttons 4** and **5** to increase and decrease the value.

At the end of programming, press **button 1** to confirm the set data.

12.5.5 Modifying other operation parameters (miscellaneous)

To modify parameters, in the programming mode, press **button 1** until the sub-menu

is visualised.

Pressing **button 2**, the display shows:

Pressing again **button 2**, the display shows:

Press **buttons 4** and **5** to associate to each vending machine personal codes. These numbers are useful only when a data audit system is used with the machines.

Pressing again **button 2**, the display shows:

Press **buttons 4** and **5** the number of the stand by message to show on the display during the working of the machine (from 0 to 7). Set the message number 3 only if a programmable message is been set with the Rheaction programme with the PC.

Pressing again **button 2**, the display shows one of the following options (scroll the options pressing **buttons 4** and **5**):

type coin-mech
PAR. SING. VEND.

type coin-mech
PAR. MULT. VEND.

type coin-mech
EXECUTIVE

type coin-mech
EXEC. PRICE HOLD.

type coin-mech
MDB

Select:

type coin-mech
PAR. SING. VEND.

to programme a parallel payment system in single vend;

type coin-mech
PAR. MULT. VEND.

to programme a parallel payment system in multi vend;

type coin-mech
EXECUTIVE

to programme an Executive serial payment system;

type coin-mech
EXEC. PRICE HOLD.

to programme an Executive serial payment system working in PRICE HOLDING;

type coin-mech
MDB

to programme an MDB serial payment system.

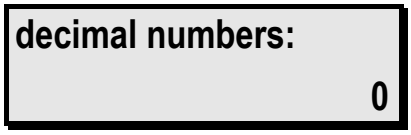
Pressing again **button 2**, the display shows:

pressing **buttons 4** and **5** it is possible to modify the value of the time range between the end of the cycle of a drink and the switching off of the aspiration fan.

Pressing again **button 2**, the display shows:

Pressing **buttons 4** and **5** it is possible to modify the value correspondent to the beep signal that indicates the end of the distribution of the drink.

Pressing again **button 2**, the display shows:

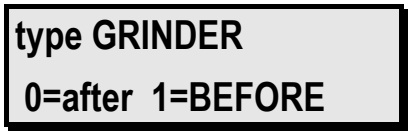


Pressing **buttons 4** and **5** it is possible to set the number of the decimal digits after comma according with the values of the coins, which the machine has to accept (Es: 0=50, 1=5,0 2=0,50…).

Pressing again **button 2**, the display shows:

Pressing **buttons 4** and **5** it is possible to select one of the 3 available languages.

Only for E Versions pressing again **button 2**, the display shows:



This parameter fixes if the grinder should be activated at the beginning or at the end of the cycle. Programme this value at 0 to make the grinding at he end of the cycle and at 1 to make it at the beginning

Pressing again **button 2**, the display shows:

With this parameter is possible to enable the connection with the SNACK DAMIAN. Programme this value at 1 to enable the connection.

Pressing again **button 2**, the display shows:

STIRRER
SUGAR

Pressing **buttons 4** and **5** it is possible to choose among the following possibilities:

- SUGAR: the stirrer is dispensed only with the drinks where sugar is added
- NO SUGAR: the stirrer is dispensed with the drinks where sugar is added also when is pressed the pre-selection NO SUGAR
- ALL: the stirrer is dispensed with all the drinks

Pressing again the **button 2**, the display shows:

Warming decaff.
0=no 1=yes X

This parameter fixes if a preset water quantity should be dispensed inside decaffeinated mixing bowl if for more than 5 minutes no drinks with decaffeinated has been made and if the decaffeinated drink just selected has a coffee water time less than 4 seconds.

Pressing again **button 2** the display shows:

First Installation
0 = First 1

Pressing **button 4** and **5** set this parameter at 0 to activate the First Installation procedure at the switching on of the machine as described at the paragraph "**Start up operations**".

At the end of the programming, press **button 1** to confirm the set data.

12.5.6 Diagnostics programmes

In the programming mode, a certain number of diagnostics programmes can be carried out in order to test the correct operation of some components of the machine.

To modify the parameters, in the programming mode, press **button 1** until the sub-menu

DIAGNOSTICS - - - - -
- - - - - - - - - - - - - - - - -

is visualised.

Press **button 2** and

ABIL. DISPLAY
TEMPERAT. 1=YES 0

is displayed.

According to the value of the parameter, which can be modified with **buttons 4** and **5**, the inside temperature of the machine is displayed in real time. Set the parameter to 1 (it is normally 0) to have the display of temperature. To read the temperature, press **button 1** and exit from the programming mode.

Pressing again **button 2** the display shows:

TENSION
Volt: XX.X

This parameter visualises the value of the supply tension at the 24 V actuators. This value should be included between 24 V and 28 V.

Pressing **button 2** again the display shows:

CUP TEST
SEL. 4

Press **button 4** to dispense a cup.

Pressing **button 2** again the display shows:

STIRRER TEST
SEL. 4

Press **button 4** to dispense a stirrer.

Pressing **button 2** again the display shows:

CUP STATION TEST
SEL. 4

Press **button 4** to verify the correct movement of the cup support.

Only for E Versions, press **button 2** again the display shows:

SUGAR TEST
SEL. 4

Press **button 4** to verify the correct sugar dispensing.

Only for H Versions, Pressing **button 2** again the display shows:

calib. Flow
low

Pressing **buttons 4** and **5** it is possible to adjust the general flow of the water setting the parameters “low”, “medium”, “medium-high” and “high”.

At the end of programming, press **button 1** to confirm the set data.

