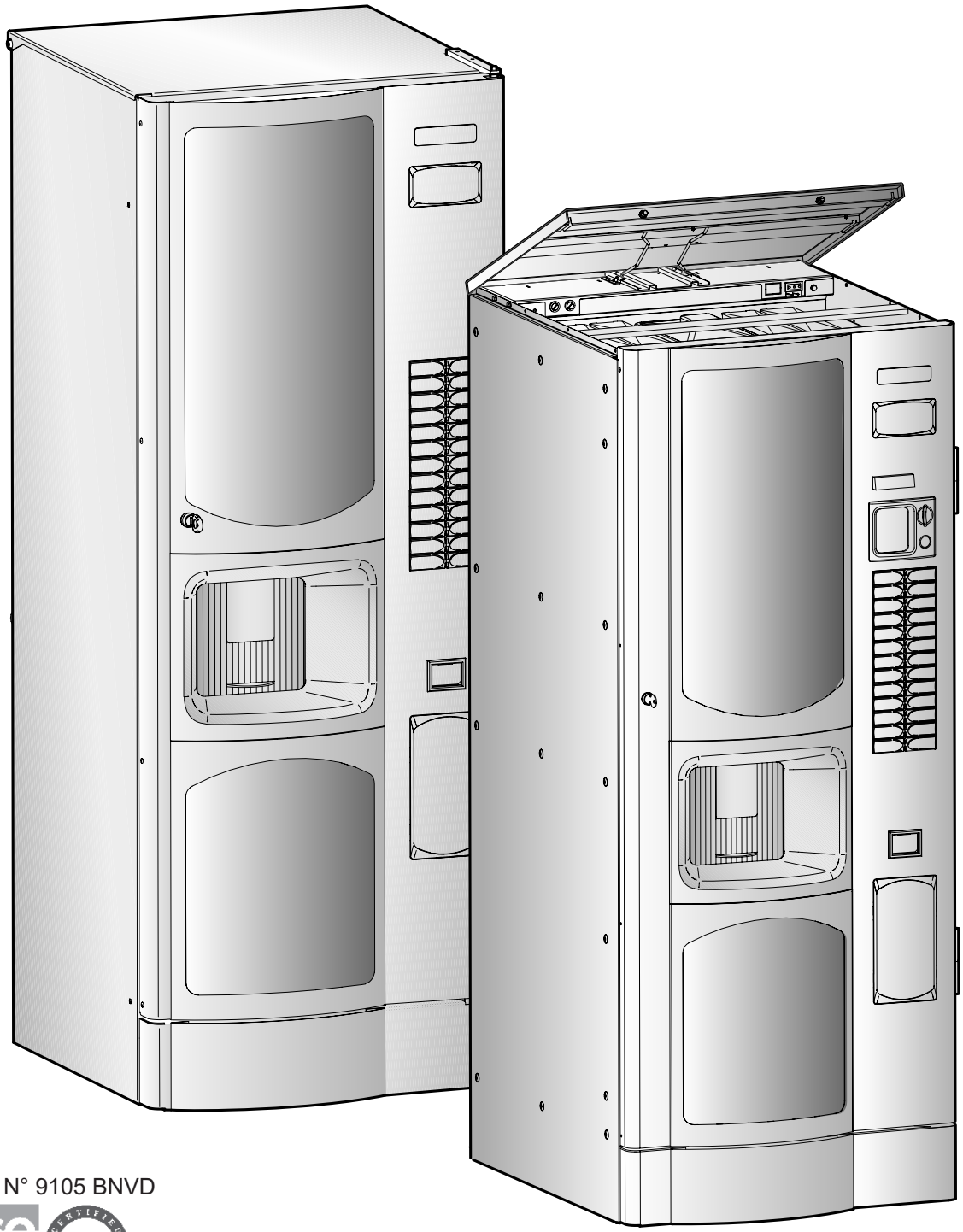
Bianchi
VENDING GROUP

USE AND MAINTENANCE MANUAL



BVM972 - BVM952

CERT. N° 9105 BNVD

UNI EN ISO 9001: 2000

DECLARATION OF CONFORMITY

BIANCHI VENDING GROUP S.p.A.
Corso Africa, 9 - 24040 Zingonia di VERDELLINO (BG) - Italy

hereby declares under its own liability that the family of automatic vending machines - model:

"BVM 972 - BVM 952"

complies with the Basic Safety Reqirements as specified in the Directives listed below:

1) 73/23 EEC Low Tension ⇒ 93/68/EEC -LT-

2) 89/336/EEC Electromagnetic Compatibility ⇒ 91/263/EEC ⇒ 92/31/EEC ⇒ ⇒ 93/68/EEC ⇒ 2004/108/EEC -EMC-

3) 90/128/EEC ⇒ 2002/72/EEC (Suitability for contact with food)
The tests/checks have been performed in accordance with the current Harmonized/European Regulations

1) LOW TENSION (LT Electric Safety):

CEI EN 60335-1 : 2004-04 + CEI EN 60335-1/A1/A11:2005	(General Electric Safety Regulation)
CEI EN 60335-2-75: 2003-06	(Special requirements for commercial dispensers and automatic vending machines)
EN ISO 11201 + EN ISO 3744	Measurement of acoustic noise

2) ELECTROMAGNETIC COMPATIBILITY (EMC)

EN 55014-1	Emissions (conduced and irradiated via power supply cable)
EN 55014-1	Emissions (intermittent conductor)
EN 61000-3-2	Emissions (harmonic)
EN 61000-3-3	Emissions (flickers)
EN 61000-4-4	Immunity (against transient/burst quick trains)
EN 61000-4-5	Immunity (against surge pulse)
EN 61000-4-6	Immunity (against conduced noises, induced by radiofrequency fields)
EN 61000-4-11	Immunity (against tension holes…)
EN 61000-4-2	Immunity (against electrostatic discharges)
EN 50366	Measurement of the electromagnetc field around the vending machine

3) SUITABILITY OF MATERIALS USED FOR CONTACT WITH FOOD
Min.Decree 21-03-1973 and following amendments: Tests of "Suitability for contact with food"

Zingonia di Verdellino (BG), January 2006

MANAGING DIRECTOR
Massimo Trapletti

INFORMATION TO THE USERS

Under art. 13, Legislative Decree 25 July 2005, no.151 "Implementation of Directives **2002/95/EC** and **2003/108/EC**, regarding the reduction of use of hazardous substances in electrical and electronic equipment as well as waste disposal".

The barred waste container symbol on the equipment means that the product, at the end of its service life, must be disposed of separately from the other types of waste.

The user must therefore convey the equipment, at the end of its service life, to the appropriate separate collection centres for electronic/electrotechnical waste products or return it to the dealer when purchasing a new equivalent equipment.

The appropriate separate collection and the following sending of the used equipment to recycling, treatment and eco-friendly disposal will help avoid negative effects on the environment as well as on health along with an easier recycling of the materials forming the equipment.

Any unauthorized disposal of the product by the user will imply the enforcement of the administrative sanctions as set out in Legislative Decree no. 22/1997 (article 50 and following articles, Legislative Decree no. 22/1997).

BEFORE USING THE MACHINE, READ THIS MANUAL CAREFULLY FOR ITS CORRECT USE IN ACCORDANCE WITH THE CURRENT SAFETY STANDARDS.

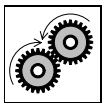
ATTENTION: *Important safety indications*

READ *the instruction manual machine carefully before using the machine*

For any service or maintenance ***switch off*** *the machine*

ATTENTION: *machine switched on*

ATTENTION: *hot parts in contact!*



CAUTION! *Parts in motion*

Earthing indication

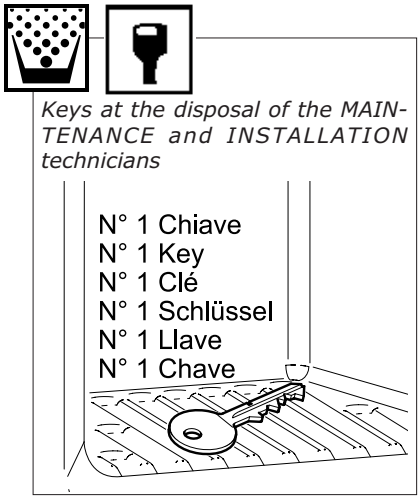
IMPORTANT NOTICES

MAINTENANCE TECHNICIAN

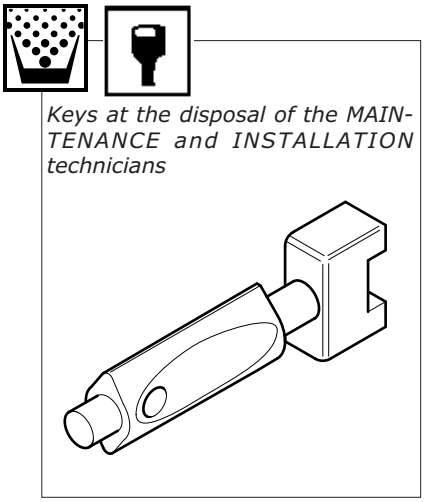
The maintenance technician is defined as being the person responsible for filling up the containers with soluble products, sugar, coffee, stirrers and cups.
The maintenance technician is also responsible for cleaning the distributor (see operations indicated in chapter 6.0). In the event of a fault the maintenance technician must call the installation technician.

INSTALLATION TECHNICIAN

The installation technician is defined as the person responsible for the installation of the automatic distributor, the starting up operations and the function settings.
Each regulation operation is the exclusive responsibility of the installation technician who also holds the programming access password.



Keys at the disposal of the MAINTENANCE and INSTALLATION technicians



Keys at the disposal of the MAINTENANCE and INSTALLATION technicians

Service key

Tools necessary for undertaking interventions on the automatic dispenser.

SOCKET SPANNERS
n° 5,5
n° 7
n° 8
n° 10
n° 20
n° 22

SPANNERS (fork type)
n° 7
n° 8
n° 10
n° 12
n° 14

SCREWDRIVERS
Small size
Medium size
Large size

Normal cross
Small cross
Medium cross
Large cross
Of Teflon, small size for Trimmer regulation.

RATCHET SPANNER no.14

TESTER

ELECTRICIAN'S SCISSORS

PROGRAMMING KIT

INDEX

PREMISE

I Important notices for operator

This automatic distributor has been designed and constructed in full accordance with current safety regulations and is therefore safe for those who follow the ordinary filling and cleaning instructions as indicated in this manual.

The user must not under any circumstances remove the guards that require a tool for removal.

Some maintenance operations (to be done solely by specialized technicians and indicated in this manual with a special symbol) require that specific safety protections of the machine must be switched off .

In accordance with the current safety regulations, certain operations are the exclusive responsibility of the installation technician, and the ordinary maintenance technician may have access to specific operations on with specific authorization.

The acquaintance and absolute respect, from a technical point of view, of the safety instructions and of the danger notices contained in this manual, are fundamental for the execution, in conditions of minimum risk, for the installation, use and maintenance of this machine.

II General Instructions

Knowledge of the information and instructions contained in the present manual is essential for a correct use of the automatic vending machine on the part of the user .

- *Interventions by the user on the automatic vending machine are allowed only if they are of his competence and if he has been duly trained.*

  The installation technician must be fully acquainted with all the mechanisms necessary for the correct operation of the machine.

- *It is the buyer's responsibility to ascertain that the users have been trained and are informed and regulations indicated in the technical documentation supplied.*

  Despite the full observance of the safety regulations by the constructor, those who operate on the automatic dispensers must be fully aware of the potential risks involved in operations on the machine.

- *This manual is an integral part of the equipment and as such must always remain inside of the same, so as to allow further consultations on the part of the various operators, until the dismantlement and/or scrapping of the machine.*

- *In case of loss or damage of the present manual it is possible receive a new copy making application to the manufacturer, with prior indication of the data registered on machines' serial number.*

- *The functional reliability and optimization of machine's services are guaranteed only if original parts are used.*

- *Modifications to the machine not previously agreed on with the construction company and undertaken by the installation technician and/or manager, are considered to be under his entire responsibility.*

  All the operations necessary to maintain the machine's efficiency, before and during it's use are at the users charge.

- *Any manipulations or modifications made to the machine that are not previously authorized by the manufacturer, relieve the latter from any responsibility for damages deriving from, and will automatically result in the cancellation of the machine guarantee terms.*

- *This manual reflects the status at the moment of the emission of the automatic vending machine on the market; possible modifications, upgrading, adaptments that are done the machine and that are subsequently commercialized do not oblige* ***BIANCHI VENDING GROUP Spa*** *neither to intervene on the machine previously supplied, nor, neither to update the relative technical documentation supplied together with the machine.*

- *It is however* ***BIANCHI VENDING's Group*** *faculty, when deemed opportune and for valid motives, to adjourn the manuals already present on the market, sending to their customers adjournment sheets that must be kept in the original manual.*

Possible technical problems that could occur are easily resolvable consulting this manual ; For further information, contact the distributor from whom the machine has been purchased, or contact Bianchi Vending's Technical Service at the following numbers:

☎ *035 4196711 - fax 02 70048332*

When calling it is advisable to be able to give the following information:

- *The data registered on the serial number label (Fig.1)*
- *version of program contained in the microprocessor (Adhesive label on the component installed on board).*

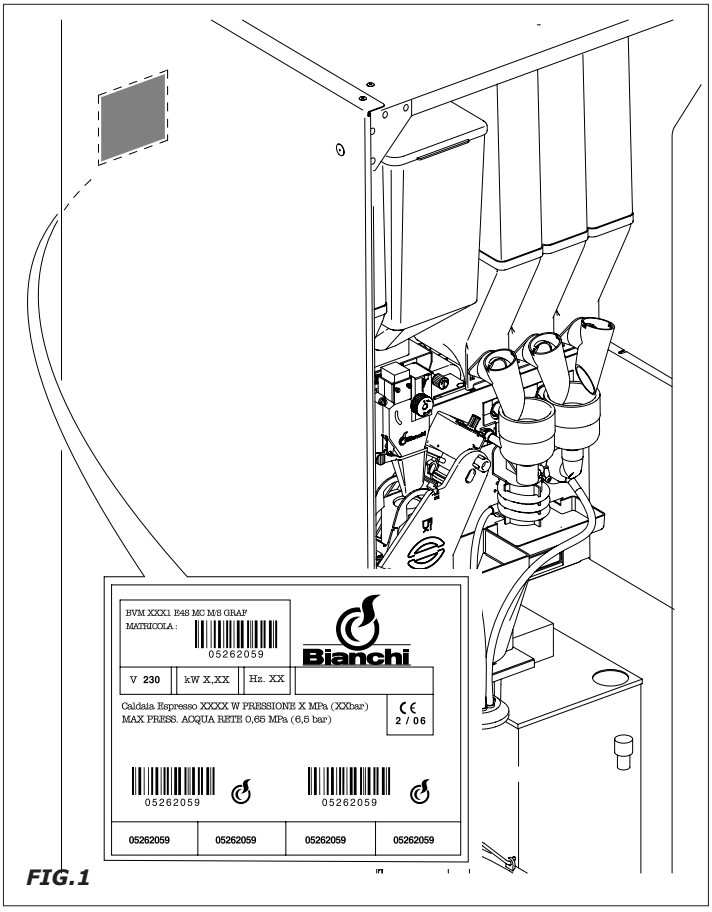


FIG.1

BIANCHI VENDING GROUP Spa *declines any responsibility for damages caused to people or belongings in consequence to:*

Incorrect installation

Inappropriate electrical and/or water connection.

Inadequate cleaning and maintenance

Not authorized modifications

Improper use of the distributor

Not original spare parts

- *Under no circumstances is* ***Bianchi Vending Group Spa*** *obliged to compensate for eventual damage resulting from the forced suspension of drink deliveries as the result of faults.*
- *Installation and maintenance operations , must be done exclusively by qualified technical personnel with prior training for carrying out these duties.*
- *For refilling use only food products that are specific for automatic vending machines.*
- *The automatic distributor is not suitable for external installation. The machine must be installed in dry places, with temperatures that never go below 1°C it must not be installed in places where cleaning is done with water hoses (ex. big kitchens.).*

  Do not use water jets to clean the machine.

III - SAFETY NORMS

ATTENTION!

- *before using the automatic distributor, read this manual carefully.*
- *The installation and maintenance operations must be performed exclusively by qualified technical personnel.*
- *The user must not in any circumstance be able accede to those parts of the automatic distributor that are protected and require a tool in order to be accessible.*
- *The knowledge and the absolute respect, from a technical point of view of the safety instructions and of the danger notices contained in this manual, constitute the basis for the operation , in conditions of minimum risk, of the installation, starting and maintenance of the machine.*

Always disconnect the POWER CABLE before maintenance or cleaning interventions.

ABSOLUTELY DO NOT INTERVENE ON THE MACHINE AND DO NOT REMOVE ANY PROTECTION BEFORE THE COOLING OF THE HOT PARTS!

- *The functional reliability and optimization of machine's services are guaranteed only if original parts are used.*
- In order to guarantee normal operation, the machine must be installed in areas that the environmental temperature is between a minimum of +1°C and a maximum of +50°C end humidity of not over 85%.
- In order to guarantee a regular operation, always maintain the automatic distributor in perfect cleaning conditions
- If at the moment of the installation, if conditions differing from those indicated in the present manual, or should the same undergo changes in time, the manufacturer must be immediately contacted before use of the machine.
- Also check that any other eventual norms or regulations as laid down by national or local legislation are taken into account and applied.

1.0 TECHNICAL CHARACTERISTICS

	BVM972	BVM952
Height (A)	1830 mm	1620 mm
Width (B)	666 mm	666 mm
Depth (C)	776 mm	776 mm
Weight	140 kg÷190 kg (3)	155 kg
Power Supply	V230	V230
Power frequency	Hz 50	Hz 50
Installed power (1)	1,8 kW ÷ 3,2 kW	1,8 kW ÷ 3,2 kW
Nominal current (Max)	8 A - 15 A	8 A - 15 A
Water supply	0,5 ÷ 6,5 bar	0,5 ÷ 6,5 bar
AVERAGE CONSUMPTIONS:		
Keeping T° /24h	1400 W/h-2400W/h	1400 W/h-2400W/h
For 60 supplies / min	90 W/h-170W/h	90 W/h-170W/h
Water supply connection	3/8" gas	3/8" gas
Electrical supply connec.	Schuko plug	Schuko plug
DISTRIBUTORE BICCHIERI		
Diametro bicchieri	70÷74mm	70÷74mm
RESISTENZA CALDAIA		
of armoured type:	coffee boiler: 1500W	coffee boiler: 1500W
of armoured type:	instant boiler: 2000W	instant boiler: 2000W
PRODUCT CONTAINER CAPACITY		
Coffee in beans	Kg 3,5	Kg 3,5
Instant coffee	Kg 1,4	Kg 1,2
Powder milk	Kg 2,2	Kg 1,7
Creamer	Kg 4,0	Kg 3,2
Chocolate	Kg 4,8	Kg 3,6
Tea	Kg 5,2	Kg 3,3
Frozen-dry tea	Kg 2,4	Kg 1,7
Broth	Kg 3,8	Kg 3,6
Sugar	Kg 4,0	Kg 4,0
Caps N°	700	500
Spoons N°	540	400
Type of light and power	N° 1 Neon light 13 Watt N° 1 Neon light 6 Watt (Optional)	

(1) Check the rated output indicated on the data plate applied by the distributor.

(2) According to the requested version and the applicable standards in the place of use.

(3) According to the version.

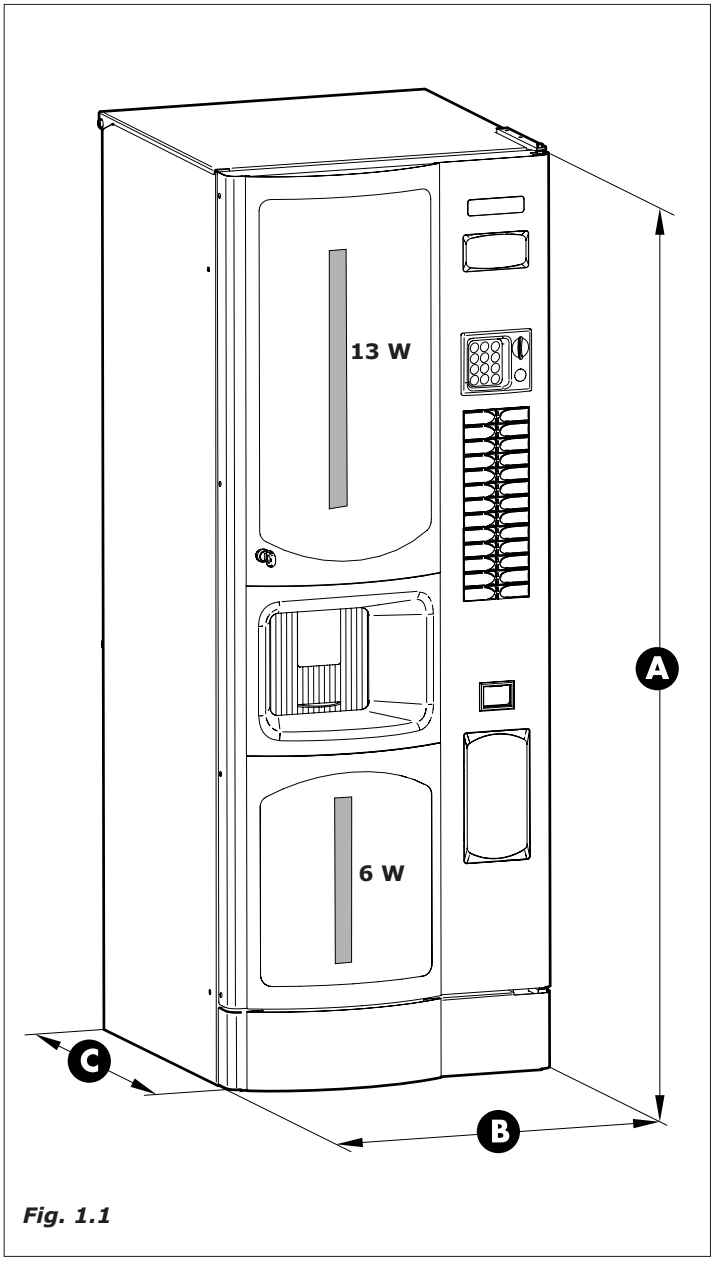


Fig. 1.1

1.1 Foreseen use

The automatic distributor is exclusively for the dispensing of drinks, prepared mixing food substances with water (by infusion as far as concerns espresso coffee).

For this purpose use products declared as suitable by the manufacturer for automatic distribution in open containers. The drinks are made in specific plastic cups automatically dispensed by the machine. Where foreseen, also the spoon for mixing the sugar is dispensed.

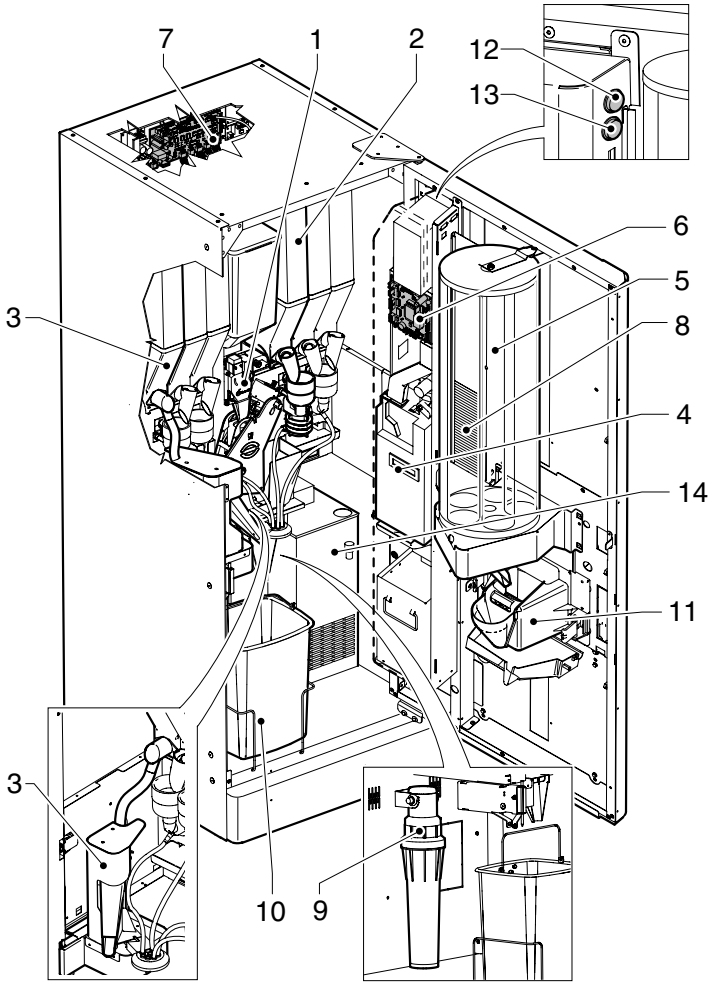
The drinks must be consumed immediately and in no case are to be kept for subsequent consumption.

1.2 KNOWING THE DISTRIBUTOR

BVM972 (Fig.1.2)

1 Coffee group and grinder
2 Drink dispensing group
3 Sugar dispenser group
4 Payment system
5 Cup column
6 Electronics board CPU
7 Power card
8 Spoons column
9 Water softener filter
10 Water bin
11 Dispensing chamber
12 Service button
13 Washing button
14 Cooling unit (optional)

BVM972 Espresso



BVM972 Instant

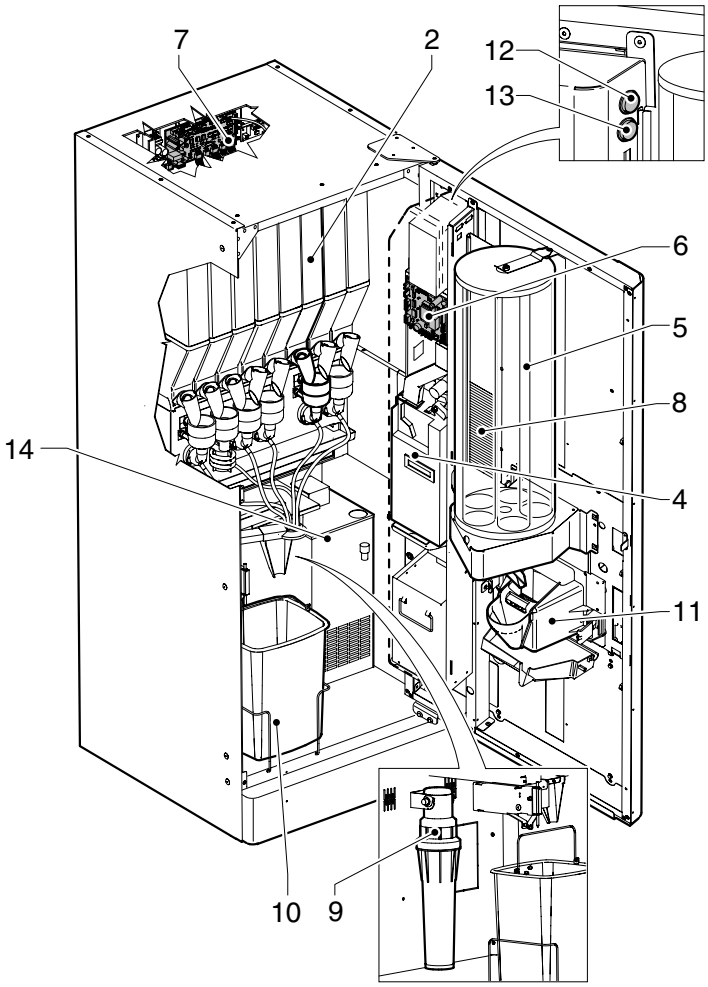
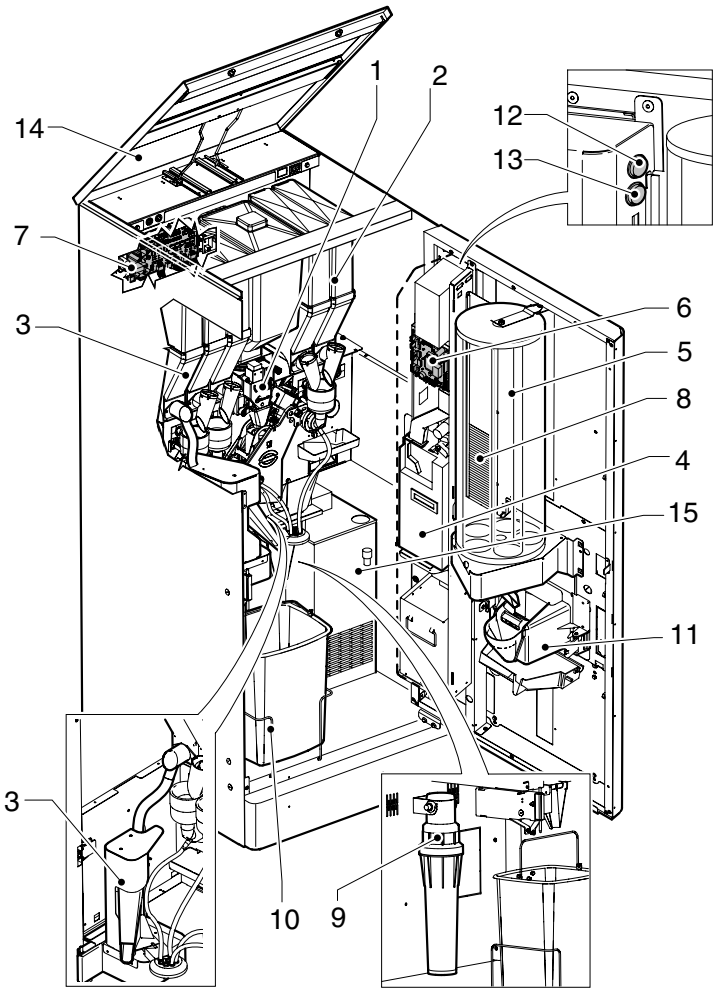


Fig. 1.2

BVM952 (Fig.1.3)

1 Coffee group and grinder
2 Drink dispensing group
3 Sugar dispenser group
4 Payment system
5 Cup column
6 Electronics board CPU
7 Power card
8 Spoons column
9 Water softener filter (optional)
10 Water bin
11 Dispensing chamber
12 Service button
13 Washing button
14 Upper case
15 Cooling unit (optional)

BVM952 Espresso



BVM952 Instant

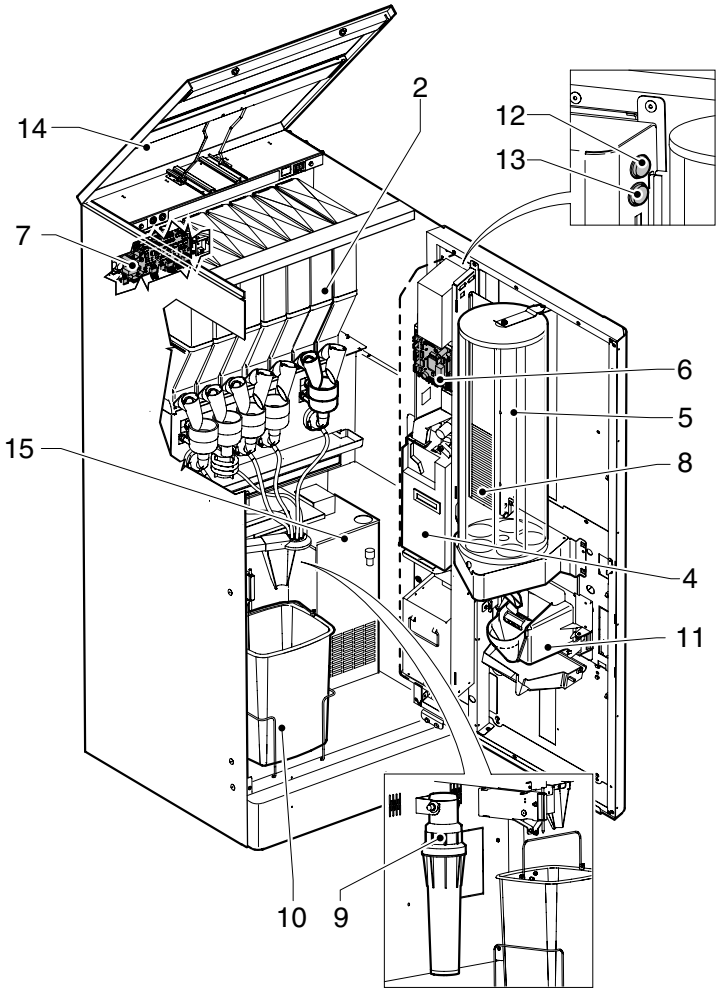


Fig. 1.3

2.0 TECHNICAL DESCRIPTION OF THE OPERATION

During the normal functioning the distributor is set in standby status.
Introducing the necessary amount, according to the set price, and after pressing the key relative to the desired drink, the drink dispensing cycle is activated and can be divided in to different processes:

2.1 BASIC PRINCIPLE OF OPERATION

2.1.1 CUP DISPENSING

– It is the first operation that the distributor starts (except for the selections with pre-selection "without CUP").

– the motor inside of the cup dispenser moves the plastic gear to separate and make the cup fall into the cup ring inside the cup dispenser (Fig.2.1).

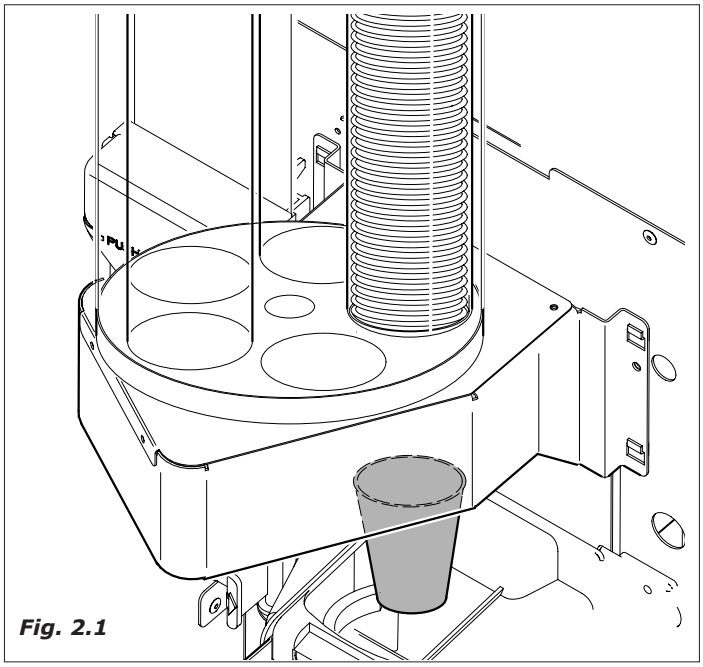


Fig. 2.1

2.1.2 SUGAR DISPENSER

The sugar is dispensed directly in the cup in the E versions whereas for the I versions it is pre-mixed with the instant drinks.

The display management of the presentation INC+ / DEC- Sugar, is represented this way:

Line 1: Sugar

Line 2: ■ ■ ■ ■ ■ ■ ■ □

Each square is equivalent to x sec of sugar according to the following equation

■ = (A+B)/8

A = Quantity in seconds of sugar in the standard drink

B = Quantity in seconds of sugar in the preselection +

8 = Maximum number of squares

The dispensing procedure occurs according to the following phases:

- the geared motor activates the helicoidal screw conveyor of the sugar product container, dispensing the desired quantity into the product chutes (Fig.2.2)

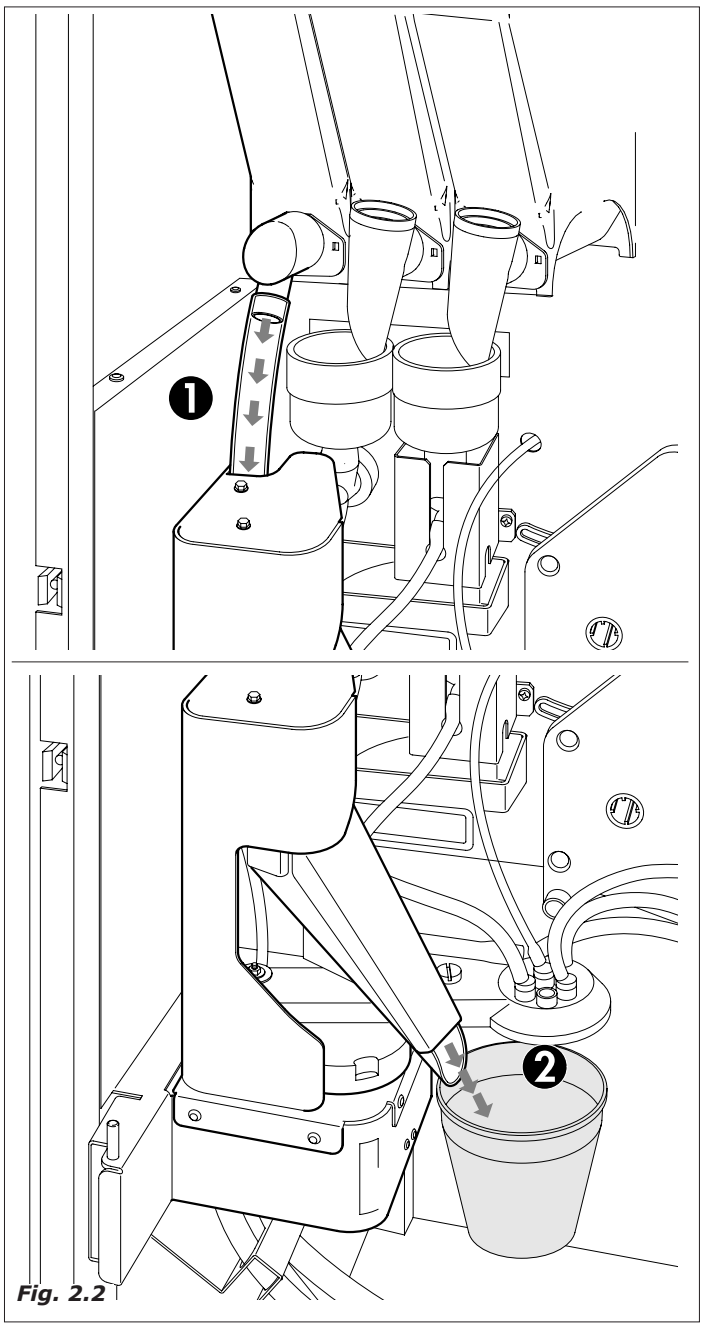


Fig. 2.2

ESPRESSO COFFEE

This process functions only the models equipped with the coffee espresso group (brass or plastic), after the cup and sugar dispensing processes have been effected.

