

## DECLARATION OF EEC CONFORMITY

**Nuova Bianchi Spa** - situated in via Parigi n°5, Zingonia (Bergamo) Italy, represented by Mariella Trapletti - states that the vending machines model:

### "SIRIO FRESH BREW "

are in conformity with the safety measures provided for by the Law nr. **98/37/EEC** dated 22-06-1998 in its items n.1-2-3-4 and relative enclosures 1-2-3-5 "Safety and Health and subsequent, and 73/23/CEE and subsequent.

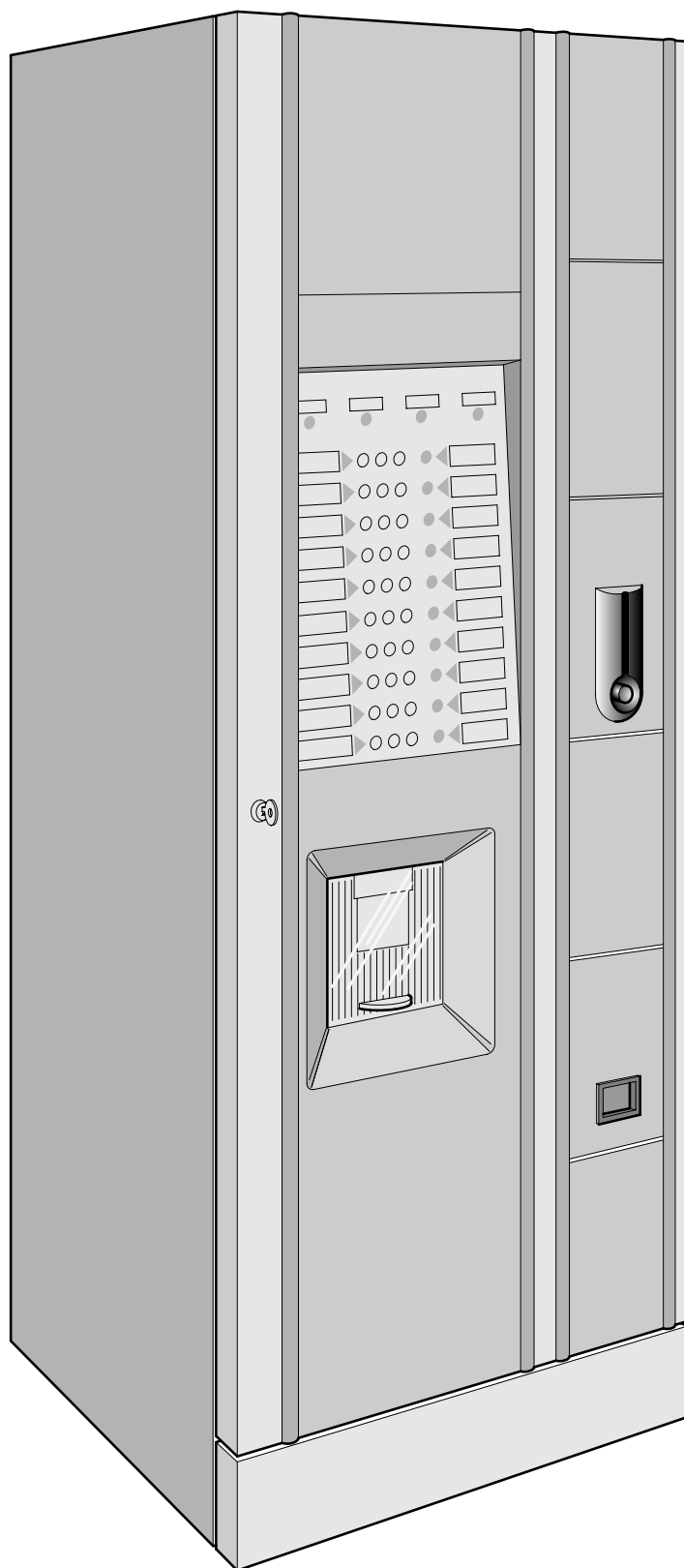
Nuova Bianchi has applied the Standards for the prevention and the elimination of the radio disturbances in respect of the EEC Standards **89/336, 93/ 68** and subsequent annexes and of the **D.L. nr. 476** and subsequent annexes , that are in conformity with the norms **EN 55014 3a ed., EN 55104, ENV 50141** and **EN 61000**.

The Standards used for testing of the suitability for contact with food substances are in accordance with **DM 21-03-1973** Standards and subsequent annexes.

In general the rules of the Standards **90/128/EEC ,73/23/CEE** and **89/336/CEE** and subsequent annexes have been applied. The Standards used for the safety tests on electrical parts are in accordance, ref. **CENELEC HD 251S2**, pub. **IEC 335-1-2**.







**FRESH-BREW**

**Sirio**

ITALIANO

ENGLISH

DEUTSCH

SWEDEN



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

## SAFETY SYMBOLS



**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 on contact!

## PICTOGRAMS



### IMPORTANT NOTICES

#### USER

The user is defined as the person authorized to collect drinks from the automatic distributor. The user is not allowed to undertake any maintenance operations either ordinary or extraordinary. In the event of a fault the user is obliged to notify the maintenance technician or the person responsible for running the automatic distributor.



#### 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 9.0). In the event of a fault the maintenance technician must call the installation technician.



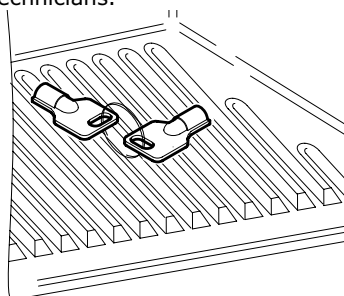
#### INSTALLATION TECHNICIAN

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.

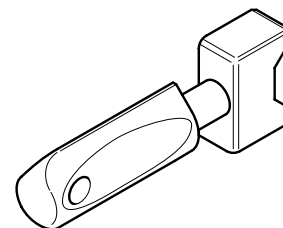




Keys at the disposal of the  
MAINTENANCE and INSTALLATION  
technicians.



Key at the disposal of the  
INSTALLATION technician.



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**

#### **EPROM EXTRACTOR**

#### **P3000**

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## 1.0 PREMISE

### 1.1 Important notices

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 specific authorization.

A thorough knowledge and technical compliance with the safety advice and danger warnings contained in this manual, are essential in order to ensure that installation, starting up, running and maintenance of the machine are undertaken under conditions of total safety.

### 1.2 General Instructions



*Before using the automatic distributor, carefully read all parts of the present manual.*

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.

The installation technician must have prior training and instruction on the operations to be undertaken on the automatic distributor, and only undertake the operations for which it is specifically competent.

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 operations necessary to ensure the machine's efficiency before and during use are the responsibility of the user.*

- Any tampering with 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, adaptations that are done the machine and that are subsequently commercialized do not oblige NUOVA BIANCHI neither to intervene on the machine previously supplied, nor, neither to update the relative technical documentation supplied together with the machine.
- It is however NUOVA BIANCHI's faculty, when deemed opportune and for valid motives, to update 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 Nuova Bianchi's Technical Service at the following numbers:

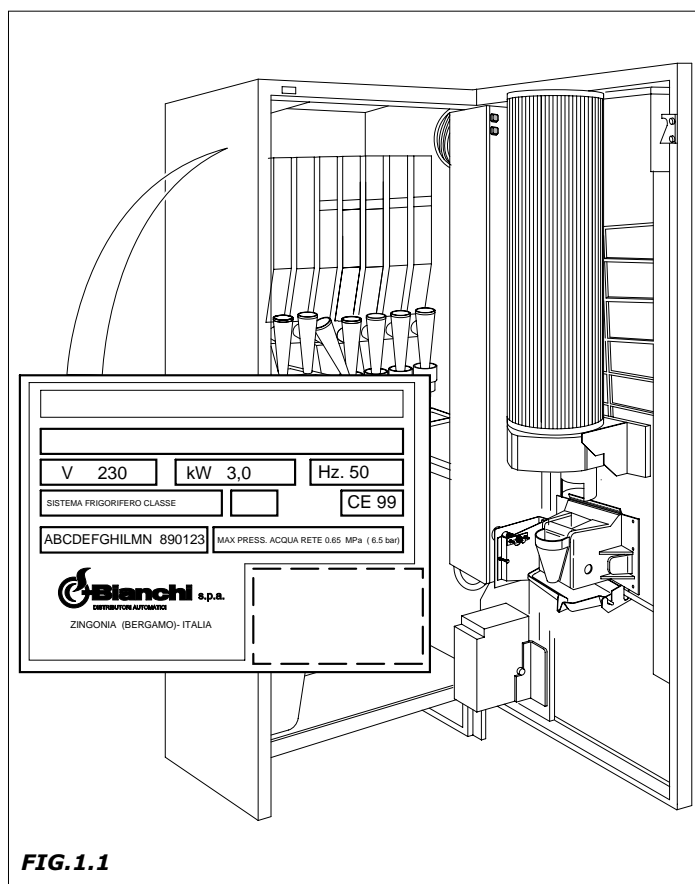
**☎ 035 4196772 - fax 02 70048332**

When calling it is advisable to provide the following information:

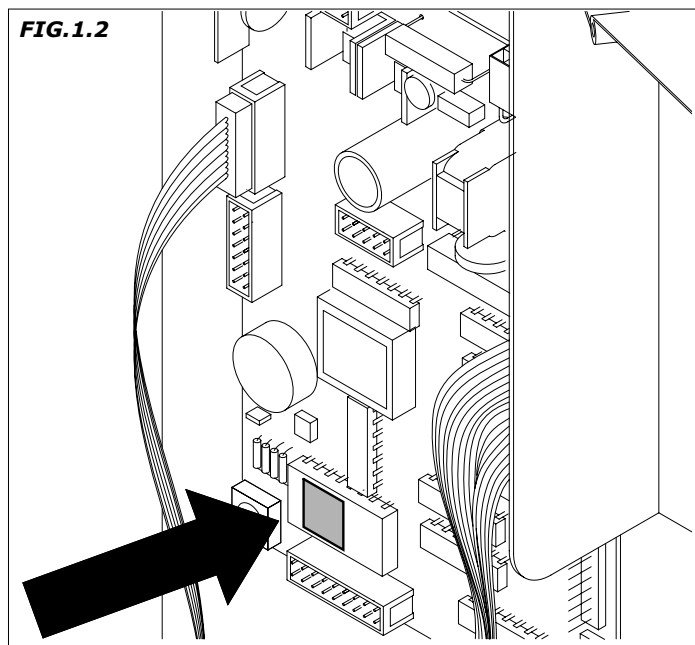
- The data registered on the serial number label (Fig. 1.1)
- The version of the programme contained in the EPROM (adhesive label applied to the component the assembled on the C.P.U. board ) (Fig. 1.2)

**Nuova Bianchi S.p.A.** declines any responsibility for damages caused to people or belongings due 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 Nuova Bianchi 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 (i.e. catering kitchens...).
  - In the event that on installation of the machine the conditions differ from those indicated in the present manual, or should the same be subjected to changes over time, it is necessary to immediately inform the manufacturer before using 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.