12.5.7 Reading of the sales data

This sub-menu concerns the reading of the sales data. The machine keeps various counters stored, which allow a direct reading for consumption and cashing.

To have an immediate reading of the total number of cycles carried out, simply keep pressed the **key** on the display board inside the machine.

The display shows:

```
1=PROG
3=FREE
```

```
2=DATA  4=CLEAN
5=MAINT.
```

```
T CYCLES
          XXXXXX
```

All counters, except that of total cycles, can be set to zero. To reset a counter, when it is visualised on the display, press **button 4**.

Read the parameter, in the programming mode, by pressing button 1 until the sub-menu

```
SALES DATA - - - - - -
- - - - - - - - - - - - - - - -
```

is displayed.

Then press **button 2** and the following counters are shown in sequence:

```
T CYCLES
          XXXXXX
```

This value indicates the total sale cycles of the machine. This is the same value, which is shown before. This value cannot be set to zero.

```
P CYCLES
          XXXXXX
```

This value indicates the partial number of sale cycles of the machine starting from the last reset operation.

```
P CASHING
          XXXXXXXX
```

This value indicates the amount of money cashed starting from the last reset operation.

TESTS
XXXXXX

This value indicates the number of beverages in the selection test mode (free-vend: see "Pre-setting of normal sale prices").

Finally, partial counters are available for each sale price. By pressing **button 2** several times, the values from

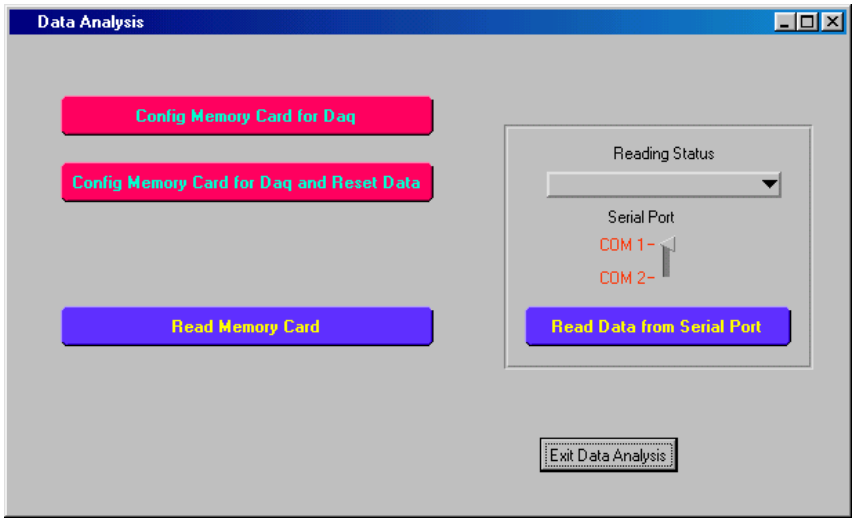
TOTAL PRICE 1
XXXXXXX

to

TOTAL PRICE X
XXXXXX

appear which indicate the total of beverages supplied for each sale price.

The Data Audit can be done also using **Rhea flash card** and **rheaction** software. For further information contact **rheavendors** Customer Service.



12.5.8 Special pre-settings for MDB/ICP standard systems

The MDB/ICP standard systems are commonly used in the machine after programming function "TYPE COIN MECH" to value MDB (see above). Due to the characteristics of this system, mostly the machine manages the credit. The following parameters must be programmed for the correct operation of the MDB/ICP systems. To modify the pre-settings of this function, in the programming mode, press **button 1** until the sub-menu:

PROGRAMMING
MDB

is displayed.

Press **buttons 2** and **3** and chooses the functions, which requires to be altered. Press **buttons 4** and **5** and modify the values of the function displayed. The first function is:

COINS EJECTIONS
Buttons 7 - 8 - 9 - 10

Some coin-mechanisms don't have internal buttons to empty tubes. In this modality when **buttons 7**, **8**, **9** and **10** are pressed, a coin will be dispensed from the corresponding tube.

By pressing **button 2** the following message

FORCED VEND
X

is displayed. Press **buttons 4** and **5** and modify the values of the function displayed. If this value is programmed at 0 it is possible to insert money and then press the button of the return change without making any selection; if this value is programmed at 1 a selection must absolutely be pressed after that the money has been put inside the machine (this to prevent that the Vending Machine could be used like a change money machine).

By pressing **button 2** the following message

CREDIT MAX
XXXXX

is displayed. Press **buttons 4** and **5** and modify the values of the function displayed. This parameter indicates the maximum value of credit accepted by the machine. When the maximum credit limit is overcome, the machine will accept no other payment. Leave this parameter set to 0 if no limitation is required.

By pressing **button 2** the following message

MAX REST
XXXXX

is displayed. Press **buttons 4** and **5** and modify the values of the function displayed. This parameter indicates the maximum value of change dispensed by the token machine (only with system for change). Leave this parameter set to 0 if no limitation is required.

By pressing **button 2** the following message

VEND. SING-MULT
X

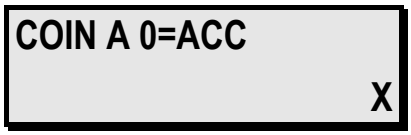
is displayed. Press **buttons 4** and **5** and modify the values of the function displayed. Another characteristic of the MDB/ICP machine with system for change is the multi-sale function. This means that, instead of giving back the correct change and end vend cycle, as usually provided for, the machine keeps the possible residual credit available for the next selection. In order to have the change back, the customer must press the button for coin ejection. This function is available when this parameter is set at 1.

ATTENTION: for mixed MDB/ICP systems, with system for change or card reader or credit key, it is advisable to activate the multi-sale mode. Transfer of credit to card or key (if present) will be carried out only when the button for the coin ejection is pressed.