- the grinder is activated until it reaches the dose of ground coffee set by the doser (Fig.2.3)
- the doser electromagnet is activated , causing the opening of the door and consequent fall of the coffee into the brew chamber
- the rotation group geared motor brings it into the dispensing position and simultaneously compresses the ground coffee (Fig.2.4 - Fig.2.5).
- the pump that dispenses the quantity of programmed water and that is controlled by a specific electronic device, (volume meter), extracting the water from the coffee boiler(Fig.2.6).
- the coffee group geared motor is activated again so as to bring again into standby position ; during this movement the used coffee grounds are expelled

The sequence of these operations (grinding and coffee dispensing) could occur in inverse order according to the type of programme used.

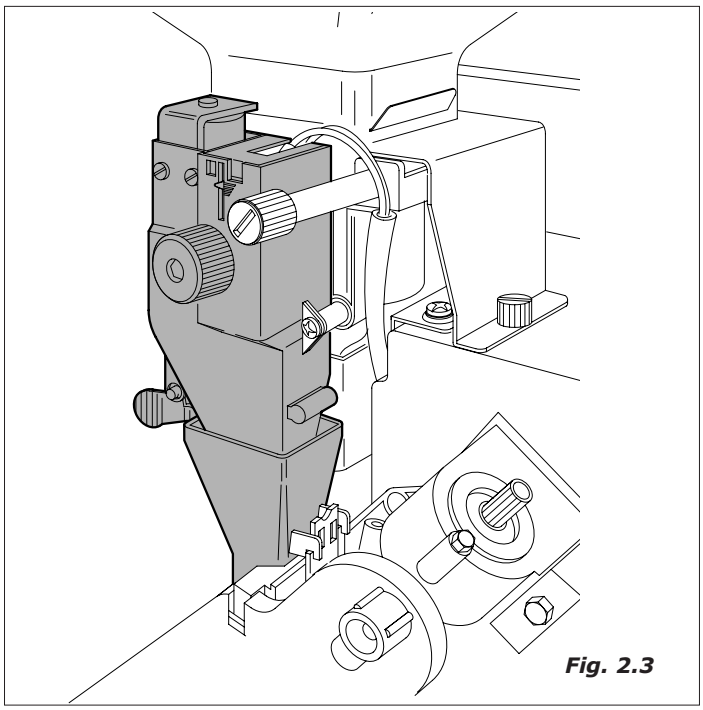


Fig. 2.3

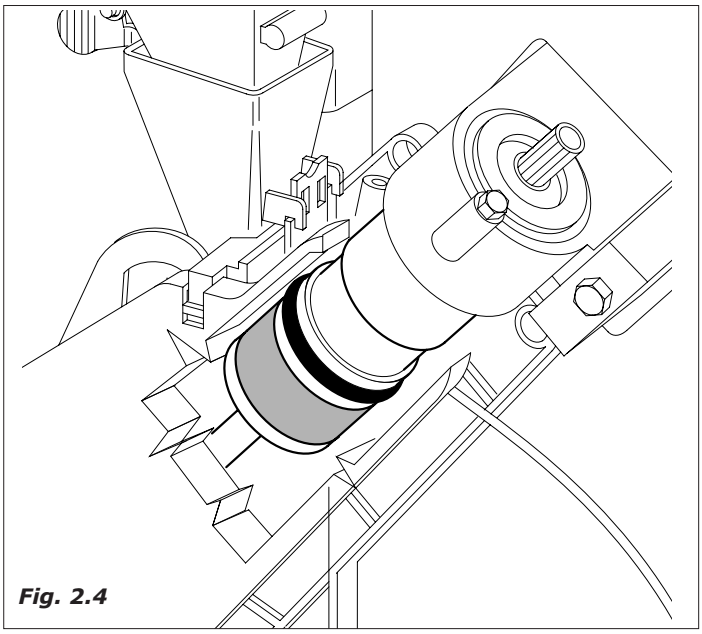


Fig. 2.4

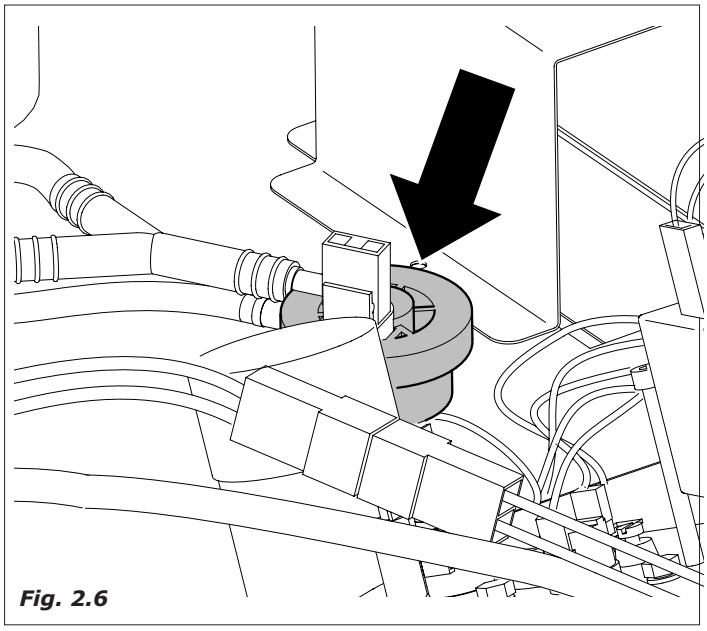


Fig. 2.6

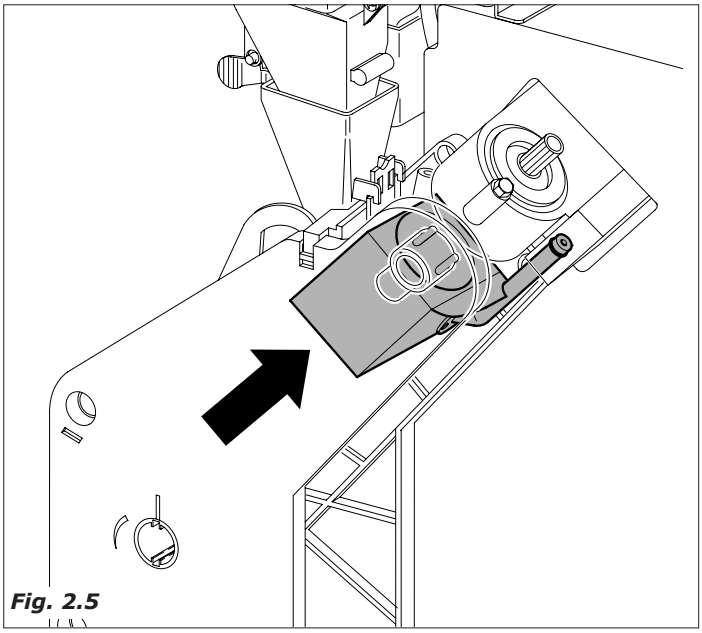


Fig. 2.5

SPOON DISPENSING

This process is activated only in the versions where the spoon dispenser is foreseen; In these versions it is possible to select the spoon in the selections without sugar and/ or in the instant selections.

- the geared motor that operates the spoon release device is activated making the spoon fall into the cup. (Fig.2.7).

INSTANT DRINKS

This process is activated when the cup and spoon dispensing processes have been completed.
According to the type drink requested and to the distributor model, several of the various processes described here below can be activated.

– If present, the whipper motor is activated (Fig.2.8)

- The electro valve fixed on the soup boiler (Fig.2.9) or on the coffee boiler (Fig.2.10). it is activated to introduce into the mixer the programmed water quantity.

- The Instant boiler is installed on the instant version and on the Double Boiler Espresso version.

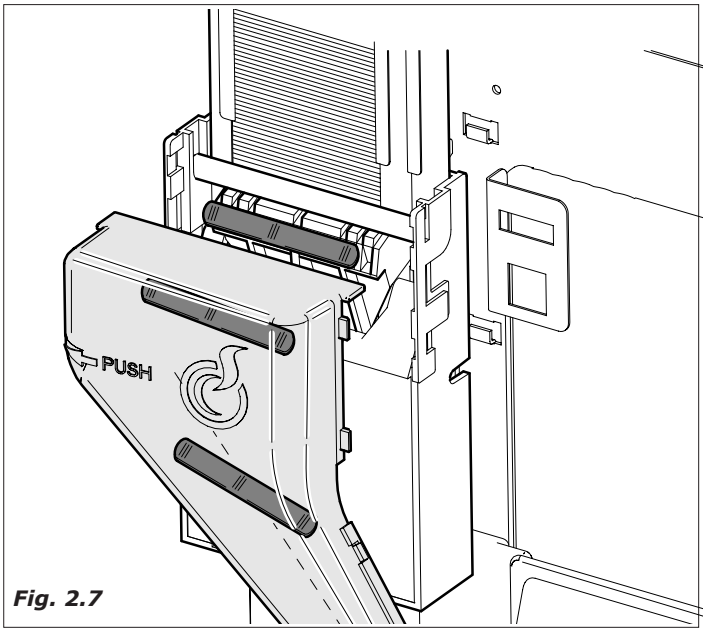


Fig. 2.7

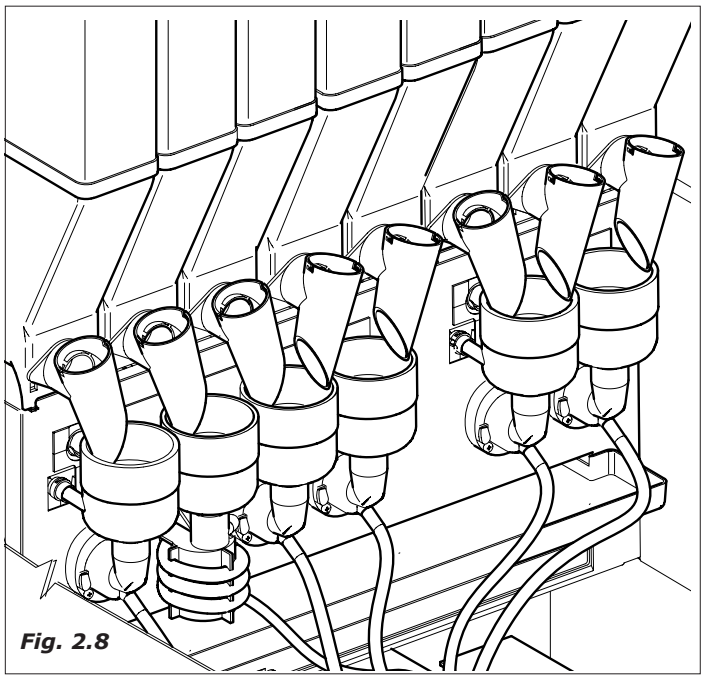


Fig. 2.8

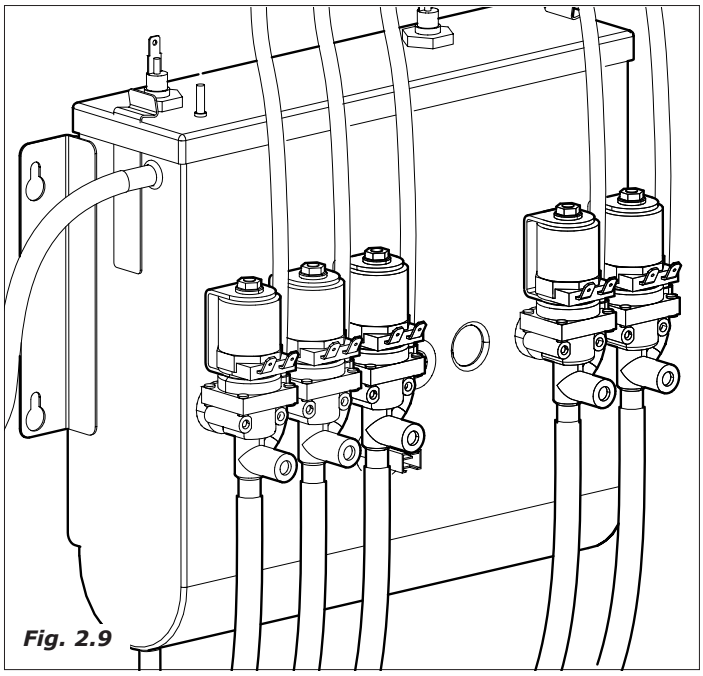


Fig. 2.9

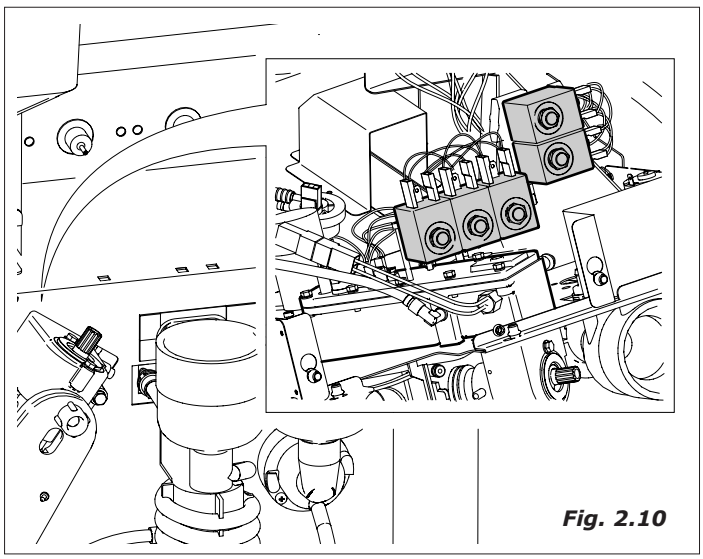


Fig. 2.10

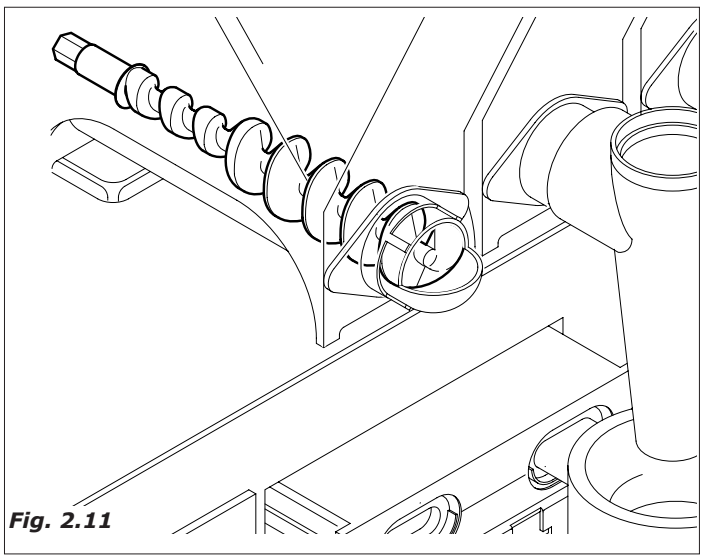


Fig. 2.11

- The instant product geared motor activates the helicoidal screw conveyor so as to dispense the quantity of product programmed into the mixer (in some versions several products can be processed in the same mixer such as milk and chocolate) (Fig.2.11)

- Once the preset water and powder quantity has been preset has been supplied, the mixer is disabled after a time (T) set during the programming.

3.0 MOVING AN AUTOMATIC VENDING MACHINE

3.1 Moving and transport *(Fig.3.1)*

The transport of the distributor must be effected by competent personnel.
The distributor is delivered on a pallet; for the shifting use a trolley and move it slowly in order to avoid capsizing or dangerous movements.

Avoid :

- *lifting the distributor with ropes or presses*
- *dragging the distributor*
- *upset or lay down the distributor during transport*
- *give jolts to the distributor*

Avoid as the distributor:

- *bumping it*
- *overloading it with other packages*
- *exposing it to rain, to cold or sources of heat*
- *keeping it in damp places*

The construction company is not liable for any damage which may be caused for the partial or complete non-observance of the warning notices indicated above.

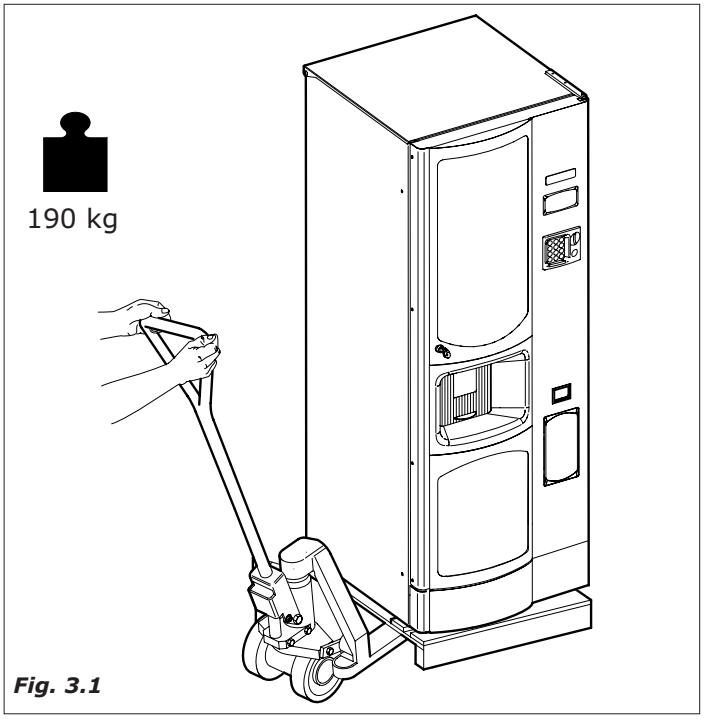


Fig. 3.1

3.2 Stocking

For eventual stocking, avoid laying several machines over each other, maintain it in vertical position, in dry places with temperatures not inferior to 1°C (Fig.3.2).


Fig. 3.2

3.3 Packing

The distributor is protected with polystyrene angles and by a transparent film in polypropylene (Fig.3.2).
The automatic distributor will be delivered packed, assuring both a mechanical protection and protection against damages from the external environment.

On the package labels are applied indicating:

- maneouver with care
- don't turn upside-down
- protect from the rain
- don't superimpose
- protect from sources of heat
- not resistant against bumps
- type of distributor and serial number.

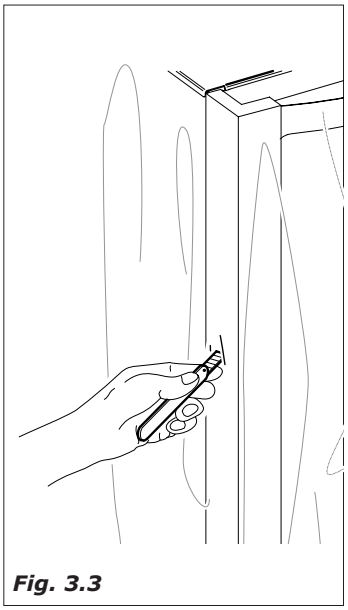


Fig. 3.3

3.4 Reception

Upon reception of the automatic distributor you need to check that the same has not suffered damages during the transport.

If damages of any nature are noticed place a claim with the forwarder immediately.

A*t the end of the transport the packing must result without damages which means it must not :*

- present dents, signs of bumps, deformations or damages of the external packaging
- present wet zones or signs that could lead to suppose that the packing has been exposed to rain, cold or heat.
- present signs of tampering

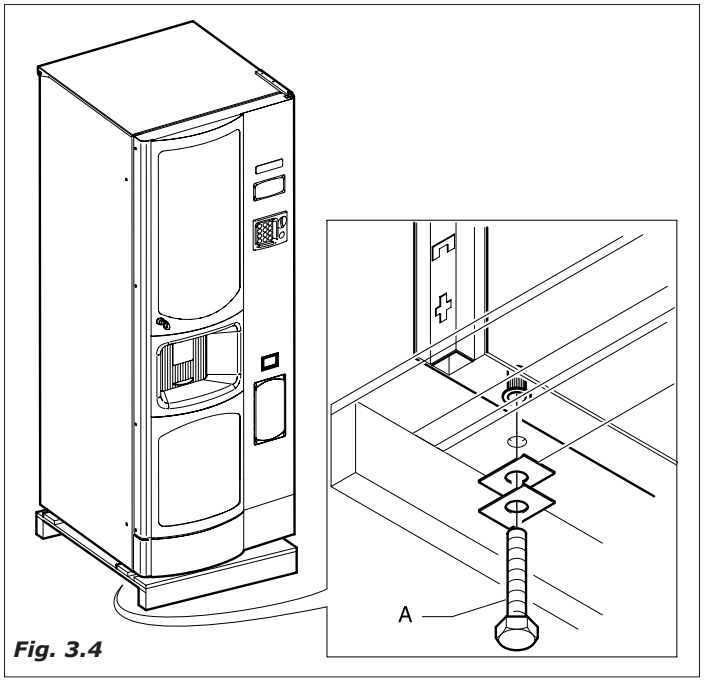


Fig. 3.4

3.5 Unpacking

- Free the distributor from the packaging , cutting the protective film in which it is wrapped, along one of the protection angles (Fig.3.3).
- Remove the distributor from transport pallet, unscrewing the screws (A) that block the fixing cross staff heads to the pallet (Fig.3.4).

– Release the pallet and insert the 4 feet into the threaded slots (fig. 3.5) freed of the screws (A)

– remove the key from the drink dispensing chamber (Fig.3.6)

Open the door of the distributor and remove the adhesive tape from the components listed here below:

- cup turret (example in Fig.3.7)
- coin box
- sugar container
- weight on the spoon dispenser column
- coin mechanism cover / Master board
- product containers
- water bin float mechanism
- bottom skirting-board
- water bin
- remove the polystyrene that that blocks the product containers (Fig.3.8)

The packing material must not be left accessible to others, as it is a potential environmental pollution sources. For the disposal contact qualified companies authorized.

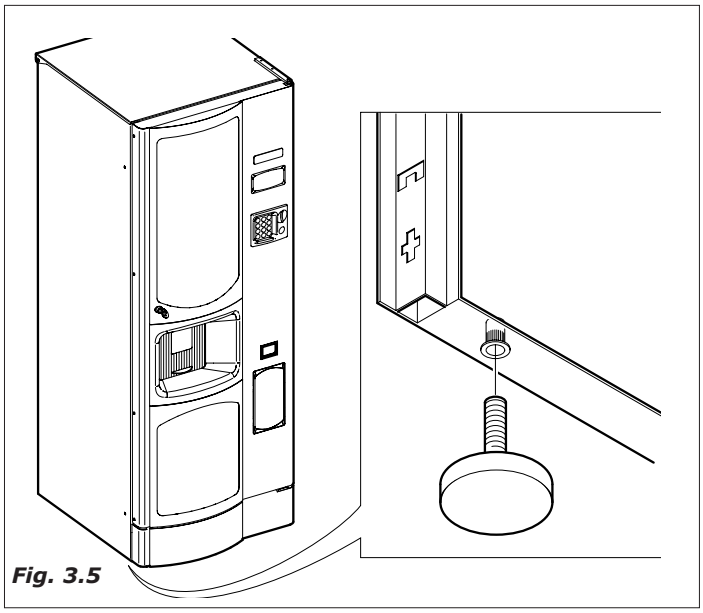


Fig. 3.5

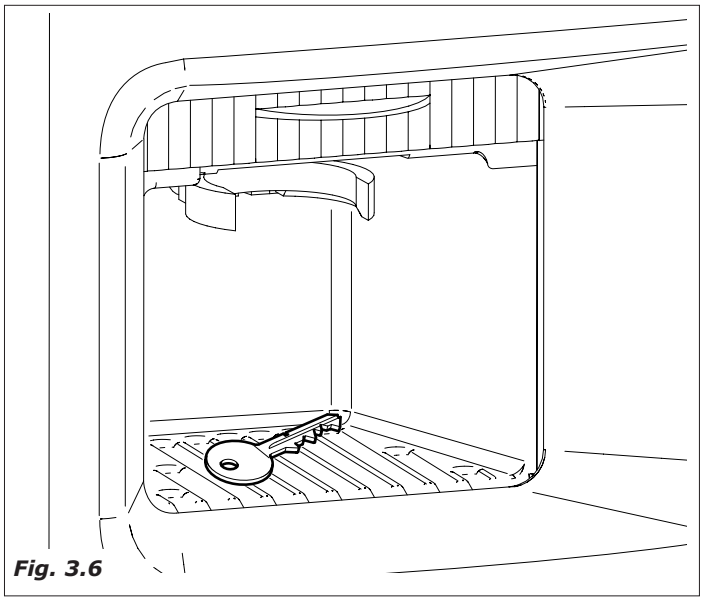


Fig. 3.6

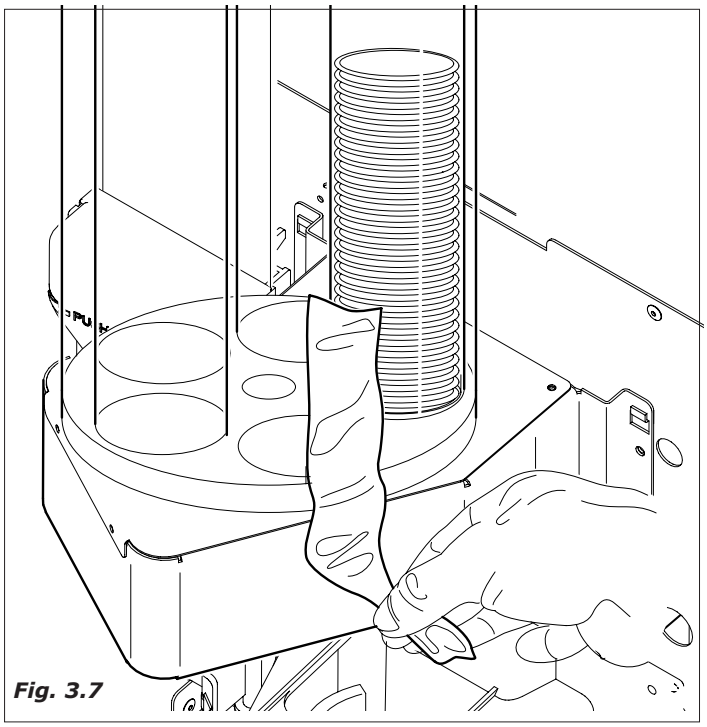


Fig. 3.7

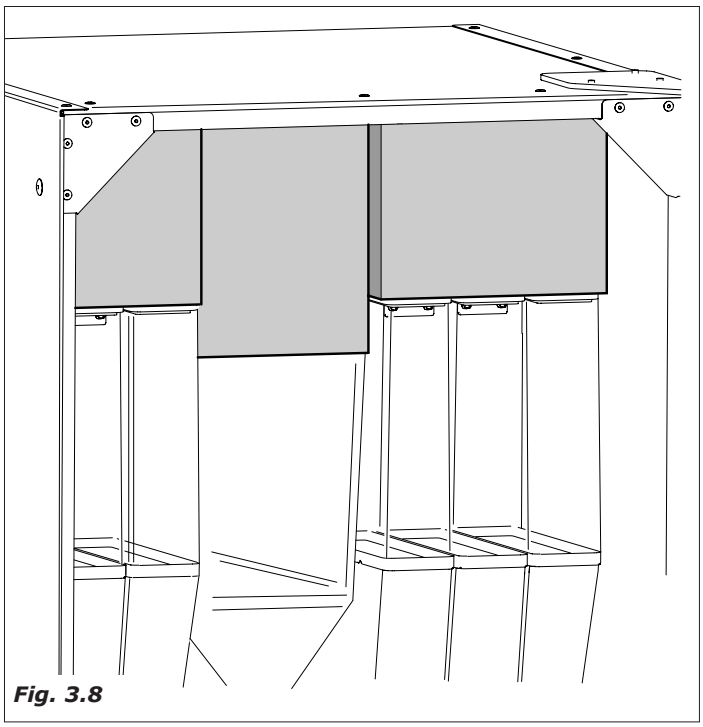


Fig. 3.8

4.0 INSTALLATION

4.1 Positioning

- If positioned near to a wall, there must be a minimum distance from the wall of at least 5 cm. (Fig.4.1) so as to allow a regular ventilation. In no case cover the distributor with cloths or similar.
- Position the distributor, checking the leveling by means of the adjustable feet already assembled on the machines (Fig.4.2). make sure that the distributor doesn't have an inclination of more than 2 degrees.

WARNING! *Do not position the device near inflammable objects, keep a minimum safety distance of 30 cm.*

Bianchi Vending Group spa declines all responsibility for inconveniences due to the non observance of the above mentioned installation norms.
If the installation is made in safety evacuation corridors make sure that with the distributor door open there is anyhow sufficient space to pass by (Fig.4.1).
So as to avoid that the floor gets dirty, due to accidental spilling of the products, use, if necessary, under the distributor, a protection sufficiently wide to cover the distributors' operating space.

6.2 Connection to the main water supply

Before proceeding with the connection of the distributor to the water main supply verify the following water characteristics:

- that it is drinkable (eventually through an laboratory's analysis certification)
- it has a pressure comprised between 0.5 and 6.5 (bar) (if this should not be the case, use a pump or a water pressure, reducer according to the case).
- install, if not present, a tap in an accessible position to isolate the machine from the water mains should it be found to be necessary (Fig.4.3).
- before making water connections, make some water flow out of the tap so as to eliminate possible traces of impurities and dirt (Fig.4.4)
- connect the cock to the distributor, using a pipe in nylon material suitable for food products and suitable for the mains pressure. In the event of the use of a flexible pipe it is necessary to fit the reinforcement bush supplied inside (Fig. 4.5).
- the foreseen connection is a 3/ 8 gas (Fig.4.6).

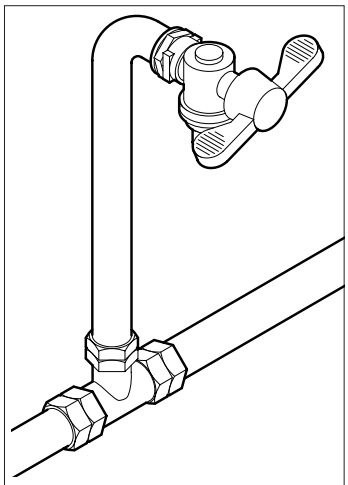


Fig. 4.3

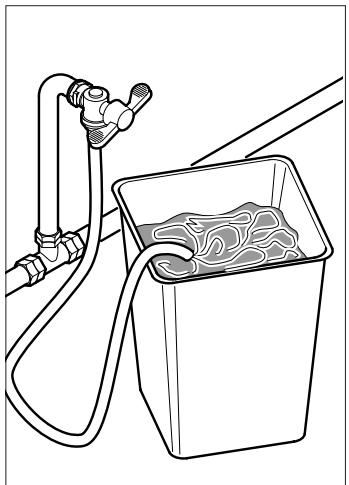


Fig. 4.4

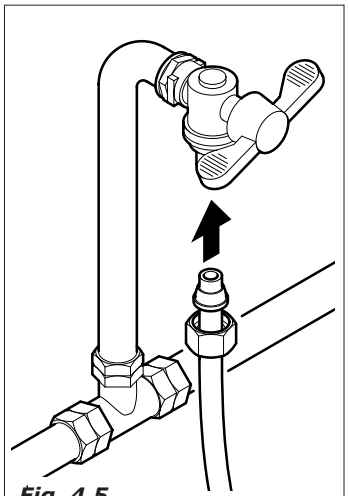


Fig. 4.5

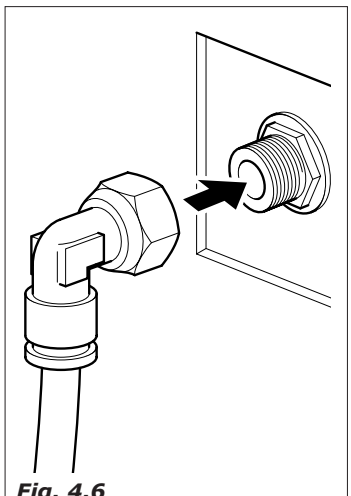


Fig. 4.6

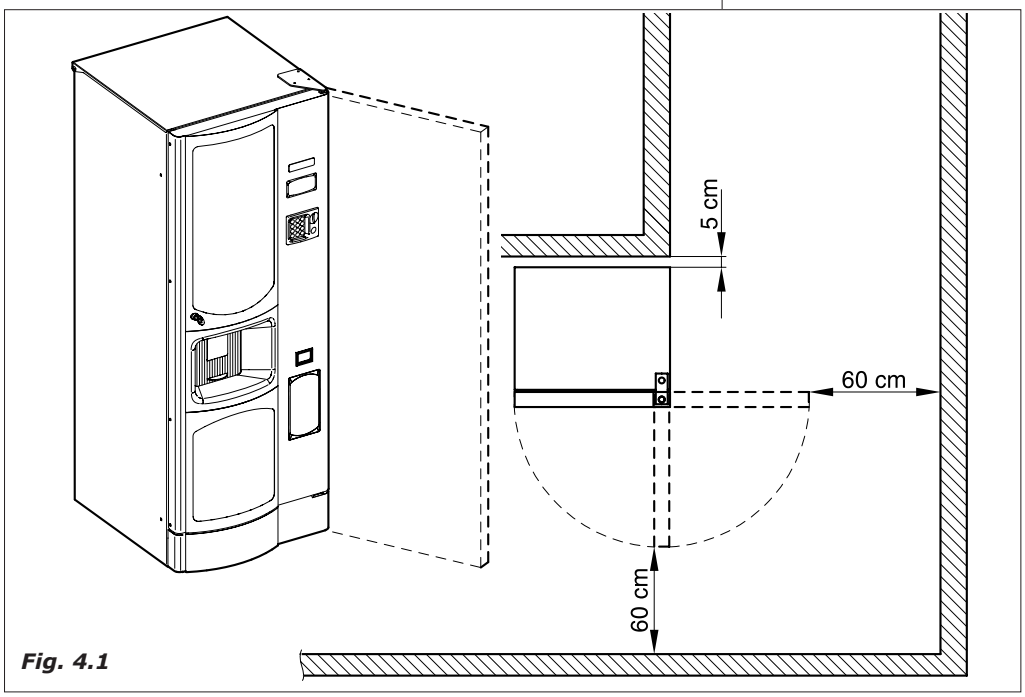


Fig. 4.1

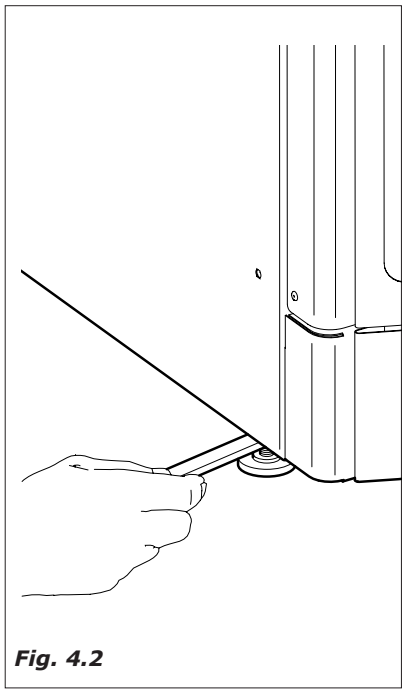


Fig. 4.2

4.3 Main Power supply connection

The distributor is predisposed to function with mono-phase 230 Volt tension and is protected with 12,5A and 20A fuses. (10A and 20A for the single boiler and instant versions and 15A and 20A for the instant hot/cold version).

We suggest to check that:

- the tension of net of 230 V doesn't have a difference of more than ± 6%
- The power supply output is able to bear the power load of the machine.
- use a system of diversified protection
- position the machine in such a way as to ensure that the plug remains accessible

The machine must be connected to earth in observance with the current safety norms.

For this reason, verify the plant's earth wire connection to ascertain that it is efficient and it answers national and European safety electric standards. If necessary require the intervention qualified personnel for the verification of the plant.

- The distributor is equipped with a power supply cable of H05VV-F 3x1,5mm², with SCHUKO plug (Fig.4.7).
- The sockets that are not compatible with that of the machine must be replaced. (Fig.4.8).
- The use of extension, adapters and/ or multiple plugs is forbidden.
- In some models, specific plugs are assembled for the destination place.

Bianchi Vending Group spa declines all responsibility for damages deriving for the complete or partial failure to observe these warnings.

Should the power cable be found to be damaged, immediately disconnect from the power socket.

The power supply cables are to be replaced by skilled personnel.

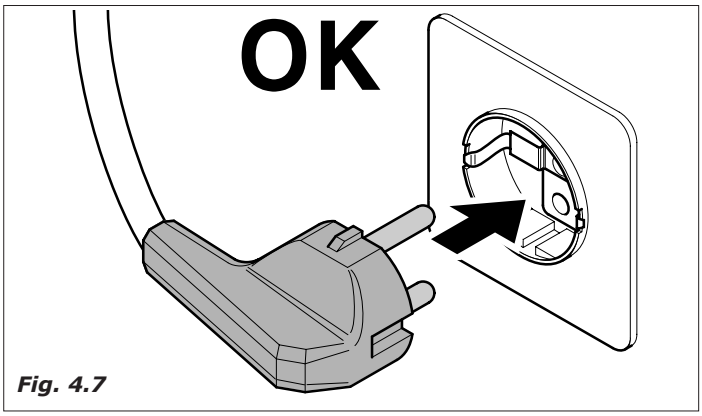


Fig. 4.7

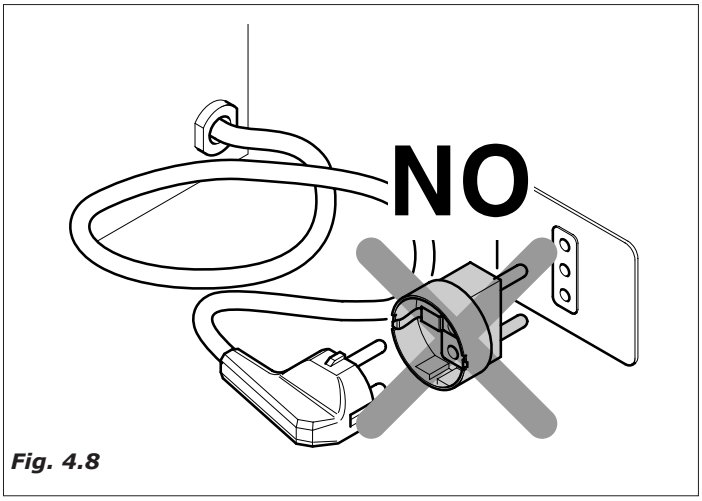


Fig. 4.8

4.4 Starting up of the unit

The distributor is equipped with a safety switch (Fig.4.9) that disconnects the machine whenever the door is opened (see electric schema).