**FIG.1.1**



**FIG.1.2**

## 2.0 Technical features

Height	mm 1830
Width	mm 657
Depth	mm 730
Weight	155 kg
Power Supply	V 230
Power frequency	Hz. 50
Installed power(1)	2,85 kW

### Average consumption:

on standby	
for 50 drinks	
Water supply connection	3/8" gas
Electric connection	spina SCHUKO

### WATER SUPPLY

from main supply with pressure between 0.5 and 6.5 bar

### CUP DISPENSER

Suitable for cups with diameter 70-74 mm

### BOILER RESISTANCES

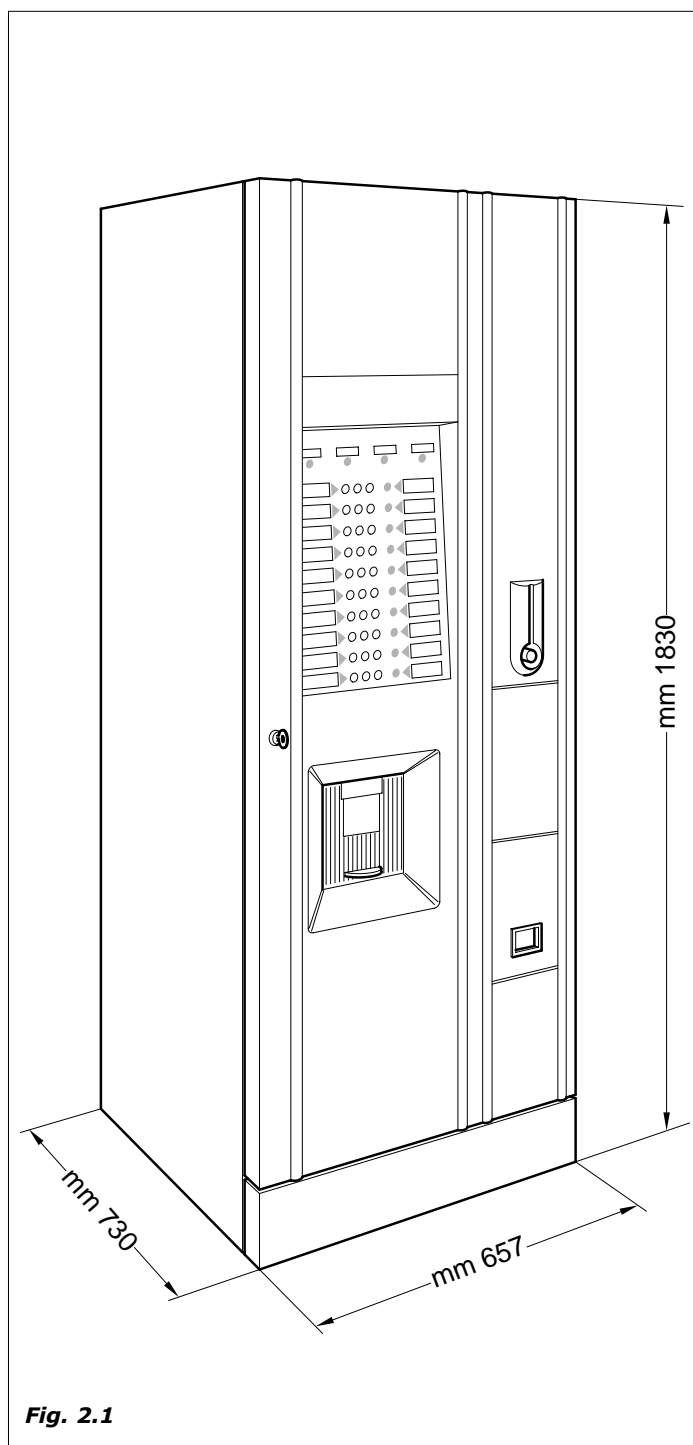
of armoured type

of 2700 W

### PRODUCT CONTAINER CAPACITY

Coffee in beans	kg 2,2 + 2,2
Tea leaves	kg .....
Milk powder	kg 2,2
Chocolate	kg 4,8
Tea	kg 5,2
Frozen-dry tea	kg 2,4
Broth	kg 3,8
Sugar	kg 5,2

<sup>(1)</sup> According to the requested version and the applicable standards in the place of use.

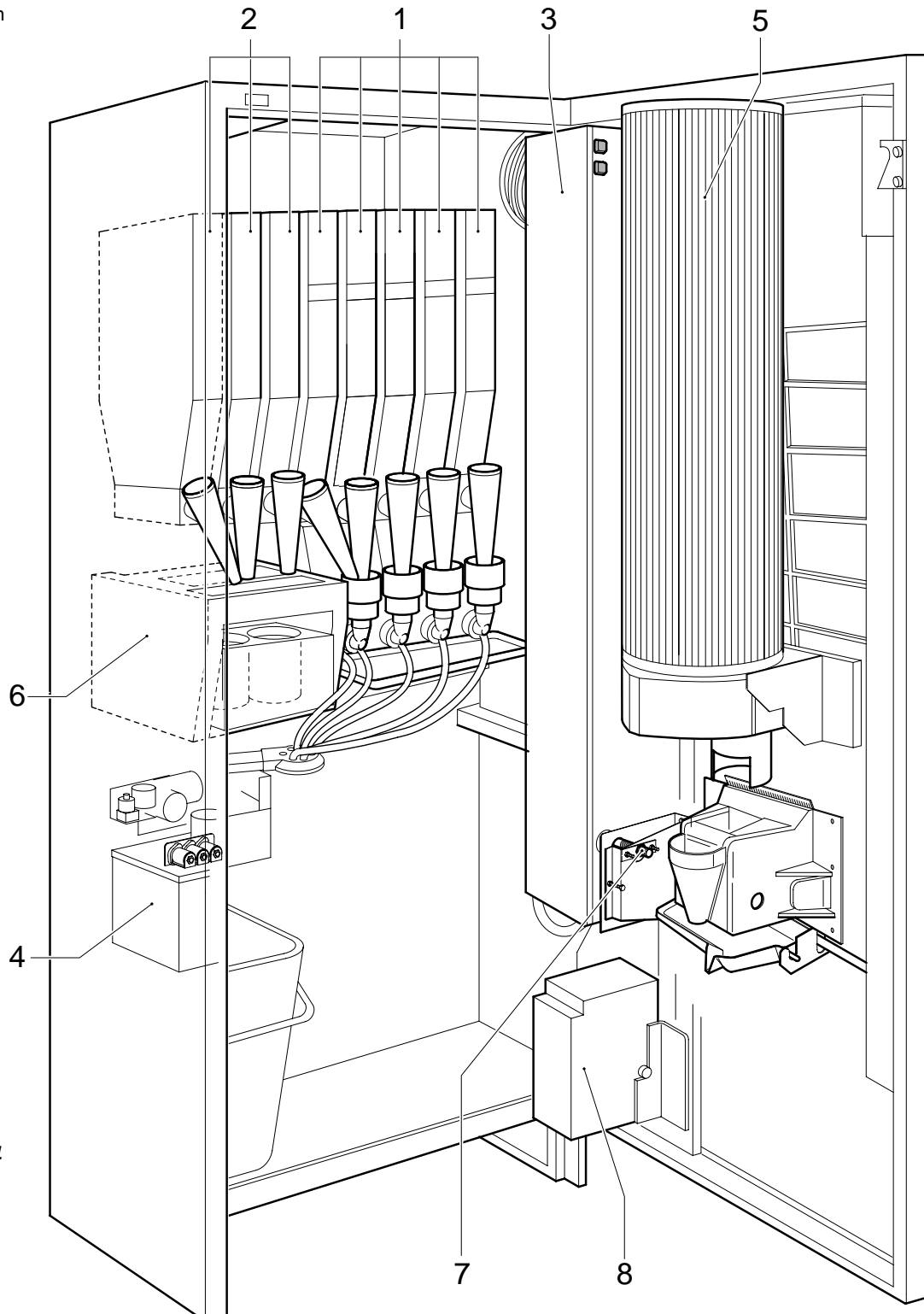




### 3.0 GENERAL TECHNICAL DESCRIPTION

#### 3.1 Machine description (Fig. 3.1)

- 1 Soluble/sugar drink containers
- 2 Fresh brew drink dispenser
- 3 Electronics board
- 4 Boiler
- 5 Cup column
- 6 Fresh brew unit
- 7 Cup presence detector
- 8 Coin mechanism



**Fig. 3.1**

### 3.2 Foreseen use

The automatic distributor Sirio is exclusively for the dispensing of drinks, prepared mixing food substances with water.

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 a sugar stirrer is also dispensed.

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

### 3.3 Models

The following terminology is used so as to distinguish the various models of automatic distributors:

#### SIRIO:

Version with soluble products and Fresh Brew device



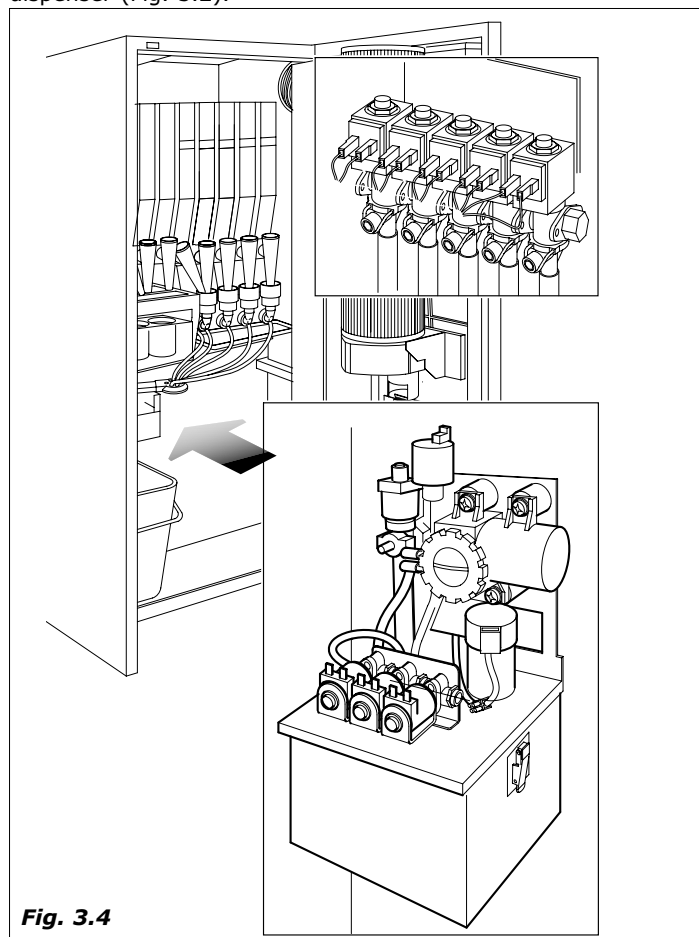
*The manual is compiled for the most complete model: it is therefore possible, to find descriptions or explanations not related to your machine*