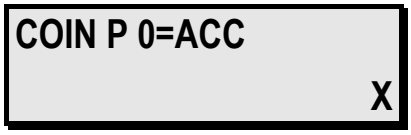
By pressing **button 2** the following message

is displayed. Press **buttons 4** and **5** and modify the value of the token.

By pressing **button 2** the following message from

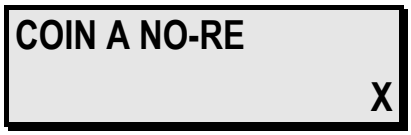


to:

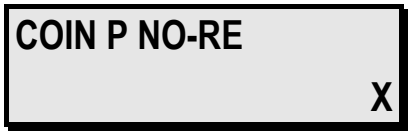


is displayed. Press **buttons 4** and **5** and modify the values of the function displayed. Set at 0 each coin from A to P, which the coin-mechanism must accept, and at 1 all the coins, which the machine must not accept. This set of parameters is working only when the tubes of the coin-mechanism have inside enough coins to give back change.

Pressing again **button 2** the display will show the set of the parameters that will be active when the tubes of the coin-mechanism don't have enough coins inside to give back change. From:

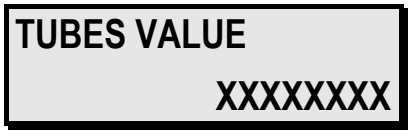


until:



Press **buttons 4** and **5** and modify the values of the function displayed. Set at 0 each coin from A to P, which the coin-mechanism must accept, and at 1 all the coins, which the machine must not accept.

By pressing **button 2** the following messages:



is displayed. This value means the total of money inside the tubes of the coin-mechanism.

At the end of programming, press **button 1**.

Downloaded from www.vendingbar.gr

12.5.9 Pre-setting of functions based on the internal clock

The machine is equipped with an internal clock able to up-date the time also when the machine is switched off. Some functions of the machine are based on the internal clock:

to modify the pre-settings of the clock, in the programming mode, push the **button 1** until the sub-menu

PROGRAMMING - - - -
CLOCK - - - - - - - - - -

is displayed.

Press **buttons 2** and **3** and choose the function, which requires to be altered. Press **buttons 4** and **5** and modify the value of the displayed function. The first two functions are:

SWITCHING ON
XX.XX

SWITCHING OFF
XX.XX

The time when the machine should be switched on and off (hh.mm) can be programmed. When the machine is off, only the option to accept coins and selections is disabled. Furthermore, as a measure to save energy, when the machine is off the water temperature in the boilers is decreased to 70°. When one of the two values is set to 00.00, the machine is never switched off.

Pressing **button 2** the following message

CLEANING
XX.XX

appears. This function programmes the time for the daily automatic cleaning cycle. It is advisable to programme an automatic cleaning at the beginning of the day. The automatic cleaning is completed with the injection a quantity of water equal to about 100 ml in the coffee group (if present) and in all the mixing bowls. In the versions **E** the automatic cleaning cycle of the coffee group can be followed by the vending of 1 or 2 coffees in order to have the correct taste of coffee immediately with the first sale after the cleaning cycle. For further information on how to programme this option at the paragraph “Modifying other operation parameters (Miscellaneous)”.

By pressing **button 2** the following messages

HOUR:
hh.mm

DAY:
DD

MONTH:
MM

YEAR:
YY

will appear.

These functions are foreseen to adjust the current time (hh.mm), the current month (mm) and day (dd) and the current year (yy), respectively. At the end of programming, press **button 1**.

12.5.10 Storing of OUT OF ORDERS

The machine stores the last 20 OUT OF ORDERS. To read them on the display, press **button 1** until the display shows:

STORING
OUT OF ORDERS

Pressing **button 2**, the display shows hour, day, month and year of the last 20 OUT OF ORDERS.

n. 1 OFF NNN
hh:mm gg - mm - - - aa

To delete, visualize each OUT OF ORDER and keep pressed **button 4** for some seconds.

12.5.11 Pre-setting of Product Counters down

In some versions of machines it is possible to set how many seconds a motor should work to dispense instant product before displaying that the product inside the canister is finished.

To proceed at the setting of this parameter enter in PROGRAMMING mode, press **button 1** until the display shows:

DECOUNTERS
PRODUCTS - - - - - - - -

Pressing **button 2** the display shows:

QTY PRODUCT 1
[-xx] xx

until

QTY PRODUCT 6
[-xx] xx

Pressing **buttons 4** and **5** program the number of the seconds that the relative motor should work. To by pass this function pre set these parameters from **PRODUCT QTY 1** to **PRODUCT QTY 6** at 0.

To activate this function take note for each canister of how many seconds the relative motor should work to dispense 1 g of product. Calculate then, depending from the quantity of product that can be filled inside the canister, how many seconds the motor should work to finish the product and pre-set the value of the relative counter.

EG: If inside the coffee canister, which corresponds to motor 1, you fill in 1000 g of coffee and the coffee motor dispenses 1 g of coffee in two seconds then the canister will be empty in 2000 seconds; so you have to program **PRODUCT QTY 1** = 2000.0.

When all selections prepared with this product are dispensed the relative counter is decreased the available seconds. When all the seconds finish all the drinks made with this product are inhibited and the display shows:

selection
not available

To confirm the set data press **button 1** and then press the **key** on the display board inside the machine. When the display shows the standard sale message keep pressed for at least 8 seconds the **key** on the display board inside the machine, until the display shows the message:

set product
OK

To set again the data in sale mode keep pressed for at least 8 seconds the **key** on the display board inside the machine, until the display shows the message:

set product
OK

12.5.12 Pre-setting of the snacks' sale prices

One price for each snack slot (11, 12 etc.) available can be memorised. When a selection is matched to a price set to zero, the selection is in the free vend mode.