In case of necessity, therefore, open the door or disconnect unplugging of the machine from the power supply.

The clamp of the power cable junction box remain under tension (Fig.4.10-pos.1) as well as the service switch inside the distributor. (Fig.4.11-pos.2).

– For some operations is however necessary operate with the door open but with the distributor connected.
It is possible for installation technician, to operate in this way, by inserting the special plastic key, supplied with the distributor, into the door switch and rotating it 90° (Fig.4.12).

The opening and the possible connection with the distributor's door open must be performed only by authorized in carrying out these operations.

Don't leave the distributor open and unguarded.

Give the key only to qualified personnel.

Any time the distributor is switched on there is a diagnosis cycle to check the state of DA peripherals and perform the restoration of moving parts.

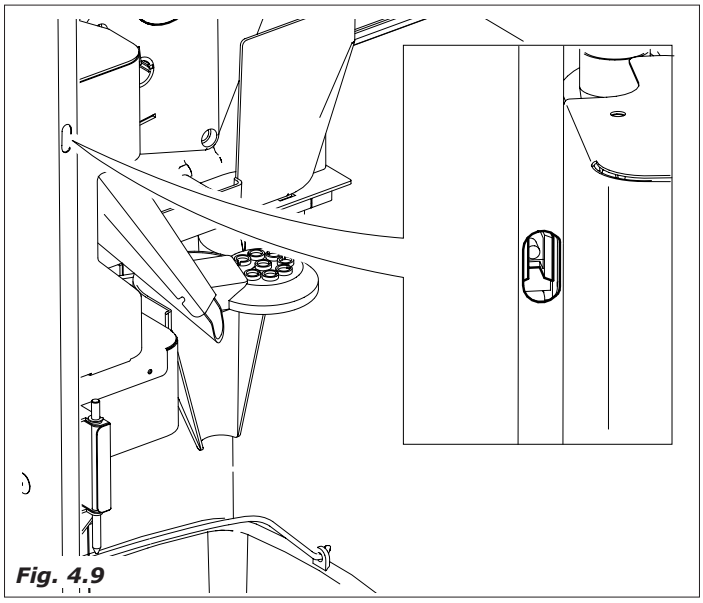


Fig. 4.9

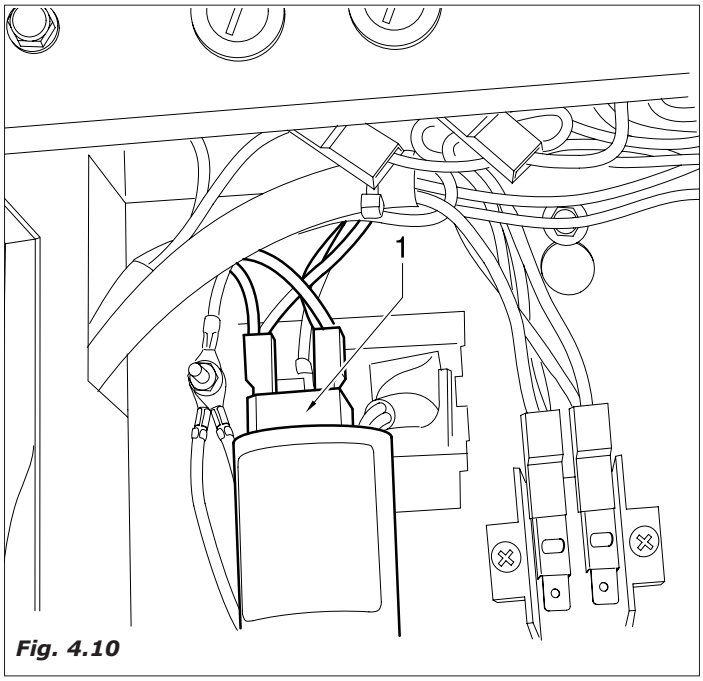


Fig. 4.10

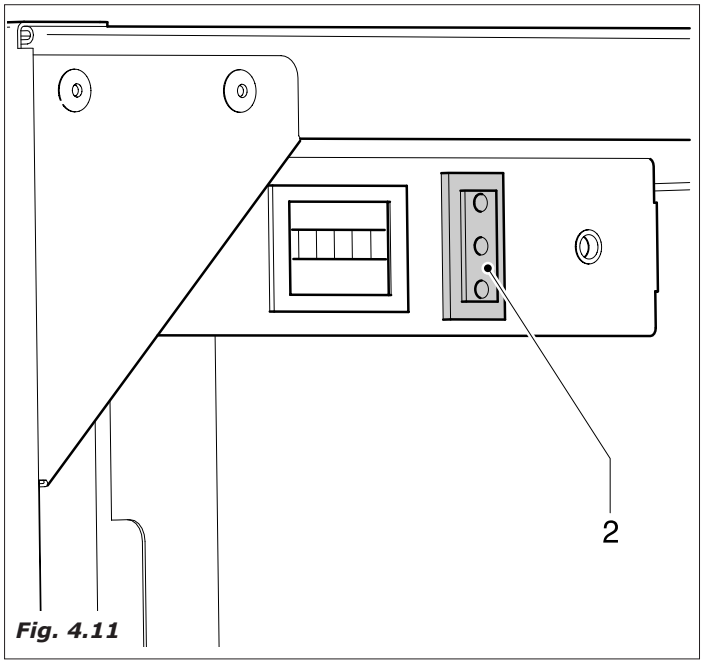


Fig. 4.11

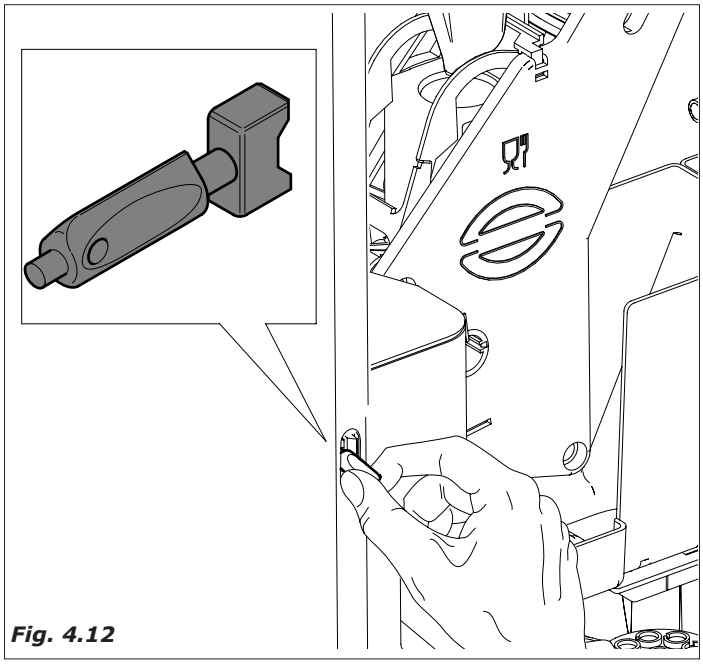


Fig. 4.12

4.5 Installation

4.5.1 Decalcificator resin washing where it is installed as accessory

First of all fill the distributor's water circuit, it is advisable effect the water softener resin regeneration (if installed)
operating in the following manner:

- insert the pipe of the bottom faucet in a container suitable for this use
- open the faucet (Fig.4.13)
- insert the key in the door switch (Fig.4.12)
- Let the water flow until it is clear (Fig. 4.14).
- Take out the key and close the faucet.

BMV972 assembles as standard the Brita filter with Acquaquell cartridge 1.5 and does not provide for the above mentioned procedure application. In this case, just link DA to the mains and proceed with the hydraulic circuit filling.

4.5.2 Filling of water circuit

INSTALLATION PROCEDURE

The installation procedure is valid only for the single boiler distributors. In particular, expresso boiler and polisulphone boiler fitted with level probes.

EXPRESSO SINGLE BOILER

At the line output, the distributor will be put in condition of FIRST INSTALLATION. As soon as it reaches the location, the operator will link only water (both in case of water supply connection and autonomous tank) and the mains.

The distributor will automatically require water until micro lack of water reaches N.C. for at least 15 seconds. In this condition D.A. switches on the pump and, with resistance OFF, will supply 200 cc of water (measured through the fan). Following this procedure the distributor installation date is stored. Once the date has been confirmed, D.A. waits 10 seconds and soon after it will start to heat water in the boiler.

POLISULPHONE BOILER with LEVEL PROBES

At the output of BV lines the distributor will be put in condition of FIRST INSTALLATION. As soon it reaches the location the operator will link only water (both in case of water supply connection and autonomous tank) and the mains.

The distributor will automatically require water until the maximum level probes detect the presence of water. After this procedure the distributor installation date is stored. Once the date has been confirmed, D.A. waits 10 sec and soon after it will start to heat up water in the boiler.

SINGLE STAINLESS STEEL BOILER FOR SOUPS

At the output of BV lines, the distributor will be put in condition of FIRST INSTALLATION.

As soon it reaches the location the operator will link only water (both in case of water supply connection and autonomous tank) and the mains.

The distributor , in condition of OFF resistance, will automatically require water and will open the electrovalve 2 to vent air which is in the boiler.

This condition will last 200 seconds. At the end of this timeout, the distributor will close the electrovalve 2 and the input water ev for 20 sec. After this period, the water loading will last until the micro lack of water is N.C. for a time exceeding 5 sec (this operation is linked to a second timeout of 200 seconds). In this condition D.A. automatically activates the electrovalve 2 which will supply 20 s of water.

At the end of the supply, the micro lack of water returns become N.C. After this procedure the distributor installation date is stored. When the date is confirmed, D.A. waits 10 seconds and soon after it will start to heat up water in boilers.

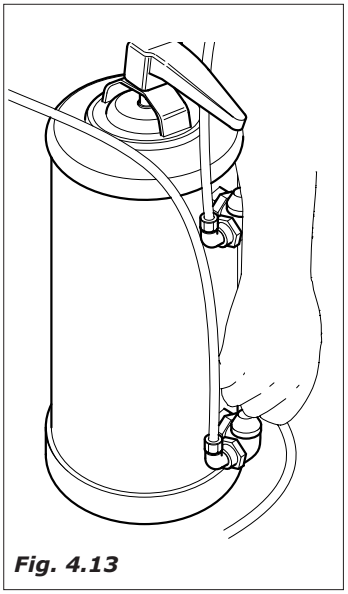


Fig. 4.13

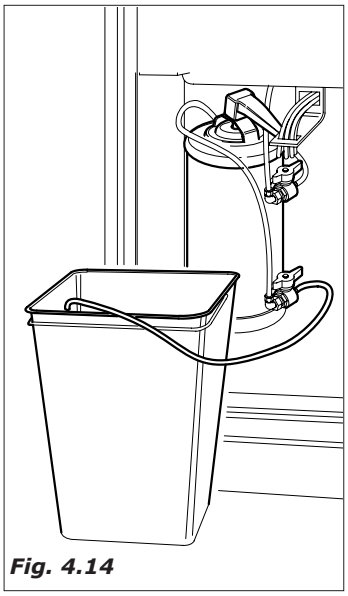


Fig. 4.14

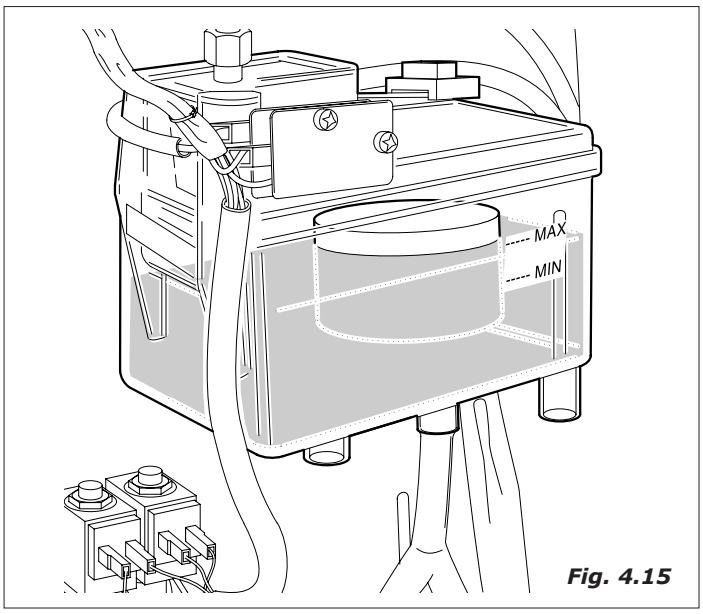


Fig. 4.15

DOUBLE BOILER

At the output of the lines, the distributor will be put in condition of FIRST INSTALLATION. As it reaches the location the operator will link only water (both in the case of linking to the mains and autonomous tanker) and the mains.

The distributor, in condition of resistances OFF, will automatically require water and will open the electrovalve 2 to vent the air which is in the stainless boiler.

This condition will last 200 seconds. At the end of this timeout, the distributor will close the electrovalve 2 and the water input ev for 20 sec.

After this time water loading will continue until the micro lack of water is N.C. for a time exceeding 5 sec (this operation is linked to a second timeout of 200 seconds). In this condition the D.A. activates the electrovalve 2 and will supply 20 sec of water.

At the end of the supply, the micro lack shall return to N.C. After 10 sec D.A. activates the expresso pump, and, on condition of resistance OFF, it will supply 20 cc of water through the coffee ev (measured through the fan).

After this procedure, the distributor installation date is stored. When the date is confirmed, D.A. waits 10 seconds and soon after it will start to heat up water in the 2 boilers.

At the end of the water filling, effect a cleaning cycle of the mixer group so as to fill all the circuits and remove eventual residues from the boiler (Fig.4.16).

Before connecting the power supply, ensure that the distributor has been connected to the water mains and that the water tap has been turned on.

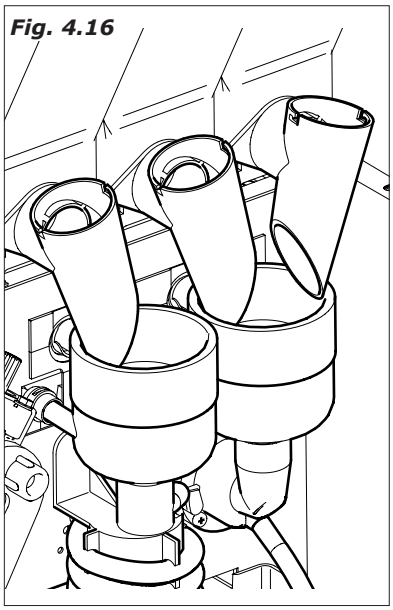


Fig. 4.16

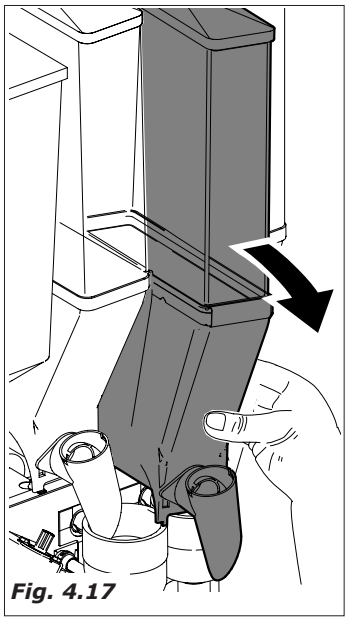


Fig. 4.17

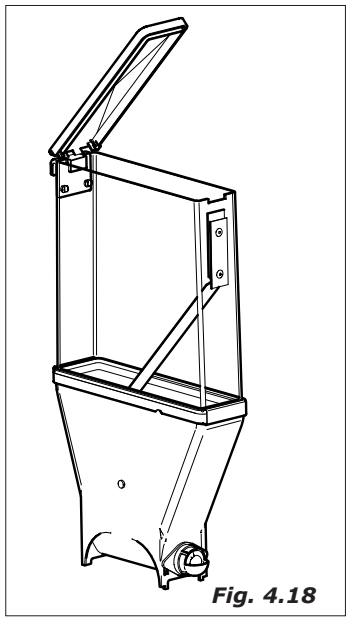


Fig. 4.18

4.5.3 Cleaning of the parts in contact with food substances

With distributor switched on effect a cleaning of the mixers pressing the buttons according to what is described in the service functions so as to eliminate any dirt from the coffee boiler and the instant boiler.

- wash your hands carefully
- prepare an anti-bacterial cleaning solution with a chlorine base (products that can be purchased in pharmacies) carefully following the indications on the product instruction labels.
- remove all the product containers from the distributor (Fig.4.17)
- remove the lids from the product containers covers and product chutes (Fig.4.18). Dip all in the solution previously prepared
- remove all the powder chutes, water funnels, mixing bowls and whippers and silicone tubes and dip these parts also in the prepared solution (Fig.4.18)
- with a cloth soaked with the solution clean the whipper assembly base (Fig.4.20)
- the parts must soak in the solution for the time indicated on the solutions' instruction label.
- Recover all the parts, rinse them abundantly, dry them perfectly and proceed with the re-assembly in the distributor.

For further safety after the assembly of the parts, effect some automatic cleaning cycles so as to eliminate any eventual residues.

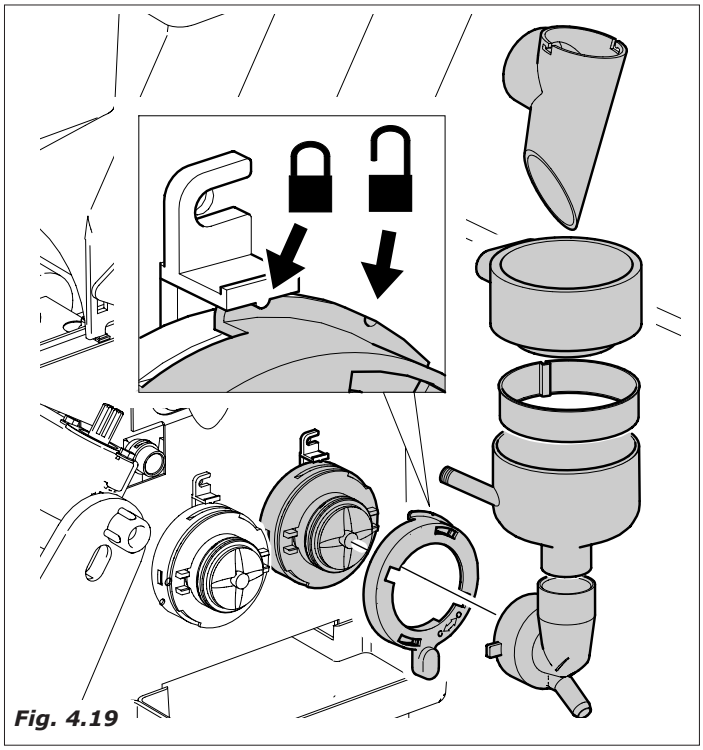


Fig. 4.19

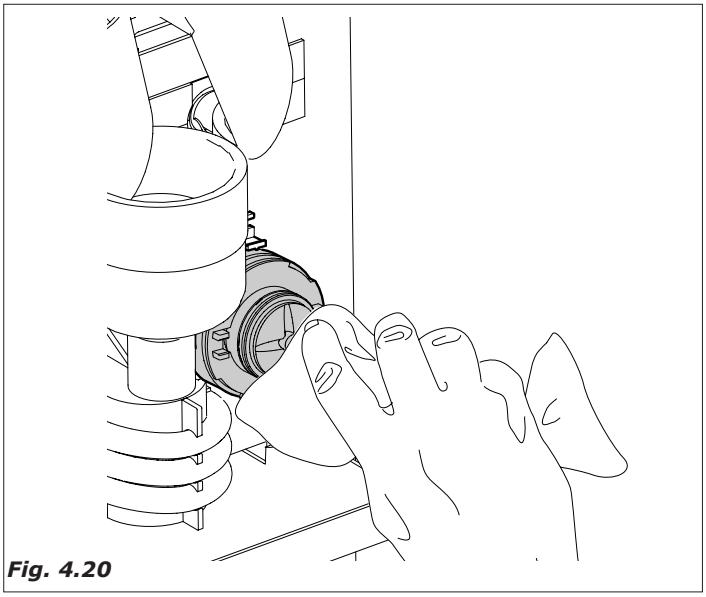


Fig. 4.20

4.5.4 Payment system installation

The distributor is supplied without any payment system:
The installation of the payment system is the responsibility of the installation technician.

Bianchi Vending Group spa will not take responsibility for any eventual damage to the machine itself and/or to things and/or persons due to incorrect installation.

– open the board and coin mechanism protection door (Fig. 4.21)

– Connect the payment system (Fig.4.22) to the Master board.

The selectors must be directly connected to the Master board the and the serial executive systems through the interface cable supplied with the machine.

Then go into programming for the correct settings.

Consult chapter" 5.0 SOFTWARE INSTRUCTIONS" so as to verify setting of the parameters, that must be coherent with the system used.

Check the payment system connections, by consulting the diagram of the sheet shown.

– Hook the coin mechanism (Fig. 4.23).

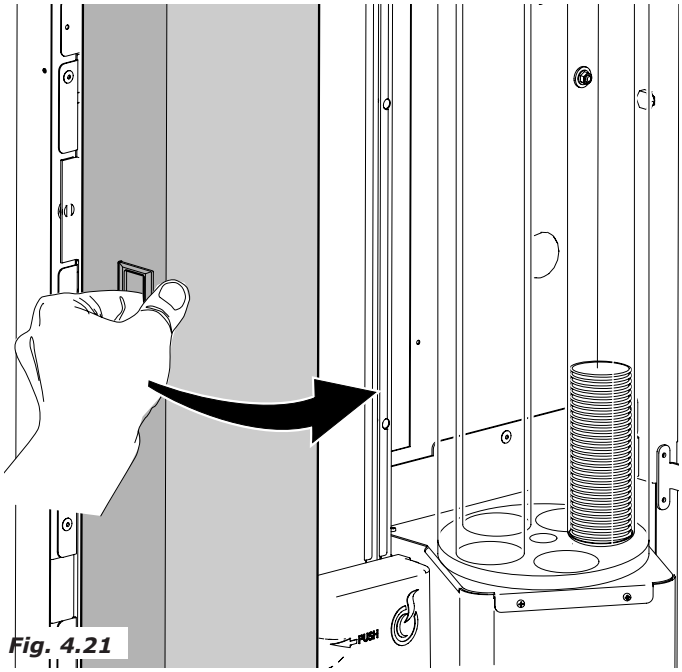


Fig. 4.21

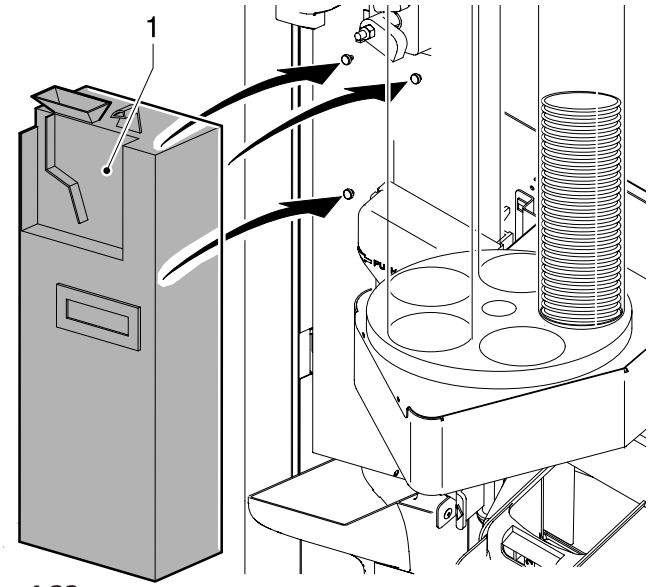


Fig. 4.22

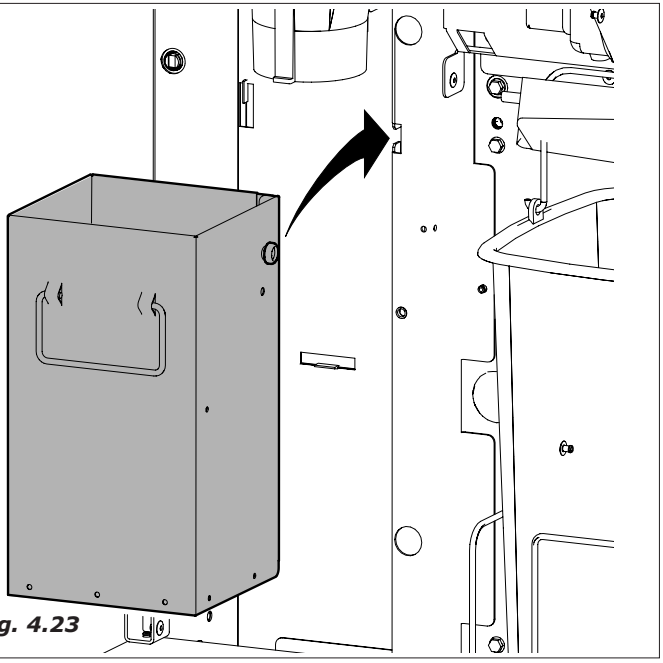


Fig. 4.23

4.6 Product container loading (with machine off)

4.6.1 Loading containers

– so as to effect the loading is necessary remove each container.

  Particularly, for the coffee bean container, it is necessary close the chute door before removing the container (Fig.4.26).

– remove the covers of each container and load the product according to the product indicated on the label (Fig.4.27)

– pay attention that they there are no clots, avoid pressing the product and using an excessive quantity, so as to avoid its aging in relation to the consumption forseen in the time period between two loadings.

Bvm952

The BVM952 vending machine is equipped with an openable upper case.
This opening gives access to the containers to load the product.
Figures 4.24 and 4.25 show the correct operations to open/close the case.

Caution! Tighten the spring shown in figure 4.25 before closing the case.

Check the container product capacity in the section TECHNICAL CHARACTERISTICS.

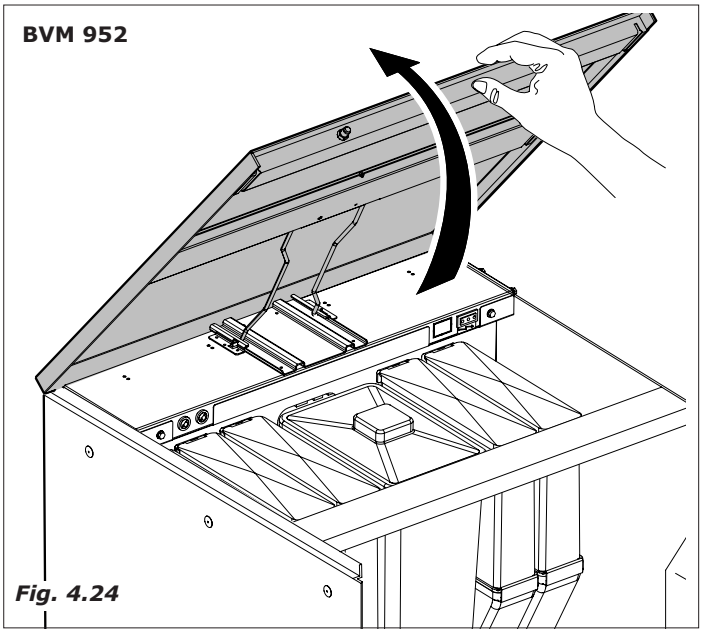


Fig. 4.24

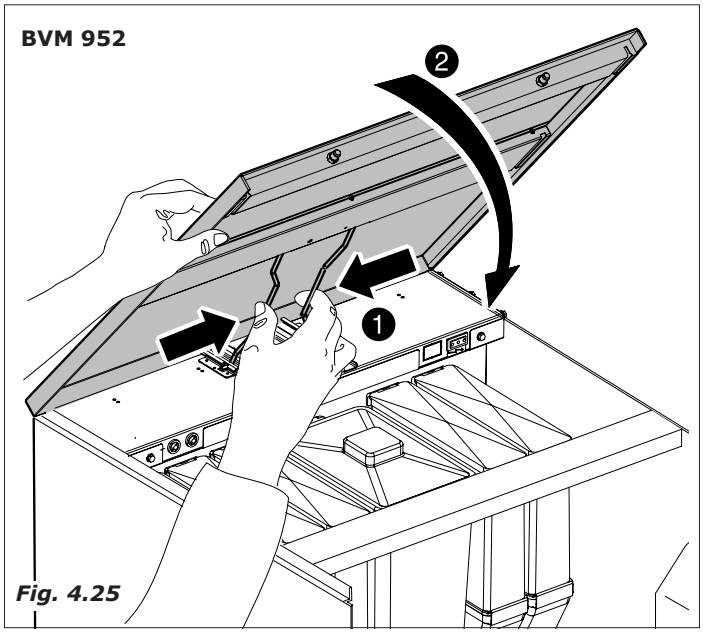


Fig. 4.25

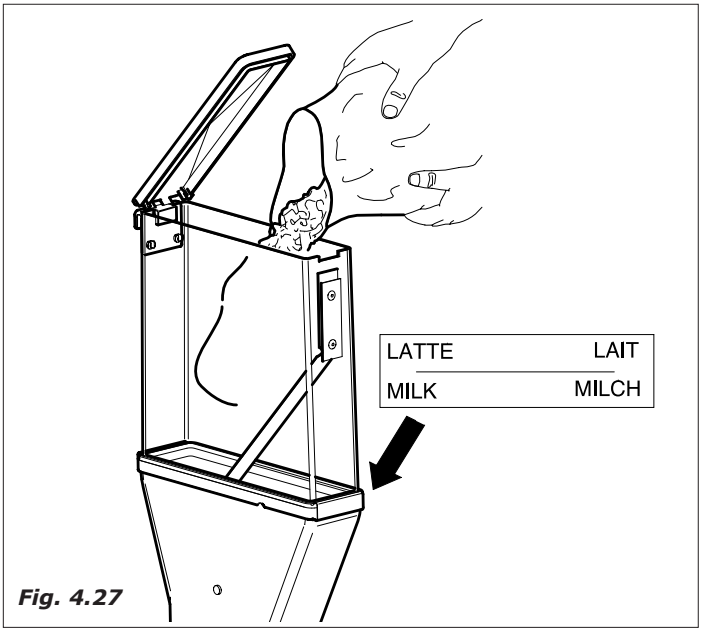


Fig. 4.27

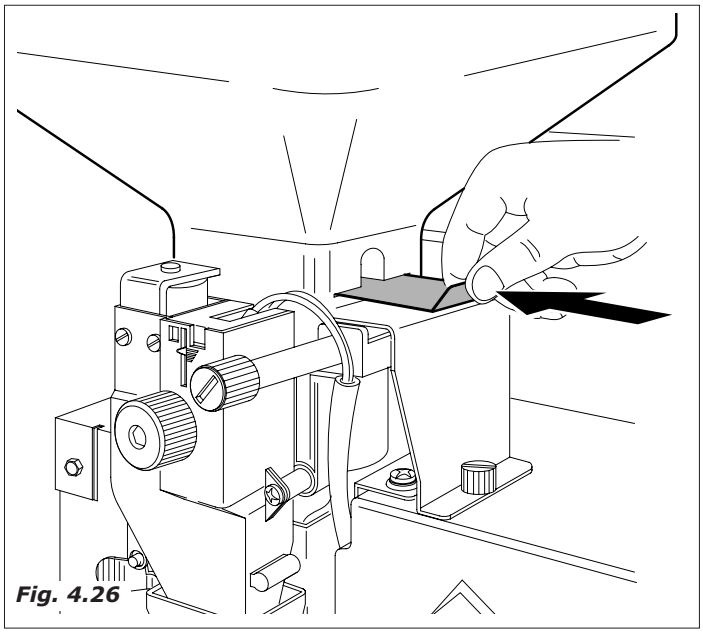


Fig. 4.26

4.6.2 Cup loading

Use only cups suitable for automatic vending machines, (check the relevant features by consulting the chapter 1.0 "Technical Specifications."), avoid compressing the cups between themselves during the loading. Don't try to rotate the turret manually.

First filling
In installation phase with the cup dispenser completely empty, operate as follows:

- Check that the cup column is not aligned with the distribution outlet, then fill all the columns proceeding in an anti-clockwise sense, opposite sense (when the column is aligned with the distribution outlet), close the door and switch on the machine so that the cup column rotates and automatically places itself in a position in which it is not aligned with the inlet and then proceed to fill (Fig.4.28)

- Put the cup turret's lid back on and snap in the spring band (Fig. 4.29).

Normal filling
The cup column should normally filled with the machine off, simply by opening the front door, lifting the lid and inserting the missing cups.

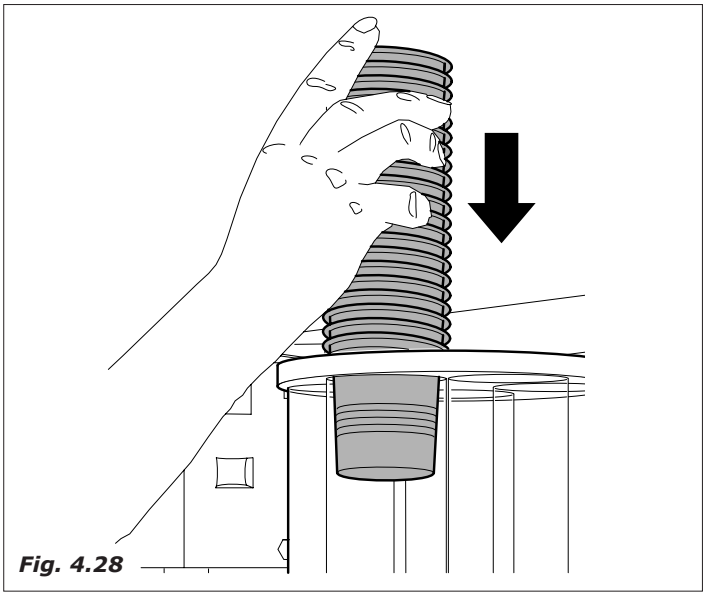


Fig. 4.28

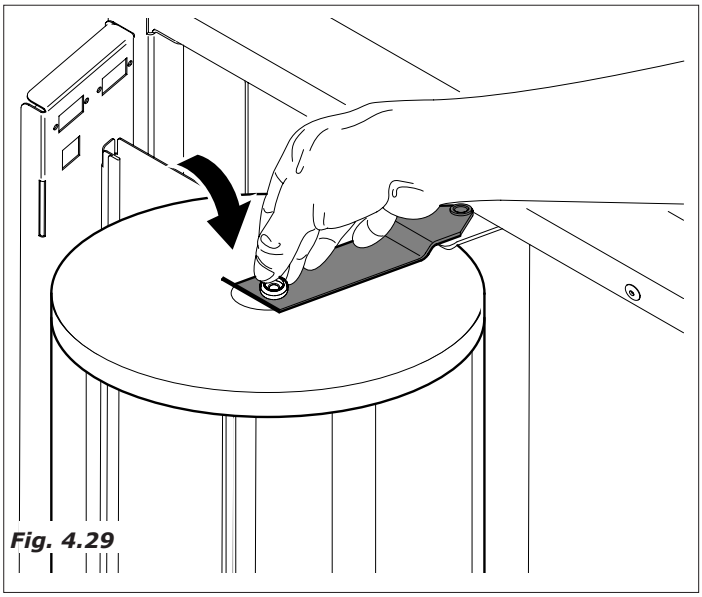


Fig. 4.29

4.6.3 Spoon loading

Attention! *Only use appropriate stirers to be used in automatic vending machines.*

- Remove the metal weight from the spoon dispensing column (Fig. 4.30)
- insert the spoons with their pack wrapping in the column and when they are positioned on the bottom cut and remove the wrapping (Fig. 4.31)
- once the loading is completed put the weight back in the spoon dispensing column.
- Check that the spoon are cut burr-free, that they are not bent and that they are all placed horizontally (Fig.4.32).

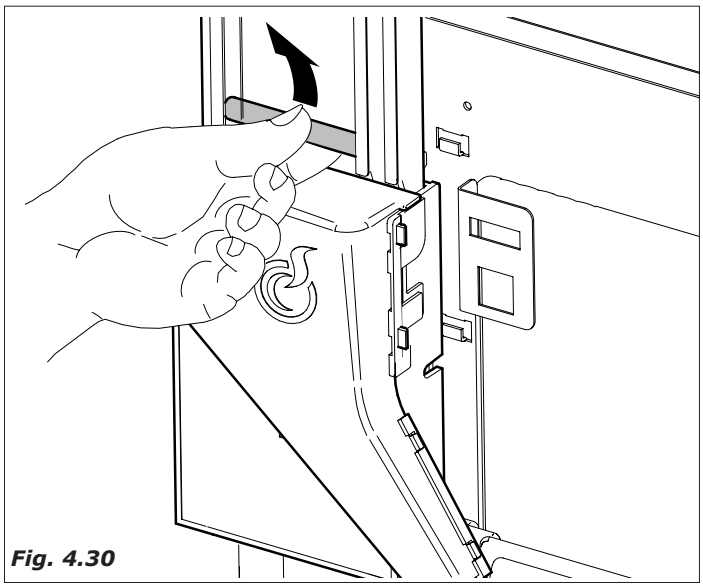


Fig. 4.30

4.6.4 Insertion of waste grounds bag

- insert the plastic bag wrapping it on the support itself (Fig. 4.33)
- Use plastic bags that are sufficiently long so that they touch the bottom of the distributor.
- Make sure that the liquid collection tank is in the correct position (Fig. 4.33) and periodically empty it.