### 3.4 Basic operation concepts

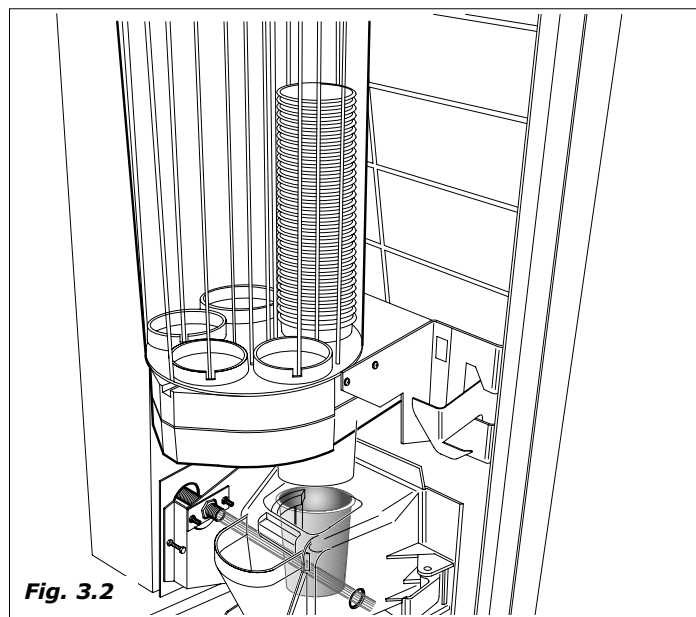
During the normal functioning the distributor is set to standby status. Introducing the necessary amount, according to the set price, and after pressing the key relative to the desired drink, the drink dispensing cycle is activated and can be divided in to different processes:

#### CUP DISPENSING

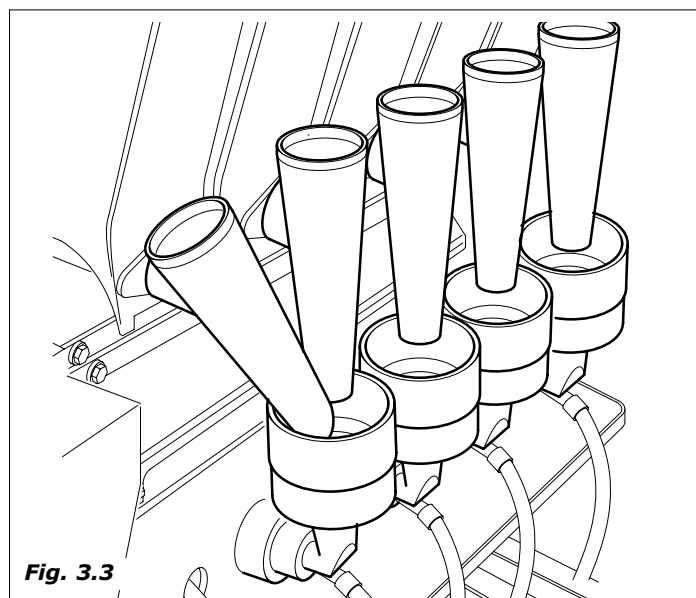
It is the first operation that the distributor starts (except for those selections in which the photocell in the drink dispenser compartment, detects the presence of a different jug). The motor inside the cup dispenser moves the plastic volutes to separate and make the cup fall into the cup ring inside the cup dispenser (Fig. 3.2).



**Fig. 3.4**



**Fig. 3.2**



**Fig. 3.3**

#### INSTANT DRINKS

This process is activated when the cup and sugar dispensing processes have been completed.

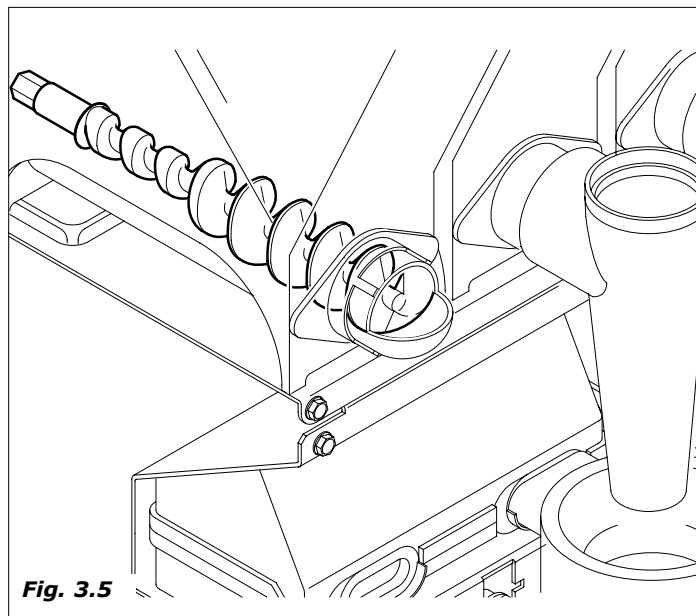
According to the type drink requested and to the distributor model, various processes described here below can be activated:

- if present, the motorized mixer is activated (Fig. 3.3).
- the electro-valve (Fig. 3.4) is activated in order to introduce the set quantity of water into the mixer.

- 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 more than one product can be conveyed into the same mixer) (Fig. 3.5).

### **FRESH BREW DRINKS**

- On requesting a fresh brew drink, the geared motor is activated and the pre-set quantity of tea or coffee powder is delivered to the operating cylinder (Fig. 3.5).
- The upper part of the cylinders is engaged and the air pump is started for the delivery of the initial quantity of water necessary for the infusion of the product.
- The fresh brew unit then stops for the time necessary for complete infusion (programmed default time of 2 seconds).
- At the end of this time the pump undertakes to deliver the second amount of water until the requested drink delivery is complete.
- The drink is in this way delivered into the cup, the cylinders then descend and a spatula undertakes the cleaning of the tea or coffee dregs.
- The unit thereby returns to its initial position and goes into standby mode awaiting a new delivery request.



**Fig. 3.5**



## 4.0 HANDLING AN AUTOMATIC VENDING MACHINE

### 4.1 Handling and transport (Fig. 4.1)

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
- overturning or laying the distributor down during transport
- jolting the distributor

Ensure that the distributor is not

- knocked
- weighed down with other packs on the top
- exposed to either rain or freezing conditions or heat sources
- kept 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.

### 4.2 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. 4.2).

### 4.3 Packing

The distributor is protected with polystyrene or card-board angles and by a transparent film in polypropylene (Fig. 4.2).

The automatic distributor will be delivered packed, assuring both a mechanical protection and protection against damages from the external environment.

Labels are applied on the package indicating:

- manoeuvre with care
- don't turn upside-down
- protect from the rain
- do not stack
- protect from sources of heat
- not resistant to knocks
- type of distributor and serial number.

### 4.4 Receipt

Upon receipt 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.



**On delivery the packaging must be integral, and therefore must not:**

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

### 4.5 Unpacking

- Free the distributor from the packaging, cutting the protective film in which it is wrapped, along one of the protection angles (Fig. 4.3).
- Remove the distributor from transport pallet, unscrewing the screws (A) that block the fixing cross staff heads to the pallet (Fig. 4.4).