To modify sale prices, in the programming mode, press **button 1** until the sub-menu:

PROGRAMMING - - - -
- PRICES SNACK - - - -

is visualised.

Press **buttons 2** and **3** and select the price to be modified. For example:

PRICE X
XXXX

will appear on the display. Press **button 4** and **5** to modify the value of the price displayed.

Press **button 1** to confirm the set data.

When the invitation message is visualised and with machine open and switched on, the pre-set sale prices can be by-passed as described in the paragraph 12.5.3.

12.5.13 Reading of the snacks' sales data

This sub-menu concerns the reading of the snacks' sales data. The machine keeps various counters stored, which allow a direct reading for consumption and cashing.

Read the sales data, in the programming mode, by pressing **button 1** until the sub-menu

SALES DATA - - - - - -
SNACK - - - - - - - - - -

is displayed.

Then press **button 2** and the following counters are shown in sequence:

T CYCLES
XXXXXX

This value indicates the total sale cycles of the machine. This is the same value, which is shown when I pressed the **key** inside the machine on the display board and then **button 2**. This value cannot be set to zero.

P CYCLES
XXXXXX

This value indicates the partial number of sale cycles of the machine starting from the last reset operation.

P CASHING
XXXXXXXX

This value indicates the amount of money cashed starting from the last reset operation.

TESTS
XXXXXX

This value indicates the number of snacks sold in the selection test mode (free-vend: see "Pre-setting of normal sale prices").

Finally, partial counters are available for each sale price. By pressing **button 2** several times, the values from

TOTAL SELECTON 1
XXXXXXX

to

TOTAL SELECTION X
XXXXXX

appear which indicate the total of snacks supplied for each sale price.

12.5.14 Modification of the operating temperature of Snack

The machine defines and regulates temperature in Snack unit.

To modify the temperature, in the programming mode, press **button 1** until the sub-menu:

PROGRAMMING - - - -
MISCELLANEOUS SNACK

is displayed.

Pressing **button 2** the display shows:

TEMPERATURE
Snack XXX

Pressing **button 4** and **5** set the value.

At the end of programming, press **button 1** to confirm the set data.

12.5.15 Storing of OUT OF ORDERS of the Snack unit

The machine stores the last 20 OUT OF ORDERS of the Snack unit. To read them on the display, press **button 1** until the display shows:

REGISTRATION
OUT OF ORDERS SNACK

Pressing **button 2**, the display shows hour, day, month and year of the last 20 OUT OF ORDERS.

n. 1 OFF NNN
hh:mm gg - mm - - - aa

To delete, visualize each OUT OF ORDER and keep pressed **button 4** for some seconds.

13 Installation of the payment systems

To install the payment systems always follow the instructions supplied by the manufacturer. For information only, the installation of a token machine is hereunder described.

1) Switch off the machine;
2) Fit the coin-mechanism;
3) Connect the dialogue cable to the display board;
4) In case of Executive systems connect also the voltage supply cable;
5) Switch on the machine;
6) Enter in PROGRAMMING and select the correct payment system as described in the paragraph “Modifying other operation parameters (miscellaneous)”;
7) Exit from PROGRAMMING;
8) Switch off and on the machine.

The machine is now ready to use the payment system .

14 Cleaning and loading operations

WARNING: The personnel in charge of the loading of the ingredients must own a valid certificate of good health following local and NATIONAL NORMS. Furthermore, compliance with any other domestic or local regulations must be checked.

WARNING: Given the sensitivity of some ingredients used in the machine to excessive temperature and humidity, some malfunctions may occur if the machine is operated at temperature higher than 30° C or with relative humidity exceeding 80%. Under these conditions the components in contact with the powdered ingredients must be cleaned at least once a day.

WARNING: The use of the safety key can make in movements internal parts of the machine.

WARNING: To fill canisters use only ingredients specific for vending machines.

To guarantee a correct operation of the machine, it is advisable to carry out the periodic cleaning operations hereunder described. Some of these operations are required to comply with health legislation in force. The cleaning operations must not be carried out when the machine is not working (e.g. if it has already been temporarily out of service following instructions given in section "Out of service - Temporary").

WARNING: **The cleaning operations must be carried out when the machine is open and switched off. The loading of ingredients, if required, must be carried out after any cleaning operation.**

WARNING: The correct installation of the machine is must be in closed places with temperatures between 5°C and 30°C and relative humidity no more than 80%.

14.1 Daily cleaning

The objective of these operations is to avert any growth of bacteria in areas in contact with foodstuff. **Before any operation, wash your hands thoroughly.** To carry out these operations use two clean cloths as well as a clean brush; if drinkable water near the machine is not available, also provide for a container with drinkable water. Proceed as follows:

Make sure that the machine is off.

1) With a damp cloth, clean the visible components in the ingredients vend area.

2) Carefully remove and rinse:

- the mixing bowls, the mixer supports and fans;

- the silicone, outlet pipes of the ingredients;

- the slides of the ingredients and the relative caps;

When the mixers are disassembled, clean the basis of the mixer supports with a damp cloth.

Dry the components thoroughly with a dry cloth and mount again all the washed components to the original position.

14.2 Weekly cleaning

These operations are carried out once a week, after completing the daily cleaning operations.
Make sure that the machine is off.
With a damp cloth clean the surface where the ingredient canisters lay and the bottom of the machine to remove any powder eventually spilled during loading. Clean the outside of the machine, taking care to the vend area.