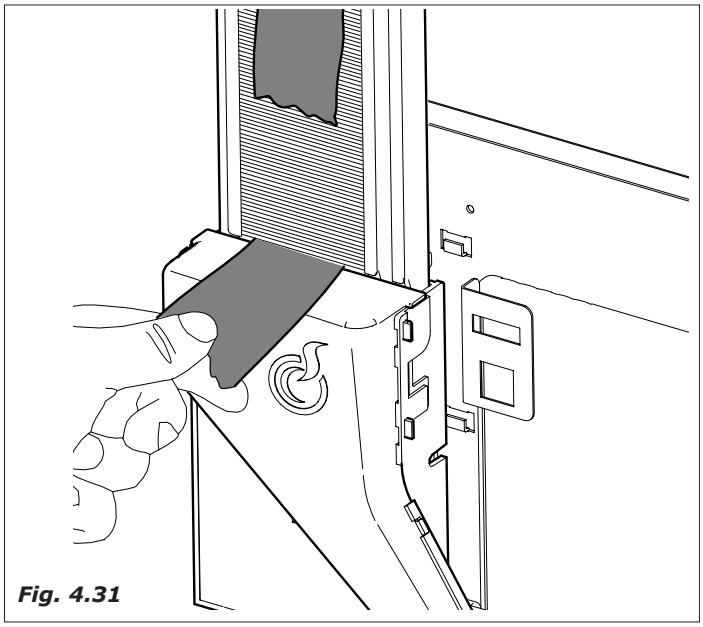


Fig. 4.31

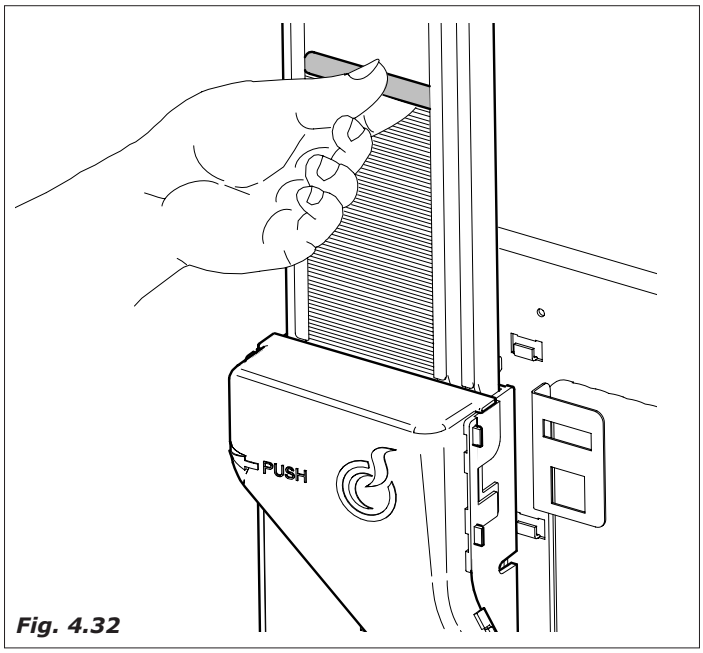


Fig. 4.32

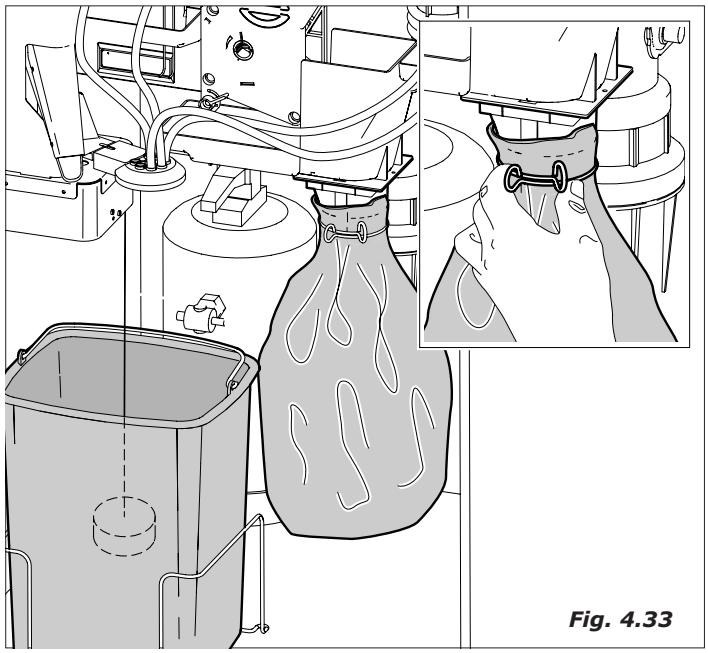


Fig. 4.33

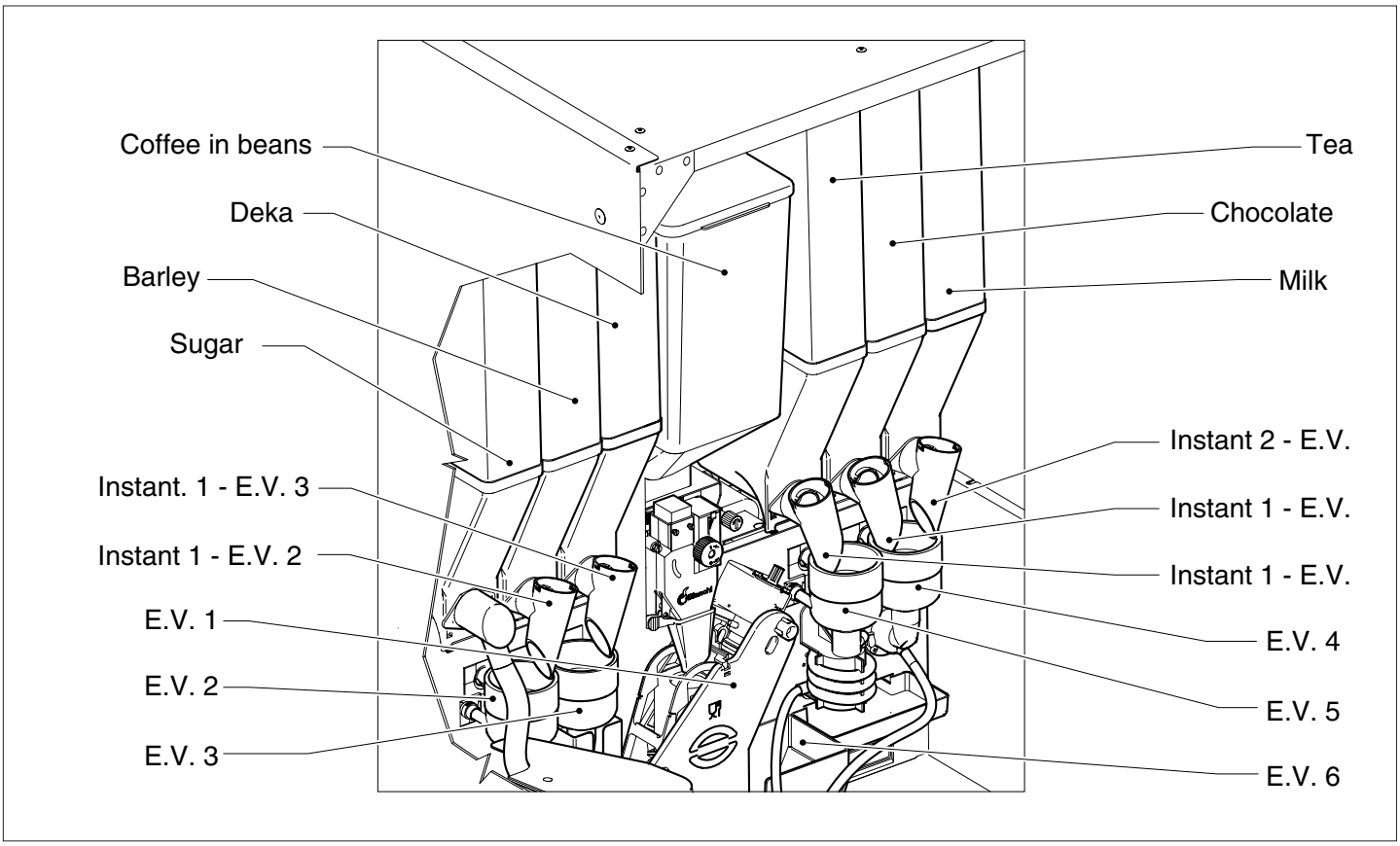
4.7 AUTOMATIC DISTRIBUTOR LAYOUT

LAYOUT BVM972 Espresso Single boiler

With the new dose menu we have the possibility to create selections with the required sequences.

Therefore any selection can be combined, creating a maximum sequence of 3 electrovalves; each electrovalve can be coupled to 2 products at most.

These couplings are factory made, therefore, for a correct use of the distributor we should keep strictly to the following indications.



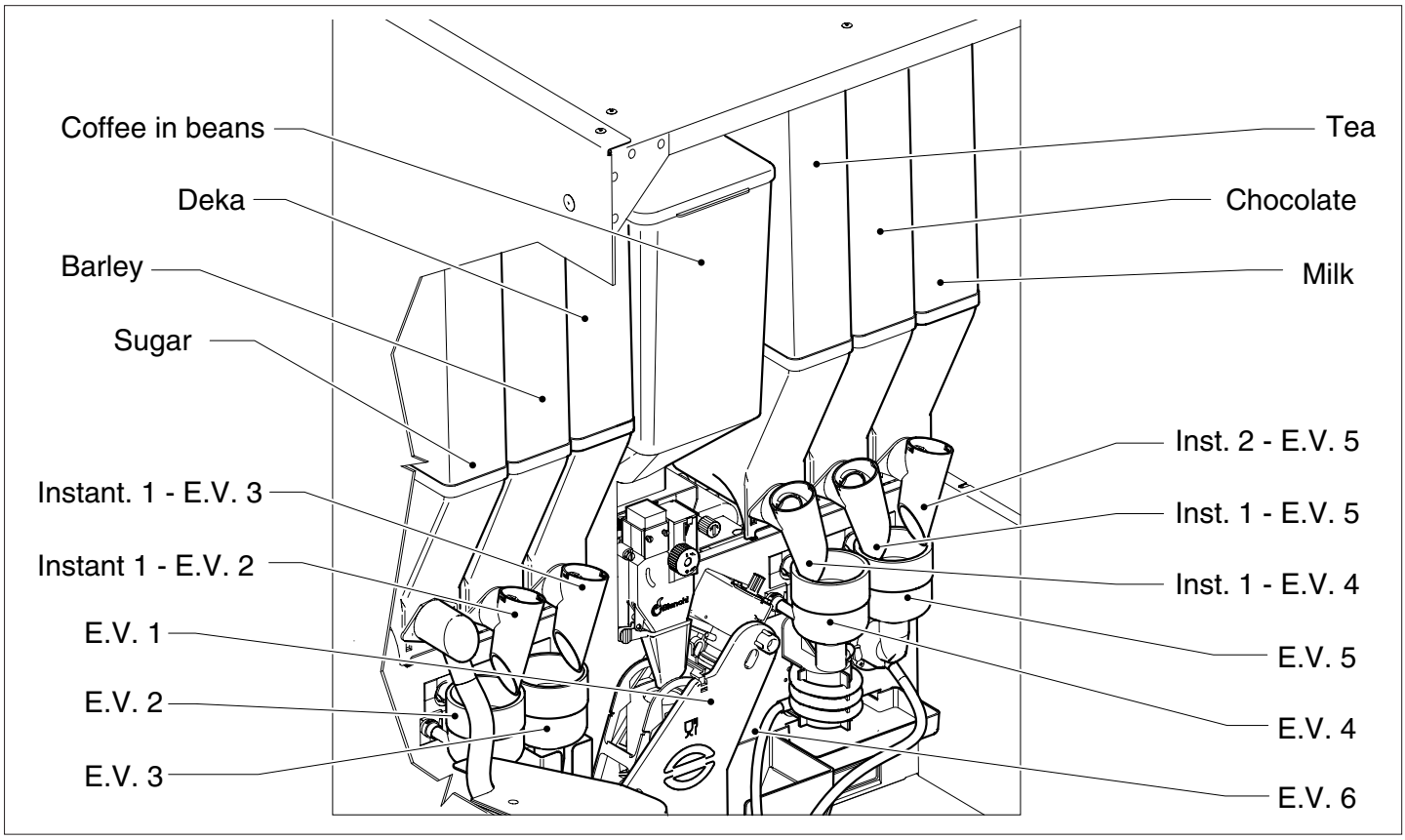
	FIRST SOUP	SECOND SOUP
EV1 Coffee	0	0
EV2	Barley	0
EV3	Deka	0
EV4	Tea	0
EV5	Chocolate	Milk
EV6 Water	0	0

LAYOUT BVM972 Espresso Double boiler

With the new dose menu we have the possibility to create selections with the required sequences.

Therefore any selection can be combined, creating a maximum sequence of 3 electrovalves; each electrovalve can be coupled to 2 products at most.

These couplings are factory made, therefore, for a correct use of the distributor we should keep strictly to the following indications.



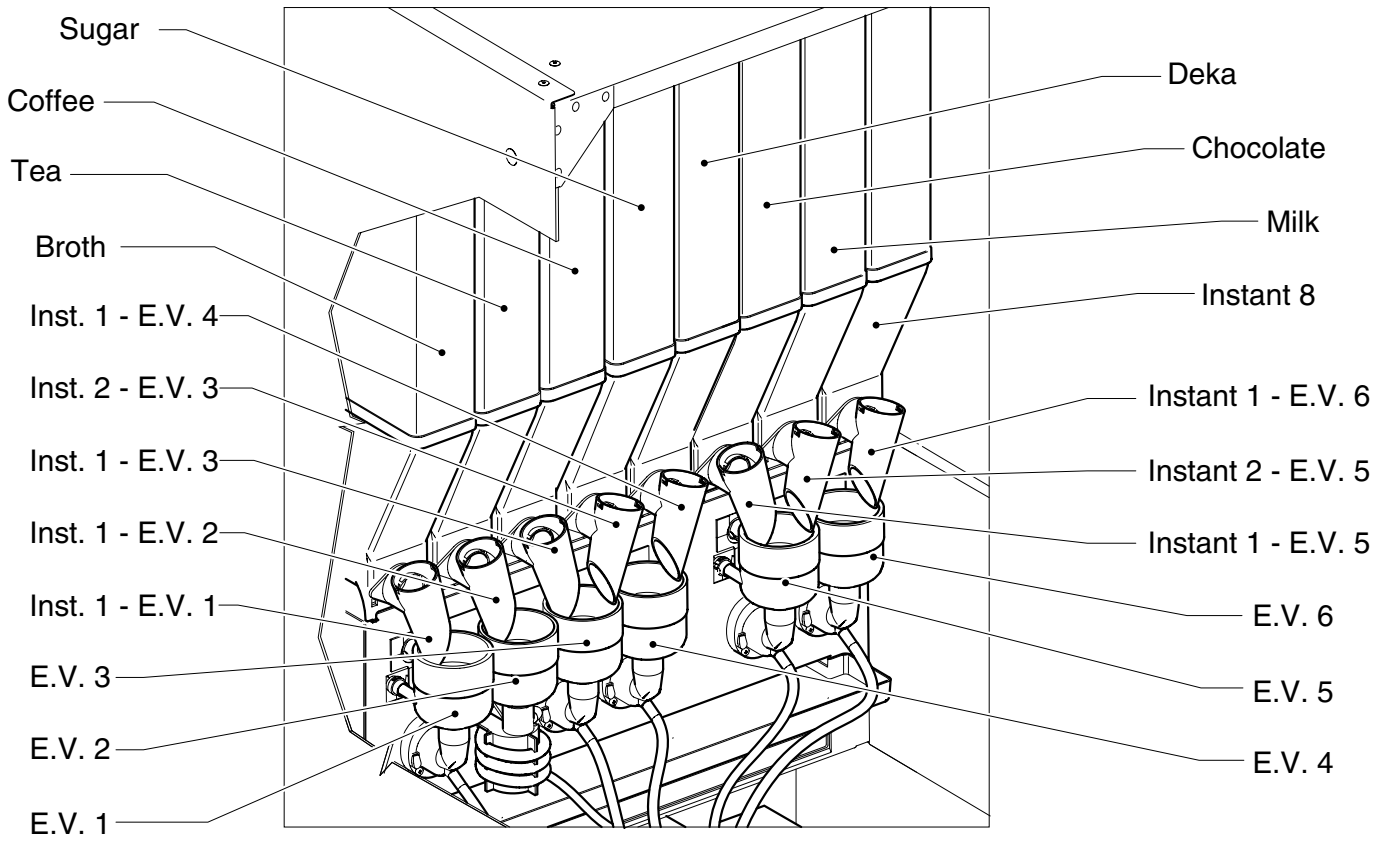
	FIRST SOUP	SECOND SOUP
EV1 Coffee	0	0
EV2	Barley	0
EV3	Deka	0
EV4	Tea	0
EV5	Chocolate	Milk
EV6 Water	0	0

LAYOUT BVM972 Instant boiler

With the new dose menu we have the possibility to create selections with the required sequences.

Therefore any selection can be combined, creating a maximum sequence of 3 electrovalves; each electrovalve can be coupled to 2 products at most.

These couplings are factory made, therefore, for a correct use of the distributor we should keep strictly to the following indications.



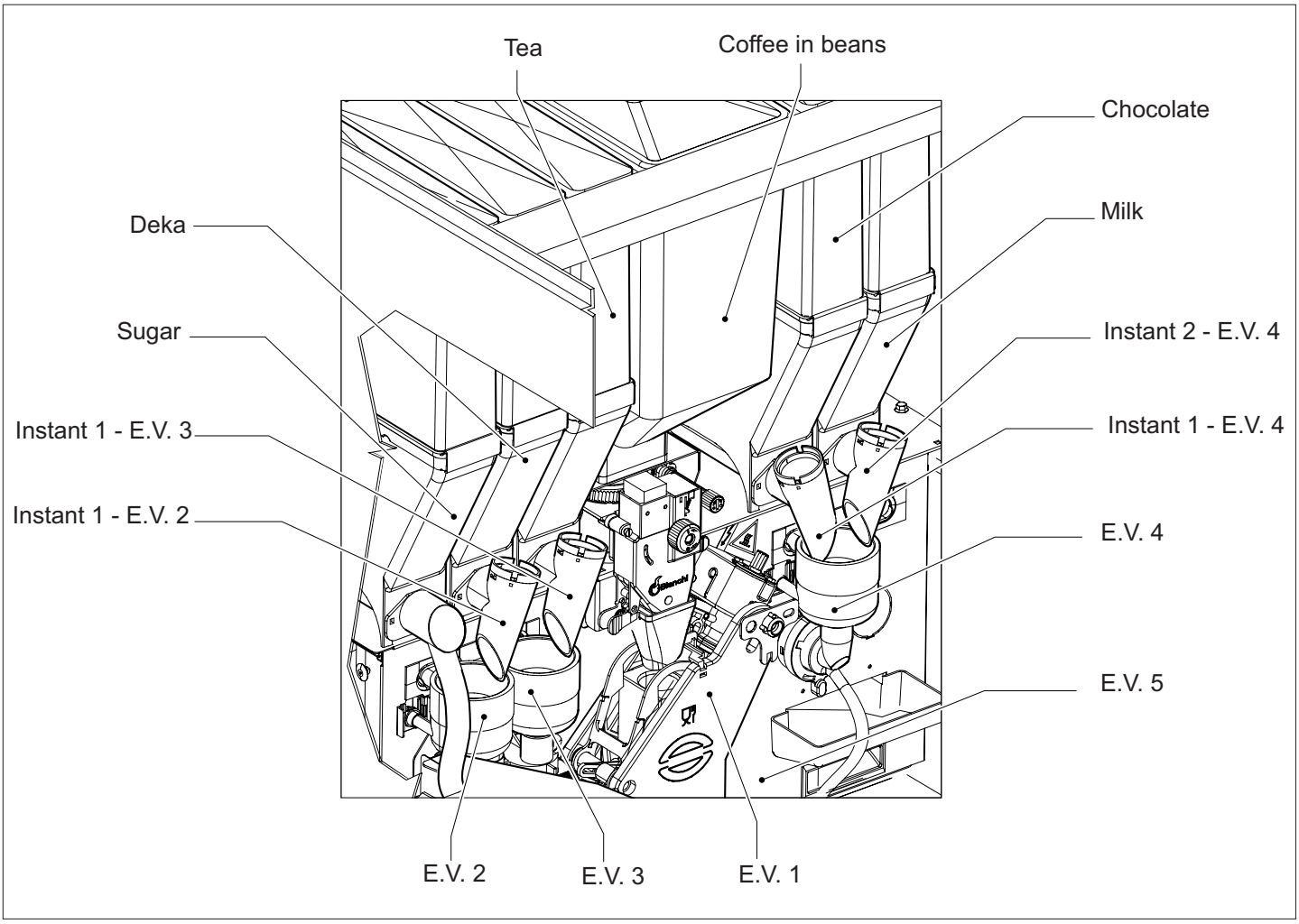
	FIRST SOUP	SECOND SOUP
EV1	Broth	0
EV2	Tea	0
EV3	Coffee	Sugar
EV4	Deka	0
EV5	Chocolate	Milk
EV6	Instant 8 or natural tea	0

LAYOUT BVM952 Espresso Single boiler

With the new dose menu we have the possibility to create selections with the required sequences.

Therefore any selection can be combined, creating a maximum sequence of 3 electrovalves; each electrovalve can be coupled to 2 products at most.

These couplings are factory made, therefore, for a correct use of the distributor we should keep strictly to the following indications.



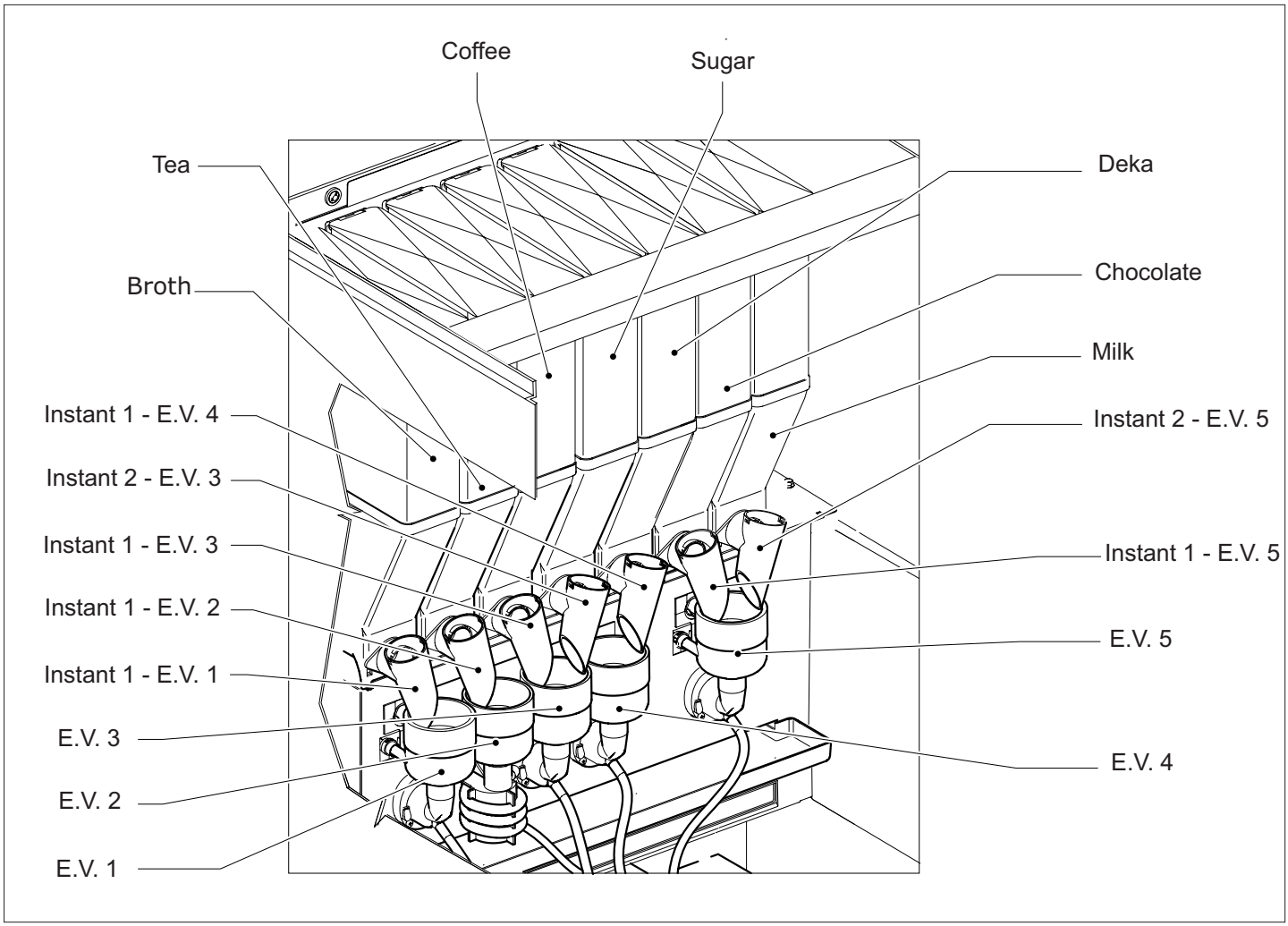
	FIRST SOUP	SECOND SOUP
EV1 Coffee	0	0
EV3 2	Deka	0
EV3	Tea	0
EV4	Chocolate	Milk
EV5 Water	0	0

LAYOUT BVM952 Instant boiler

With the new dose menu we have the possibility to create selections with the required sequences.

Therefore any selection can be combined, creating a maximum sequence of 3 electrovalves; each electrovalve can be coupled to 2 products at most.

These couplings are factory made, therefore, for a correct use of the distributor we should keep strictly to the following indications.



	FIRST SOUP	SECOND SOUP
EV1	Broth	0
EV2	Tea	0
EV3	Coffee	Sugar
EV4	Deka	0
EV5	Chocolate	Milk

4.8 FIRST SELF INSTALLATION MODE

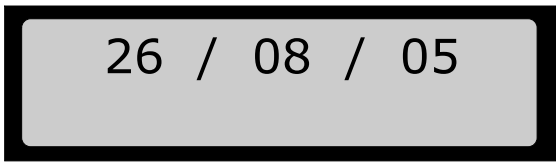
At the first machine start up will be performed a self installtion .The aim of this procedure is to avoid the manual connections of wires on the boards after the filling of the Hydraulic cyrcuit.

For Espresso single boiler:
When the distributor is started up the airbreak is filled with water.
When the floater is in the upper position the machine will start loading water automatically and this will go on until 200cc of water are counted by the fan (then water will be supplied via a mixer throughout the procedure).
The procedure will be carried out with resistance off.
At the end a date will be shown on the display.

For Espresso Double boiler

When the distributor is started up the airbreak is filled with water.
When the floater is in the upper position the machine will start the automatic installation process and following loading of both boilers (then water will be supplied via a mixer and by the 3-way Coffee EV throughout the procedure).
The procedure will be carried out with resistance off.
At the end a date will be shown on the display.

For Instant boiler :
When the distributor is started up the airbreak is filled with water.
When the floater is in the upper position at least for 5 consecutive seconds the machine will open an instant electrovalve and start a water loading cycle in the boiler (then water will be supplied via a mixer throughout the procedure)
The procedure will be carried out with resistance off.
At the end a date will be shown on the display.



Now we must enter the installation date using the push button panel as shown below:

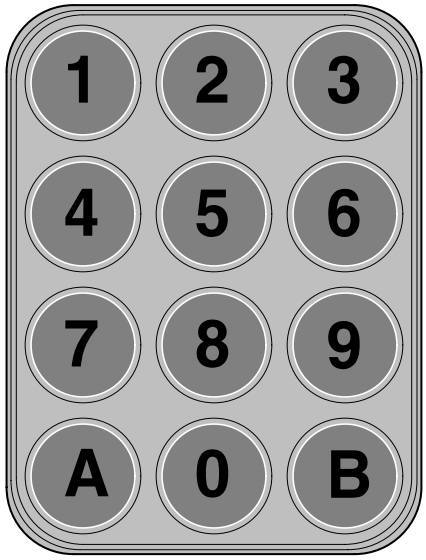
KEY 1 INCREASE VALUE

KEY 3 MOVE CURSOR

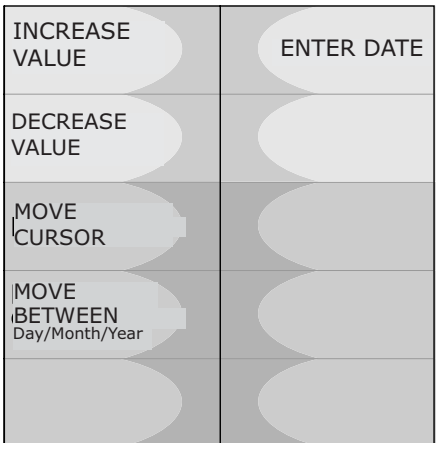
KEY 5 ENTER DATE

KEY 7 DECREASE VALUE

KEY 9 MOVE BETWEEN Day/Month/Year



For Alphanumeric version



For Push Button Panel version

Pushing the ENTER BUTTON , the machine will wait for 10 seconds then will start to warm up the boiler.

The date will be stored in a safe place of the board.

To restore the first installation mode, go to Programming using Password 22933.

5.0 SOFTWARE INSTRUCTIONS

5.1 PASSWORD

The current programming logic requires, when entering by pressing the PROG key, the insertion of a password allowing to access one programming menu.
To facilitate and speed up some operations on the field, the password management is subdivided as follows:

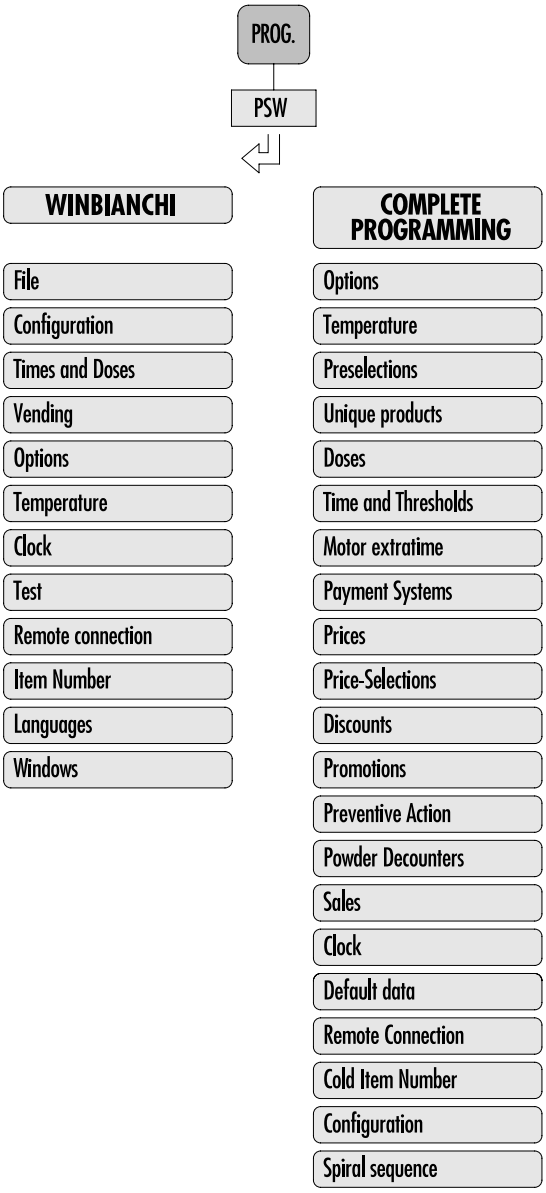
PWD 1 - Reduced programming menu
PWD 2 – Complete programming menu
PWD 3 – Sales Menu;
PWD 4 – Subdivided into 2 PWD set: 88000 to test all BVM600 slaves;
Test (managed by Bianchi Vending Group only) to access the test carried out in the assembly line.

Note: If the password of the reduced menu coincides with the password of the complete menu, the latter will prevail.

5.2 MACHINE and WINBIANCHI MENUS

PWD 1 allows the access the complete menu of the vending machine. The menu access procedure is as follows: press PROG key on the master board, enter the password and press ENTER key. Below is a list of WinBianchi menus and programming menus of the vending machine.

5.2.1 WINBIANCHI MENUS



5.2.1.1 CONFIGURATION

This menu, available with WinBianchi Level 3 only, allows to assemble your vending machine as you like. The management of the parts to be assembled will be of two types: graphic (through the drawings of the mechanical parts) or question/answer (as the current WB).

Below is a description of the Question/Answer structure.

Machine type	Selects the type of machine [BVM970, BVM 950, BVM 921, BVM600, BVM470]
Manag.Cold X	Selects the type of management of the cold compressor [0/Snack/Pan/Can] Menu available only with machine type BVM600/ BVM470].

1: None

Cold management not enabled

2 : Snack configuration

Settings/values:

Tank temperature
Delta temperature
Offset

Ex.: if we set tank temper. =6°, delta temper. = 2° and offset =0 when we read the value 6 on the display, the temperature of the bottom cabinet will be = 6° and the compressor will stop to restart at 8°.

if we set tank temper. = 6°, delta temper. = 2° and offset = -3 when we read the value 6 on the display, the temper. of the bottom cabinet will in fact be 9° (i.e.the display will show a value 3° lower than the temper.of the bottom cabinet). The compressor will stop with temper. of the bottom cabinet at 9° (but the display will continue showing 6°) to restart at 11° (but the display will continue showing 8°) if we set the tank temper. = 6°, delta temp. = 2° and offset =+3 when we read the value 6 on the display, the temper. of the bottom cabinet will in fact be 3° (i.e.the display will show a value 3° higher than the temper.of the bottom cabinet). The compressor will stop with temper. of the bottom cabinet at 3° to restart at 5°.

Defrost after x hours: provides the sequence of the defrosting intervention. i.e. the time interval after which the compressor will stop to let the evaporator defrost.

Defrost after x minutes: is the period of time during which the compressor is at stop.

In this case the impeller inside the tank will continue rotating.

3 : PAN Configuration

Below are two examples of a machine with PAN configuration with the following data:

Tank temperature = 2°

Delta temperature = 2°

Offset temper. = 0

Delta safety = 5 (therefore "safety temper."=5+2= 7°). Safety time =2 (hours)

1) Assume that the loader takes 15' to recharge the machine therefore the cell temperature measured by the probe when the machine is closed again will be 12°.

   Then the tank temperature will be higher than the set "safety temperature" (5+2 = 7°), then the buzzer warns (for 30 sec.) that the loader must enter code 98 within 30 sec. to inhibit the stop of the two bottom cabinets.

   If the loader enters 98 within 30 sec. the "Safety time" function will intervene and being this time set on 2 hours, it will enable the machine to dispense the perishable products for 2 more hours,after which and with the tank temper.fallen below 7°, the normal conditions will be restored. If after these two hours the tank temper. remains higher than 7°, that means that there are problems and the machine will stop the two bottom cabinets.

2) Assume that the mains power is off, a first time (A) for 10 minutes, a second time (B) for 30 minutes:

   (A) If the machine remains at stop for 10 minutes, the tank temperature will remain below the 7° of the "safety temper." and therefore when the power is on again, everything will operate as before.

   (B) If the machine remains at stop for 30 minutes, the tank temper.will exceed 7° and therefore with power on again the buzzer will beep for 30 sec, and if nobody enters code 98, the two bottom cabinets will be inhibited.

In case of PAN config., defrosting is always set every x hours, but its duration cannot be set (for x minutes) as the unskilled customer may set such a long stop duration for the compressor so to increase the tank temper. above the "safety temper." with all subsequent problems (moreover the European regulations require a "guarantee" check on perishables).

In this case the stop duration for the compressor is no longer established by the time but by an increase in temperature fixed in +3° for all machines:

When the tank temper. exceeds the set temperature (2°) of 3°, the compressor will start again. The tank must obviously be insulated to allow a complete defrosting during the stop period of the compressor If it is not properly insulated, the stop time is so short that the evaporator is unable to defrost in max.hot moments.

(Then it is maybe possible to enter a min.fixed time of 10' in addition to the fixed delta of 3°).

CAN Configuration

Not managed.

The X indicates the slave number linked to the MASTER distributor. Displayed and modifiable in WB only. In the Machine programming this parameter can be modified only from Options in the parameter Type BVM600.

Boiler 1 Slave X — Selects the type of the main boiler to be installed [Espresso, Instant Stainl.steel, Instant Polysulfone, none] This menu is available only if a type of machine BVM970, BVM950, BVM920 has been chosen. The wording Slave X shows the slave number linked to the MASTER distributor.Managed by WinBianchi only.

Boiler 2 Slave X — Selects the type of the second boiler to be installed [Instant Stainl.steel, Instant Polysulfone, none] Menu available only with Machine BVM970. The wording Slave X shows the slave number linked to the MASTER distributor.Managed by WinBianchi only.

Grinder Slave X — Selects grinder management [Yes/No] If grinder Management NO the first three product boxes are dedicated exclusively to ground coffee. The wording Slave X shows the slave number linked to the MASTER distributor. Managed by WinBianchi only.

Double grinder Slave X — Selects management of the double grinder [Yes/No] Menu available only with Grinder YES. If one of the two grinders is out of order or without coffee, all selections concerning that grinder shall be made NOT AVAILABLE. The two grinders can operate either alternately (1st selection grinder 1 – 2nd selection grinder 2 – 3rd selection grinder 1 - etc...) or completely separated (as two different drinks). If one of the two grinders is out of order or without coffee, all selections will be automatically carried out with the operating grinder. The wording Slave X shows the slave number linked to the MASTER distributor.Managed by WinBianchi only.

Altern.Grinders — Selects the alternate management of the grinders [Yes/No]. If YES the doses menu does not change, if NO the entire management of the second grinder is added (Coffee 2). With YES if one of the two grinders is out of order or without coffee, all selections will be automatically carried out with the operating grinder. With NO, in the doses menu the wording Coffee 1 and Coffee 2 will be managed so to distinguish the two Grinders. The hardware managing the two grinders will be a board with a double contact relay so that, with the double grinder signal, either the grinder 1 or grinder 2 can be operated. The exchange of this relay must be carried out with power off on the grinders. Automatic grinding will be managed on coffee 1 only.

Cooling Unit — Selects the type of cooling unit to be installed [Yes/No]. With YES it enables the management of 6 timed outputs and the management of the compressor from expansion board (see time diagram in the Doses menu).