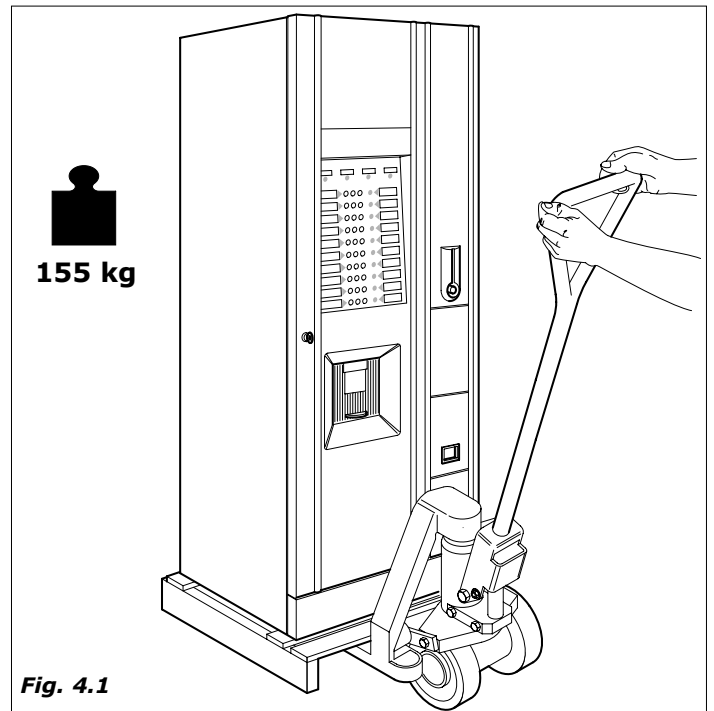


Fig. 4.1

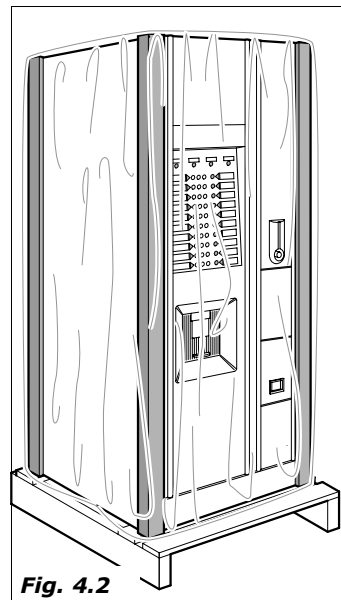


Fig. 4.2

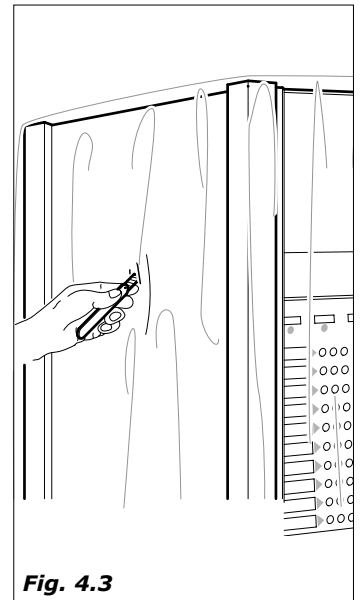


Fig. 4.3

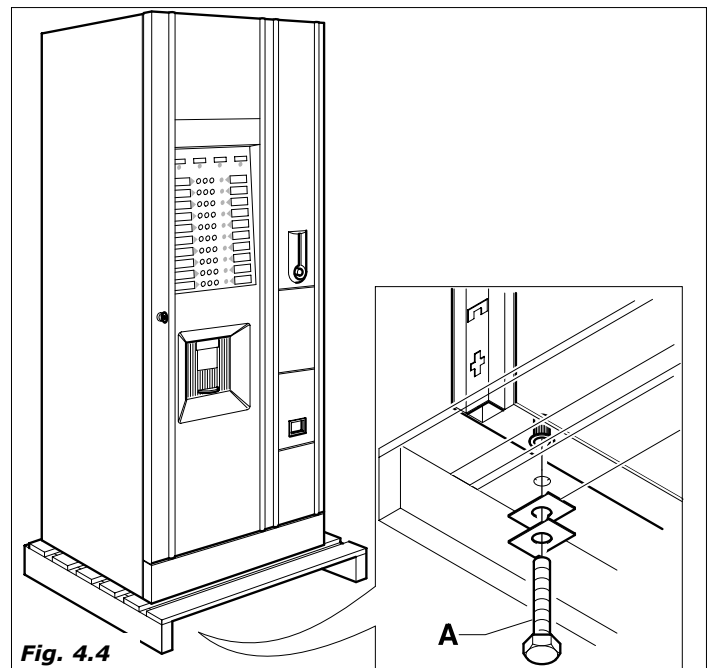


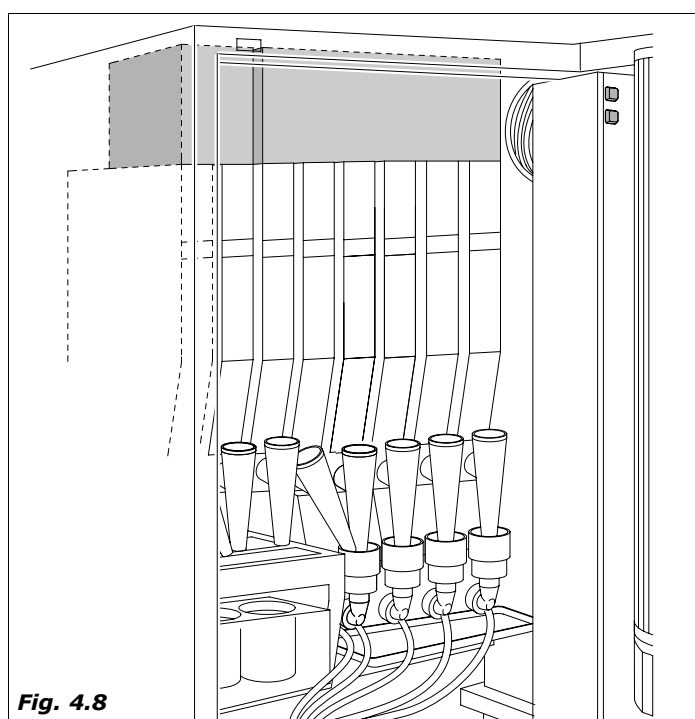
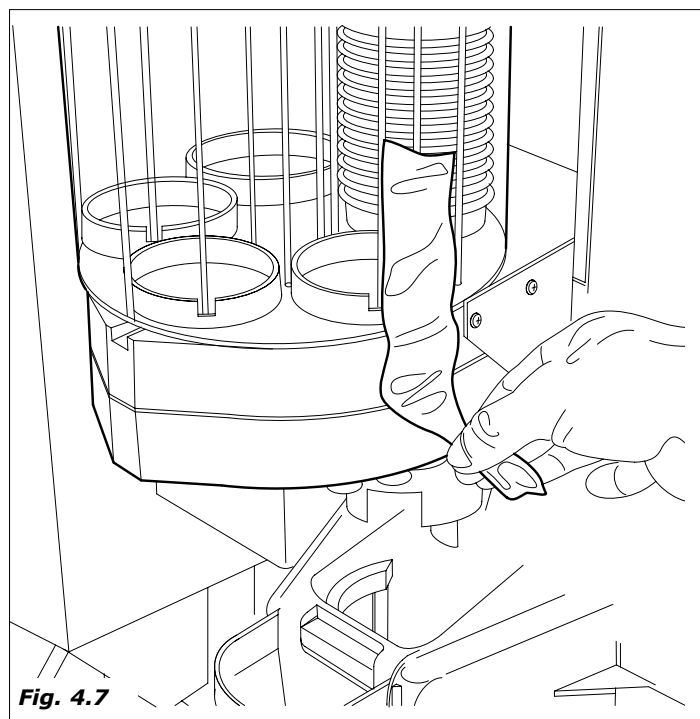
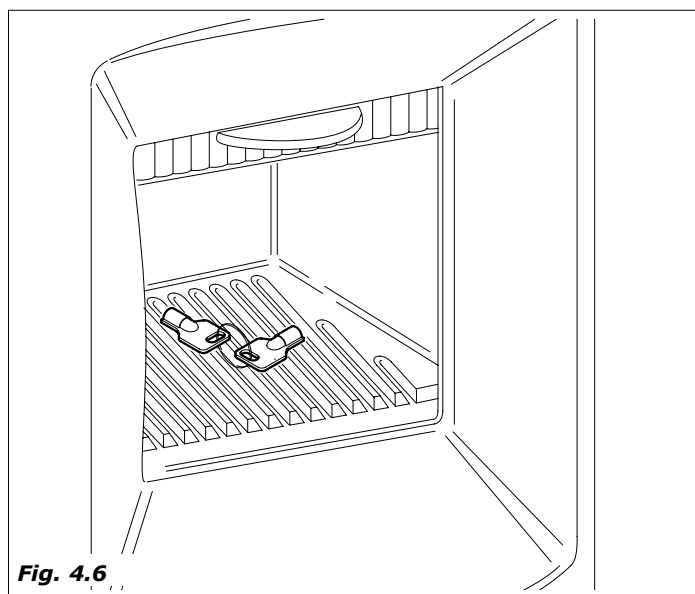
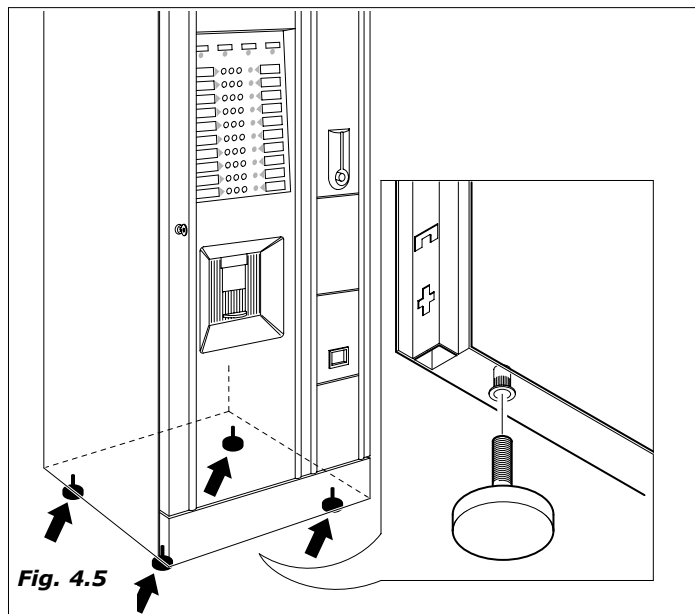
Fig. 4.4

- Release the pallet and insert the 4 feet into the threaded slots (fig. 4.5) freed of the screws (A).
- Remove the key from the drink dispensing chamber (Fig. 4.6).

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

- cup column (example in Fig. 4.7)
- coin box
- coin mechanism cover / CPU board
- product containers
- liquid dreg full float
- bottom skirting-board
- liquid dreg bucket
- remove the polystyrene that blocks the product containers (Fig. 4.8).

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



## 5.0 SAFETY NORMS



### WARNING!

- 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 to acquire access to those parts of the automatic distributor that are protected and require a tool in order to be accessible.
- A thorough knowledge and complete respect for the safety advice and danger warnings contained in this manual, are essential to ensure operation, starting up and maintenance of the machine in conditions of minimum risk.



*Always disconnect the POWER CABLE before maintenance or cleaning operations.*



*NEVER OPERATE ON THE MACHINE OR REMOVE ANY GUARD ELEMENTS BEFORE THE HOT PARTS HAVE BEEN ALLOWED TO COOL.*

- The functional reliability and optimization of machine's services are guaranteed only if original parts are used.
- The distributor is not suitable for external installation. The machine must be positioned 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 (i.e. catering kitchens).
- In order to guarantee normal operation, the machine must be installed in areas with environmental temperature of between a minimum of -1°C and a maximum of +32°C and humidity of not over 70%.
- In order to guarantee regular operation, always maintain the automatic distributor perfectly clean.
- **Nuova Bianchi S.p.A.** declines all responsibility for damages product to people or belongings due to:
  - incorrect installation
  - inappropriate electrical and/or water supply connection
  - inadequate cleaning and maintenance
  - not authorized modifications
  - improper use of the distributor
  - not original spare parts
- Furthermore verify observance of any other eventual local and national standards.

## 6.0 INSTALLATION



### 6.1 Positioning

- The distributor is not suitable for external installation. The machine must be positioned 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 (i.e. catering kitchens).
- If positioned near to a wall, there must be a minimum distance from the wall of at least 5 cm. (Fig. 6.1) so as to allow a regular ventilation. In no case cover the distributor with cloths or similar.
- Position the distributor, checking the levelling by means of the adjustable feet already assembled on the machines (Fig. 6.2). 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.

**Nuova Bianchi** declines all responsibility for problems due to the non observance of the above mentioned installation norms. Should the distributor be installed in safety evacuation corridors ensure that there is sufficient space for passage with the distributor door open (Fig. 6.1).

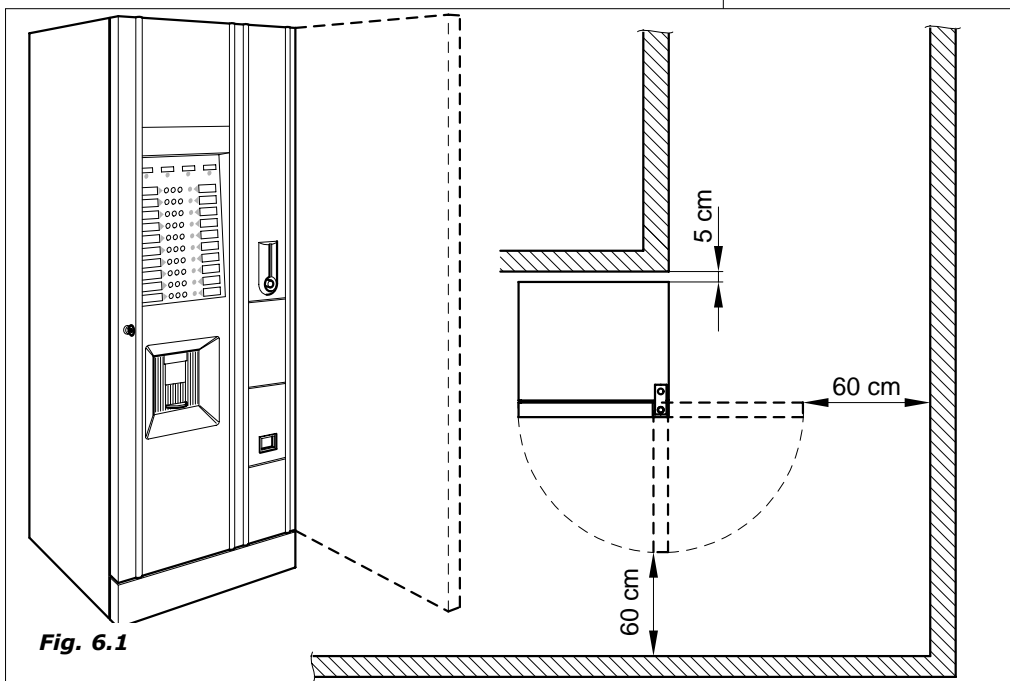
To avoid soiling the floor as the result of accidental spills, place a covering element beneath the distributor of adequate size to cover the operating range of the distributor itself.