14.3 Refilling of consumption products

When required, proceed to the following loading operations.

ATTENTION: the loading operation of ingredients must be carried out only with machine off.

14.3.1 Refilling of ingredients

Read on the canister the indication of the ingredient to be loaded into the machine.

Fill up the canister of the ingredients, after having removed the cover.

Use a quantity of product suitable for a period between two refilling, and in any case do not exceed the quantities shown in the table here below.

INGREDIENTS	QTY
Cups	180
Stirrers	250
Coffee beans	1.5 Kg
Instant coffee (small)	0.5 Kg
Milk (small)	0.7 Kg
Chocolate (small)	1.5 Kg
Chocolate (big)	3.1 Kg
Tea (small)	2.0 Kg
Sugar (small)	2.0 Kg

This will prevent deterioration of the quantity of product in excess. Canisters for soluble ingredients can be removed from the machine, in order to facilitate refilling.

Rotate the slide lock in order to avoid to spill powder and make sure that the closing tongue of the exit of the coffee beans canister is pushed right in.

After having refilled, refit the canister and open the slide lock and pull the tongue of the coffee beans canister out.

15 Ordinary and prevention maintenance

15.1 Monthly maintenance

15.1.1 Disinfecting of components in contact with ingredients

WARNING: during the ordinary and prevention maintenance operations the technical personal can be in contact with moving parts.

Maintenance operations include cleaning, refilling of products, electronic programming and so on.

During these operations the personal in contact with the machine should have all necessary protections.

These operations must be carried out once a month to ensure the hygiene of the machine. These operations have already been described in the paragraph "Cleaning and Disinfecting of components in contact with ingredients".

15.1.2 Adjustment of grinding (E versions)

The brewing time for a 50 ml espresso coffee must be around 20 sec. If due to the wear and tear of the grinder, the brewing time is shorter, turn the adjustment ring nut of the grinder by 1-3 steps in the direction indicated by the sticker near the grinder itself. A thinner grinding and therefore, an adequate brewing time id then obtained.

15.1.3 Maintenance of the espresso brewer (E version)

Every month, using a silicone grease compatible for foodstuff, the following components must be lubricated.

If the group has vended at least 15000 coffees from the last check-up, the sealing of the filters must be replaced.

For the cleaning of the brewer:

Remove the plates of the superior filter

Turn upwards the superior filter, dismount and clean it with hot water removing all coffee powder.

Turn the group in the position of ejection waste grounds and overturn the slide of coffee

Dismount the inferior filter and clean it with hot water removing all coffee powder.

Reassemble the group in the original position.

15.1.4 Washing and disinfecting of components in contact with foodstuff.

With the vending machine switched on, make sure that the display shows:

rheavendors
XM

Open the door. Insert the plastic key into the safety switch. The display shows:

1=PROG
3=FREE

2=DATA 4=CLEAN
5=MAINT.

Make the cleanings of the mixing bowls pressing **button 4**; the display shows:

CLEANINGS
SEL 1-2-3- - - - - - -

Press **buttons 1**, **2** and **3**. With all these three buttons use about 3 litres of water altogether (the button 1 makes the cleaning of the group; the other ones the cleaning of the existing mixing bowls). This will remove any possible trace of dirt from the boiler. Press the internal key on the display board inside the machine.

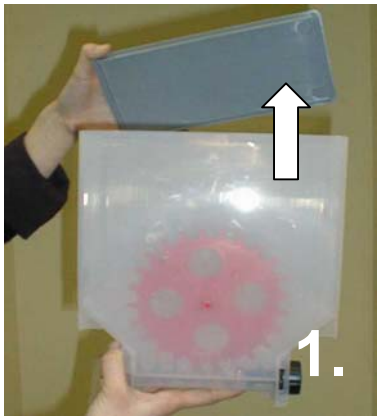
Switch off the machine.

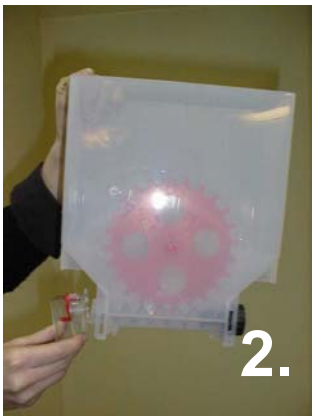
Wash hands thoroughly.

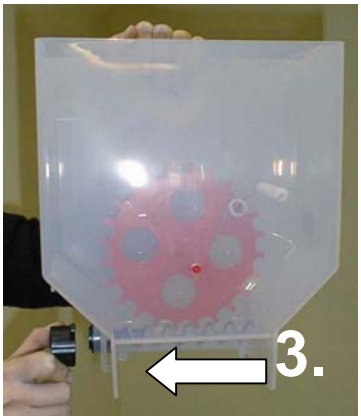
Prepare separately, in a suitable container, a disinfecting antibacterial solution of chlorine, according to the instructions enclosed in the chemical.

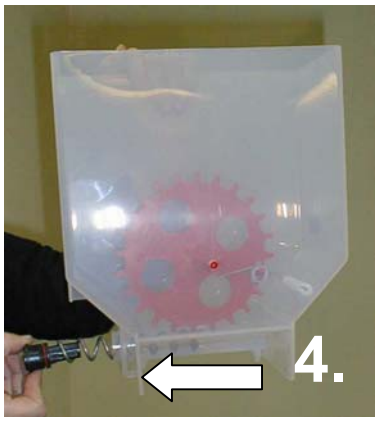
Lift the top cover.