Sens. probe min — Probe sensitiveness at minimum Level [20÷200]. Only with Boiler 1 or 2 in Polysulfone. Setting concerning all polysulfone boilers installed in the battery.

Sens.Probe max — Probe sensitiveness- Max level [20÷200] Only with Boiler 1 or 2 in Polysulfone. Setting concerning all polysulfone boilers installed in the battery.

Group 1 Slave X — Selects the type of the main boiler group to be installed [Espresso, Fresh Brew, None] This menu is available only if boiler 1 is either Espresso or Instant Polysulfone] The wording Slave X shows the slave number linked to the MASTER distributor.Managed by WinBianchi only.

Group 2 Slave X	Selects the type of the main boiler group to be installed [Espresso, Fresh Brew, None] This menu is available only if boiler 1 is either Espresso or Instant Polysulfone] The wording Slave X shows the slave number linked to the MASTER distributor.Managed by WinBianchi only.
Code Keyboard	Enables the management of the alphanumeric keyboard for Hot Distributor [On/Off] It enables the selection code in the Times and Doses Menu.

In the programming mode the keys have the following meaning:

1 Increase

2 Show name

3 Move cursor

4 Powder test

5 Go back to previous menu (esc)

6 Only water test

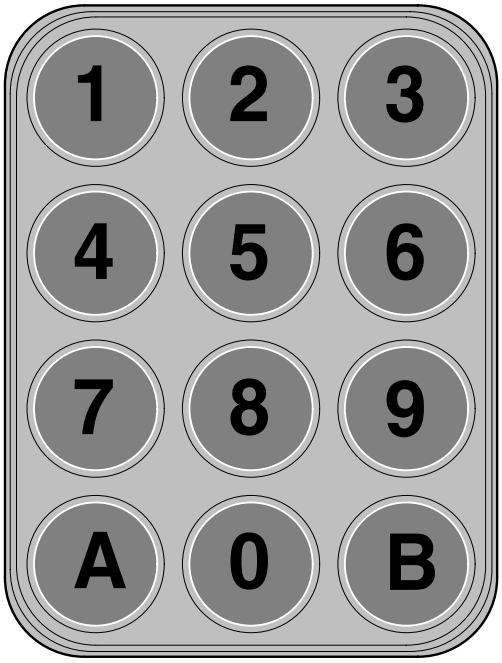
7 Decrease

8 Complete test (Dose menu)

EV or Inst. Test (Drink dose menu)

9 Enter

0 Complete test (Drink dose menu)

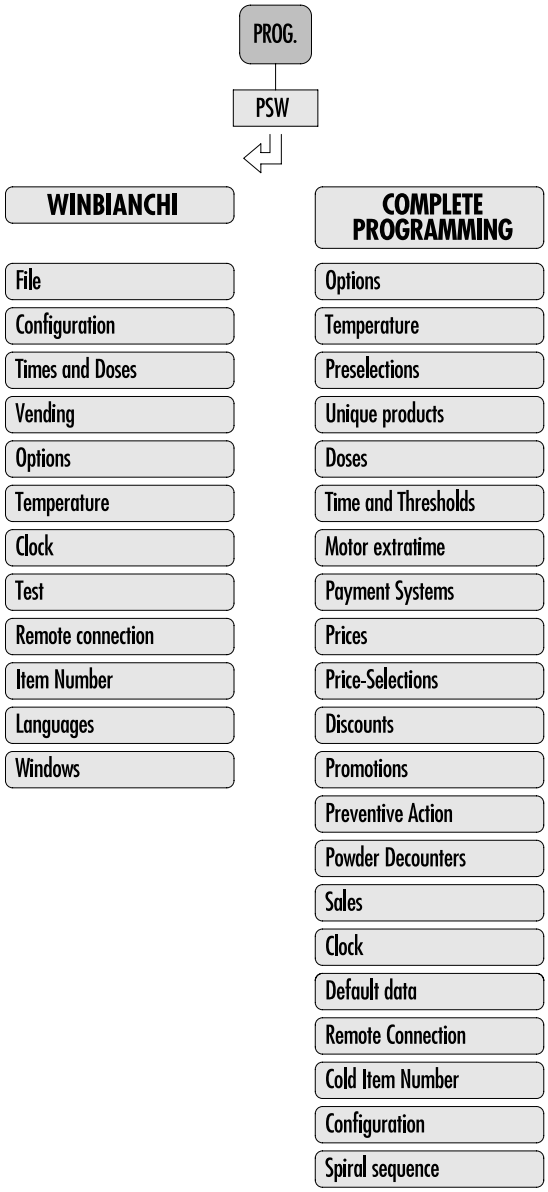


Code keyboard

Direct selection keyboard

INCREASE MENU DIGIT	QUIT MENU
DECREASE MENU DIGIT	
MOVE CURSOR	
ENTER / SCROLL OPTIONS	
IN THE DOSE MENU,SHOW THE BOX NAME, EV OR MIXER	
	IN THE DOSE MENU, PERFORM ONLY POWDER
IN THE DOSE MENU, PERFORM ONLY WATER TEST	IN THE DOSE MENU,PERFORM COMPLETE TEST

5.3 COMPLETE PROGRAMMING MENU



5.3.1 'Options' Menu

Serial Number	Machine Serial Number [0÷999999]
SN Slave 2	Slave 2 machine serial number [0÷999999] Displayed only with slave machine 2
SN Slave 3	Slave 3 machine serial number [0÷999999] Displayed only with slave machine 3
Location no.	Location number [0÷65535]
Customer no,.	Customer number [0÷65535]
Language Language	[Italian, French, English, Spanish, German, Dutch, Portuguese, English, Catalan]
Currency Code	Definition of the International Telephone Country code used for Audit only [000]
Instant grind.	Enables instant grinding [Yes/No]
Make-up	Enables make-up [Yes/No]. If ON, every 6 hours the pump is activated and the water electrovalve opened for 3" to make up the boiler. Moreover, all machines fitted with espresso boiler manage an automatic make-up beyond this option. In case of automatic make-up the first espresso coffee selection is increased as well as all espresso cffee selections, as shown in the table below:

Time from last selection	Q.ty of water to be increased
3 ore	2 cc
6 ore	3 cc
9 ore	5 cc
12 ore	6 cc

Type BVM600	Selects the type of management of cold compressor [Snack/Pan].Menu available only with machine type BVM600/BVM470]
Cleaning	Enables cleaning with clock [On/Off]. Displayed and settable only with machine with espresso/Instant/FB boiler.
Cleaning cycle	Enables cleaning cycle [On/Off]. It enables a mixer cleaning after 30 minutes from activation which is followed by a second cleaning after 12 hours without preparations. Therefore a daily cleaning of the mixer is ensured. Visible and settable only with machine with espresso/Instant/FB boiler.
Code 1	Selects Password 1 [00000]
Code 2	Selects Password 2 [00000]
Code 3	Selects Password 3 [00000]
2 FB coffees	Enables double FB coffee [On/Off]. With Fresh Brew management only.
Fresh Brew Tea	Enables FB tea [On/Off]. With Fresh Brew management only.
Display Temp	Enables temperature display for BVM600 [Yes/No] Alternately it shows the temperature of BVM600 A and BVM600 B. Anyway even if this fucntion id disables, the operator can display the temperatures for some seconds by pressing A999 (Vega A) or B999 (Vega B).

Custom Messages	Management of messages to be customized only in WinBianchi [On/Off]
All drinks?	Manages the automatic grinding also for compound drinks (Yes/NO) Displayed only with Bianchi Development Yes: Grinding control takes place also on drinks with more than one EV (e.g. Cappuccino) No. Automatic grinding control takes place on espresso coffee only (strong and weak).
Always spoon	Enables spoon management- Yes/No. If always spoon yes, the spoon is always provided, if always spoon no, the item spoon will appear in the doses menu. It will therefore be possible for any drink to manage the spoon supply.
Spoon after Yes/No	If No the spoon is supplied upon selection beginning, if Yes the soppon is supplied after sugar in sweet drinks and after water dose in bitter drinks.
Enabl. Sens. Vega x	Enables product fall sensor management on Vega distributors. If Yes the product fall sensor is enabled. A cold selection is succesful if the sensor detects the product passage. If not, the distributor will communicate the failed sale to the coin box. If No, nothing checks the dispensing.
Sugar Espresso	Enables the sugar management as for espresso machines [Yes/No]
Spiral Sequence	Enables the Spiral Sequence option [Yes/No] (Vega 6xx). It allows to select different spirals and manage them with one code. For example, this option is used when different spirals have the same type of product. The spirals of this group, at every selection, will activate in sequence and supply one product each. The Extra times for every single spiral as well as the cabinet attempts will however be respected. Below is the programming procedure:

Item No.1

With at least one Vega Slave linked and operating, the Spiral Sequence menu will be displayed:

Spiral sequence menu selection

In the menu by pressing ENTER the following will be displayed:

Spiral Sequence Group 1A

where the number shows the group that can range from 1 to 12 and the letter shows if it is referred to Vega A or Vega B, therefore the sequence will be: 1A ... 12A, 1B ... 12B.

Item No. 2:

After selecting the group to be modified, using keys INC to increase or DEC to decrease the digits and confirming with ENTER, enter the programming of the spirals related to the selected group:

Group x A NN W YY

where in the first line the number x [1 ÷ 12] will appear referring to the selected group and the indication of Vega A or B, the 2nd line will show NN which is the number of spirals related to group x and is a value that can only be displayed and cannot be programmed;letter W specified whether the group is referred to Vega 1 or 2 and digits YY refer to the code of the spiral belonging to the group.

After entering the menu, the first spiral belonging to the group will be displayed, or in case of an empty group NN will be displayed equal to 0 and code A 00 or B 00 according to the Vega machine.

Now there are two options: eliminating one or more spirals or adding one or more spirals in the selected group, unless this is a previously empty group; if so, it is only possible to add one or more spirals. To eliminate a spiral: using ENTER all spirals belonging to the selected group can be scrolled.

After selecting the spiral to be eliminated, press key 5 to eliminate it (cursor), the number of available spirals (NN) will decrease by one unit and code (YY) will show one available spiral.

It is also possible to directly select the spiral, using INC and DEC keys and press key 5. Obviously if the selected spiral does not belong to that group, nothing will happen. The eliminated spirals belong to no group.

To add a spiral: within the group using INC and DEC keys select the spiral to be added. Press ENTER to couple the spiral to the group. the number of available spirals (NN) will increase. If the selected spiral belonged to another group. this operation implies the elimination of the spiral from the previous group to be added to the new group.

Sugar Bar	Yes/No If YES, the sugar bar will be displayed with all squares empty (and not with four full squares and four empty squares) Given that the sugar management of this option follows the formula: Sugar= A + B/8 Where: A= Sugar dose in the doses menu for every drink B= Sugar dose in the Preselections menu – Increase product Therefore to have a basic sugarless drink it is necessary to set A=0 and all squares empty – therefore no pressing of Increase key To have a sweetened drink press INC preselection to increase. For example, if in the preselections menu sugar is set at 8 seconds, for every sugar square selected a second of product will be provided.
Enable Door Sw	The door contact management is enabled by programming the "Enabl.Door SW" to Yes. In this condition, an "Open Door" message will be sent when the door is opened (with distributor on) and the opening time count will start and stored every 10 seconds. When the door is closed a new SMS message will be sent "Close Door: time 7m 40s" to show that the

opening has lasted 7 minutes and 40 seconds.

If the door is re-opened, the opening message will be no longer sent but only the closing message will be sent with the total opening time.

The opening time will be reset at the first selection with closed door or anyway after 5 minutse from the switching on with closed door. In case of a new opening the procedure will re-start by sending the "Open Door" message.

If the opening message is not sent due to lack of time (the distributor has been switched off before the sending of the message) it will however be sent upon the following switching on.

If EVA-DTS level 1 and 2:

- For level 1 and 2 Modules will download the EA2 fields only if active, otherwise it will send an empty package
- For level 2 also fields PA3/PA4/PA6/ SA1 are eliminated that are meaningless if fields PA1 and PA2 are eliminated.

Example:

If level 1 or level 2 modules downloads: EA2 only if active, otherwise it will send an empty package PA1/PA2/PA3/PA4/PA6/SA1 if available drink/spirals are sent, otherwise string PA1*13 (for hot drink) or PA1*V34 (for Vega) is sent.

The above to maintain a certain uniformity with the case of Vega not present when PA1*V13 is sent (example) with no additional data.

The following parameters are displayed only if the master board is connected to the relevant slave power boards.

Cup sensor	enables cup sensor [On/Off]
BVM600 A sensor	enables VEGA Slave 1 product fall sensor [On/Off]
BVM600 B sensor	enables VEGA Slave 2 product fall sensor [On/Off]
BVM600 C sensor	enables VEGA Slave 3 product fall sensor [On/Off]

5.3.2 'Temperature' Menu

Boiler Temp. 1 Slave X — Boiler 1 temperature. Espresso boiler has a range [70÷110°C] Instant Stainl.steel boiler has a range [70÷90 °C] The wording Slave X indicates the slave number linked to the MASTER distributor. Managed by WinBianchi only.

Boiler Temp. 2 Slave X — Boiler 2 temperature. Espresso boiler has a range [70÷110 °C] Instant Stainl.steel boiler has a range [70÷90 °C]

The wording Slave X indicates the slave number linked to the MASTER distributor. Managed by WinBianchi only.

Temp. Cool Unit Slave X — Temperature of the Cooling unit probe [0.5÷15.0 °C] It sets the working temperature of the distributor. The wording Slave X indicates the slave number linked to the MASTER distributor. Managed by WinBianchi only. If the pressure switch detects lack of water at the cooling unit entrance, all cold drinks will be disabled.

Delta Temp. — Hysteresis Temperature of the Cooling unit probe [0.5÷5.0 °C] It determines the interval according to the programmed temperature to enable and disable the compressor.

Offset temp. — Offset Temperature of the Cooling unit probe [-5÷5 °C] Programmable by WB.only.

The pressure switch will detect the presence of mains water. In case of lack of water, the distributor must disable all cold drinks.

TEMPERATURE CONTROL MANAGEMENT FOR ESPRESSO BOILER: The temperature control must be managed so that the resistance is switched on independently from the boiler temperature as soon as selection button is pressed for a T proportional to the T passed from the last selection,as shown in the table below:

T PASSED [min]	T WITH RESISTANCE ON [sec]
1	3
2	6
3	7
4	9
5	10
6	11
7	12
8	13
9	14
10	15
OVER 10	15

Special cases:

1- At the end of the pump work cycle the resistance must be switched off although the T shown in the table has not passed.

2- Distributor with single boiler: The resistance must be activated for 8" whenever, further to an instant drink, a coffee-based drink is selected. The above regardless of the T passed from the last selection. After 4 minutes the algorithm shown in the table is restored.

Temp.1 Tank Slave X Temperature of probe 1 of Tank A [5÷15 °C for SNACK model and 1÷15 °C for PAN model , >15 °C = Off] It sets the working temperature of the distributor.The wording Slave X indicates the slave number linked to the MASTER distributor.

Delta Temp.1 Slave X Temperature hysteresis of probe 1 of cool A [1.0÷5.0 °C] It determines the interval according to the programmed temperature to enable and disable the compressor.The wording Slave X indicates the slave number linked to the MASTER distributor. Stored on BVM600 board.

Offset temp.1 Slave X Offset temperature of probe 1 Cool A [-5÷5 °C] The wording Slave X indicates the slave number linked to the MASTER distributor. Managed by WinBianchi Level Development only. Stored on BVM600 board. Modifiable by Bianchi only.

Temp.2 Tank Slave X Temperature of probe 2 of Tank A [5÷15 °C for SNACK model and 1÷15 °C for PAN model , >15 °C = Off] It sets the working temperature of probe 2 of the distributor. If it has to cool it switches on the fan output in the new board with 2 probes. The wording Slave X indicates the slave number linked to the MASTER distributor. Displayed only if Cool Distributor Probe is 2.

Delta Temp.2 Slave X Temperature hysteresis of probe 2,Cool A [1.0÷5.0 °C] It determines the interval according to the programmed temperature to enable and disable the compressor.The wording Slave X indicates the slave number linked to the MASTER distributor. Displayed only if Cool Distributor Probe is 2.Stored on BVM600 board.

Offset temp.2 Slave X Temperature offset of Probe 2, Cool A [-5÷5 °C] The wording Slave X indicates the slave number linked to the MASTER distributor. Managed by WinBianchi Level Development only. Displayed only if Cool Distributor Probe is 2.Stored on BVM600 board. Modifiable by Bianchi only.

Delta Safety Slave X Delta cool safety A [5÷50 °C] Enabled only in PAN configuration, it determines the safety temperature.The wording Slave X indicates the slave number linked to the MASTER distributor. Managed by WinBianchi only.

T Safety Slave X T Cool safety A [1÷9 ore] Interval expressed in hours within which the selections of the 2 bottom cabinest are still available despite the cell temperature is higher than 7°C (safety temperature), for example after the installation or loading of the distributor. The wording Slave X indicates the slave number linked to the MASTER distributor. Managed by WinBianchi only.

Defrost after Slave X Defrost frequency Cool A [1÷12 hours] Interval expressed in hours in order to defrost the radiator. The wording Slave X indicates the slave number linked to the MASTER distributor. Managed by WinBianchi only.

Defrost for Slave X Defrost duration Cool A [1÷30 minutes] Interval expressed in minutes determining the duration of the deactivation of the compressor for defrosting.The wording Slave X indicates the slave number linked to the MASTER distributor. Managed by WinBianchi only.

PAN cycle:
Upon switching on the distributor, the cycle provides that if the probe detects an inner temperature > than the safety temperature, the selections will be stopped.
Within a limit time of 30 sec., signalled by the buzzer activation, the alarm can be inhibited by setting the code 98 on the alphanumeric keyboard. The temperature alarm will remain inhibited for the programmed safety time, then the safety temperature control will be enabled again. If upon switching on the detected temperature is < than the safety temperature (non alarm condition), the control of this temperature is immediately enabled.
This alarm can be set to zero in both maintenance mode and by switching off and switching on again the machine, by entering the code 98 within 30 sec. of buzzer operation.
If the inner temperature reaches the value set as safety value, the selections from 51 to 68 are stopped and automatically made "NOT AVAILABLE".

5.3.3 'Preselections' Menu

All push buttons can be used as preselection:

Push button 01…30

Without product

Product [0…9] 0= disabled

This type of preselection allows to select the relevant product. When this preselection is pressed the first 3 characters on the display are reserved to the wording "NO ". The remaining 10 characters will display the product to be entered using the "graphic configuration" window of the windows program of the current software.

For example, if the product is Milk, the message will be "NO milk". The function of this preselection is to set to zero the programmed dose in the drink of the relevant instant product. There can be several selections of this type coupled to different products.

Double product [0…9] 0= disabled Applicable only for drinks with espresso or instant coffee. It replaces the coffee with the selected instant drink.

INC+ / DEC - Sugar

T sugar [0…25.5 s]

H_2O [0…25.5 s] o [0…999 cc] For instant drinks only

DEC- key? 01…30 Select DEC- key and STOP, if required.

Fixed in line 2? Management of sugar bar always on the second line instead of wording Ready [On/Off] If ON the alarm signals are not displayed in the second line. If this option is ON, it prevails on any type of alarm signal usually displayed in line 2 (e.g. without coffee).

Increase product: with this type of preselection it is possible to program the instant product, a time for the instant prodcut, a dose of water and the enabling "fixed in line two".

If the fixed in line 2 option is enabled, it means that the bar of the 8 squares is always displayed in line 2 to the user in ready status. The calculation of the final dose, should a user press the preselection, is given by the fraction of the black squares over the total (8) by the sum of the doses programmed on the drink and the dose programmed on the preselection. The calculation of the water dose is not implemented as there is some doubts about how to manage it.

Decrease product: linked to the Increase product preselection and is used to decrease the black squares. Therefore the parameters related to this preselection are the same as the "Increase product" preselection. N.B. There can be only one "Increase/Decrease product" preselection.

Generic preselection

Product	[0…9] 0= disabled
T product	[0…25.5 s]
H_2O	[0…25.5 s] o [0…999 cc]
T double product	[0…25.5 s]
H_2O double	[0…25.5 s] or [0…999 cc] If 0 ++ disabled.

Stop management? STOP preselection management [On/Off] When the drink is selected the display will show the squares that scroll slowly. After selecting the desired quantity, the distributor will start to prepare the drink.

Extra Management? Extra product management [On/Off] If on it performs + and ++, if off – and --. Obviously if Stop Management is Off.

Generic preselection: The parameters that can be programmed are: product, product time, product water, time + product, water + product, enable stop and enable extra.

Enable Stop will prevail on Enable Extra. When Stop is set the programmed time is not considered but when a button of a drink is pressed the scrolling squares will be displayed waiting for the stop. Upon Stop the instant product dose is calculated and the preparation is started.

There can be several Stop preselections coupled to different products ; in this case they will be displayed one after the other and in any case only if the drink includes the prelesected product. Extra can be enabled only if Stop is Off. It sets if the preselection is managed as - and -- (Extra=Off) or + and ++ (Extra=On). - and -- deducts the programmed doses from the dose of the drink to be prepared while + and ++ adds them. By pressing once the display will show - or + and show the deduction or the addition of the product time doses, product water doses; by pressing again (before the preselection timeout elapses) the display will show – or ++ and also the time + product and water + product doses are deducted or added. There can be several preselections coupled to different products.

User jug Manages the button as JUG BUTTON 1..12 with increases of 1. [On/Off] If ON the remaining Doses menu is not displayed. The jug will be managed only on the selections enabled to this process.

Extra Coffee

Time [0-5sec]

The user presses the Extra coffee (or strong coffee) preselection and then short coffee (for example). The Grinder will grind the coffee until the volumetric dispenser is filled, the dispenser will release the ground coffee into the group. The grinder will re-start for the seconds set in the preselection, the dispenser will be opened; the group will start and the preparation will begin.

Cup
No Cup
No Preselection

When the box is selected it is possible to see the name of the selected product. The buttons programmed as preselection must not be displayed in the Doses menu. If a user presses a preselection key, the display will show this choice as long as 7 sec.

Please remember that the preselections are added to/deducted from the selection parameters. The max.values of the sums will be:

Product sum: Max 25.5 s
Water sum: Max 99.9 s or 999 cc.

INC+ preselection will be managed as follows:

Ex. 1
Button 1

INC+ / DEC - sugar	
T sugar	[10 s]
H_2O	[10 s]
DEC- key?	02
Stop Management?	Off

In this example Key 1 is a + Sugar Preselection key. It allows operations only before selections. If it is pressed before selection, we will have:

Line 1: Select sugar quantity
Line 2: ■ ■ ■ ■ □ □ □ □

If + sugar key is pressed 3 times we will have

Line 1: Select sugar quantity
Line 2: ■ ■ ■ ■ ■ ■ ■ □

Now the user will select the drink under reference.

Ex. 2

Button 1		
INC+ / DEC - Sugar		
T sugar		[10 s]
H_2O	[10 s]	
Tasto DEC- key?		02
Stop management?	On	

In this example Key 1 is a + sugar preselection key. It allows operations before and during selection.

If the key is pressed once before selection we will have:
Line 1: Select sugar quantity
Line 2: ■ ■ ■ ■ □ □ □ □

If + sugar key is pressed twice we will have
Line 1: Select sugar quantity
Line 2: ■ ■ ■ ■ ■ ■ □ □

If Decrease sugar key is pressed 4 times, the drink will be bitter.

Line 1: Select sugar quantity
Line 2: □ □ □ □ □ □ □ □

Ex.

Line 1: Select sugar quantity
Line 2: ■ □ □ □ □ □ □ □

Line 1: Select sugar quantity
Line 2: ■ ■ □ □ □ □ □ □

Line 1: Select sugar quantity
Line 2: ■ ■ ■ □ □ □ □ □

At the fourth square press + sugar key serving as STOP sugar key.

Line 1: Select sugar quantity
Line 2: ■ ■ ■ ■ □ □ □ □

The selected drink will be prepared with the quantity of sugar requested by the user.

Every square corresponds to x sec of sugar given by the following equation:

■ = (A+B)/8

A = Qty of sugar in seconds in standard drink
B = Qty of sugar in seconds in + sugar preselection
8 = Max number of squares

Attention: The equation with Bar from zero to on is as follows:

■ = A+ B/8

A = Qty of sugar in seconds in standard drink
B = Qty of sugar in seconds in + sugar preselection
8 = Max number of squares

If you want the basic drink sugarless, set the value of A to zero. The max quantity of sugar in the selection is given by the value of B.

5.3.4 'Unique Products' Menu

Product X	It selects the first unique product for all selections [0…No. Canisters] 0=no unique product (if 0 it will not even display the unique second, third and fourth product) – using button X the box name will be displayed.
Product X	It selects the second unique product for all selections [0… No. Canisters] 0= no unique product (if 0 it will not even display the unique third and fourth product) - using button X the box name will be displayed
Product X	It selects the third unique product for all selections [0… No. Canisters] 0=no second product (if 0 it will not even display the unique fourth product) -using button X the box name will be displayed
T H_2O Unique Prod1	T EV relevant to Product 1 [0÷99.9 s]
R H_2O Unique Prod1	EV Delay relevant to Product 1 [0÷25.5 s]
T Unique Prod1	T Product 1 [0÷25.5 s]
R Unique Prod1	Product 1 motoreductor delay [0÷25.5 s]
Ton Unique Prod1	T on unique product 1 motoreductor [0…25.5 s]
Toff Unique Prod1	T off unique product 1 motoreductor [0…25.5 s]
T H_2O Unique Prod2	T EV relevant to Product 2 [0÷99.9 s]
R H_2O Unique Prod2	EV Delay relevant to Product 2 [0÷25.5 s]
T Unique Prod2	T Product 2 [0÷25.5 s]
R Unique Prod2	Product 2 motoreductor delay [0÷25.5 s]
Ton Unique Prod2	T on unique product 2 motoreductor [0…25.5 s]
Toff Unique Prod2	T off unique product 2 motoreductor [0…25.5 s]
T H_2O Unique Prod3	T EV relevant to Product 3 [0÷99.9 s]
R H_2O Unique Prod3	EV Delay relevant to Product 3 [0÷25.5 s]
T Unique Prod3	T Product 3 [0÷25.5 s]
R Unique Prod3	Product 3 motoreductor delay [0÷25.5 s]
Ton Unique Prod 3	T on unique product 3 motoreductor [0…25.5 s]
Toff Unique Prod3	T off unique product 3 motoreductor [0…25.5 s]

In each phase of the Unique Products Menu using button X the box name will be displayed.

The unique product is provided only if in the time and doses menu the same box with a product time other than 0 is recalled.

5.3.5 'Doses' Menu

With WinBianchi it will be possible to work Off line and establish the machine settings. At the end of the programming the data can be transferred to a setting key and saved in an excel file at the same time. In this way the user will be able to print the data and file them. There must be a data selection menu to be copied on the key.

Button XX	Selection of the button to be configured: [1…30] for linear keyboard[1…32] for multibrand keyboard, [1…12] for antivandalism keyboard. [Ivs] for IVS keyboard refer to paragraph 3.2.1. IVS keyboard [ ] for Old Style keyboard.
Drink	Enable drink [On/Off]
Drink code XXX	The user can select the selection code for the hot distributor [000…A99… B99] Menu enabled exclusively if in Code On keyboard configuration. For max. 30 drinks.
Code BVM600	Button association for BVM600 combination [000….A00….B00] Menu enabled only if BVM600 direct ON and from the Spoon menu the Doses submenus are no longer displayed. If 000 it will disable the direction selection of BVM600.
Hot proposal?	Adds the management of a second hot selection chosen by the user. [On/Off] Menu enabled only if BVM600 direct ON.
ITEM Number xx	ITEM NUMBER code [0÷254] The code programming must be made in the relevant menus. In the Doses Menu for the selections referred to hot drinks and Item Number for spirals.
Spoon?	Enables spoon distribution [Yes/No] (Only if Spoon distributor Yes and Always Spoon No in Configuration Menu).
Cup?	Enables cup distribution [Yes/No] (Only if Cup Management Yes and Always Cup No in Configuration Menu)
No. Jug X	Number of distributions for this selection [0÷99] (If Unique Jug Off in Configuration Menu) If 0 jug disabled.
Coffee 2?	Enabled management of coffee 2 in case of Double Grinder distributor [On/Off]. Displayed only if Double Grinder Yes and Alternate Grinders No.
First E.V. X	Number 1^EV [0-Wafer 1 Wafer 2, Coffee 1-Coffee 2…8- Cold] 0=E.V. not coupled to this button
T first E.V.	T opening first E.V. [0…99.9 s]
R first E.V.	Opening delay first E.V. [0…25.5 s]
T Mixer 1E.V.	T Mixer coupled to first E.V. [0…25.5 s]
R Mixer 1^E.V.	Mixer delay coupled to first E.V. [0…25.5 s]
T product X	T first box coupled to 1 E.V. [0…99.9 s]
R product X	First box delay coupled to 1 E.V. [0…25.5 s]
Ton product X	T on motoreducer first product [0…25.5 s]
Toff product X	T off motoreducer first product [0…25.5 s]
T product X	T second box coupled to 1 E.V. [0…99.9 s]
R product X	Second box delay coupled to 1 E.V. [0…25.5 s]
Ton product X	T on motoreducer second product [0…25.5 s]

Toff product X	T off motoreducer second product [0…25.5 s]
T product X	T third box coupled to 1 E.V. [0…99.9 s]
R product X	Third box delay coupled to 1 E.V. [0…25.5 s]
Ton product X	T on motoreducer third product [0…25.5 s]
Toff product X	T off motoreducer third product [0…25.5 s]

Second E.V. X	Number 1^EV [0…8-Cold] 0=E.V. not coupled to this button
T 2^ E.V.	T opening second E.V. [0…99.9 s]
R 2^ E.V.	Opening delay second E.V. [0…25.5 s]
T Mixer 2E.V.	T Mixer coupled to second E.V. [0…25.5 s]
R Mixer 2^E.V.	Mixer delay coupled to second E.V. [0…25.5 s]
T product X	T first box coupled to 2 E.V. [0…25.5 s]
R product X	First box delay coupled to 2 E.V.[0…25.5 s]
Ton product X	T on motoreducer first product [0…25.5 s]
Toff product X	T off motoreducer first product [0…25.5 s]
T product X	T second box coupled to 2° E.V. [0…25.5 s]
R product X	2nd box delay coupled to 2^ E.V. [0…25.5 s]
Ton product X	T on motoreducer second product [0…25.5 s]
Toff product X	T off motoreducer second product [0…25.5 s]
T product X	T 3rd box coupled to 2 E.V. [0…25.5 s]
R product X	3rd box delay coupled to 2 E.V. [0…25.5 s]
Ton product X	T on motoreducer third product [0…25.5 s]
Toff product X	T off motoreducer third product [0…25.5 s]

Third E.V. X	Number 1^EV [0…8-Cold] 0=E.V. not coupled to this button
T 3^ E.V.	T opening third E.V. [0…99.9 s]
R 3^ E.V.	Opening delay 3rd E.V. [0…25.5 s]
T Mixer 3E.V.	T Mixer coupled to 3rd E.V. [0…25.5 s]
R Mixer 3^E.V.	Mixer delay coupled to 3rd E.V. [0…25.5 s]
T product X	T first box coupled to 3rd E.V. [0…25.5 s]
R product X	First box delay coupled to 3rd E.V. [0…25.5 s]
Ton product X	T on motoreducer first product [0…25.5 s]
Toff product X	T off motoreducer first product [0…25.5 s]
T product X	T 2nd box coupled to E.V. [0…25.5 s]
R product X	Delay 2nd box coupled to 3rd E.V. [0…25.5 s]
Ton product X	T on motoreducer second product [0…25.5 s]
Toff product X	T off motoreducer second product [0…25.5 s]
T product X	T 3rd box coupled to 3rd E.V. [0…25.5s]
R product X	3rd box delay coupled to 3rd E.V. [0…25.5]
Ton product X	T on motoreducer third product [0…25.5s]
Toff product X	T off motoreducer third product [0…25.5s]

T Sugar Espresso X	T sugar espresso [0…25.5 s]
T Sugar MB	T sugar [0…25.5 s] only with MultiBrand Keyboard
H_2O MB	Water EV sugar [0…25.5 s] only with Multi Brand Keyboard and Instant Distributor.
Double Product 1	
E.V. X	Number 1^EV [0…8] 0=E.V. not coupled to this button
T E.V. d.p.	T opening- E.V. [0…99.9 s]
R E.V. d.p.	Opening delay -E.V. [0…25.5 s]
T Mixer 1E.V.	T Mixer coupled to E.V. [0…25.5 s]
R Mixer 1^E.V.	Mixer Delay coupled to E.V. [0…25.5 s]
T product X	T first box coupled to E.V. [0…99.9s]
R product X	First box delay coupled to E.V. [0…25.5 s]
Ton Product X	T on motoreducer double product [0…25.5s]
Toff Product X	T off motoreducer double product [0…25.5s]
Double Product 2	
E.V. X	Number 1^EV [0…8] 0=E.V. not coupled to this button
T E.V. d.p.	T opening E.V.[0…99.9 s]
R E.V. d.p.	Opening delay E.V. [0…25.5 s]
T Mixer 1E.V.	T Mixer coupled to E.V. [0…25.5 s]
R Mixer 1^E.V.	Mixer delay coupled to E.V. [0…25.5 s]
T product X	T firt box coupled to E.V. [0…99.9s]
R product X	First box delay coupled to E.V. [0…25.5s]
Ton product X	T on motoreducer double product [0…25.5s]
Toff product X	T off motoreducer double product [0…25.5s]

If First EV is cold, the following menu will appear

First E.V. Cold	
T OUT 1 Cold	T opening OUT 1 Cold [0…99.9 s]
R OUT 1 Cold	Delay opening OUT 1 Cold [0…25.5 s]
T OUT 2 Cold	T opening OUT 2 Cold [0…99.9 s]
R OUT 2 Cold	Delay opening OUT 2 Cold [0…25.5 s]
T OUT 3 Cold	T opening OUT 3 Cold [0…99.9 s]
R OUT 3 Cold	Delay opening OUT 3 Cold [0…25.5 s]
T OUT 4 Cold	T opening OUT 4 Cold [0…99.9 s]
R OUT 4 Cold	Delay opening OUT 4 Cold [0…25.5 s]
T OUT 5 Cold	T opening OUT 5 Cold [0…99.9 s]
R OUT 5 Cold	Delay opening OUT 5 Cold [0…25.5 s]
T OUT 6 Cold	T opening OUT 6 Cold [0…99.9 s]
R OUT 6 Cold	Delay opening OUT 6 Cold [0…25.5 s]
T Mixer 1E.V.	T Mixer coupled to first E.V. [0…25.5s]
R Mixer 1^E.V.	Delay Mixer coupled to first E.V. [0…25.5 s]
T product X	T first box coupled to 1 E.V. [0…99.9s]
R product X	First box delay coupled to 1 E.V. [0…25.5 s]
Ton product X	T on motoreducer first product [0…25.5s]
Toff product X	T off motoreducer first product [0…25.5 s]

T product X	T second box coupled to 1 E.V. [0…99.9 s]
R product X	Second box delay coupled to 1 E.V. [0…25.5 s]
Ton product X	T on motoreducer second product [0…25.5 s]
Toff product X	T off motoreducer second product [0…25.5s]
T product X	T third box coupled to 1 E.V. [0…99.9s]
R product X	Third box delay coupled to 1 E.V. [0…25.5 s]
Ton product X	T on motoreducer third product [0…25.5s]
Toff product X	T off motoreducer third product [0…25.5s]

Second E.V. Cold

T OUT 1 Cold	T opening OUT 1 Cold [0…99.9 s]
R OUT 1 Cold	Delay opening OUT 1 Cold [0…25.5 s]
T OUT 2 Cold	T opening OUT 2 Cold [0…99.9 s]
R OUT 2 Cold	Delay opening OUT 2 Cold [0…25.5 s]
T OUT 3 Cold	T opening OUT 3 Cold [0…99.9 s]
R OUT 3 Cold	Delay opening OUT 3 Cold [0…25.5 s]
T OUT 4 Cold	T opening OUT 4 Cold [0…99.9 s]
R OUT 4 Cold	Delay opening OUT 4 Cold [0…25.5 s]
T OUT 5 Cold	T opening OUT 5 Cold [0…99.9 s]
R OUT 5 Cold	Delay opening OUT 5 Cold [0…25.5 s]
T OUT 6 Cold	T opening OUT 6 Cold [0…99.9 s]
R OUT 6 Cold	Delay opening OUT 6 Cold [0…25.5 s]
T Mixer 2E.V.	T Mixer coupled to second E.V.
R Mixer 2^E.V.	Mixer delay coupled to second E.V. [0…25.5 s]

T product X	T 1st box couled to 2 E.V. [0…25.5 s]
R product X	1st box delay coupled to 2 E.V.[0…25.5 s]
Ton product X	T on motoreducer first product [0…25.5 s]
Toff product X	T off motoreducer first product [0…25.5 s]
T product X	T 2nd box coupled to 2° E.V. [0…25.5 s]
R product X	2nd box delay coupled to 2^ E.V. [0…25.5 s]
Ton product X	T on motoreducer second product [0…25.5 s]
Toff product X	T off motoreducer second product [0…25.5 s]

T product X	T 3rd box coupled to 2 E.V. [0…25.5 s]
R product X	3rd box delay coupled to 3 E.V. [0…25.5 s]
Ton product X	T on motoreducer third product [0…25.5 s]
off product X	T off motoreducer third product [0…25.5 s]

Third E.V. Cold

T OUT 1 Cold	T opening OUT 1 Cold [0…99.9 s]
R OUT 1 Cold	Delay opening OUT 1 Cold [0…25.5 s]
T OUT 2 Cold	T opening OUT 2 Cold [0…99.9 s]
R OUT 2 Cold	Delay opening OUT 2 Cold [0…25.5 s]
T OUT 3 Cold	T opening OUT 3 Cold [0…99.9 s]
R OUT 3 Cold	Delay opening OUT 3 Cold [0…25.5 s]
T OUT 4 Cold	T opening OUT 4 Cold [0…99.9 s]
R OUT 4 Cold	Delay opening OUT 4 Cold [0…25.5 s]
T OUT 5 Cold	T opening OUT 5 Cold [0…99.9 s]
R OUT 5 Cold	Delay opening OUT 5 Cold [0…25.5 s]
OUT 6 Cold	T opening OUT 6 Cold [0…99.9 s]
R OUT 6 Cold	Delay opening OUT 6 Cold [0…25.5 s]
T Mixer 3E.V.	T Mixer coupled to 3 E.V. [0…25.5 s]
R Mixer 3^E.V.	Mixer Delay coupled to 3 E.V. [0…25.5 s]

T product X	T 1st box coupled to 3 E.V. [0…25.5 s]
R product X	1st box delay coupled to 3 E.V. [0…25.5 s]
Ton product X	T on motoreducer first product [0…25.5 s]
Toff product X	T off motoreducer first product [0…25.5 s]

T product X	T 2nd box coupled to 3 E.V. [0…25.5 s]
R product X	2nd box delay coupled to 3 E.V. [0…25.5 s]
Ton product X	T on motoreducer second product [0…25.5 s]
Toff product X	T off motoreducer second product [0…25.5 s]

T product X	T 3rd box coupled to 3 E.V. [0…25.5 s]
R product X	3rd box delay coupled to 3 E.V. [0…25.5]
Ton product X	T on motoreducer third product [0…25.5 s]
Toff product X	T off motoreducer third product [0…25.5 s]

5.3.6 'Times and Thresholds' Menu

Pump Timeout — Pump timeout [0÷90 s]

Load Timeout — Water load timeout [5÷240 s] Load timeout linked to the Water Entry EV in DC in case of A/R distributor or to immersion pump in case of S/A distributor. Whenever errors are reset, also this timeout will be reset.