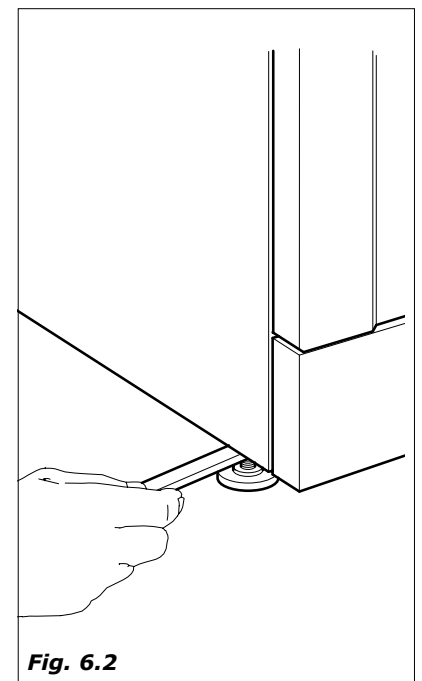
### 6.2 Connection to the main water supply

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

- that it is drinkable (with laboratory analysis certificate if necessary);
- it is at a pressure level of between 0.5 and 6.5 bar, if not, use either a pump or a water pressure reduction unit, as necessary);



**Fig. 6.1**



**Fig. 6.2**

- if not already present, install a tap in an accessible position to isolate the machine from the water mains should it be found to be necessary (Fig. 6.3);
- before making water connections, make some water flow out of the tap so as to eliminate possible traces of impurities and dirt (Fig. 6.4);
- 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. 6.5);
- the connection used is a 3/ 8 gas type (Fig. 6.6).

### 6.3 Main Power supply connection

The distributor operates 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 cold version).

It is advisable to check that:

- the 230 V main voltage doesn't have a difference of more than  $\pm 6\%$
- 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.

Therefore check that the earthing cable connection of the machine to ensure that it is efficient and that it complies with national and European electrical safety norms.

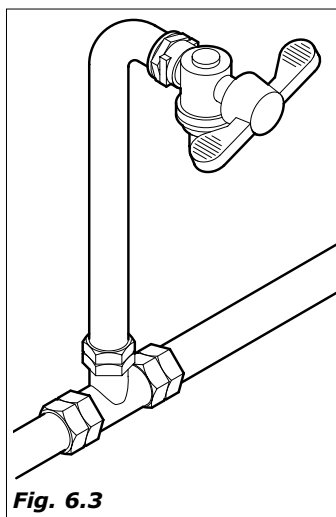
If necessary request the intervention of qualified personnel in order to check the system.

- The distributor is equipped with a power supply cable of H05VV-F 3x1,5mm<sup>2</sup>, with SCHUKO plug (Fig. 6.7).
- The sockets that are not compatible with that of the machine must be replaced (Fig. 6.8).
- The use of extension, adapters and/ or multiple plugs is forbidden.

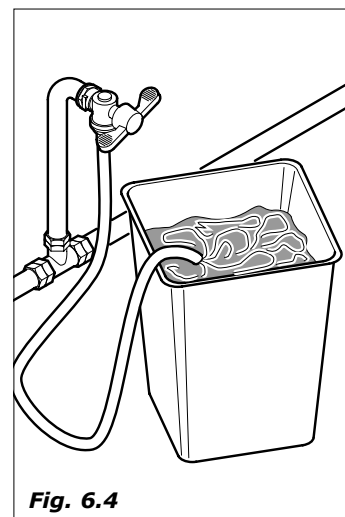
**Nuova Bianchi S.p.A.** declines all responsibility for damages deriving from complete or partial failure to observe these warnings.



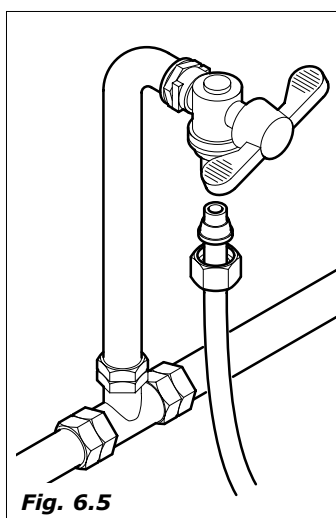
**The power supply cables are to be replaced by skilled personnel.**



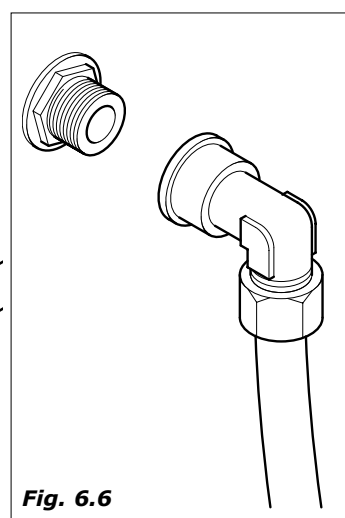
**Fig. 6.3**



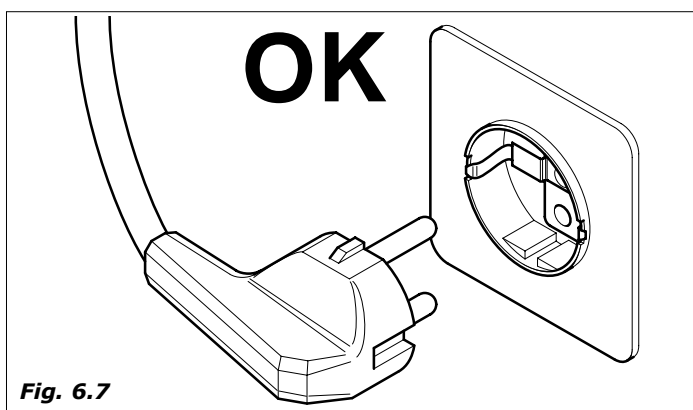
**Fig. 6.4**



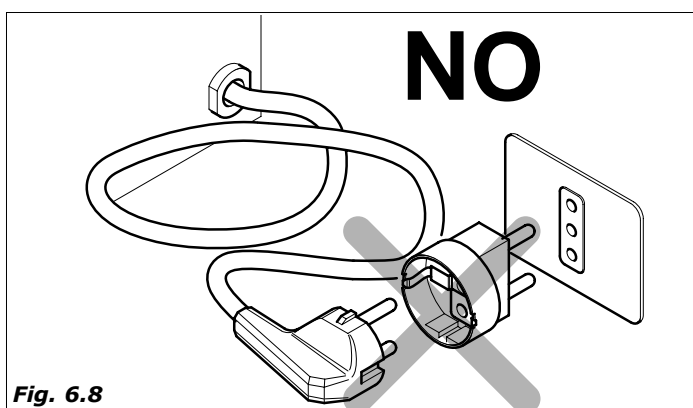
**Fig. 6.5**



**Fig. 6.6**



**Fig. 6.7**



**Fig. 6.8**



#### 6.4 Starting up of the unit

The distributor is equipped with a safety switch (Fig. 6.9) that disconnects the machine whenever the door is opened (see wiring diagram).

Therefore, if necessary, open the door or disconnect the plug from the machine socket.



*The terminals of the power cable (Fig. 6.10 - pos. 1) and the service switch inside the distributor (Fig. 6.11 - pos. 1) however remain live.*

- For some operations it is however necessary to 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. 6.12)

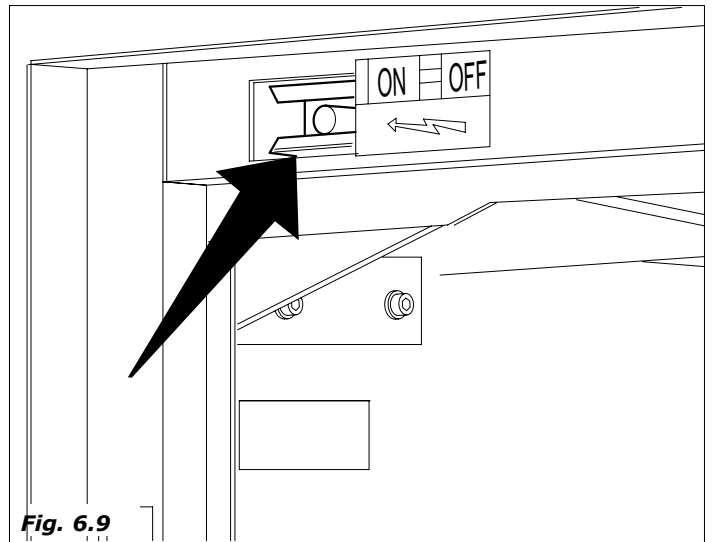


*The opening and possible connection of the distributor with door open (unless it involves cleaning operations) is to be undertaken solely by personnel authorized to undertake such operations.*

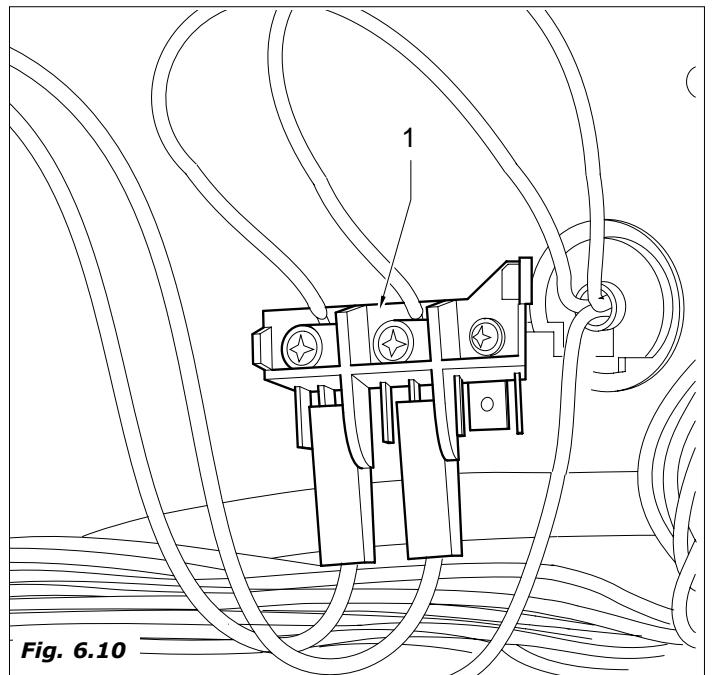
*Don't leave the distributor open and unguarded.*

The safety element disconnection key is to be kept under the exclusive responsibility of the installation technician.

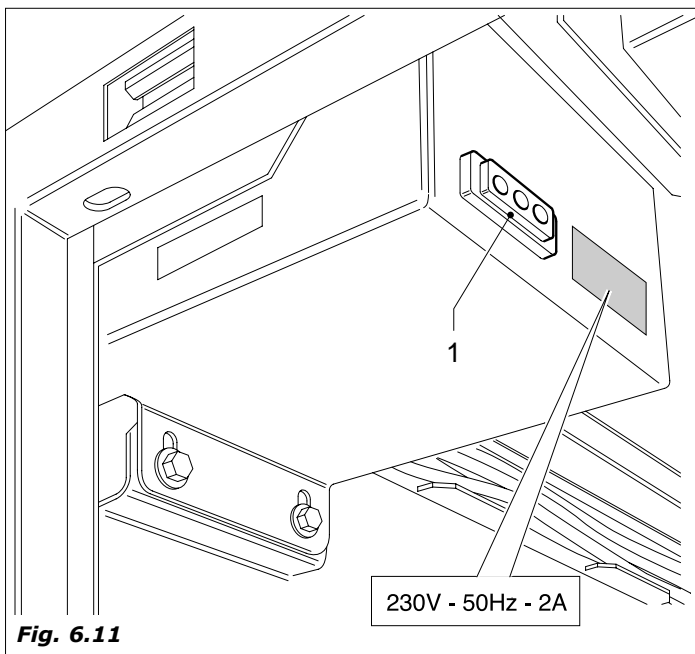
Every time the distributor is switched on a diagnosis cycle is undertaken which checks the position of the moving part, as well as the presence of water and products.