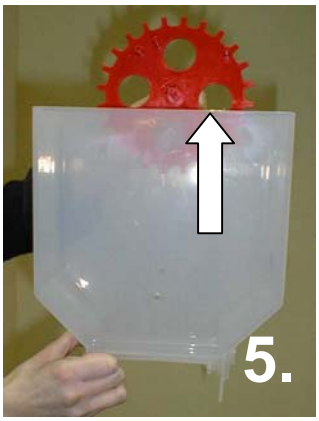
Remove all the ingredients canisters from the machine and disassemble completely the canisters



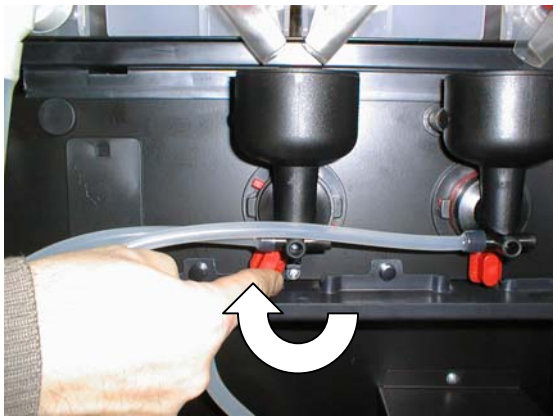


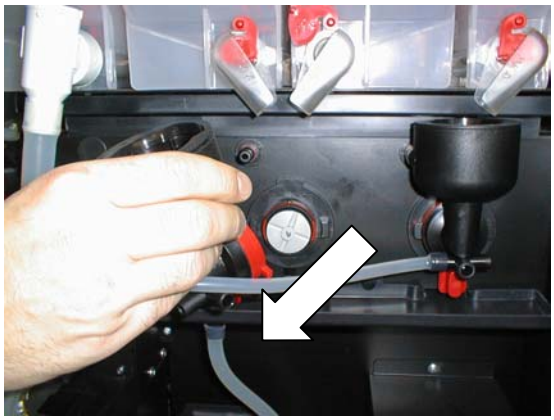




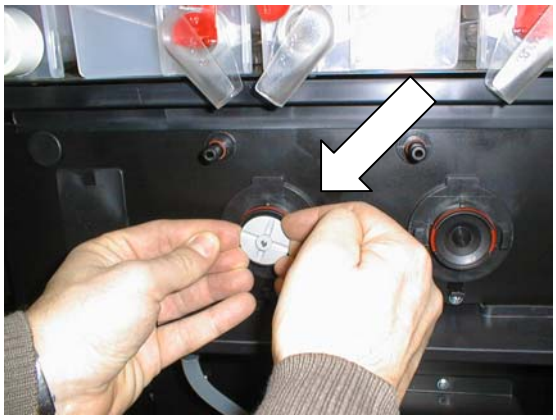


immerse all parts in the solution previously prepared.





Remove the mixing bowls and the mixing fan.



Remove the silicone beverage outlet pipes and pertaining supports. Immerse all parts in the solution.

Using a cloth soaked in the solution, proceed to clean also the attachment bases of the mixers, which remain fixed to the machine.

WARNING: The time of permanence in the solution, in order to obtain a full disinfecting, is stated on the packaging of the chemical

At the end of the disinfecting, recover canisters and covers, dry them very carefully (using compressed air, a hair dryer or perfectly clean and sterile cloths) and reassemble them in the machine. Recover all other parts from the solution and put them back in the machine in opposite sequence with respect to disassembly.

Switch on the machine and wait for the message:

RHEA VENDORS
XM

Carry out repeatedly washing cycles of the mixing bowls pushing twice the internal **key** on the display board inside the machine until is displayed the message:

1=PROG
3=FREE

2=DATA 4=CLEAN
5=MAINT.

Push **button 4**; the display shows:

CLEANINGS
SEL 1-2-3

Use **buttons 1**, **2** or **3**.

Use about 2 litres of water altogether. This will remove all traces of disinfecting solution from the outlet pipes.

Press the internal **key** on the display board inside the machine.

15.1.5 Maintenance

A new MAINTENANCE menu has been introduced to have the possibility to improve maintenance operations.

Press the **key** on the display board inside the machine. The display will show:

1=PROG
3=FREE

2=DATA 4=CLEAN
5=MAINT.

Then press **button 5**. The display will show:

PROGRAMMING - - - -
MAINTENANCE

Water filter replacing

Pressing **button 2** the display will show the first maintenance option:

dec. filter H2O
[200] 200

Use **button 4** and **5** to increase or decrease the number of the selections that the machine has to dispense before the message that **the filter should be changed** appears on the display.

To load the number of drinks to make into the machine, keep pressed **button 8** until the left counter (the one in brackets) contains the same number.

During the functioning of the machine, the counter on the right decreases. Starting from 5 selections to 0, the machine still works but the display shows the message:

change
water filter

When the counters arrives at 0 the machine stops working and the display will show:

OUT OF SERVICE
water filter

This message means that you have to replace the water filter.

After replacing the filter to reset the machine enter in the sub-menu MAINTENANCE, look for

dec. filter H2O
[200] 200

and reset the counter keeping pressed **button 8**.

Coffee brewer cleaning

Pressing **button 2** the display will show the second maintenance option:

cnt. brewer cof
[200] 200

Use **button 4** and **5** to increase or decrease the number of the selections that the machine has to dispense before the message that the **coffee brewer should be cleaned** appears on the display.

To load the number of drinks to make into the machine keep pressed **button 8** until the left counter (the one in brackets) contains the same number.