T-out motors slave X — BVM600 spiral motor timeout [0÷25.0 s]. The wording Slave X shows the number of slave linked to MASTER distributor. It is managed only by WinBianchi.

In the management of the spiral distribution there is an additional internal timeout for complete distribution. This timeout is equal to the max motor timeout, i.e. 25.5 s.

Grinder timeout — Grinder timeout [0÷25.5 s]

Grinder threshold — Threshold to read grinder current [5.0÷18.0]

T. coffee preparation — Coffee preparation time [2.9÷23.0 s]. Linked to automatic grinding.

T. cleaning — Cleaning water time [0÷25.5 s]

S/T Pump Time — Advanced pump start time for train tank [0.0 – 5.0 s]

Cold cleaning — Cold cleaning management [Yes/No] For models with cool unit only. Before making a cold drink the hydrauic circuit is cooled with a cold water cleaning.

Timeout Lift x — Timeout Lift [0÷25.5s]. Time within which the lift must complete a selection.

Attempt Cabinet x [0-3] — If the cabinet times are equal to 0 this parameter will appear that allows to choose the number of failures after which the spiral goes to alarm mode.

Default 1.

Extra time sector X — Additional movement in case of failed passage of the product further to a selection [0.0 … 1.0s]. X=11 to 68 and corresponds to every spiral installed in the distributor (priority over cabinet attempts). If the parameter is set to 0, this function will not be available and the management logic will change giving the possibility of managing the cabinet attempts.

If the distributor consists of 5 cabinets, it will obscure the parameter for cabinets 6-7-8. Every 0,1 s in empty conditions will correspond to approx. 12 degrees of movement of a spiral. Default value 0,3 s.

Time prel. Ev X — Programming goes from a minimum of 0.0 s to a maximum of 10.0 s and it is possible only for the actually installed electrovalves except for espresso coffee electrovalve.It consists in enabling, for the set time, the electrovalves involved in the distribution (except for the espresso coffee electrovalve) if the time passed from the last distribution of the relevant electrovavle is longer than 60s.

T Power Off — [0...995] (resolution=5) The parameter is enabled only if the Clock Chip is installed and the type of machine is PAN. The parameter determines the mains lack parameter at the end of which the selections of the two last cabinets of the machine will be blocked. The microprocessor will read and store the date and time of mains lack. When the distributor is switched on again (when the power is restored) the microprocessor will evaluate whether the switching off time is longer than the programmed T power off.

If so, the Fresh selections will be disabled (two last cabinets).

Below are the possible conditions:

Condition	Operation	Type of alarm
Time of mains lack rete < T Power Off	Regular	None
Time of mains lack = T Power Off	Regular	None
Time of mains lack > T Power Off	Inhibits last two cabinets	ECA - stored EJB - stored
Time of mains lack> 999	Stops machine	Out of order

If the machine remains off for more than 999 minutes, it will be necessary to reset the alarms to restart all distributor controls. Whenever a reset is carried out the time will be set to zero. After the reset the first switching off and the following switching on of the distributor will not be considered (e.g. Maintenance and/or Loading). Further to the inhibition of the cabinets signallings of unavailable selections will be generated (also remote).

The date and time will be stored every 5 minutes. This extension will ensure 9 years of duration of the location writing.

T Safety 98 — [Yes/No] Only distributors configured as PAN.

If Yes the following PAN cycle will be performed:

The cycle requires that when the distributor is started if the probe detects an internal temperature higher than the safety temperature the selections will be blocked. Within a limit time of 30 sec. signalled by the activation of the buzzer, it is possible to inhibit the alarm by entering the code 98 on the alphanumeric keyboard. The temperature alarm will remain inhibited for the programmed safety time; after this time the safety temperature control will be enabled again. If upon start up, the temperature is < than the safety temperature (non alarm condition) the control of this temperature will be immediately enabled. This alarm can be set to zero in both maintenance mode and by switching off and on again the machine by entering the code 98 within 30 sec of buzzer operation.

If the temperature in the tank reaches the value set as safety temperature, the selections from 51 to 68 will be blocked and automatically made "NOT AVAILABLE".

If No, the following PAN cycle will be performed:

The cycle requires that when the distributor is started up the temperature is not controlled throughout the programmed safety time. After this time the safety temperature control will be enabled again. If, after the safety time, the temperature measured is higher than the safety temperature (alarm condition), the selections from 51 to 68 will be immediately blocked and automatically made "NOT AVAILABLE". This alarm can be set to zero in both maintenance mode and by switching off and on again the machine.

5.3.7 'Payment systems' Menu

5.3.7.0 General Parameters

Protocol	Selection of Payment System (Up-Down Scroll menu)

Parallel

Credit Timeout	Management of credit timeout before going to overpay [0-180s]
Multivend	Enables multisale [On/Off]. If ON the credit will permanently remain on the display and bypass the set timeout. If OFF the credit timeout will be managed
Decimal point	Decimal point [00000, 0000.0, 000.00, 00.000] For Parallel protocol only.

If the Validator is selected, the distributor will alwyas be in Exact Change mode.

Executive

Immediate Change	Enables distribution of the instant change if a hot selection is made [On/Off] Priority on Multivend. Displayed only if Executive Protocol.
Fixed in line 1-2	Enables message "Enter exact change" fixed on the display if the coin box cannot give change

ECS diff.

Price Timeout	Price timeout (only for ECS or price holding) [2.0÷25.0 s]
Fixed in line 1-2	Enables message "Enter exact change" fixed on the display if the coin box cannot give change
Immediate Change	Enables distribution of the instant change if a hot selection is made [On/Off] Priority on Multivend. Displayed only if Executive Protocol.

Price Holding

Price Timeout	Price timeout (only for ECS or price holding) [2.0÷25.0 s]
Price Table (Yes/No)	If NO the price table is unique and manages 50 prices (1 –50). If YES the price table is subdivided into two tables. First table 1 –25. Second table 26 (25+1) 50 (25+25)

MDB

Credit Timeout	Management of credit timeout before going to overpay [0…180s]
Multivend	Enables multisale [On/Off]. If ON the credit will permanently remain on the display and bypass the set timeout. If OFF the credit timeout will be managed
Fixed in line 1-2	Enables message "Enter exact change" fixed on the display if the coin box cannot give change
Ignore Exact Change	OFF 1- Configuration MDB Coin box+ Banknote reader: if the coin box cannot give the change the banknotes will not be accepted; 2- Configuration MDB Coin box+Cash less+Banknote reader: The reader is enabled only to recharge keys. ON: 1- Configuration MDB Coin box+Banknote reader: if the coin box cannot give the change the banknotes will be accepted; 2- Configuration MDB Coin box+Cash less+Banknote reader: The reader is enabled only to recharge keys.
Max.change	Max.change than can be given by the coin box[0÷9999]
Coin changer	Enables the change lever [Yes/No]
Max coin credit	Max.credit accepted by the coin box [0÷65535]
Max credit on key	Max.credit that can be changed on the key[0÷65535]
Ignore ExChg	Ignores coin inhibitions of in 'exact change' [Yes/No]
Min Lev tube 1 X	Selects minimum quantity in tube 1 [1…20]
Min Lev tube 2 X	Selects minimum quantity in tube 2 [1…20]
Min Lev tube 3 X	Selects minimum quantity in tube 3 [1…20]
Min Lev tube 4 X	Selects minimum quantity in tube 4 [1…20]
Min Lev tube 5 X	Selects minimum quantity in tube 5 [1…20]
Enab. TOKEN	Enables TOKEN [On/Off]
Token	Sets the value of Token 1 [000.00÷999.99]Enabled only if Enab.Token On
Token 2	Sets the value of Token 2 [000.00÷999.99] Enabled only if Enab.Token On
Token 3	Sets the value of Token 3 [000.00÷999.99] Enabled only if Enab.Token On
Change x Token	Enables change if token value is > than selection [Y/N] Enabled only if Enab. Token On
Recharge Token	Enables recharge of token value on key [Y/N] Enabled only if Enab.Token On
Ex.Chg. & Token	Inhibits the acceptance of tokens when the machine is in Exact Change [Y/N] Enabled only if Enab.Token On

During the reset phase the payment system is inhibited.

5.3.7.1 Coins/Line

Coin 1	Associazione moneta - linea 1 [0÷65535]
...	
MCoin 16	Associazione moneta - linea 16 [0÷65535]

5.3.7.2 Banconote/Linea

Banconota 1	Coin - line 1 association [0÷65535]
...	
Banconota 16	Coin - line 16 association [0÷65535]

5.3.7.3 Banknote/Line

Banknote 1	Banknote - line 1 association [0÷65535]
...	
Banknote 16	Banknote - line 16 association [0÷65535]

5.3.7.4 Enabling coins

Coin 1	Enables coin 1 [On/Off]
...	
Coin 16	Enables coin 16 [On/Off]

5.3.8 'Price Table' Menu

If set price table No

Price 1	Price 1 [0÷65535]
...	
Price 50	Price 50 [0÷65535]

If set price table Yes

Price 1	
….	Price table 1
Price 25	
Price 25 + 1	
…	Price table 2
Price 25+25	

5.3.9 'Price-Selections' Men

All at price 1	All selections associated to price 1 [On/ Off] Except preselection buttons. The preselection button price must be associated to the relevant key.
Price Presel XX	Preselection Price from 1 to 12 [1÷50]. Only the first 12 keys can have this function.
Price select. 01	Drink price 1 [1÷50]
...	
Price select. 30	Drink price 54 [1÷50]
Price sect/col XX	Price sector /column XX [1÷50]
...	
Prezzo sect/col XX	Price sector /column XX [1÷50]
P Jug Sel 1	Price for every single jug of selection 1. Not linked to All price at 1.
…	
P Jug Sel 30	Price for every single jug of selection 30. Not linked to All price at 1.

Near the line of the price table the set price must be displayed to facilitate programming. A and B refer to BVM600 A and BVM600 B to make the Trio.

5.3.10 'Discount Table' Menu

Discount X	Discount X=1 to 50 [0÷65535] related to coins
Discount Presel XX	Discount Preselection from 1 12 [1÷50]. Only the first 12 keys can have this function.
	If a key reader or cashless MDB is installed also the second discount table will be enabled.
Discount Key X	Discount Key X=1 to 50 [0÷65535]
Discount Cup	Discount Cup with both key and coins
Discount Fidelity	Discount to be added to the selection discount after the second selection equal to the first selection. Available only for selections made with key.

5.3.11 'Promotions' Menu

Enable Promot	Enables management of promotions [0/User/ Set] 0 promotions disabled
Promo cashless	Enables management of promotions with a cahsless system [On/Off]
Promo coin	Enables management of promotions with credit [On/Off]
	Uses the discounts of the discount table.
Happy Hour	Happy Hour Management [On/Off].Available only with clock chip, with No Promotion and with Promotion Set. Calendar
	Daily
	Weekly
	Monthly

Daily enables the happy hour according to the time sections set all days of the month.

Weekly enables the following menu:

Monday
Tuesday
Wednesday
Thursday
Friday
Saturday
Sunday

In this mode by selecting Monday as day of the week, the happy hour will be made according to the time sections set exclusively for the Mondays of the month.

Monthly or Weekly enables the following menu:

Happy Hour 1: OFF or XX
Happy Hour 2: OFF or XX
Happy Hour 3: OFF or XX
Happy Hour 4: OFF or XX
Happy Hour 5: OFF or XX

If 'Start' is higher than or equal to 'End' the switch on time section is not enabled. In Happy Hour the discount table will be enabled.

Start 1	Sets switch on time 1 [00:00÷23:59]
End 1	Sets switch off time 1 [00:00÷23:59]
Start 2	Sets switch on time 2 [00:00÷23:59]
End 2	Sets switch off time 2 [00:00÷23:59]
Start 3	Sets switch on time 1 [00:00÷23:59]
End 3	Sets switch off time 1 [00:00÷23:59]
Start 4	Sets switch on time 2 [00:00÷23:59]
End 4	Sets switch off time 2 [00:00÷23:59]

If 'Start' is higher than or equal to 'End' the switch on time section is not enabled.

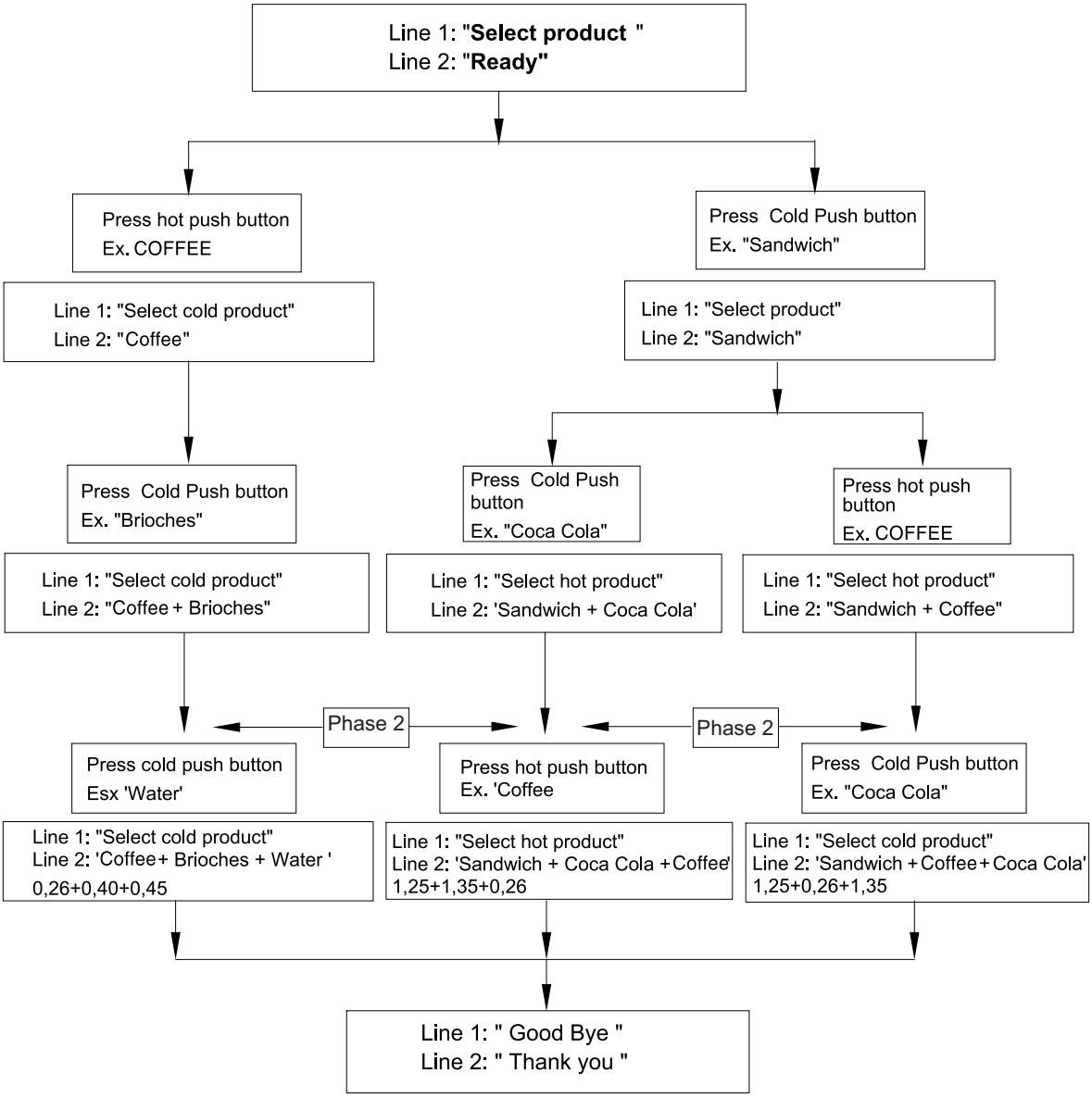
If this is made on both sections, the machine is not in Happy Hour promotion.

Mess H Hour	Manages Happy Hour messages that can be customized only in WinBianchi [On/Off]
Discount H Hour	Discount on all drinks in Happy Hour [0÷65535]

Example of User Promotion:

Price Coffee	0.30€	discount 0.04€
Price Sandwich	1.35€	discount 0.10€
Price Water	0.50€	discount 0.05€
Price Brioches	0.50€	discount 0.10€
Price Coca Cola	1.50€	discount 0.15€

If the cusTomer takes through master slave



If in PHASE 2 the user does not select the third product within the end of preparation of the second, he/she will miss the opportunity to have it in promotion.

In the User Promotion if all proposed products are not taken, the performed discount will be the sum of the discounts on the chosen products.

Cold products could also be direct on non-alphanumeric key-board.

Menu enabled only if Promotion Set ON:

Select key	selects promotion key [1..30]
Select hot	selects hot key [1..30]
Select cold 1	selects code 1 [A11…B68]
Select cold 2	selects code 2 [A11…B68]

N.B. For space reasons it was decided to make the management of promotions, for several keys, only with WinBianchi in ON-LINE mode.
Only one promotion can be programmed by the distributor.

If Codes Cold 1 and Cold 2 are relevant to the same cold machine, then the products, after pressing the menu key, will be provided in sequence. If one of the codes is relevant to the Cold distributor A and the other code to the Cold Distributor B, then the products will be provided at the same time.

The button selected as Promotion must not be displayed in the Doses menu.

5.3.12 'Preventive Action' Menu

Water filter	Water filter decounter value [0÷99999]
Boiler	Boiler decounter value [0÷99999]
HACCP	HACCP Sanitization decounter value [0÷99999]
Electrovalves	Electrovalve decounter value [0÷99999]
Gaskets	Gasket decounter value [0÷99999]
Boiler 2	Boiler decounter value [0÷99999]
Water filter	Water filter decounter value [0÷99999]
Coffee blades	Coffee blade decounter value [0÷99999]
Coffee filters	Coffee filter decounter value [0÷99999]
FB 1 filter	Fresh Brew filter 1 decounter value [0÷99999]
FB 2 filter	Fresh Brew filter 2 decounter value [0÷99999]

5.3.13 'Decounters and Reserves' menu

Decount powders?	Yes/No (If "Yes" it requires the decount parameters relevant to powders. When decount. = 0 supply disabled)
Decount sectors?	Yes/No (If "Yes" it requires the decount parameters relevant to sectors. When decount. = 0 supply disabled). The data to be set can be sent and modified using WinBianchi via cable and modem.It also displays on WinBianchi the Reserve Sector Parameter.
Decount beans?	Yes/No (If "Yes" it requires the decount parameters relevant to beans. When decount. = 0 supply disabled). It also displays Reserve beans.
Decount cups?	Yes/No (If "Yes" it requires the decount parameters relevant to cups. When decount. = 0 supply disabled). If the cup sensor is installed it allows to supply drinks only with their own cup. It also displays Reserve Cups
Reserve powders?	[On/Off] Enables the management of powder reserve. When the distributor goes to reserve it will send an sms/ data call to the operating central unit.
Reserve Sectors?	[On/Off] Enables the management of sector reserve. When the distributor goes to reserve it will send an sms/ data call to the operating central unit.. Only via cable or modem using WinBianchi.
Reserve beans?	[On/Off] Enables the management of bean reserve. When the distributor goes to reserve it will send an sms/ data call to the operating central unit.
Enable Reset?	Enables the management of the reset button of decounters in maintenance mode [On/Off]. Upon confirmation of every decounter the electronics will store, by duplicating them, the values not yet decounted in safe memory locations. Whenever the operator goes to maintenance mode he will be able, using a dedicated button, to return the decounters to the initial parameter. Check the possibility to automatically reset upon operator passage.
Dec. Powder 1	Decounter value-Powder 1 [0÷1677721s]
…	
Dec. Powder 8	Decounter value- Powder 8 [0÷1677721s] The decount value to be entered the Dec. Powder X is determined by measuring for every second of product preparation the quantity of grams provided. The result must be multiplied by the total quantity of product in the container. Example : Chocolate 1sec = 4 g i.e. 1g = 0,25'sec Chocolate in the container = 1000 g Dec. Powder 8 = 1000g * 0,25sec = 250 sec.
Dec.Sect/Col XX	Decounter value- Sector /Column XX […….]
Dec.Beans	Decounter value- coffee beans[…….]
Dec.Cups	Decounter value- cups […….]
Reserve Powder 1	Reserve value – Powder 1 […….]
Reserve Powder 9	Reserve value –Powder 9 […….]
Reserve beans	Reserve value – Coffee beans […….]
Reserve cups	Reserve value –cups […….]
Chip Card?	[On/Off] It enables the Chip card management. Every Chip Card, in addition to its own data, features three types of stored codes: machine, location and customer codes. When the chip card is inserted in the relevant connector a check is made to make sure that the codes in the key coincide with the machine codes. Any code not present in the chip card is not checked and therefore if no code is present the check will not be carried out. It is also possible to make settings on the chip card (via windows program) that allow to select the codes on which to perform the check. The Decount chip card is used to update the decounters of the machine by adding the stored recharge to the residual value. To be enabled to operate the key must have, in addition to the correct three codes, if present (machine, location and customer), also the recharge value other than zero as well as an identification code of the key under reference not included in the list stored in the machine Eeprom. This list is updated with the code of the key used after the recharge operation has been properly finished. Moreover, along with this operation, the two recharge values of the stored decounters is cancelled in order to avoid any possibility of re-using the key. To be noted that disabling the key by saving the code and cancelling the recharge will occur only after the update has been completed correctly. Any early removal of the key or any sudden voltage drop will not affect the proper operation of the key; therefore when the regular operating conditions are restored (key inserted and power supply steady) the operation can be correctly completed. With CHIP CARD decounters are always blocking. Without it, they become signallings.

To carry out a reload operation insert the key in the relevant connector, then switch on the board. The board will recognize the decounter key and propose the following action

Reload
T1 – Key >>> VMC

Then press button 1 and wait for the complete reload of the machine.

Key
Wait

At the end of the reload operation the following message will appear:

Key
Operation OK

If the reload is not completed (non compatible machine codes, the following message will appear:

Key
Error

5.3.14 'Sales' Menu

Tot.collected hot — Unresettable total hot amount [0÷16777215]

Hot collect. — Resettable total hot amount [0÷16777215]

Total collected snack — Unresettable total snack amount [0÷16777215]

Total snack — Resettable total snack amount [0÷16777215]

Unresett.total coll. — Unresettable total amount [0÷16777215]

Total collect. — Resettable total amount [0÷16777215]

Discount — Total discount sum of all discounts applicable to one preparation [0÷16777215]

Overpay — tot Overpay– Amounts collected but not used [0÷16777215]

Unresett.total selections — Unresettable total select. Paid/Free/Test [0÷16777215]

Total selections — Resettable total select. Paid/Free/Test [0÷16777215]

Paid selections

- Total selections — Unresettable total selections-PaidHot+Snack [0÷16777215]
- Total selections — Resettable total select. Paid Hot+Snack [0÷16777215]
- Unres.total hot selections — Unresettable total hot selections [0÷16777215]
- Hot total select. — Resettable total hot selections [0÷16777215]
- Select. 01 — Selection counter- drink 1 [0÷65535]
- ...
- Select. 54 — Selection counter- drink 54 [0÷65535]
- Unreset.total snakc — Unresettable total snack selections [0÷16777215]
- Total snack — Resettable total snack selections [0÷16777215]
- Selections-sect. 11 — Selection counter-sector 11 [0÷65535]
- ...
- Selections-sect. 68 — Selection counter- sector 68 [0÷65535]

Free

- Tot. Free — Unresettable total free [0÷16777215]
- Tot. Free — Resettable total free [0÷16777215]
- Free sel. 01 — Free counter- drink 1 [0÷65535]
- ...
- Free sel. 54 — Free counter- drink 54 [0÷65535]
- Free sect. 11 — Free counter- sector 11 [0÷65535]
- ...
- Free sect. 68 — Free counter- sector 68 [0÷65535]

Jug

- Unresett.total jug — Unresettable total jug [0÷16777215]
- Tot. jug — Resettable total jug [0÷16777215]
- Jug sel. 01 — Jug counter- drink 1 [0÷65535]
- ...
- Jug sel. 30 — Jug counter - drink 30 [0÷65535]

Free jug

- Total free jug Unresett. — Unresett. tot. free jug [0÷16777215]
- Total free jug — Resettable total free jug [0÷16777215]
- Free jug sel. 01 — Free jug counter- drink 1 [0÷65535]
- ...
- Free jug sel. 30 — Free jug counter- drink 30 [0÷65535]

Jug test

- Unreset.total jug test. — Unresettable total jug test [0÷16777215]
- Total jug test — Resettable total jug test [0÷16777215]
- Jug test- sel. 01 — Jug test counter - drink 1 [0÷65535]
- ...
- Jug test – sel.54 — Jug test counter - drink 54 [0÷65535]

Test

- Unreset.total test — Unresettable total test [0÷16777215]
- Total test — Resettable total test [0÷16777215]
- Test sel. 01 — Test counter- drink 1 [0÷65535]
- ...
- Test sel. 30 — Test counter- drink 30 [0÷65535]
- Test sect. 11 — Test counter- sector 11 [0÷65535]
- ...
- Test sect. 68 — Test counter- sector 68 [0÷65535]

Preselections

- Tot Presel 1 — Tot Preselection 1 resettable [0÷16777215]
- …
- Tot.Presel X — Tot Preselection XX resettable [0÷16777215]

Coins

- Coin 1 — Coin 1 counter [0÷65535]
- ...
- Coin 16 — Coin 16 counter [0÷65535]

Banknotes

- Banknote 1 — Banknote 1 counter [0÷65535]
- ...
- Banknote 16 — Banknote 16 counter [0÷65535]

Sales code — Sales code setting [00000÷99999]

Erase code — Enter code [0000÷9999, default 0001]

Replace code? — Replace code? [Yes/No]

Code — Code setting [0000÷9999]

Set to zero? — Set sales data to zero? [Yes/No]

Code 9999 will erase also unresettable data

5.3.14.1 'System Audit'

Aut. Tub.	Value of coins automatically inserted [00000÷99999]
Man. Tub.	Value of coins manually inserted [00000÷99999]
Aut. Em.	Value of coins automatically depleted [00000÷99999]
Man. Em.	Value of coins manually depleted [00000÷99999]
Acc. CP.	Value of coins loaded on key [00000÷99999]
Add. CP.	Value of coins unloaded through key [00000÷99999]
Reset Tubes	
Code	Enter code [0000÷9999, default 0001]
Replace code?	Replace code?[Yes/No]
Code	Code setting [0000÷9999]
Set to zero?	Set tube data? [Yes/No]

5.3.15 'Clock' Menu

The following menus are available:

Hour/minute
Date
Switch on
Cleanings
Disinfection

5.3.15.1 'Hour/minute'

Set hour/minute	Sets current hour and minute [00:00÷23:59]

5.3.15.2 'Date'

Set Date	Sets current date [Mo dd/mm/yy]

5.3.15.3 'Switch on'

Start 1	Sets switch on time 1 [00:00÷23:59]
Stop 1	Sets switch off time 1 [00:00÷23:59]
D.A. Off 1?	Decide to switch off the whole distributor or to leave in St-by the coin box only[On/Off]. Linked to time section 1
Start 2	Sets switch on time 2 [00:00÷23:59]
Stop 2	Sets switch off time 2 [00:00÷23:59]
D.A. Off 2?	Decide to switch off the whole distributor or to leave in St-by the coin box only [On/Off]. Linked to time section 2

If 'Start? is higher than or equal to 'Stop' the switch on time section is not enabled. If this is made on both time sections, the machine will be always on. If a distributor is in off condition, the display will show in line 1 the word Off and in line 2 the real time.

St-By Boiler?	Activates the boiler during the st-by hours programmed in the clock menu [On/Off] If On the boiler will keep the st-by temperature according to the following algorithm, If Off the boiler will remain off
Temp Boiler X	Sets the temperature of all boilers during st-by period. According to the number of boilers included in the battery, the X field will be updated.

5.3.15.4 'Cleanings'

Cleaning 1	Sets time of cleaning 1 [00:00÷23:59]
Cleaning 2	Sets time of cleaning 2 [00:00÷23:59]
Cleaning 3	Sets time of cleaning 3 [00:00÷23:59]
Cleaning 4	Sets time of cleaning 4 [00:00÷23:59]

These sections can be set and displayed for the hot machine only

5.3.15.5 'Disinfection'

T disinfection	T disinfection [0÷120s]
Disinfection delay	Disinfection delay [0÷240s]

5.3.16 'Distributor Test' Menu (with Password)

Machine cycles allowing the operator to check the proper operation of the peripherals. With this password all components configured in the setting file will be tested. This password can be modified by Bianchi Vending Group only.

The line operator must load only the setting file and enter this pwd. The machine will warn the operator to make sure that no product is contained in the distributor. Only after confirming with enter key, the distributor will perform the machine test.

For testing procedure please refer to SS005-04 specifications.

By entering password 88000, enabled only if a Vega power is connected, the motor test can be performed. When the pwd is entered the display will show:

Set motors BVM600 X Set motors BVM600 to zero [On/Off]

X specifies the number of BVM600 machine which will have the motor alignment.

5.3.17 Default data

Code	Enter code [6666]. It will be a fixed code for all established by Bianchi.
Reset?	Reset factory data? [Yes/No]

When the distributor is programmed in the assembly line, the std settings are duplicated and inserted in the default data table. If the configuration is reset, the same data as loaded in Bianchi Vending Group spa will be obtained.

5.3.18 'Remote Connection' Menu

5.3.18.1 Bianchi Telemetry

In order to avoid to use third party services (Digisoft, Alcatel, Modules, etc.) which are expensive and mainly designed for major distributions, Bianchi System can be used.
The possibilities are several and depend on the target interaction level with distributors.
To get only the sales data it is sufficient to have an e-mail box to receive the EVA data in text format. Data interpretation will be at customer's charge. The sending of the data is time only, programmed in the board and only if the clock chip is installed.
For a more complete management a computer at the customer's premises must be equipped with a GSM modem and a windows management program.

In the management program Bianchi telemetry uses three transmission systems:
SMS
GSM
GPRS

SMS
Sending the alarms generated by the machine to the central unit,filing and returning to the selected number for a quick intervention.

SMS Example:

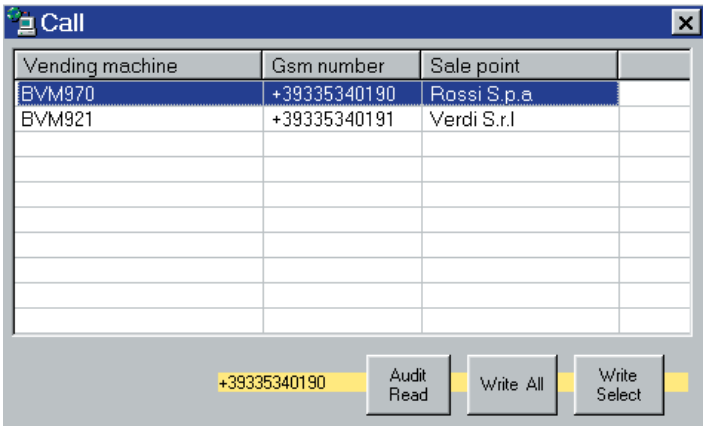
950E*ECE*280205*1008

where the first field specifies the type of machine,the second the event and the third and fourth the date and time.
Moreover, it is possible to use the Win Modem program allowing to manage the customer machine fleet so to rationalize any technical intervention.
If an e-mail message is not sent successfully, the manager will receive an SMS notification.
If the SMS messages are not sent successfully, 3 attempts will be made, at intervals of 5 minutes, repeated every hour.

GSM
Via the VMC-Central Unit direct connection through the GSM modems it is possible to download the distributor settings offline and modify them. It is also possible to request the updated sale data.

The Program for the remote management of the Audit data of Bianchi distributors is managed as follows:

The graphic presentation of the form includes a list containing the information about the type of distributor, telephone number of the GSM installed on the board and the sale point of the distributor.



By pressing the Audit Read key it is possible to call the remote machine.

After the connection is established, which is monitored via labels on the form, the data download will start. At the end of this operation a CommonDialog will be displayed (Save File with name) allowing to save the file in the ".prm" format, i.e. with an extension comptabile with WinBianchi (e.g.: BVM970. prm).

Via the WinBianchi\ WinSoftwareAperto program in OFF-LINE mode, it is possible to open this file later to monitor the data or to modify them.

After modifying the file, it is possible to save it with another name or to overwrite it. Now the file must be returned to the remote machine using the Write all key to re-write the entire machine configuration or using the Write Select key to re-write only the modified data.

GPRS
The sending of e-mail messages with EVA audit data can be adjusted from PC on fixed days and timetables. Moreover it is possible to select when to reset the resettable data. It is possible to receive e-mail messages also with the distributor error. The e.-mail message with the EVA-TDS data is sent at the established time and therefore the clock chip is required. At the end of this operation the card will generate a Beep.

If any e-mail message is not sent successfully, 5 attempts will be made at intervals of 5 minutes, repeated every 6 hours.

To use the GPRS section the SIM card must be configured by enabling the password for the connection to the internet network and setting the connection strings on the card; these operations are to be made by the different providers and are at customer's charge.

All SMS-GSM-GPRS connection and transmission test are made with TIM, the use of other providers will not ensure the correct operation, in particular as far as GPRS section is concerned.

In the machine, in the "Remote connection" menu the following data can be displayed:

Signal intensity	In line 2 the display will show the GSM signal intensity, the network registration status and the presence of GPRS network.

The signal intensity can range from 0 to 31 and if the signal cannot be found the value 99 will be displayed.

The value of the network registration status can range from 0 to 5 according to the meaning:

0 - network not found or absent;

1 - ok, registered in the network of its own provider;

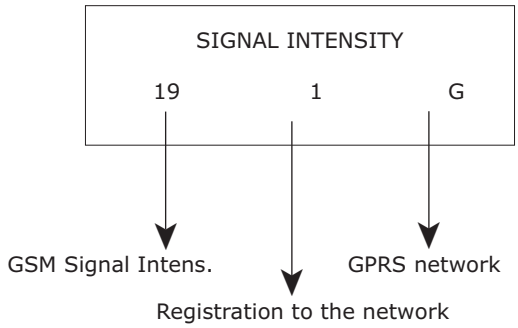
2 – not registered, searching network;

3 - network found but registration not allowed;

4 – network status indetermined;

5 - registered in roaming with another provider.

If GPRS network is present a G will be displayed.



Via WinBianchi the following can be programmed:

APN	Access Point Name - identifies the node for Internet access used by GPRS connection. Provided by the chosen provider.
USER ID	User identity for GPRS access. Provided by the provider.Some providers do not use it (for example: Tim uses the SIM telephone number as user-id, whereas Wind does not require it ; in this case write "none").
PASSWORD	Password for GPRS access. Viene fornito dall'operatore. Provided by the provider. As for the User ID, some providers do not use it The max number of characters is 15 (for example: Tim provides the password, whereas Wind does not require it ; in this case write "none").
SERVER SMTP	Address of the outgoing mail server. Provided by the chosen provider.
EMAIL RECEIVER	is the e-mail address to which the e-mail messages with Audit data must be sent.

EMAIL SENDER	If the smtp server cannot deliver the e-mail message to the specified address (for example, due to the fact that the receiving server-is out of order or because the address does not exist); then this address is used to signal the failed delivery by sending an error notification message.
SUBJECT	"Subject" field of the e-mail (e.g. "Audit Data")
SERVICE CENTER No.	Number of the service center to send sms messages provided by your own operator. It must be written in international format (+39XXX…)
SMS RECEIVER No.	Number to which the SMS messages are sent.
PIN	PIN code of the SIM card.

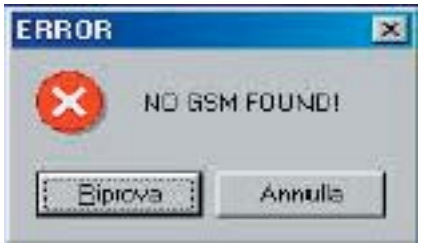
The e-mail messages are sent with an automatic name: Vending Machine no. XXXXXX where X is replaced by the serial number.

In addition to these data it will be possible to set whether to receive the e-mail messages on a daily, weekly or monthly basis. The same method can be used to select when to reset the sale data that can be set to zero.

5.3.18.1.1 WinModem Program

After its installation in the computer, this program is configured for an automatic start when the PC is switched on; if the program has been closed, this can be manually re-started from the Start menu in Windows in the Programs/WinModem item by clicking on the corresponding icon.