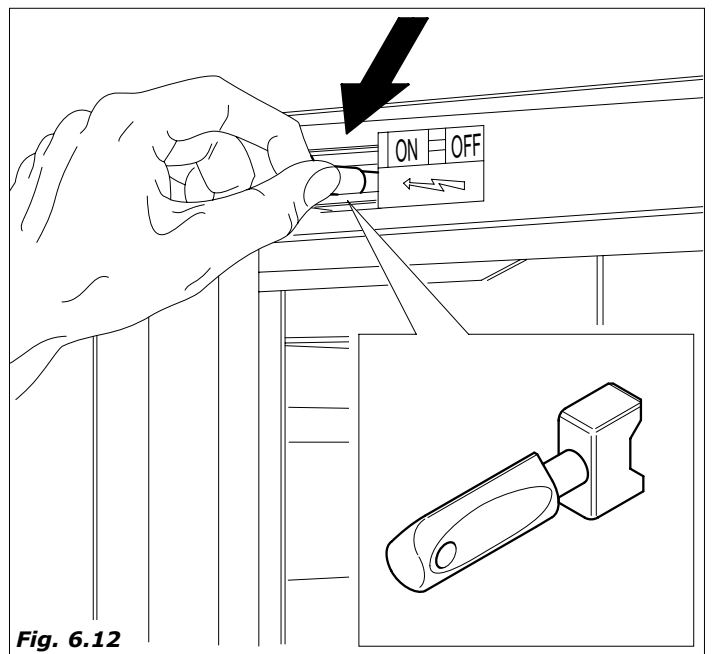
**Fig. 6.9**



**Fig. 6.10**



**Fig. 6.11**



**Fig. 6.12**





## 6.5 Installation

### 6.5.1 Filling the water circuit

The machine fills the water circuit automatically.

On switching on the distributor a electro-valve provides consent for filling of the boiler.

It is good practice to undertake the washing of all units, each time the machine is switched on again, by pressing the button shown in Fig. 6.13.

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.

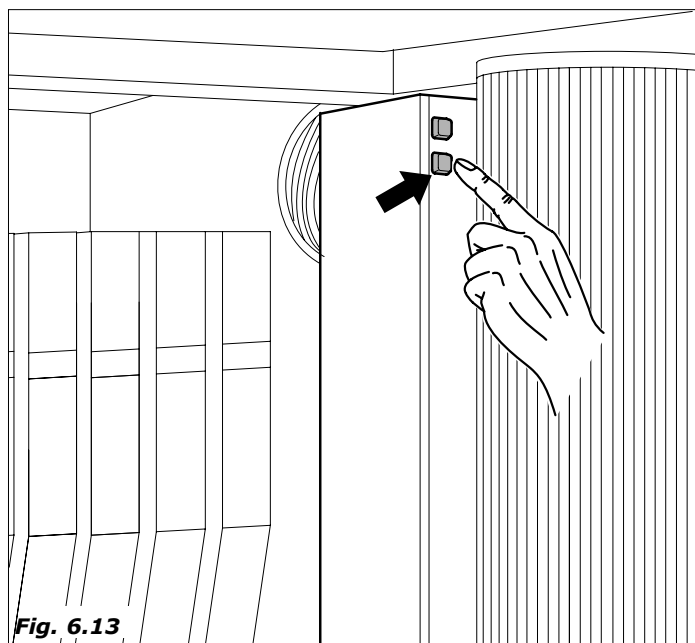
### 6.5.2 Cleaning of the parts in contact with food substances

With distributor on clean all the mixers pressing the buttons as in the operating instructions, in order to remove all traces of dirt from the boiler.

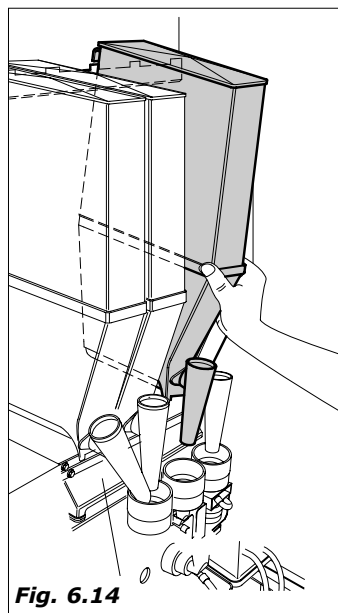
- Wash your hands thoroughly.
- Prepare an anti-bacterial cleaning solution with a chlorine base (products that can be purchased in pharmacies) carefully following the indications on the product instruction labels.
- Remove all the product containers from the distributor (Fig. 6.14).
- Remove the lids from the product containers covers and product chutes (Fig. 6.15). Dip then in the solution previously prepared.
- Remove all the powder chutes, water funnels, mixing chambers and whippers and silicone tubes and dip these parts in the prepared solution (Fig. 6.16).
- With a cloth soaked with the solution clean the whipper base (Fig. 6.17).
- 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.



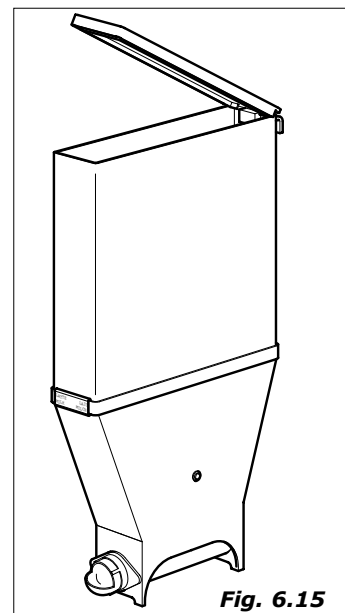
*To ensure even greater safety, on re-assembling the relative parts, it is a good idea to undertake some automatic washing cycle in order to eliminate any eventual residues.*



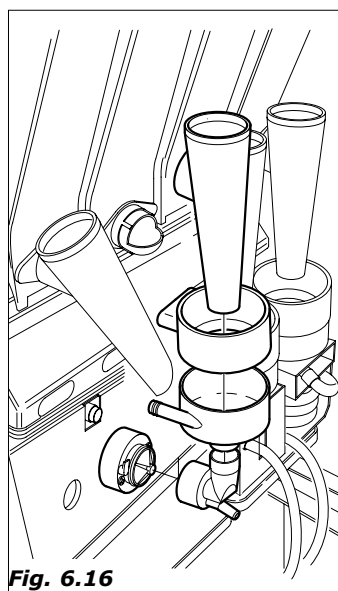
**Fig. 6.13**



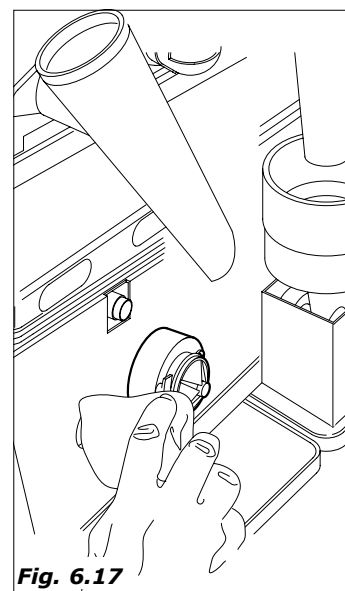
**Fig. 6.14**



**Fig. 6.15**



**Fig. 6.16**



**Fig. 6.17**



## 6.6 Product container filling (with machine off)

### 6.6.1 Container filling

- Each container needs to be removed for filling.
- Remove the lids of each container and fill with the product in accordance with the instructions on the plate itself. (Fig. 6.18).

The three containers on the left are necessary for supplying the Fresh Brew unit and should be filled according to the following configurations:

#### Version 1 (Fig. 6.19) - TEA LEAVES menu **YES**

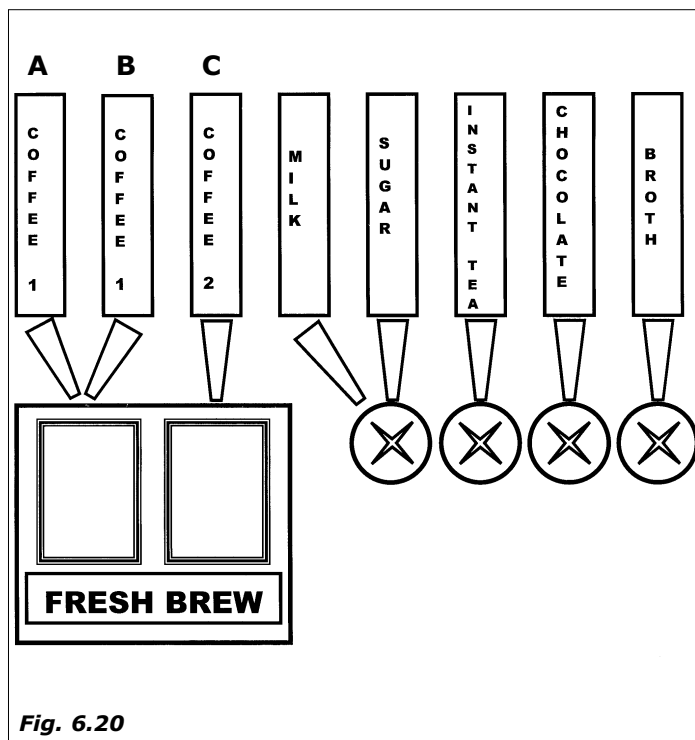
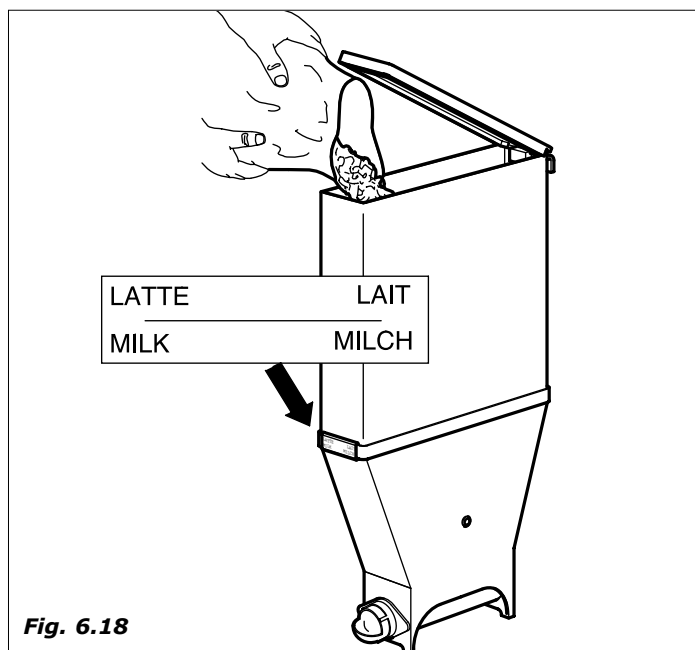
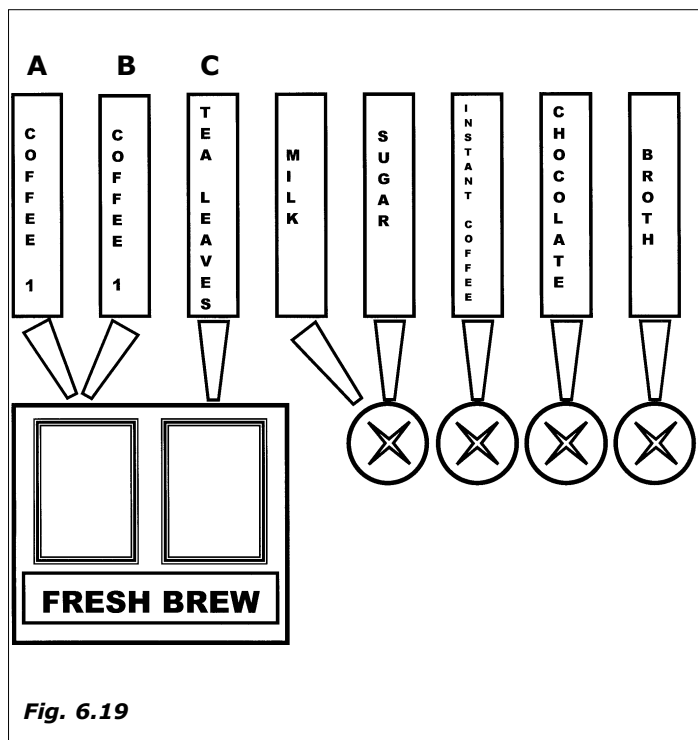
Container A: Coffee 1  
Container B: Coffee 1  
Container C: Tea leaves

#### Version 2 (Fig. 6.20) - TEA LEAVES menu **NO**

Container A: Coffee 1  
Container B: Coffee 1  
Container C: Decaffeinated coffee 2.