During the functioning of the machine, the counter on the right decreases. Starting from 5 selections to 0, the machine still works but the display shows the message:

make brewer
cleaning

When the counters arrives at 0 the machine stops working and the display will show:

OUT OF SERVICE
cleaning brewer

This message means that it is necessary to make a brewer cleaning.

After cleaning the coffee brewer to reset the machine enter in the sub-menu MAINTENANCE, look for

cnt. brewer cof
[200] 200

and reset the selections keeping pressed **button 8**.

Emptying ground coffee wastes bucket

Pressing **button 2** the display will show the third maintenance option:

cnt cof ground
[200] 200

Use **button 4** and **5** to increase or decrease the number of the selections that the machine has to dispense before the message that the **ground coffee wastes bucket should be empty** appears on the display.

To load the number of drinks to make into the machine, keep pressed **button 8** until the left counter (the one in brackets) contains the same number.

During the functioning of the machine, the counter on the right decreases. Starting from 5 selections to 0, the machine still works but the display shows the message:

Downloaded from www.vendingbar.gr

remove coffee grounds

When the counters arrives at 0 the machine stops working and the display will show:

OUT OF SERVICE coffee grounds

This message means that you have to empty the ground coffee wastes bucket must be emptied.

After emptying the ground coffee wastes bucket to reset the machine enter in the sub-menu MAINTENANCE, look for

cnt cof ground [200] 200

and reset the selections keeping pressed **button 8**.

Press **button 1** and exit from MAINTENANCE.

15.1.6 Adjustment of the solenoid valves of instant ingredients

This operation must carried out only for versions with softener filter.

The presence of lime scale can affect the correct operation of the solenoid valves of the instant ingredients. During vending, check that the water flow from each solenoid valve is more than sufficient to completely rinse the corresponding mixing bowl at the end of one selection. If the flow is limited, turn the adjustment screw of the solenoid valve.

°FF	l
20°	1200
30°	1000
40°	900
60°	700
80°	500

The filter can be regenerated without removing it from the machine (keep a container of 30l capacity near the machine) this operation can be carried out near a 3/8" mains connection and a drain.
- close the tap of the mains water supply, outside the machine;
- insert the drainpipe of the upper tap in the container;

- turn the levers of the upper and lower tap towards the right hand side and wait for the water to totally flow out of the filter;
- loosen the upper fixing knob, remove the cover of the water softener and pour 1 Kg of fine salt into the filter;

- place the cover again and fix it with the knob;
- turn the lever of the upper tap towards left hand side;
- open the tap of the mains water supply, outside the machine;
- leave the water flow in the container until it is clear and tasteless. The regeneration takes about 30 min.

- turn the lower tap lever towards the left hand side. The regeneration is completed.

16 Machine out of service

16.1 Temporary out of service

Should a long period be foreseen in which the machine will not operate, the following operations must be carried out:

Enter in the programming mode (see section "Enter and exit from the programming mode"):

- by means of **button 1** choose the programming sub-menu:

PROGRAMMING
TEMPERATURE

- by means of **button 3**, scroll the functions until the message:

TEMPERATURE	
boiler	85

pressing **button 5** set to 0 the temperature value;
- press **button 1** to confirm the data

Unplug the machine from the electric mains.

Unload all ingredients from the canisters.

Remove and thoroughly clean in hot water all components in contact with foodstuff. The components are indicated in the part "Maintenance".

For the version without self-water tank close the tap of the external water mains supply and disconnect the water supply pipe from the machine.

Discharge the whole content of the boiler for instant ingredients by removing the cap from the end of the drainpipe. Replace the cap on the pipe end. Use the liquid waste disposal bucket as container for the drained water.

Empty and clean the internal liquid waste tray.

Clean the inside and the outside with a damp cloth. Protect the outside of the machine with a piece of cloth or a plastic film. The machine must be kept in a sheltered place and at a temperature not lower than 5° C

16.2 Definitive out of service

Before carrying out the definitive out of service operation, it is necessary to carry out all operations to empty the machine of ingredients and water according to instructions given in the above section.

The machine is not made of polluting materials. Therefore, for demolition it is advised to disassemble the machine by dividing the various components according to the type of material (plastic, metal, paper, etc.).The various components can be then delivered to authorised companies for waste disposal.

17 Further advice for the user

The automatic vending machine in your hands is safe for those who follow the loading and ordinary cleaning instructions indicated in this manual. The user must not gain access to areas in the machine, which feature a cover requiring a tool to be removed.

Some maintenance operations (to be carried out by authorised personnel only) require an intentional bypassing of safety protections of the machine. Technical qualification, the compliance of maintenance procedures indicated in this manual and the due care when having access to areas indicated as dangerous allows to operate in a safe way.

The stickers indicating danger are applied on fixed covers and show the following symbols:

- possible contact with components under voltage;
- possible contact with hot surfaces.

18 Troubleshooting

18.1 Problems visualised by the machine

The problems described in this section are shown by an error message on the display of the machine.