In case of malfunction of the Modem the start program will provide an error message:



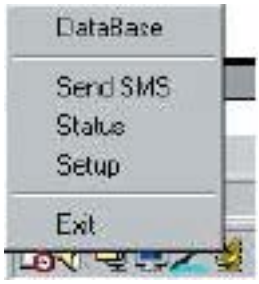
to which you can reply to try again to connect or to annul to exit from the error message.

If the program has been successfully performed in the bottom right hand corner of the Windows bar an animated icon will appear showing that the modem is operating correctly:

For check purposes, place the mouse on the icon and the "Connect Home network" message will appear; in case of an anomaly (to the modem, network, etc.) during the program operation, the icon will appear with a barred signal.

Description of the Program Interface

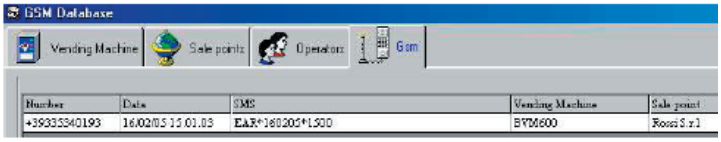
By clicking with the right button of the mouse on the program icon, a five-item menu will appear:



DataBase	-used to the enter the main database of the program including the received messages and where the database of the machines, operators,etc can be set.
Send SMS	– used to access the message sending section
Status	–provides information about the modem and the connection to the network
Setup	–used to enter the number of the service center of the chosen operator.
Exit	–used to close the program.

DataBase Section

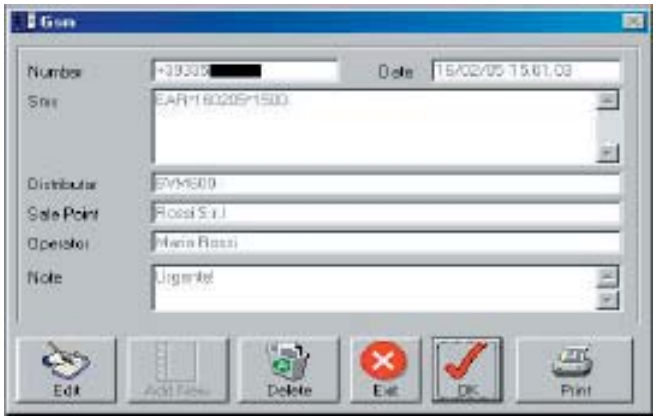
By clicking with the left button of the mouse on the Database wording the main program menu will appear, including four tab formats:



- The first format "Gsm" starting from right, will show the list of the received messages that have been stored in the program database.

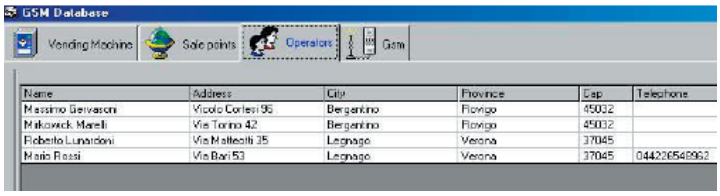
  The list includes the Number field, specifying the number from which the message was sent corresponding to a specific distributor; the Date field specifying date and time of reception of the message; SMS field specifying the alarm occurred; date and time of message sending; Vending Machine specifying the type of distributor where the error occurred; Sale point field specifying where the distributor is physically installed; Operator field specifying the operator in charge of the maintenance of the distributor and finally the Notes field including the comments, if any.

  By clicking twice on one of the messages of the list a window will appear:



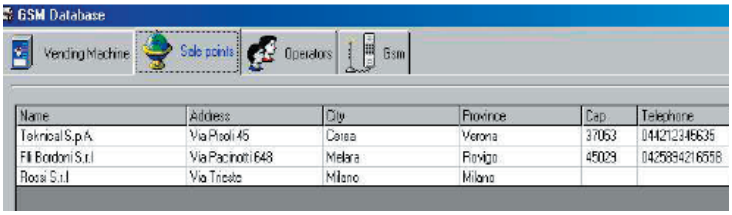
showing the abovementioned fields and giving the possibility using the keys below to add some notes (EDIT key) to be entered via OK key, or to delete the message (DELETE key) or to print the message (PRINT key); using the EXIT key you will go back to the previous screen.

– The second format "Operators" includes the list of the operators in charge of the maintenance of the different distributors, with relevant data (address, telephone number, E-mail,etc.)

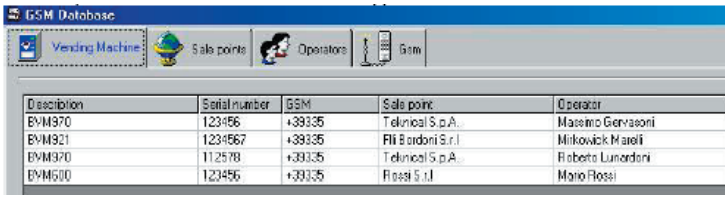


By clicking twice on one of the operators in the list a window will appear similar to the previous one showing as additional options the possibility to modify any field and not only the form note using the EDIT key and the possibility to enter a new operator by pressing ADD NEW key; this insertion must be confirmed by pressing OK key.

– The third format "Sale Point" includes the list of the customers having at least one distributor enabled for the telemetry service, with the data to track them; similarly to the operators format, by clicking twice on one of the customers in the list a window will appear showing the different fields and giving the same possibilities of intervention as the previous window.

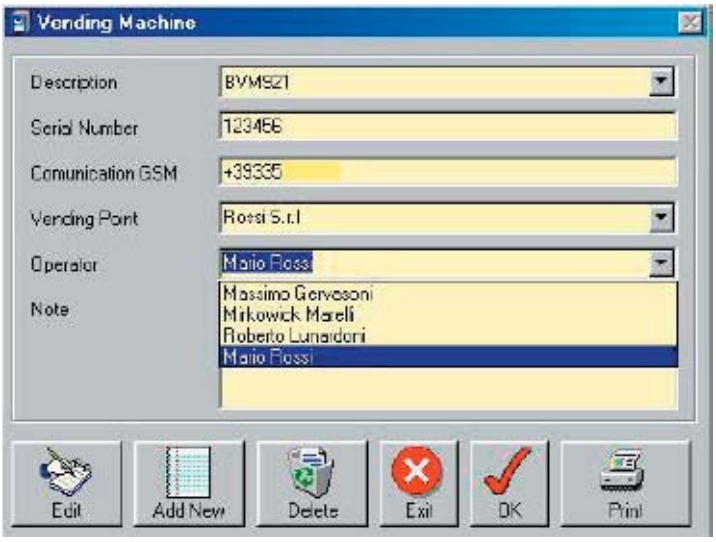


- The fourth format "Vending Machine" includes the list of the distributors with the following fields: "Description" specifying the type of machine; "Serial number" specifying the serial number; "GSM" specifying the number of SIM board installed in the machine; "Sale point" specifying the customer where the distributor is installed; "Operator" specifying the technician in charge of that specific distributor and finally "Notes" including the comments, if any



– By clicking twice on one of distributors in the list, a window will appear showing, as the previous windows, the previously listed field, the major difference lying in the fact that if a data sheet is modified with Edit key or a new distributor is added with Add New key, the Sale Point and Operator fields will allow you to enter only one of the corresponding items listed in the formats described above, while in the Description item one of the types of machine listed in the pull-down list must be selected.

NB: if new elements must be added to the list of distributor, first of all it will be necessary to enter the new Operators and Sale Points in the corresponding formats and then the new Vending machines; the above to avoid that when the operator and sale point data are coupled, in the creation of the new vending machine there will be no possibility to try and enter any item not included in the insertion list.



Important: When a new Distributor is added in the "Communication GSM" field I must ABSOLUTELY enter the number with +39 at the beginning.

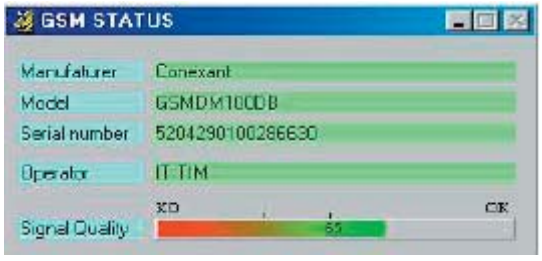
Send SMS Section

This section gives the possibility to send an SMS by writing in the window with the portable phone icon the number of the receiver and entering the message text in the bigger window; in the top right hand corner there is also a counter showing the number of characters entered (2nd number) as well as the total number of available characters (1st number).

At the end of the message text, this will be sent to the selected number by pressing SEND key.

Status Section

This section provides some information about the Modem and the connection and in particular about the operator of the board inserted in the Modem ("Operator" field) and the "Signal Quality" field providing an indication of the current power of the network signal.

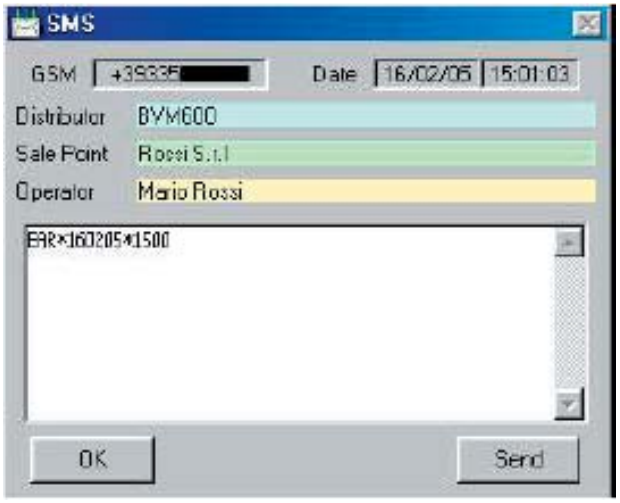


Setup Section

In this section you will enter the number of the service center of the chosen operator and write it in the relevant window, then you will press the Set GSM key.

Receiving an Alarm signalling

When you receive an alarm message from a distributor, a window will be opened on the computer desktop showing the number from which it was sent, the date and the time while the bigger window will show the type of alarm and when it occurred.
Moreover, if it corresponds to one of the numbers of the distributors stored in the program database, the following data will appear: type of machine (Distributor); Customer at which the machine is installed (Sale Point) and the operator in charge (Operator).



Now you can store the received SMS in the list of the "GSM" format of the database (OK key) or you can send the message to the operator in charge (Send key) and in the window appearing again by pressing Send key.

5.3.18.2 Modules Telemetry

This management can be enabled via an option. For specifications please refer to TROLL/Modules protocol.

5.3.19 Menu 'Item Number Cold

code cold XXX	Sets the ITEM NUMBER code for sector or column XXX [0÷254]
...	
code cold XXX	Sets the ITEM NUMBER code for sector or column XXX [0÷254]

5.4 MAINTENANCE

Maintenance is performed by pressing the key 'Service'.
In line 1 "Maintenance xxx" will be displayed , where xxx displays the boiler temperature, and in line 2 the possible detected alarms.
Pressing twice the key Service, the stand by heating phase will be bypassed, allowing you to perform test selections even on non regimen temperatures. Pressing a key the slave boiler temperature will be displayed in scroll.

The maintenance panel has the following functions (which can be enabled by WinBianchi):

In the maintenance mode the keys have the following meaning:

01: Group rotation
02: MDB tube filling
03: MDB tube depletion
04: Input test and empty pipes for MDB
05: Reset alarms
06: Complete test for one selection also Vega
07: Only water test
08: Nozzle movement
09: Column rotation
11: Alarm scrolling (if they are present)
12: Total entries display (cancellable) for 5 s
13: Cup release
14: Mixer test
15: Refill
16: Test without sugar
17: Spoon

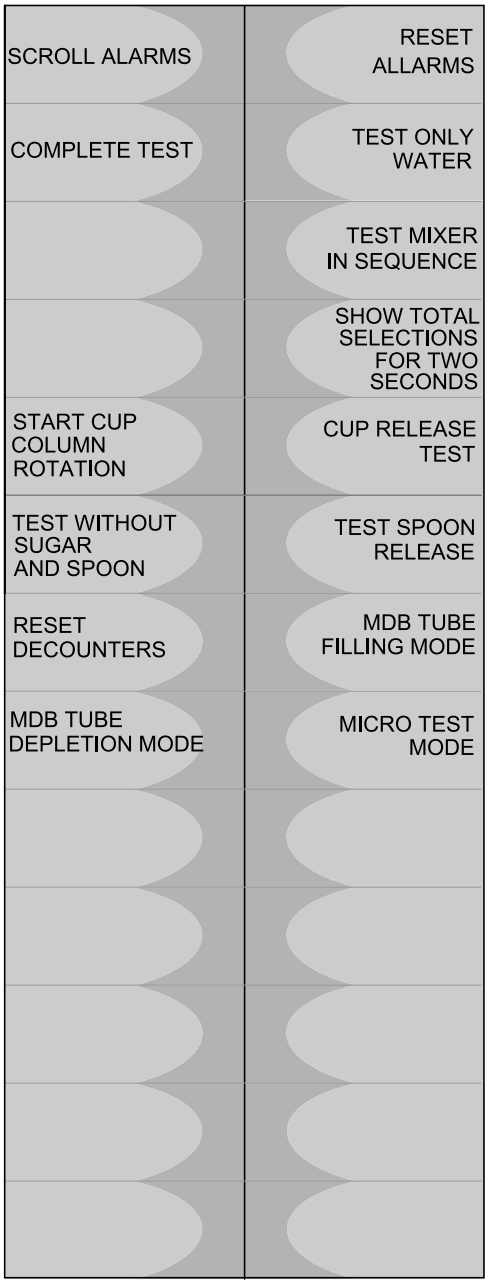
Code keyboard

In maintenance mode it is necessary to enter in sequence,via the alphanumeric keyboard, the numbers shown to obtain the desired function.

Direct selection keyboard –Espresso version

SCROLL ALARMS	RESET ALLARMS
COMPLETE TEST	TEST ONLY WATER
TEST GRINDER AND DOSER	TEST MIXER IN SEQUENCE
COFFEE GROUP ROTATION	SHOW TOTAL SELECTIONS FOR TWO SECONDS
START CUP COLUMN ROTATION	CUP RELEASE TEST
TEST WITHOUT SUGAR AND SPOON	TEST SPOON RELEASE
RESET DECOUNTERS	MDB TUBE FILLING MODE
MDB TUBE DEPLETION MODE	MICRO TEST MODE

Direct selection keyboard –Instant version



Test without sugar	Performs an option drink without sugar
Complete test	After pressing this key in line 2 the word Test will be displayed and the machine will wait for the selection; at the end of the preparation the machine exits the test mode to go back to maintenance mode.
Only water test	In line 2 the word Test will be displayed and the machine will wait for the selection The selection will be made by setting all solubles to zero, while the test of drinks with espresso coffee is complete, at the end of the preparation the machine exits the test mode to go back to maintenance mode.
Ground coffee test	By pressing this key line 2 will display Ground Test and the distributor will make a grinding and then the dispenser will be released. In this way the operator can check the grain size and the basic weight of th ground dose.
Failure reset	All alarms are set to zero and the diagnosis of the Automatic distributor is performed. Line 2 will show the Reset message for a T of 2 seconds.
Mixer test	Switches on the Mixers for 5 sec. in the following order 1,2,3,4,5,6
Group rotation	Makes a rotation of the coffee group
Alarm scrolling	Used to scroll installed alarms and signallings. In case of signallings, these are displayed in line 2 as soon as maintenance mode is accessed, in case of no signalling line 2 will be blank. Visualization is not automatically updated during the maintenance mode; to update it this key must be pressed again.
Total selections	The total unresettable selections are displayed for a T of 2 seconds, then it is possible to return to maintenance mode.
Spoon release	Releases one spoon
Column rotation	Allows column rotation
Cup	Releases cup
1° FB cleaning	1° FB piston cleaning
2° FB cleaning	2° FB piston cleaning
Decount reset	Allows to reset the decounters to the initial value. A double pressing must be made.
MDB tube filling	Filling MDB tubes
MDB tube depletion	Coin 1 (key X depletes) ... Coin 16 (key X depletes)
Micro switch test	By pressing this key we will access the micro switch test status. In this status by pressing the micro switch to be tested, the master board will provide a BEEP to confirm its operation.

6.0 MAINTENANCE AND INACTIVITY

6.1 Cleaning and Loading

So as to guarantee the correct functioning of the distributor during time it is necessary to effect some operations periodically, some of which are indispensable for the observance of the health standard norms. These operations must be done with the distributor open and switched off. The cleaning operations must be effected before the loading of the products. In order to guarantee normal operation, the machine must be installed in areas that the environmental temperature is between a minimum of -1°C and a maximum of +32°C end humidity of not over 70%. Must not be installed in places where cleaning is done with water hoses(ex. big kitchens.).

Do not use water jets to clean the machine.

Please refer to the provisions of section III SAFETY REGULATIONS and section 4.0 INSTALLATION of this manual.

6.1.1 Recommended maintenance

***Bianchi Vending Group spa** guarantees the proper operation of its distributor over time only with a preventive maintenance carried out in compliance with the provisions listed below:*

TYPE OF INTERVENTION	***No. of COUN***				
	5.000	***10.000***	***20.000***	***30/40.000***	***70/80.000***
Softener regeneration (*Resins)	●				
Replacement of piston equipped with filters and gask		●			
Replacement of entire coffee group		●			
Decalcification of espresso boiler and solenoid valves				●	
Replacement of grinders					●
Decalcification of instant drink boiler and solenoid valve					●
*: if not otherwise recommended by the softener supplier.					

6.1.2 Periodic cleaning by the maintenance technician

First step: disposal of the waste inside the waste bins (used cups, stirrers, paper, tissues etc).Once the waste has been disposed of it is possible to clean the surrounding area.

- elimination of the coarse dirt
- disinfecting of the flooring and walls of the area surrounding the machine up to a radius of 1 metre around the distributor
- once this is complete proceed with opening the distributor.

6.1.3 Daily cleaning recommended

The objective is that to avoid the creation of bacteria in the food zone areas.

For all cleaning operations follow the instructions indicated in paragraph 6.3.1.

Operate as follows:

- clean all the visible parts in the dispensing area. (Fig. 6.1 e Fig. 6.2)

remove and clean carefully:

- funnels and powder chutes (Fig. 6.3-pos.1)
- canal água (2), camara miscelação (3), ventainha de misturagem (4) e anel (5).

Fig.6.1

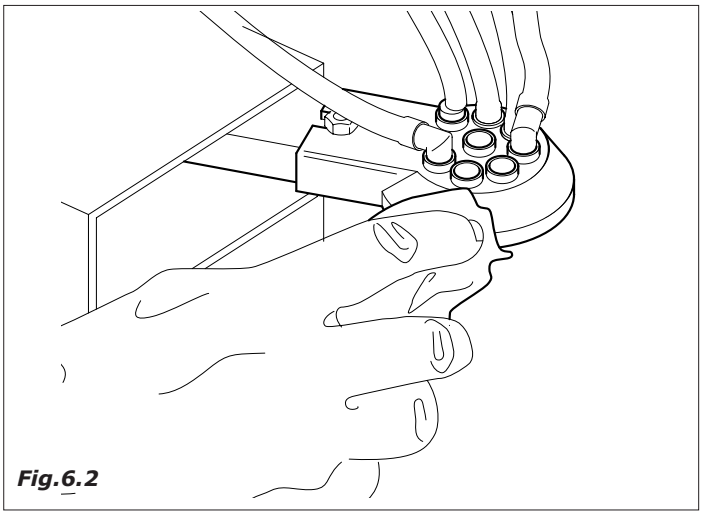


Fig.6.2

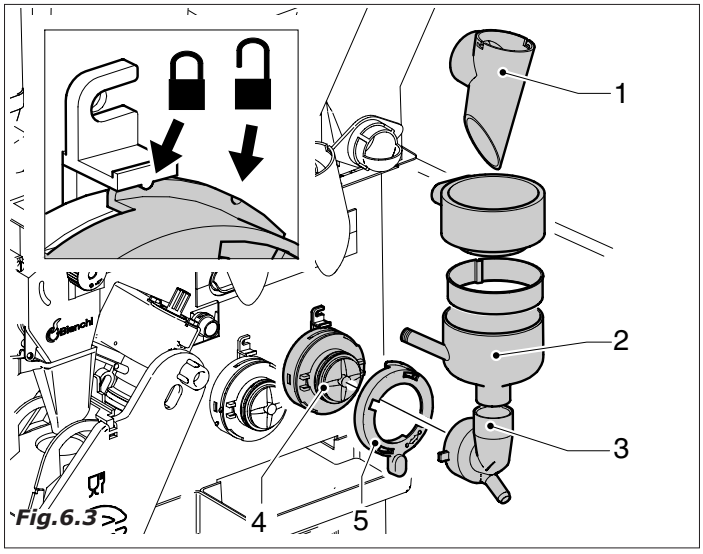


Fig.6.3

– silicone water dispensing tubes.

– dispensing chamber (Fig. 6.4)

– coffee funnel and chute (Fig. 6.5)

Before effecting the re-assembly operations clean all the elements carefully.

– remove all coffee powder residue; the unit can be removed from its housing to make the task easier (Fig. 6.6)

6.1.4 Product loading

When necessary provide for the loading of the products and/or consumption materials of the automatic vending machine. For these operations please refer to the operations described under chapter 4.6.

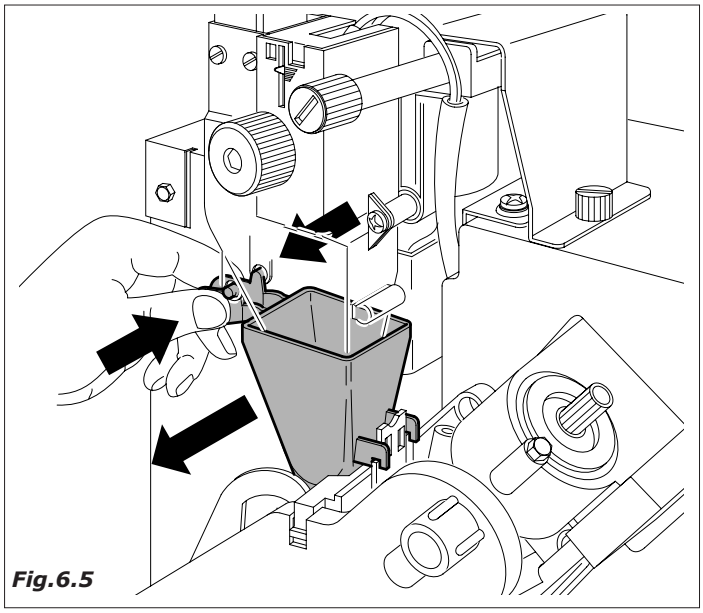


Fig.6.5

6.2 Ordinary and Extraordinary Maintenance

The operations described in this section are purely indicative as they are tied to variable factors such as the water hardness, humidity, products used and workload, etc.

For all operations that require the disassembly of the distributors' components, make sure that the latter is switched off.

Entrust the operations mentioned here below to qualified personnel.

If the operations require that the distributor be switched on, entrust them to specially trained personnel.

For more complicated interventions, such as removing the lime build-up in the boilers a good knowledge of the equipment is necessary.

Monthly effect the debacterisation of all the parts in contact with food substances using chlorine based solutions following the operations already described under chapter 4.5.3.

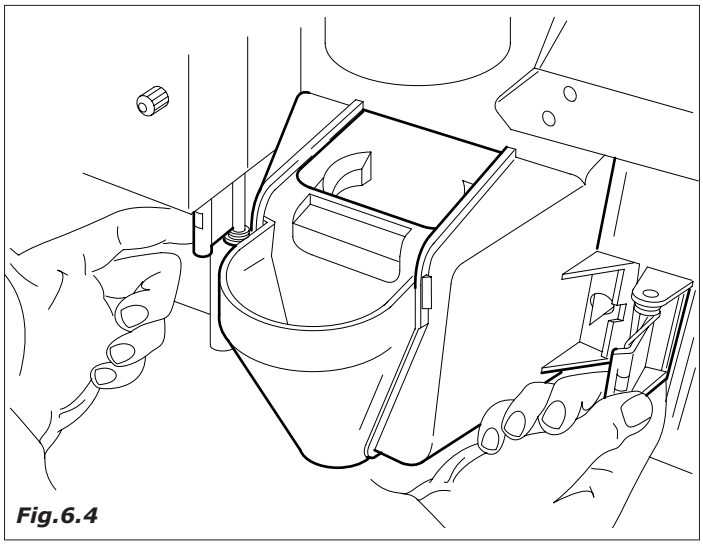


Fig.6.4

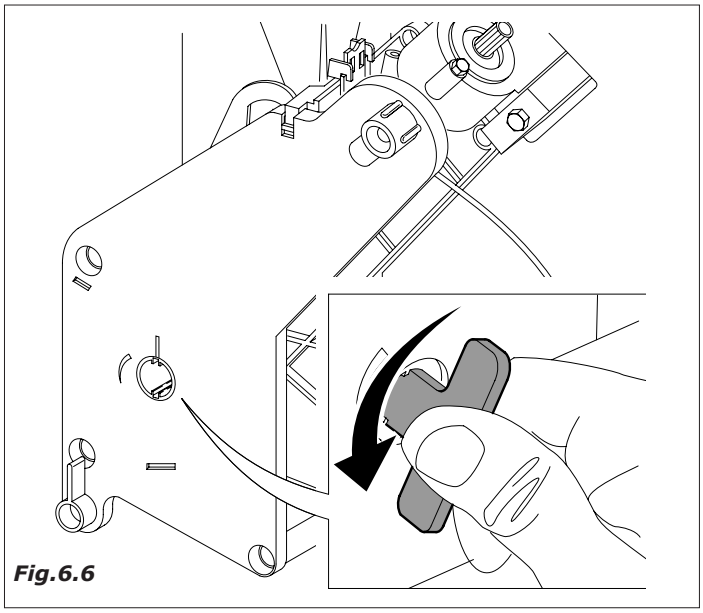


Fig.6.6

COFFEE MACHINE TIMING CHECK PROCEDURE

Ensure that during the idle state, the rotating index is aligned with the stage index (see fig. 6.7)

Ensure that during the delivery stage that the rotating index is not more than 1.5 mm in advance of the delivery reference point (the rotating index must be at a delivery position of between 0 and 1.5 mm from the delivery point).

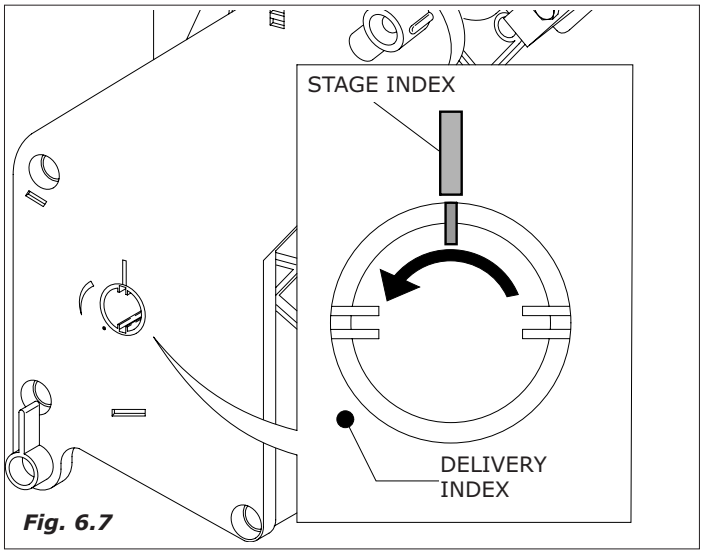


Fig. 6.7

6.3 MAINTENANCE PROCEDURES

Recommended equipment:
For those responsible for filling up and maintenance of the machine the recommended equipment is as follows:
- Tool carrier case
- Clean uniform
- Disposable gloves
- Clamp for closing the
- Roll of kitchen paper
- Wood or plastic stick
- Bottle of detergent
- Bottle of disinfectant
- "Distributor out of action" sign
- Small table for resting items (optional)

Never use:
- Sponges, scourers, cloths
- Brushes
- Screwdrivers or metallic objects.

6.3.1 Sanitization

IMPORTANT ADVICE

- Vending operators and technicians who usually get in contact with food shall pay particular attention to their personal cleaning and the cleaning of their clothes.

In particular before starting any operation on the distributor, make sure to:
- wear protection shoes or at least suitable shoes
- carefully wash your hands
- keep your hand nails short, clean and with no varnish
- keep your hair short and clean
- avoid scratching yourselves during maintenance operations
- avoid smoking and eating during work
- avoid touching hair, mouth, nose during work
- avoid wearing rings, bracelets, watches
- cover wounds (if any)
- avoid any personal strong perfume

The major food contamination passes through hands; remember to wash your hands when:
- you start working on the distributor
- after being to the toilet
- after touching your hair, blowing your nose, eating
- after touching chemical cleaning products
- after shaking hands with other people

If you use protection glove, remember to change them whenever they get in contact with polluting objects.

To ensure hygiene:
- Use disinfectants

The purpose of the disinfectants is to destroy any surface bacteria which may be present.

For cleaning:
- Use detergents and/or detersive products

The detergents act to eliminate the dirt.

Products exist on the market which are both detergents/disinfectants and are usually sold at the chemist's (chlorine-based).

For anything not mentioned in this section, refer to the HACCP regulation and in particular pay attention to the following:
- Cleaning of the premises
- Product transportation
- Machinery maintenance
- Waste disposal
- Drinking water procurement
- Personnel hygiene
- Food product characteristics
- Personnel training
- (Directive 93/43 CEE)

Important advice (ref. Directive 93/43)
- The premises where the automatic distributors are installed must be such as to prevent any accumulation of dirt, any contact with toxic materials, and the formation of condensate or mould on the surfaces of the machine.
- It is also important that the premises where the distributor is installed can guarantee a correct hygienic procedure, also preventing any cross contamination, during the operations, between food, equipment, materials, water, air recirculation or personnel interventions and excluding any external contamination agent such as insects or other harmful animals.
- Make sure that the water system complies with EEC Directive 80/778 regarding the quality of water for human consumption.
- Ensure a correct mechanical or natural aeration, avoiding any mechanical air flow from a contaminated area to a cleaned area.

The cleaning operations may be undertaken at the site of installation of the automatic distributor

Example of a recommended cleaning procedure of a hot drink automatic distributor:

The person responsible for machine hygiene, before opening the distributor must check the cleanliness of the surrounding environment and put up a sign to tell any potential consumers that:
- the machine is "out of use as maintenance is in progress"
- it is important that the person responsible for cleaning never has to interrupt his work in order to operate the machine.
- For internal cleaning use clean cloths, better if disposable.
- It is indispensable to avoid any contact between the products used for the generic cleaning of the distributor and the products to clean the parts in contact with food.
- During cleaning operations, pay attention not to transfer germs from dirty areas to already cleaned areas.

A) Use clean gloves.

B) Use hot water not taken from toilets.

C) Pay special care to clean the parts in contact with food
- Carefully remove any residual dirt before proceeding to use disinfectants.
- Carefully avoid any contact of food with dirty surfaces.
- During the cleaning operations carefully follow the instructions on the packages of chemical detergents. Absolutely avoid any contact of food with detergents.
- Make sure that your cleaning equipment is perfectly efficient.

D) At the end of the cleaning operations, place the water collecting bags in appropriate areas far from the automatic distributor areas.

The following table summarizes the recommended behaviour to reduce the risk of bacteria proliferation and contamination inside the distributor to the minimum.

TYPE OF INTERVENTION	TIME / No.of COUN		
	EVERY DAY	EVERY WEEK	20000 COUN OR MAX EVERY MONTH
Remove and wash all visible parts in the delivery area with sanitizing liquid.	•		
Empty the liquid ground collecting buckets and clean them with sanitizing liquid.	•		
Empty the coffee ground collecting tank and wash it with sanitizing liquid	•		
Remove all containers and clean with a wet cloth all container supporting parts, as well as the bottom and the outside of the distributor, in particular the delivery area; then proceed to sanitization.		•	
* Sanitization kits including plastic parts for the passage of pulverized or liquid product (cups, pipes, delivery flange, nozzles,…). For any further information, please contact directly our offices.			•
* Bianchi Vending Group has prepared specific kits expressly designed for every distributor mode			

6.4 Regulations

6.4.1 Dosage and grinding regulations

- Coffee temperature in the cup between 70 °and 80 °
- Temperature of soup products in the cup between 70°C and 80 °C.
- Grammage of coffee powder between 6 and 8 grams.
- grams of instant powder products according to what is indicated on the specific tables.

In order to obtain the best results with the product used we advise to check:

- **Ground coffee gram weighting:** vary the quantity using the knob positioned on the measuring device (Fig.6.8).

  Each notch of the regulation knob corresponds to a value of 0.05 grams.

  By turning in a clockwise sense the amount decreases.

  By turning in an anti-clockwise sense the amount increases.

  The variation in the product can be controlled by means of the reference notches on the body of the measuring unit (see figure 6.8)

  Coffee pellets must be have a compact consistency and be slightly damp.

- **Adjustment of the grade of manual grinding.**

  Turn the screw (fig.6.9) to obtain the desired results.

  Turn clockwise for fine grinding, turn anti-clockwise for coarser grinding.

  After regulation, three product regulations must be carried out in order to assess the efficiency of the regulation, the finer the granules the greater the time required for product delivery.

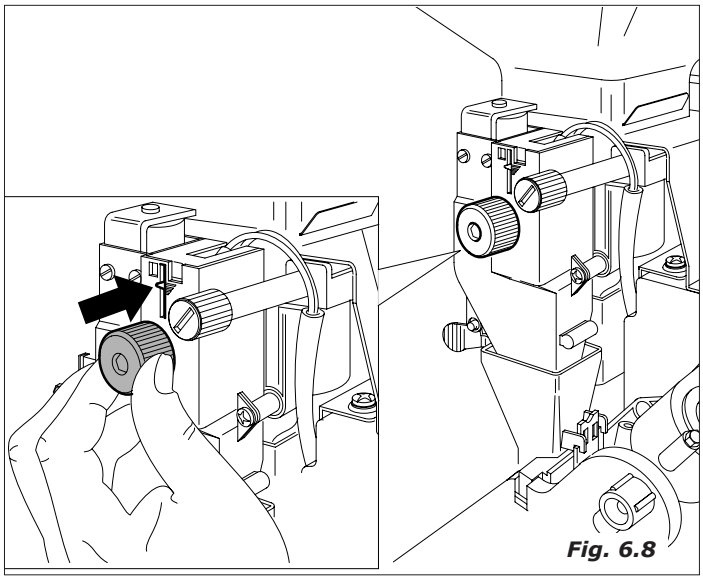


Fig. 6.8

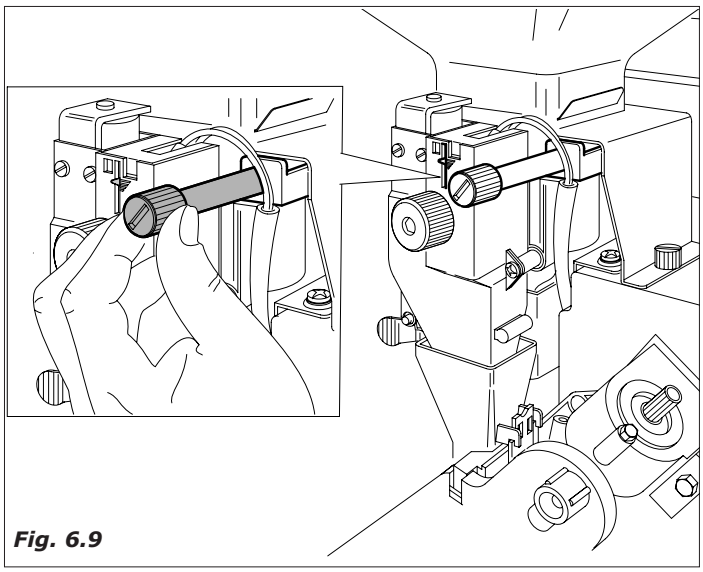


Fig. 6.9

- Automatic adjustment of grinding (Fig.6.10)

- It allows in the expresso versions to keep grinding steady, irrespective of the percentage of moisture, temperature and wear of blades.
- The first adjustment is performed with the device disconnected
- Performing the dose adjustment manually (6-7g)
- Performing the grinding adjustment manually
- Reckoning the supply time in seconds (std 18s)
- Reconnecting the device
- Setting the measured supply time, in programming
- Out of 5 expresso coffee, this parameter test will be automatically performed .The valid readings correspond with the third / fourth coffee: The first two will be ignored since they are the results of the previous adjustments, the fifth will be adjusting tests

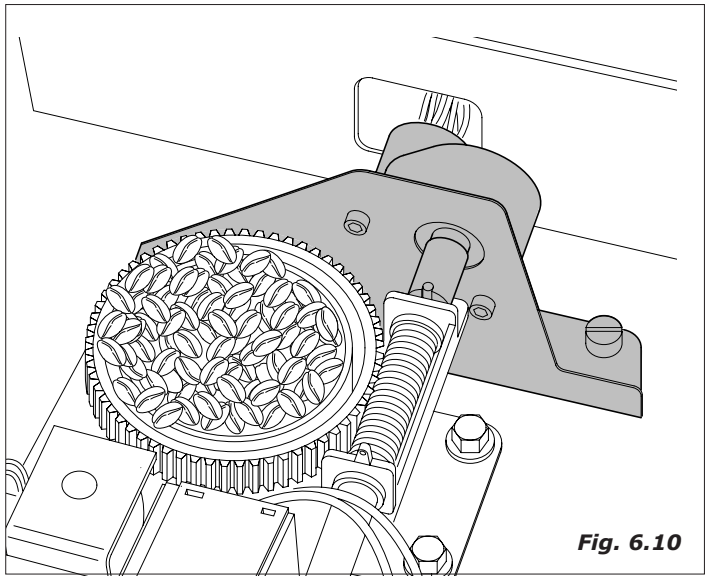


Fig. 6.10

6.4.2 Regulation of the instant solenoid water delivery valves

In the case of soluble products you can regulate the quantity of water and the powder dosage electronically by varying the standard parameter, according to the procedure indicated in chapter 5.0 SOFTWARE INSTRUCTIONS.

ATTENTION: Re-adjust water rate by acting on the soup valve adjusting screws means to compromise and alter the quantity of water supplied in cup and therefore its dose.

To access the electrovalve placed in the instant boiler, remove panel (1) by loosening the two screws (2) shown in figure 6.12

– To obtain a good rinsing of cups possibly act on the rate screw and then check that doses are reliable (Fig. 6.11).