- Check that there are no lumps, avoid pressing the product too much or to use too much coffee in order to prevent it from ageing.

Check the container product capacity in the section TECHNICAL FEATURES.



### 6.6.2 Label application

- The labels indicating the product selections must be inserted in the special slots according to the order indicated (Chapter "8.0 MAINTENANCE").

Carry out the operation as follows:

- Lift the cup column's spring band (Fig. 6.21).
- Remove the cup column (Fig. 6.22).
- Insert the labels in the order according to the selections used on the vending machine (Fig. 6.23).
- Re-assemble the whole in inverse order.

### 6.6.3 Cup filling

Use only cups suitable for automatic vending machines, with a diameter of over 70-74 mm, avoid compressing the cups between themselves during loading.  
Don't try to rotate the column manually.

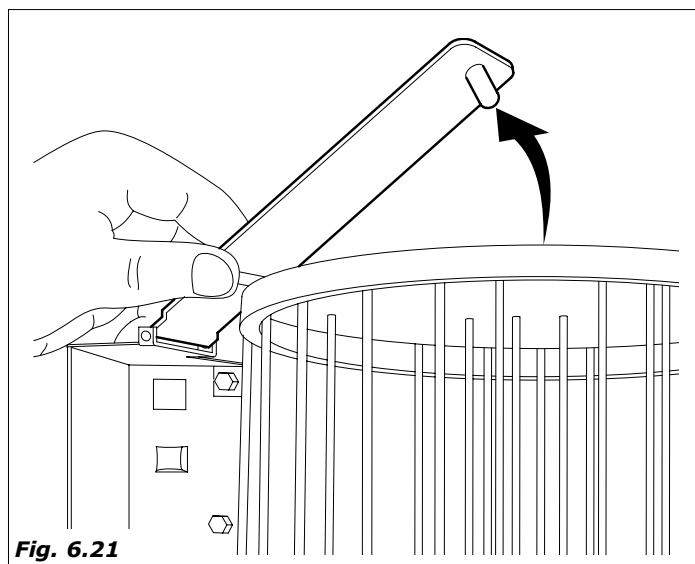
#### First filling

In installation phase with the cup dispenser completely empty, proceed as follows:

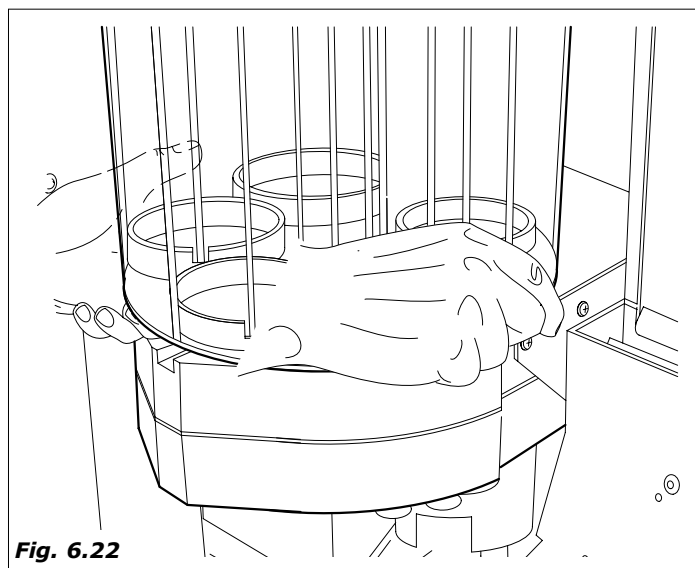
- Check that the cup column is not aligned with the distribution outlet, then fill all the columns proceeding in an anti-clockwise sense, opposite sense (when the column is aligned with the distribution outlet), close the door and switch on the machine so that the cup column rotates and automatically places itself in a position in which it is not aligned with the inlet and then proceed to fill (Fig. 6.24).
- Put the cup column's lid back on and snap in the spring band (Fig. 6.25).

#### Normal filling

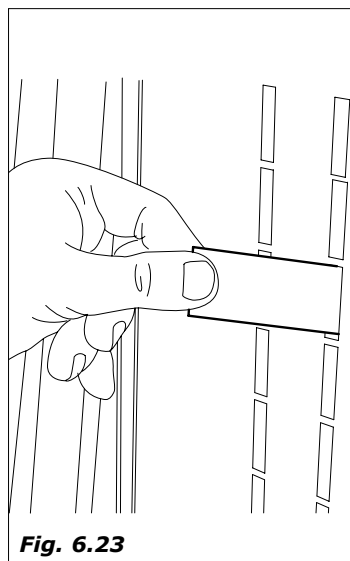
The cup column should normally filled with the machine off, simply by opening the front door, lifting the turret securing bracket, lifting the lid and inserting the missing cups.



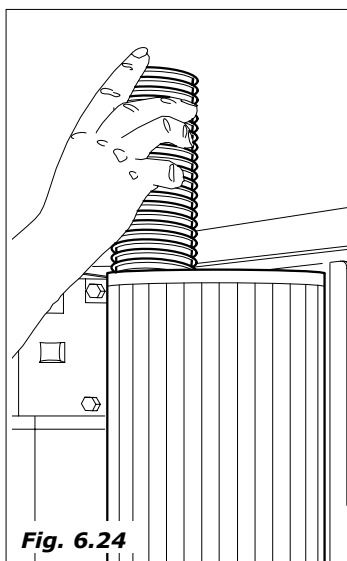
**Fig. 6.21**



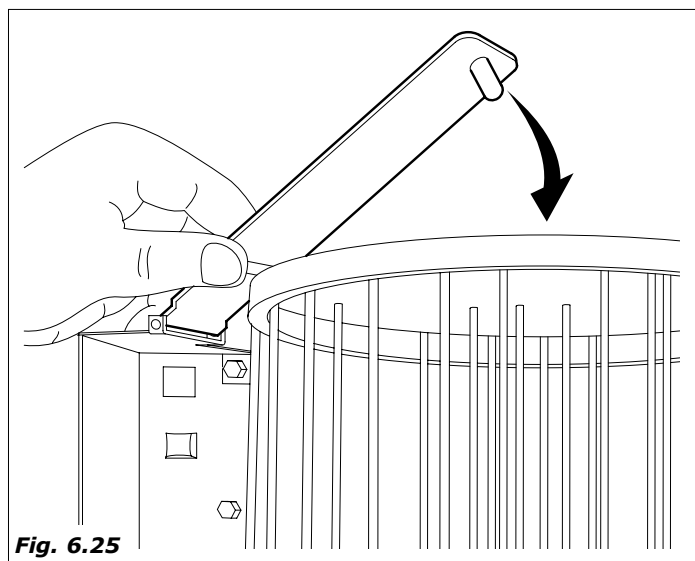
**Fig. 6.22**



**Fig. 6.23**



**Fig. 6.24**



**Fig. 6.25**

#### 6.6.4 Insertion of waste dreg bag

- remove the coffee dreg chute from its slot;
- apply the bag securing clip to the chute;
- insert the plastic bag on to the chute and secure it with a clip (Fig. 6.26);
- re-insert the chute into its slot.

Use plastic bags that are sufficiently long so that they touch the bottom of the distributor.

#### 6.6.5 Payment system installation

The distributor is supplied without any payment system.

The installation of the payment system is the responsibility of the installation technician.

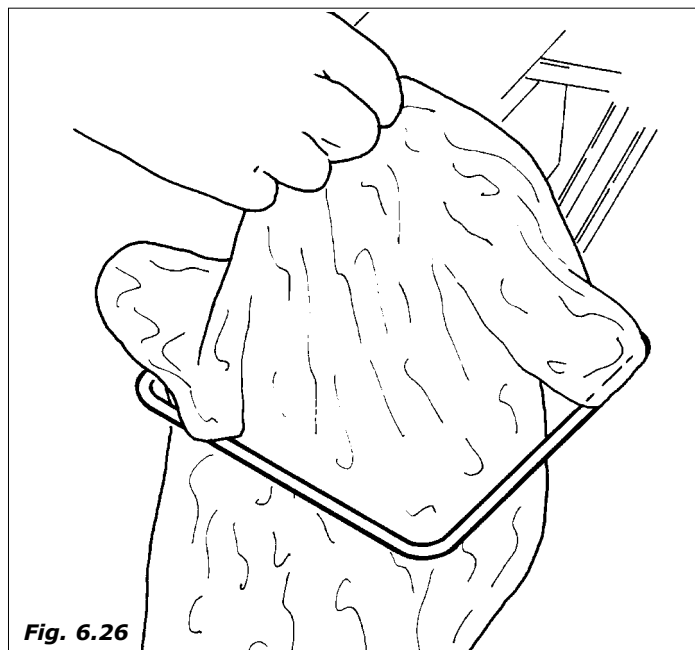
Nuova Bianchi will not take responsibility for any eventual damage to the machine itself and/or to things and/or persons due to incorrect installation.

- Open the board and coin mechanism protection door (Fig. 6.27).
- Remove the support bracket from the machine (Fig. 6.28).
- Hook the coin mechanism on to the support brackets (Fig. 6.29).
- Fix the support with the two knobs.
- Connect the coin mechanism to the CPU board.