SYMPTOM	PROBABLE CAUSE	REMEDY
The display shows **"OFF1": the machine is out of order**	No cups	Load the cups in the machine
	The material of cups is not suitable	Refer to specifications in the manual
	The type of cups is not suitable	Refer to specifications in the manual
The display shows **"OFF2": the machine is out of order**	No serial link between the CPU board and the serial payment system.	Correctly programme the payment system (see section "Presetting the payment systems")
		Correctly connect the payment system to the CPU board
	The payment system is not powered or is faulty.	Make sure that the payment system is working
	Jammed coin inside the selector	Remove the coin
The display shows **"OFF3": The machine is out of order**	Liquid waste in the inside collection tray has reached the maximum level	Empty the tray
The display shows **"OFF4": the machine is out of order**	Error pipes movement	Check the micro-switch of the pipes movement and verify the correct power supply at the pipes movement motor.
The display shows **"OFF5": the machine is out of order**	One or both EAROM memories are faulty	Replace them
The display shows **"NO WATER"**	No water	Wait until the mains water pressure is reset
		Open the water supply.
	The safety on the water inlet solenoid valve is activated	Reset the safety on the solenoid valve.
The display shows **"OFF6B": the machine is out of order**	Leaking of water into the water tank	Check if there are some leaking into the water tank or in its pipes and if the pipes are correctly connected

Downloaded from www.vendingbar.gr

The display shows **"OFF7":** the machine does not vend beverages through the coffee brewer	***Only for E Versions*** Check the volumetric counter	Dismount and clean the volumetric counter
	The brewing time of coffee is too long	Adjust the grinding by acting on the special ring nut of the grinder or suitably programme the quantity of ground coffee
		Program an adequate quantity of water for filter coffees
The display shows **"OFF8":** the machine does not vend beverages through the coffee brewer	***Only for E Versions*** The coffee group does not return to rest position	Check the micro-switch of the position of the group and the correct power supply at the coffee group motor.
		Remove the group, clean and grease it.
The display shows **"OFF8A":** the machine does not vend beverages through the coffee brewer	***Only for E Versions*** The coffee group is not in its right position or is missing.	Check coffee brewer and the micro-switch presence coffee group.
The display shows **"OFF9":** the machine does not vend beverages through the coffee brewer	***Only for E Versions*** After the limit time (preset) no sufficient throw of ground coffee was poured in the feeder	Check the micro-switch of the doser.
	The mills of the grinder are worm up	Replace them.
The display shows **"OFF10": the machine is out of order**	Loss of programming standard data	Enter into the programming mode, reset the pre-settings of all functions until they show plausible values (the standard data can be typed in) and then exit from the programming mode. Eventually replace the EAROMs
The display shows **"OFF12": the machine is out of order**	***Only for H Versions*** Problems to the pipe tube selector motor	Check the motor and its cable.
The display shows **"OFF13": the machine is out of order**	The cup movement does not return to rest position	Remove possible trapped cups in the movement area.
The display shows **"OFF14": the machine is out of order**	Too many drinks have been supplied without resetting the level of the refilling pump of the boiler	Check and replace if it is necessary the water level probes.
The display shows **"OFF15": the machine is out of order**	The central stack of the cup feeder cannot rotate	Remove the trapped cups between the stack and the cup feeder; check the cup-column sensor
The display shows	The key on the display board	Check and eventually replace the key.

"OFF16": the machine is out of order	inside the machine could be trapped.	
The display shows **"OFF17": the machine is out of order**	The selection keypad has at least one trapped button.	Check and eventually replace the keypad and or the relative cable, if necessary.
The display shows **"OFF23":** the machine does not vend drinks brewed from tea leaves	***Only for FBT Versions*** The tea brewer does not return to rest position	Pull the group out, clean and grease it.
The display shows **"OFF 24VB": the machine is out of order**	5 A fuse on the electronic board burnt	Change the fuse
	Problem at the transformer	Replace the transformer
The display shows **"OFF 24A" the machine is out of order**	The power supply of the 24 V elements is excessive	Check the Zener diode TL 431 on the CPU/POWER board and eventually replace it.
The display shows **"OFF 25" the machine is out of order**	An error occurred at the cup fall motor	Check the micro-switch that controls the end of the cycle of the cup fall and the power supply of the cup fall motor.
The display shows **"OFF 31A" the machine is out of order**	An error occurred in the temperature control of the boiler (high temperature)	Check and replace, if necessary, the thermal switch of temperature control in the boiler and the resistance
The display shows **"OFF 31B" the machine is out of order**	An error occurred in the temperature control of the boiler (low temperature)	Check and replace, if necessary, the thermal switch of temperature control in the boiler and the resistance
The display shows **"OFF 31C" the machine is out of order**	Temperature probe cut off	Change the temperature probe
Il display shows "**PLEASE LOAD THE MASTER PROGRAM**"	It has not been loaded any master program in the CPU board	Ask to Rhea technical service the correct master file and load the file master with flash card into the machine
The display shows **"OFF 34"** the snack machine is out of order	(***Only for machines connected with Snack unit***) Error at the temperature of the Snack	Check and eventually replace the temperature probe of the Snack unit
The display shows **"OFF 36"** the snack machine is out of order	(***Only for machines connected with Snack unit***) Error at the keyboard of the Snack	Check and eventually replace the keyboard of the Snack unit
Dialling the code of a snack the display shows **"SELECTION NOT AVAILABLE"**	(***Only for machines connected with Snack unit***) Error at the motors of the Snack	Check and eventually remove snack jammed. Check and eventually replace the product motor.

18.2 Miscellaneous shortcomings

The shortcomings described in this section are not indicated by any message displayed on the machine.

SYMPTOM	PROBABLE CAUSE	SOLUTION
The machine does not switch on (no component is powered)	No mains voltage	Wait for the resetting of mains voltage
	The boiler is overheated	Reset the safety thermal switch boiler. Check the correct operation and cable of the thermal probe or the resistance in the boiler and replace them if necessary
	One general fuse (230V) is burnt out	Replace it
	The general safety switch is faulty	Replace it
The machine does not switch on (some components are powered but the display is off)	The fuse on the CPU board (8.5 V) is burnt out	Replace it
	The display is badly connected to the board	Check the correct connection
The machine is on, the selection starts regularly but neither water nor ingredients are dispensed	The power fuse (24 V) on the board is burnt out	Replace it

Downloaded from www.vendingbar.gr