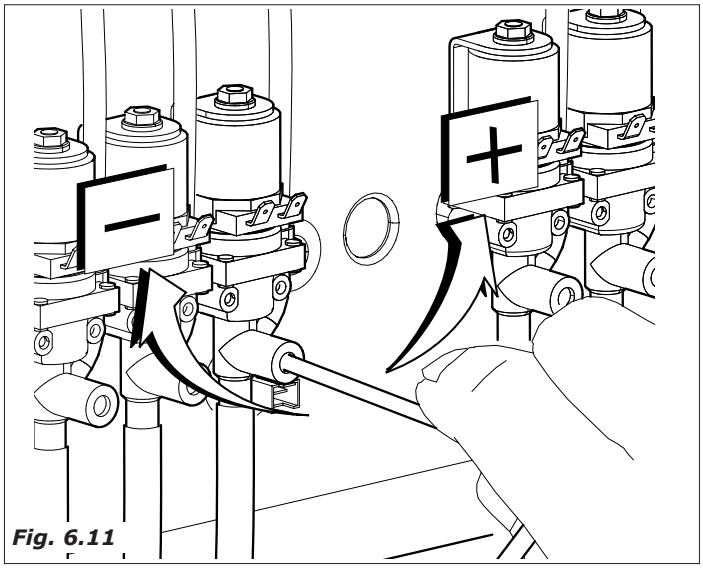


Fig. 6.11

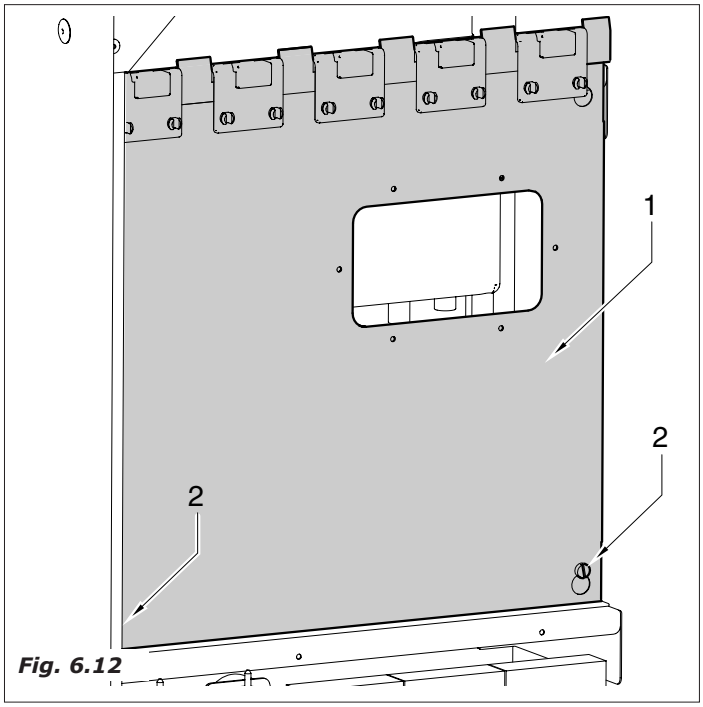


Fig. 6.12

6.4.3 Access to internal parts

To access the internal parts of the automatic distributor (pumps, espresso coffee boiler, electrovalves, electrical connections,etc.):

Espresso version:

- Rotate the sugar dispensing group towards outside (fig.6.13).
- Then act on the two handles shown in fig. 6.14 - 6.16, remove the panel and support it until completely taken out (fig.6.15-6.17).

After carrying out maintenance operations, if required, lift the complete panel until it is correctly installed in vertical position, then put again the sugar dispensing group in work position by rotating it rightwards.

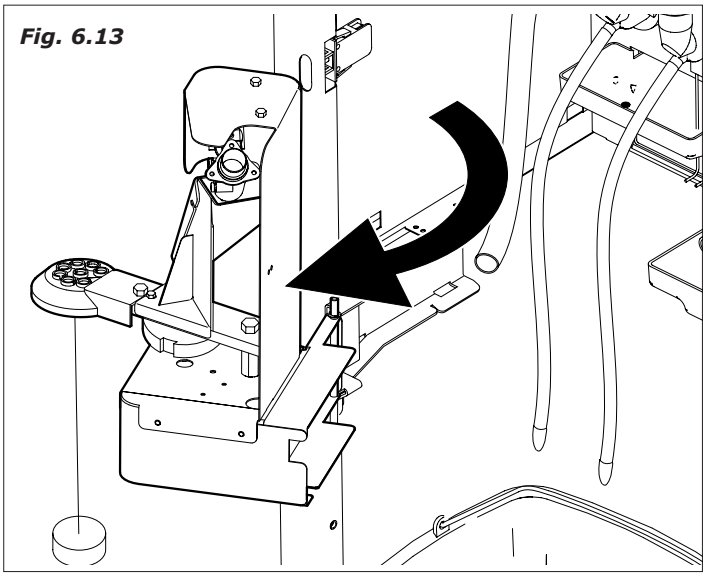


Fig. 6.13

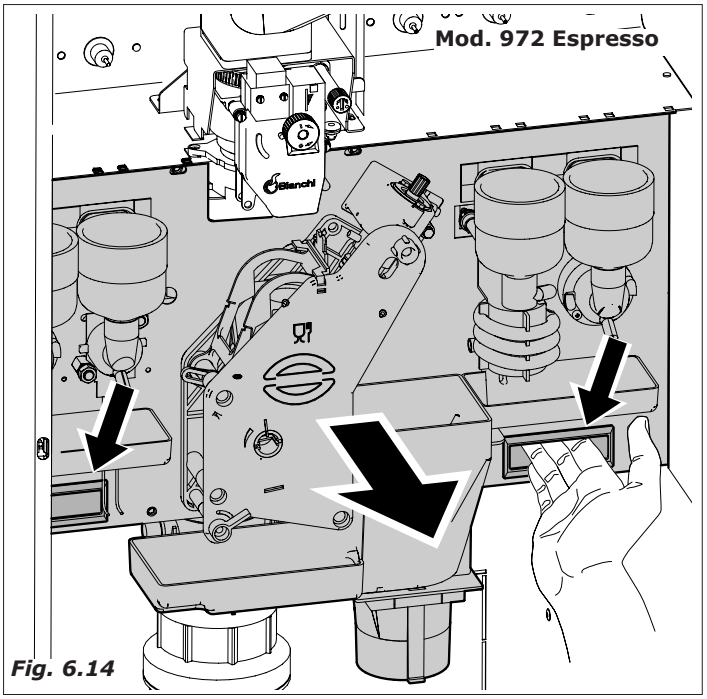


Fig. 6.14

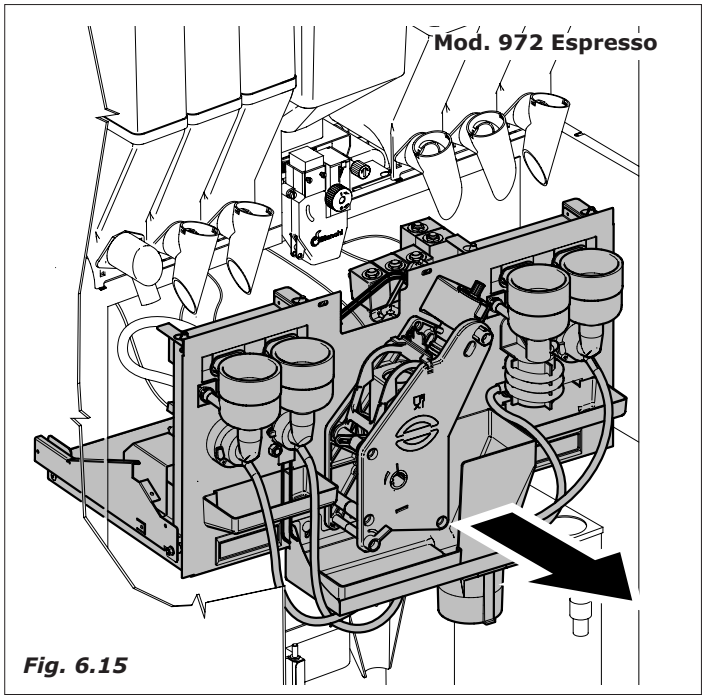


Fig. 6.15

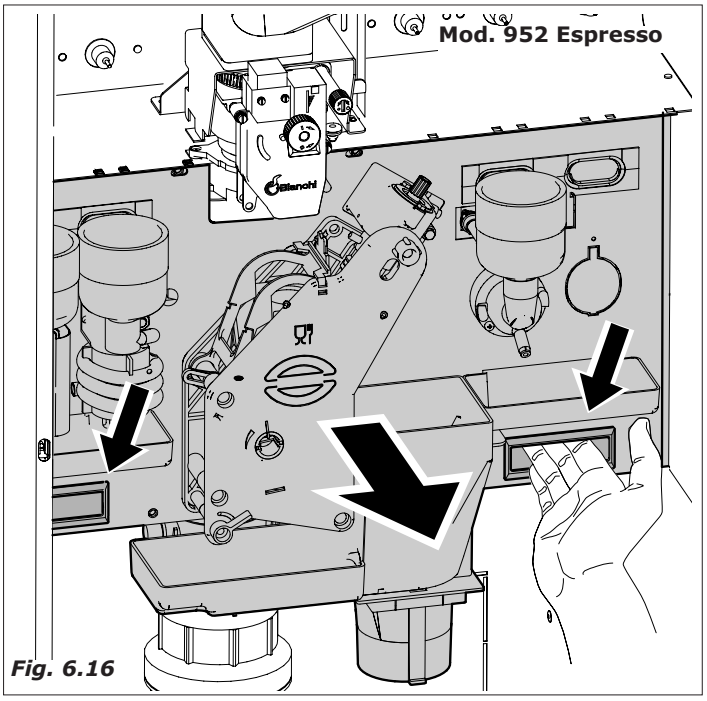


Fig. 6.16

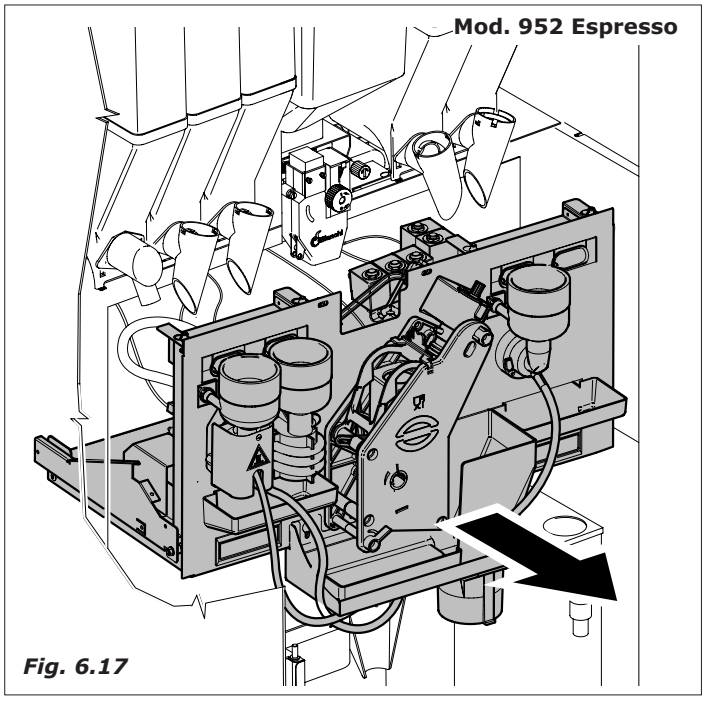


Fig. 6.17

Instant version:

- Disassemble the mixer groups and loosen the three screws shown in figure 6.18 - 6.19, slide the frontal panel leftwards until the slots are released, then remove the panel to access inside.

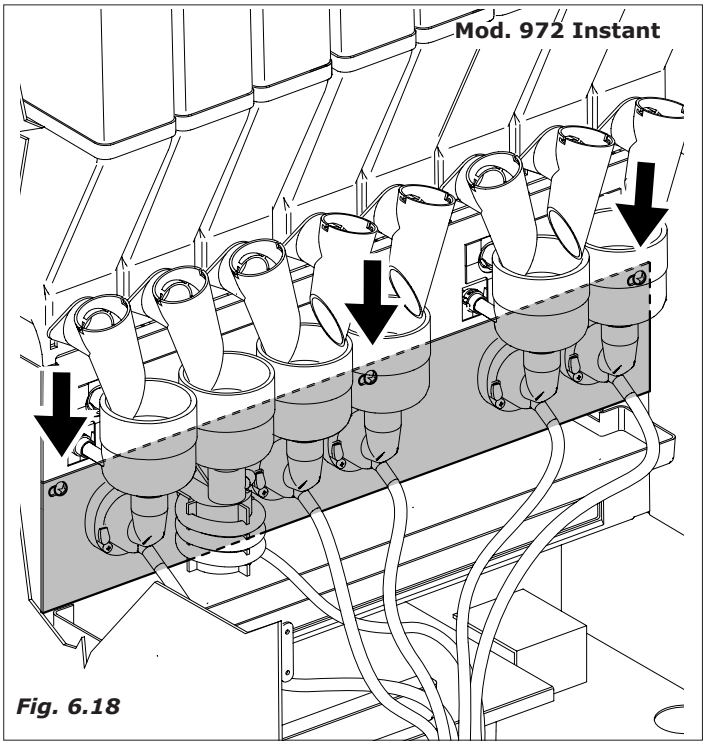


Fig. 6.18

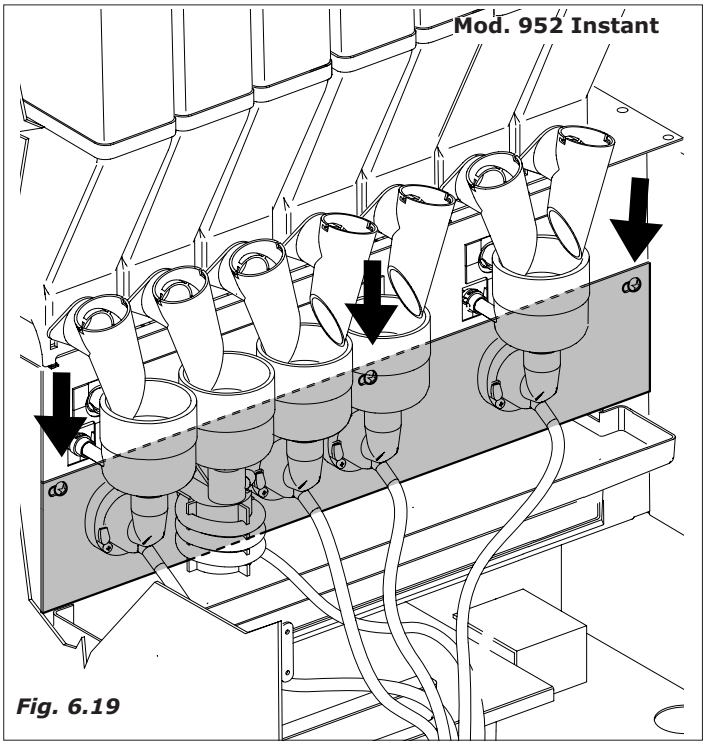


Fig. 6.19

6.5 BRITA decalcificator filter

It performs water decarbonization, reduction of organic impurities (such as free chlorine, its compounds and pesticides).

They remove the temporary water hardness , and some heavy metals such as lead and copper.

They neutralize build up of bacteria through active carbon treatment on Silver base.

The filtering compound of the Brita filter AcquaQuell 06-B

BRITA AquaQuell filtering systems (AquaQuell 33,1,2,3) contain ionic-exchange resins and activated granular carbon with the pur pose of optimizing drinkable water.

The cationic-exchange resin (IER) is an artificial polymer with acrylic base. Groups are linked to the polymeric chains in their H+ form.

In the whole exchange process, calcium cations, magnesium, copper and lead are exchanged with protons.

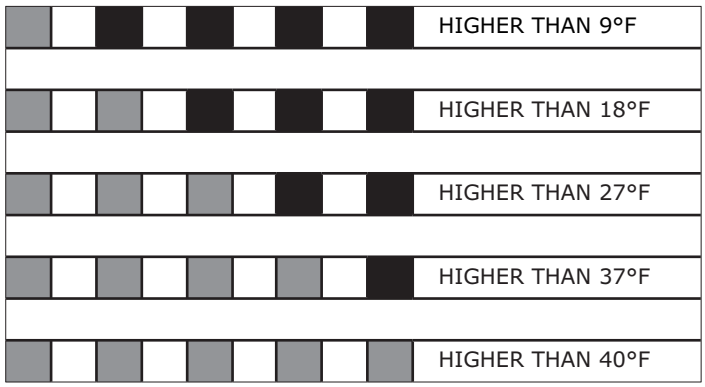
Since IER is a weekly acid resin, only the temporary hardness is removed (The grade of acidity is given by the H+ concentration). The granular active carbon (GAC) is produced by the coconut shells which are charred and activated in oven.

The activation process gives an exchange surface whose GAC can, by alloying organic impurities to it such as disinfectants, chlorine and pesticides such as lindane and atrazine, etc.

Water hardness detection systems

There are various systems to check water hardness level, from immersion stripes sensitive to calcium hydrogenate dissolved in water, to ortolidina kit which can make water colour change in presence of given percentages of Ca and Mg dissolved in it.

Through the immersion strips the darker colour shows a lower hardness of water, the lighter colour a higher hardness. (see diagram)



Set BRITA filter duration through the kit supplied with the decalcificator. Then, enter the data in the programming software so that , after a number of selections, the maintenance operator is warne

Water hardness °F	Capacity lt	No. of supplies		
		130 cc.	150 cc.	180 cc.
10,5	700	5300	4600	3800
4,5	520	4000	3400	2800
18,0	420	3200	2800	2300
21,5	350	2600	2300	1900
25,0	300	2300	2000	1600
28,5	260	2000	1700	1400
32,0	240	1800	1600	1300

6.6 Resin regeneration of the water softner
(Optional)

The regeneration of the resins must be executed according to the water of mains supply to which the distributor is connected. As reference the table indicated here below can be used:

Water hardness	**Number of selections**	
° french	***60cc***	***130cc***
10	25000	12500
20	12500	6000
30	9510	4500
40	6500	3000
50	5000	2500

So as to verify the degree of hardness of the water and consequently the time and type of interventions, specific kits available on the market can be used.

The operation can be effected on the distributor as follows:

- switch off the machine.
- turn the lower faucet being careful to put the relative hose in a bucket or better in a drain (Fig. 6.20).
- remove the cover and introduce 1,5 kg of normal cooking salt (Fig. 6.21)
- replace the cover.
- switch on the machine and let the water pour out until it is no longer salty (Fig. 6.22).
- switch off the machine and close the faucet.

The time necessary for this operation is about 30/45 minutes.

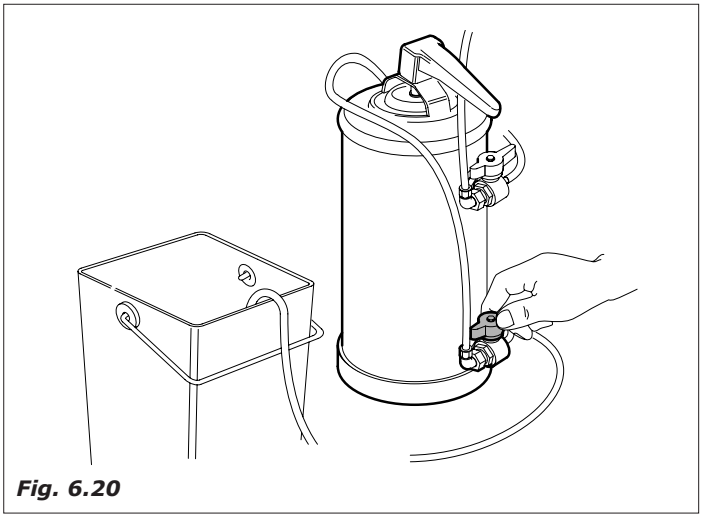


Fig. 6.20

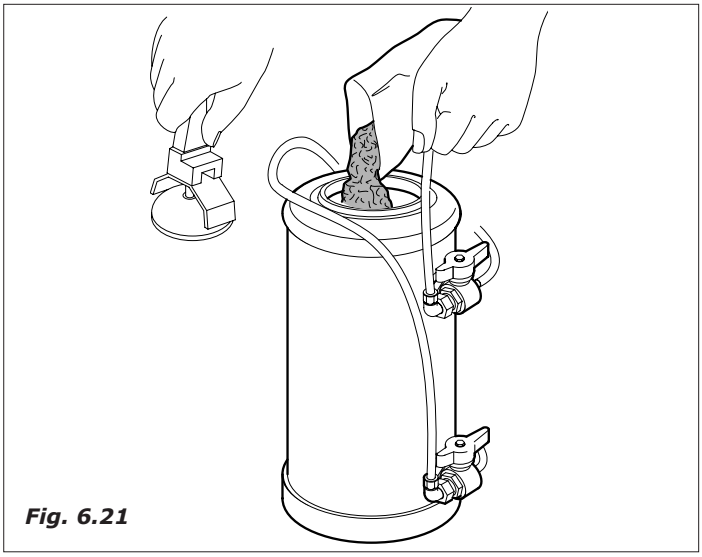


Fig. 6.21

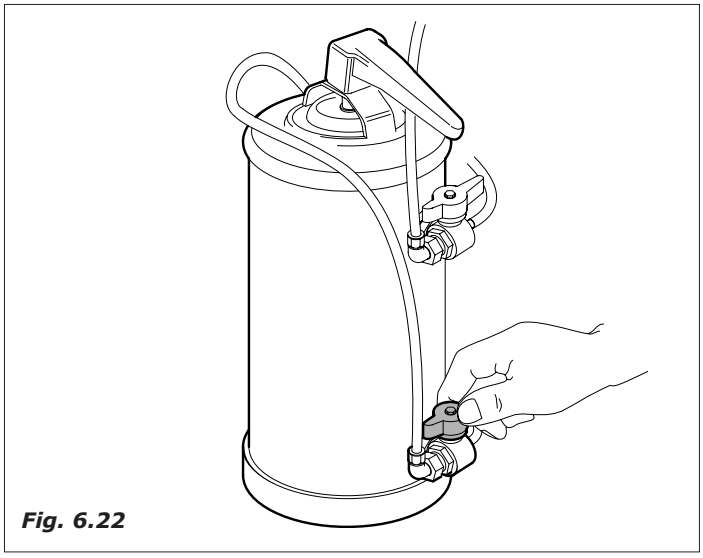


Fig. 6.22

6.7 Replacing the neon lamp

Before starting any operation on the machine make sure that the power supply of the distributor is off.

Access to the upper neon lamp

- Lift the bracket and remove the cup column (Fig.6.23)
- Unscrew the two external screws and loosen the two nuts as shown in Fig 6.24
- Remove the protection casing and replace the neon lamp by carefully taking it out of its support (Fig.6.24).
- After replacing the lamp make sure that it works.
- After cutting off again the power supply of the machine, assemble the parts in the reverse order.

Access to the lower neon lamp

- Unscrew the two external screws and loosen the two nuts as shown in in Fig 6.24
- Remove the protection casing and replace the neon lamp by carefully taking it out of its support (Fig.6.24).
- After replacing the lamp make sure that it works.
- After cutting off again the power supply of the machine, assemble the parts in the reverse order.

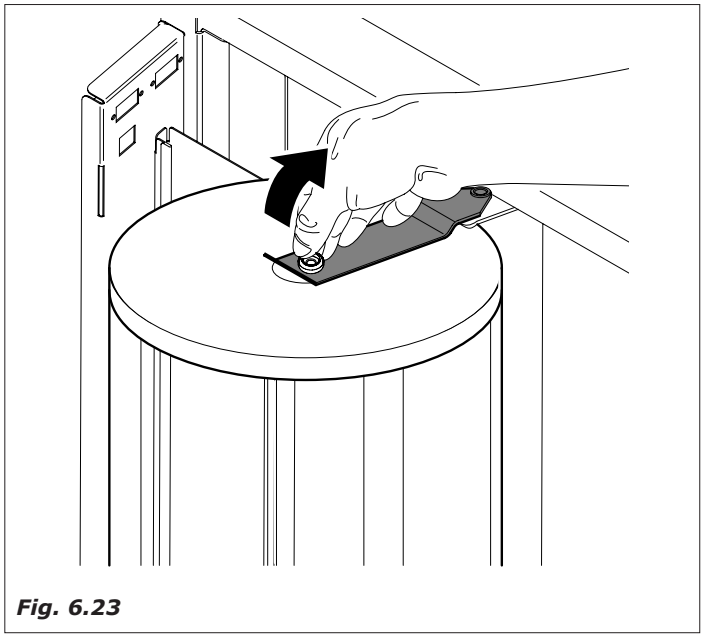


Fig. 6.23

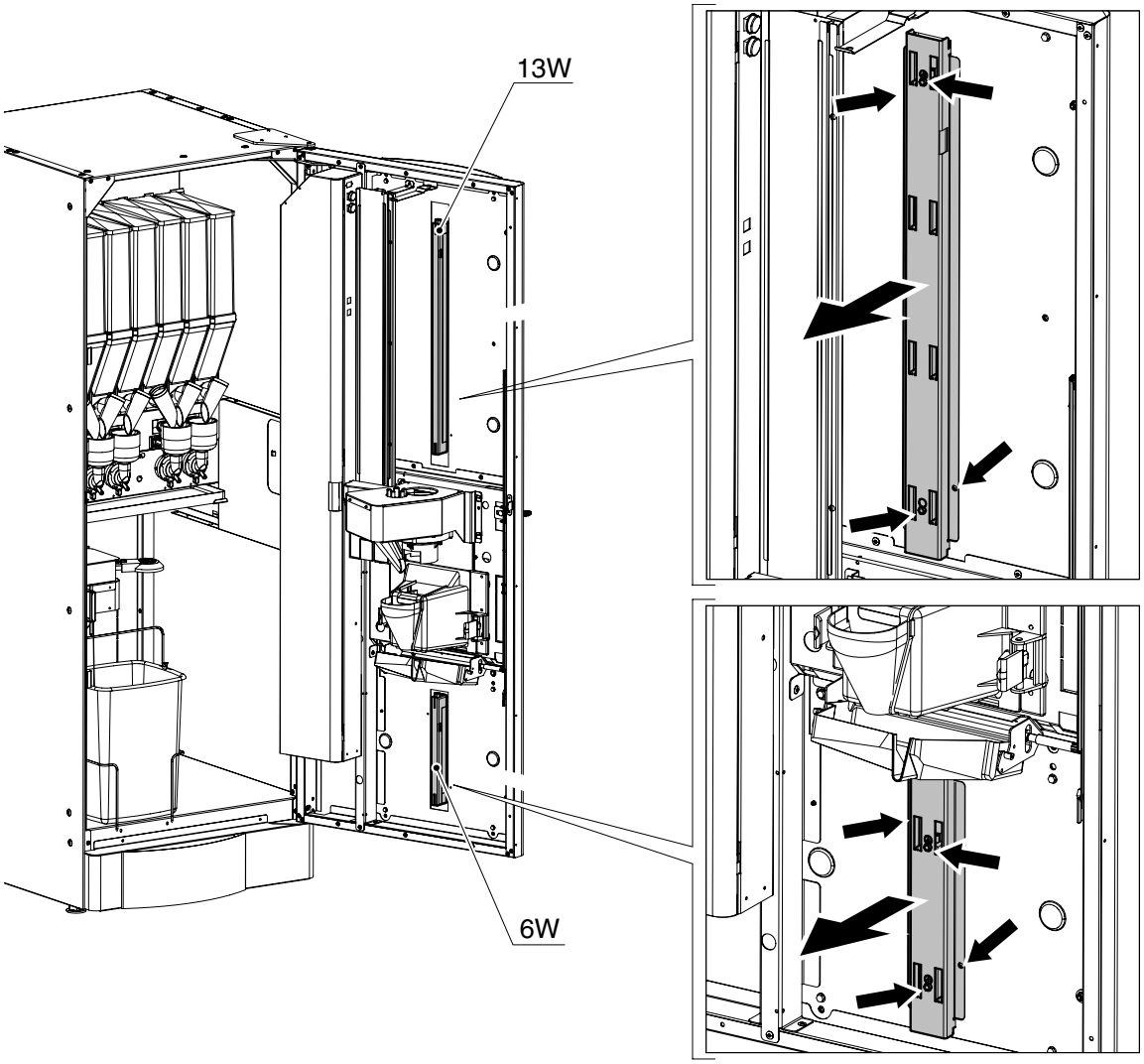


Fig. 6.24

6.8 Inactivity

If the automatic vending machine remains inactive for a long time it is necessary to perform some prevention operations:

- disconnect the machine electrically and hydraulically.
- empty completely the instant boiler and the floater reservoir removing the plug located on the hose along the drain chute (Fig. 6.25).
- Put the plug back in once the draining has been done.
- unload all the product from the containers
- perform a thorough cleaning of all the parts in contact with food substances according to what has already been described.
- empty the liquid waste bin carefully
- eliminate the spent grounds bag
- clean with a cloth all the internal and external surfaces of the machine.
- protect the outisde of the machine with a plastic film wrapping or bag (fig. 6.26)
- stock in a dry and protected place where the temperature is not less than 1° C.

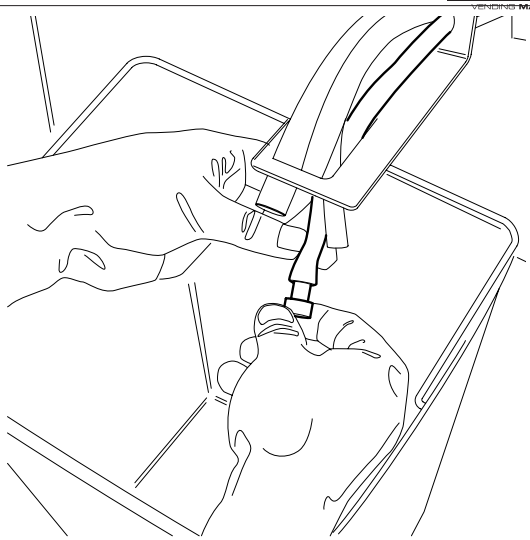


Fig.6.25

Fig.6.26

7.0 DISMANTLEMENT

Proceed with the emptying of the products and of the water as described in the previous paragraph.
For the dismantlement we advise to disassemble the machine dividing the parts according to their composition (plastic, metal etc.).
Subsequently entrust to specialised companies the parts divided in this manner.

Attention! Check that the machine disposal is perfomed with respect of environmental rules and according to the regulations in force

8.0 ALARMS

When an alarm occurs, it usually switches off all outputs and blocks any dispensing under way. All alarms can be eliminated, further to removing the cause, by accessing Maintenance mode and pressing Reset button. WinBianchi must include the possibility of making an alarm blocking.

8.1 BLOCKING ALARMS SHOWN ON DISPLAY

Riga 1: Alarm

Riga 2: Out of order

It occurs when a blocking error is found. The reset operation will automatically reset and re-check the occurred alarms. The alarms that generate this signal are:

Serial communication problems with Executive or MDB coin box. It occurs in case of communication error between board and coin box or the coin box itself is not found.

- Executive: a 60 sec.delay is expected from the moment the coin box is not found until the alarm starts.

- MDB: the delay is equal to 10 seconds upon start-up.

- Scale factor: This alarm is active only if the Executive coin box is enabled (not in Price Holding mode). It occurs if the division between of the programmed prices and the basic coin received by the coin box exceeds the value of 250. This alarm is self-restoring.

- Slave boards linked to the Master board in alarm conditions. Therefore no dispensing is possible.

8.2 ALARMS SHOWN IN MAINTENANCE MODE

In maintenance mode both alarms and signallings will be displayed. Signallings are a special type of alarm that does not interrupt the regular operation of the machine. Both alarms and signallings are subdivided into stored and not stored. Stored alarms and signallings persist even when the board is switched off and switched on again.

ALARMS	DESCRIPTION	TYPE OF INTERVENTION
8.2.1 Stored alarms		
ECM EEprom error	It occurs if an error is found in EEprom. By carrying out the reset operation also the factory data will be recharged in the eeprom (only if this alarm is installed).	Installer
EBI Translator	It occurs if the 10 sec timeout lapses during the movement of the spout translator	Installer
8.2.2 Non stored alarms		
EAJ Scale factor	This alarm is active only if the Executive coin box is enabled (not in Price Holding mode). It occurs if the division between one of the programmed prices and the basic coin received by the coin box exceeds the value of 250. This alarm is self-restoring.	Installer
ECE Out of order	It occurs if the communication between board and master interrupts.	Installer
EBA Cup	It occurs in one of the following two cases: 1. The 90 sec timeout for cup column rotation lapses. 2. The 10 sec timeout for cup release lapses.	Installer
EDP water level	It occurs 2 seconds after the water empty micro is detected. It switches off the resistance and re-initializes the timeout for E12 and E13.	Installer
EDM NTC X Slave Y	It occurs if the temperature probe goes to short-circuit or the circuit is open. The resistance will be switched off if NTC is in short circuit or open. Upon start up a 30 sec delay is expected prior to alarm check. NTC 1 – Related to power board NTC 2 – Related to expansion 1Slave Y specifies the machine to which it belongs. If the probe is in short circuit the maintenance mode will show a value equal to 0. If the probe is an infinite resistance open circuit the maintenance mode will show a temperature value equal to 150.	Installer

ALARMS	DESCRIPTION	TYPE OF INTERVENTION
EH1A NTC Cold	It occurs if the temperature probe of the cool unit goes to short circuit or the circuit is open. The resistance will be switched off if NTC is in short circuit or open. Upon start up a 30 sec delay is expected prior to alarm check.	Installer
EC1C Tcoffee<60°C	Referred to boiler 1. It occurs if upon reset the set temperature minus 15°C is not reached in 15 minutes or if during the regular operation the temperature remains below 60° for 15 minutes. Applicable to single boiler or for coffee boiler if the double boiler is enabled.	Installer
EC2C Tinstant<60°C	Referred to boiler 2. It occurs only if the double boiler is enabled and if upon reset the set temperature minus 15°C is not reached in 15 minutes or if during the regular operation the temperature remains below 60° for 15 minutes.	Installer
EDF Sugar	It occurs if the 10 s timeout lapses duringthe sugar conveyor movement.	Installer
EGN Too full	It occurs 2 sec.after the too full condition of the liquid collecting tank micro is found.	Installer
ECK No Espansion	It occurs if components managed by any expansion are enabled.	Installer
8.2.3 Stored signallings		
EDT Grinder X	It occurs if the programmed grinder timeout lapses. The display will show the 'Without coffee" message.The amount is re-credited only in case of instant grinding. X=1 or 2	Installer
EEK Group	It occurs if the programmed coffee group timeout lapses. The display will show the "Without coffee" message. The amount is re-credited.	Installer
EEJ No Group	It occurs if the group presence micro is NA.	Installer
EFN ESP Pump	It occurs during the coffee water dispensing if at least 10 cc are not provided in the programmed pump timeout.The display will show the "Without coffee" message. The amount is re-credited. The boiler resistance will be switched off until the error is reset.	Installer
EFN INSTANT pump	It occurs during the water dispensing of instant products or hot water if at least half dose is not provided in the programmed pump timeout. The display will show the "Espresso only" message. The amount is re-credited if hot water was not being dispensed.The boiler resistance will be switched off until the error is reset.	Installer
EDU Dose vol 1	It occurs if after the coffee release phase the dose micro remains pressed.The display will show the "Without coffee 1" message. The amount is re-credited.	Installer
EDU Dose vol 2	It occurs if after the coffee release phase the dose micro remains pressed.The display will show the "Without coffee 2" message. The amount is re-credited.	Installer
Water empty	For machine with cool unit only. It occurs in one of the following two cases: 1. Water is not at Min Lev (with approx. 2 sec.delay).2. The 4 min timeout for the water loading ev lapses.The display will show "Cold drinks only" message.	

ALARMS	DESCRIPTION	TYPE OF INTERVENTION
EDF Spoons	It occurs if the 10” spoon timeout lapses.With this signalling on, no spoon will be dispensed.	Installer
ELC Capacity	Dispensing of instant products or hot water: it occurs if a quantity of water between 50% and 70% of the programmed dose is dispensed. The display will show the character ‘*’ as last character. This signalling will prevail on the decounter signallings (the eight signallings below)	Installer
Air pump	It occurs if during the check at the end of the dispensing from the Fresh Brew group the compressor cannot reach the pressure of 0.3 bar in 3 seconds for the circuit. The display will show the “Instant products only” message.	
EFB Cleaning filter	It occurs if the value of the cleaning filter decounter is equal to zero.	Maintenance operator
EDZ Grinding blades	It occurs if the value of the coffee grinding blade decounter is equal to zero.	Maintenance operator
EEC FB 1 filter	It occurs if the value of the FB 1 filter decounter is equal to zero.	Maintenance operator
EEC FB 2 filter	It occurs if the value of the FB 2 filter decounter is equal to zero.	Maintenance operator
EEC Esp Filter	It occurs if the value of the coffee filter decounter is equal to zero.	Maintenance operator
EFI Decount EV	It occurs if the value of the EV decounter is equal to zero.	Maintenance operator
EEL Gaskets	It occurs if the value of the coffee gasket decounter is equal to zero.	Maintenance operator
EDO Boiler 1	It occurs if the value of the boiler 1 decounter is equal to zero.	Maintenance operator
EDO Boiler 2	It occurs if the value of the boiler 2 decounter is equal to zero.	Maintenance operator
OAR HACCP	It occurs if the value of the HACCP decounter is equal to zero.	Maintenance operator
EDJ decount PX	It occurs if the X powder decounter is 000000s.	Maintenance operator
EDJ decount Gr	It occurs if the bean decounter is 000000s.	Maintenance operator
ECQ Driver OxxPxx	It occurs when a failure is found on output OUT XX (Oxx) on pin XX (Pxx).In case of intervention of OMNIFet overcurrent protection, Gate voltage must be read after50 ms.	Installer

BIANCHI VENDING GROUP S.p.A.
Corso Africa 9 - 24040 Località Zingonia, Verdellino (BG) - ITALIA
tel. +39.035.419.67.11 - fax +39.035.883.304