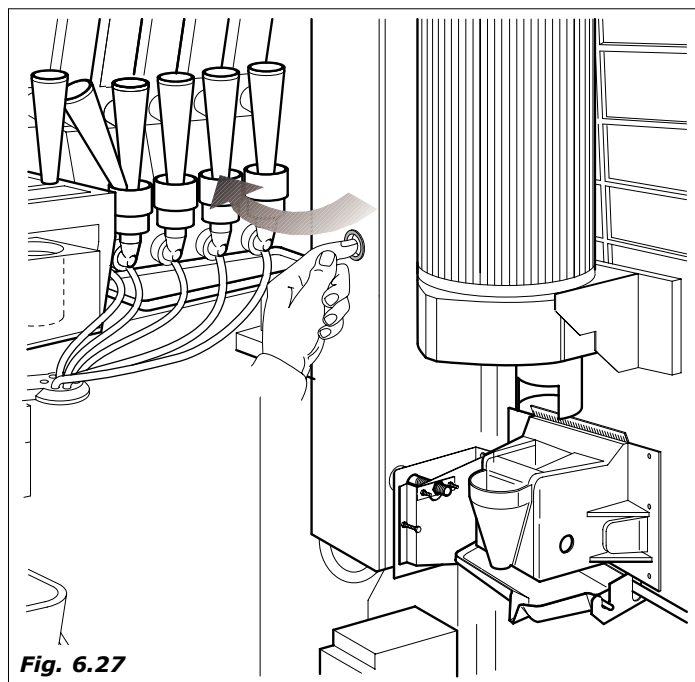
The selectors must be directly connected to the CPU board and the serial executive systems through the interface cable supplied with the machine.

Then go into programming for the correct settings.

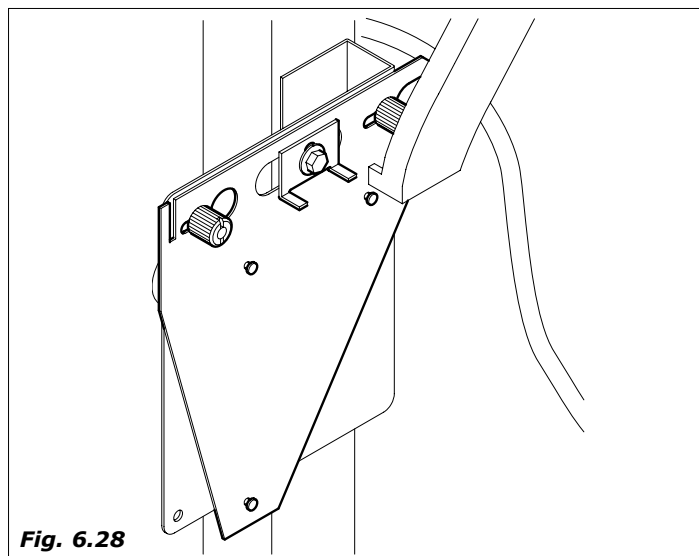
Consult chapter "7.0 PROGRAMMING" so as to verify setting of the parameters, that must be coherent with the system used.



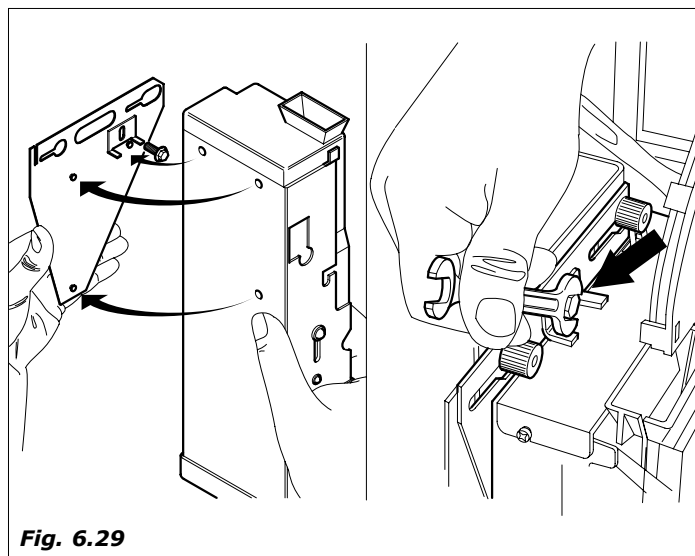
**Fig. 6.26**



**Fig. 6.27**



**Fig. 6.28**



**Fig. 6.29**

## PROGRAMMING INDEX

### 7.1 General description and preliminary operations

#### 7.1.1 Language selection

### 7.2 Function description

#### 7.2.1 TIME-DOSES

#### 7.2.2 PRICES

#### 7.2.3 DISCOUNTS

#### 7.2.4 PRICE SELECTION

#### 7.2.5 INCLUDE SELECTIONS

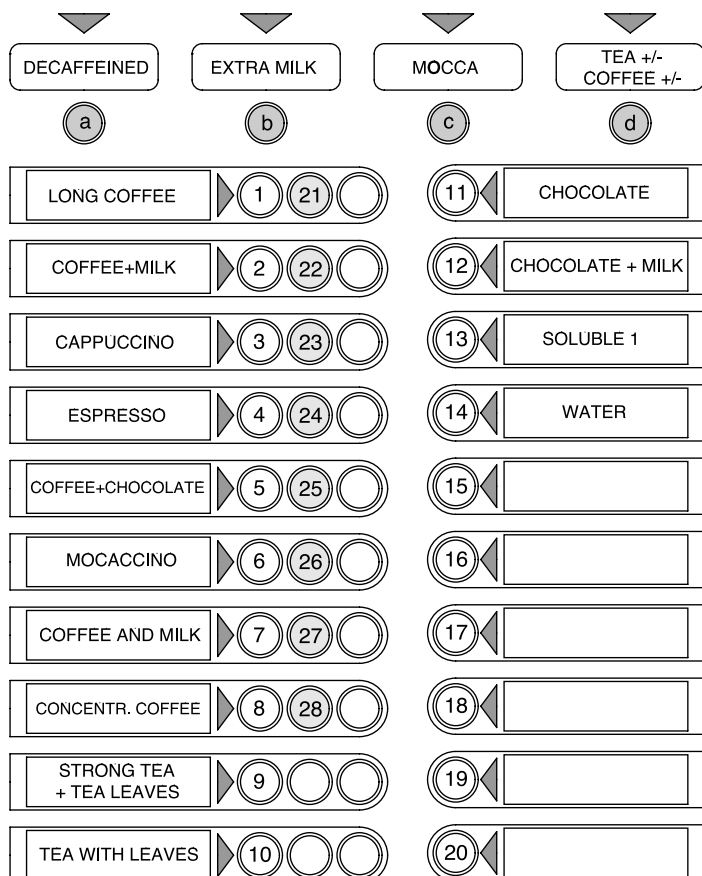
#### 7.2.6 INCLUDE JUG

#### 7.2.7 OPTIONS

#### 7.2.8 COINS

#### 7.2.9 SALES

#### 7.2.10 TEMPERATURE



## 7.0 PROGRAMMING

With the programming procedures described in this section it is possible to set all the parameters relative to the configuration of the machine, to the setting of the single doses, the prices of the drinks and extract all the vending statistical data.

The "dialogue" between the operator and the machine occurs by means of the 16 digit liquid crystal display and the use of the selection keyboard.

The distributor is regulated with standard values in the testing stage with Coffee temperature, soluble drink temperature, selections combined with price number "0".

Product regulation = quantity of water and powder, for best results it is possible to regulate the degree of grinding and dosing.

### Programming key

Press the button on the CPU board for access to the programming function (Fig. 7.1); the access code entry request will appear on the display, to be entered on the keyboard.

- The messages will be displayed in a choice of six or seven different languages, as chosen by the operator during the installation stage (Fig. 7.2).

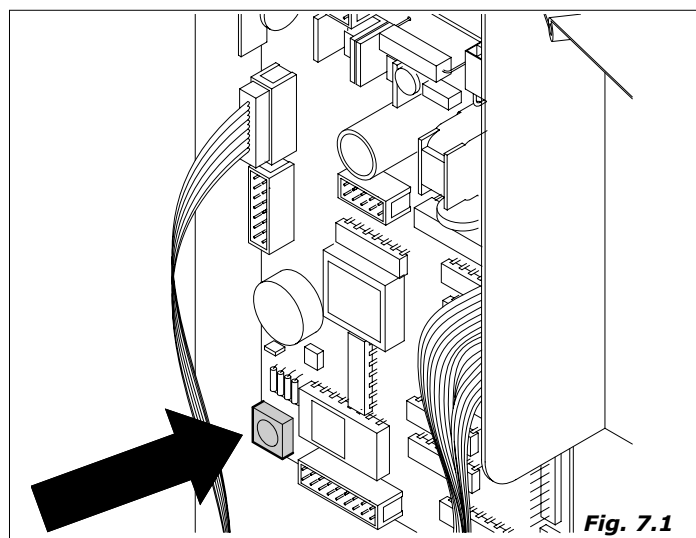
The programming data can be of two kinds:

#### ● NUMERICAL DATA

This is all the data that refers to the water , powder, prices, time and date settings

#### ● LOGICAL DATA

This is all the data that refers to the logical status of the OPTION menus that describe the status (enabled or disabled ) of a specific function.



**Fig. 7.1**

**NOTE** - The programming diagrams shown refer to the automatic SIRIO distributor with double heater: therefore for the configuration of different machines to these the programming diagrams may also be subject to variation.

**Programming panel**

▼	▼	▼	▼
PROG		COMPLETE TEST TIME-DOSES	RESET
(a)	(b)	(c)	(d)
INCREASE +	1 21	11	
DECREASE -	2 22	12	
NUMBER	3 23	13	
ENTER ↵	4 24	14	
	5 25	15	
	6 26	16	
	7 27	17	
	8 28	18	
	9	19	
	10	20	

**Maintenance panel**

▼	▼	▼	▼
		COMPLETE TEST	RESET
(a)	(b)	(c)	(d)
FRESH BREW MOVEMENT UNIT	1 21	11	
FRESH BREW COFFEE UNIT WASHING	2 22	12	
FRESH BREW TEA UNIT WASHING	3 23	13	
MILK MIX WASHING	4 24	14	
TEA MIX WASHING	5 25	15	
CHOCOLATE MIX WASHING	6 26	16	
SOUP MIX WASHING	7 27	17	
SPOUT MOVEMENT	8 28	18	
	9	19	
TOTAL ENTRIES	10	20	

For programming part of the keys of the selection keyboard are used which are namely:

■ **DECAFFEINATED "PRG"** key

Comes from the current programming submenu, and returns to the sub-menu of origin.

■ **BLACK COFFEE "+"** key

It acts to increase the value of a selected digit (i.e. Dose figure), and/or to scroll forward the list of the functions available in the submenu.

■ **WHITE COFFEE "-"** key

or DECREASE key , has the function of decreasing the value of a selected digit.

■ **CAPPUCCINO "DIGIT"** key

For moving of the display cursor to the digit to be modified using the previous + and - keys.

■ **ESPRESSO "ENTER"** key

Used to confirm the variations made or to scroll the options menu.

At the end of parameter modification, it is possible to escape from the programming mode by re-pressing the key on the CPU board.

**KEYBOARD**

The drink selection panel as well as being used for selections is also partially used for programming and maintenance.

The keys and their significance are as follows:

Programming

- a** = DECAFFEINATED
- 1** = BLACK COFFEE
- 2** = WHITE COFFEE
- 3** = CAPPUCCINO
- 4** = ESPRESSO

- prg.**
- +** (increase)
- (decrease)
- digit** (cursor)
- Enter** (confirm)

Maintenance

- TEA +/- COFFEE +/-
- MOCCA
- BLACK COFFEE
- WHITE COFFEE
- CAPPUCCINO
- ESPRESSO
- COFFEE + CHOC.
- MOCACCINO
- COFFEE AND MILK
- STRONG BLACK COFFEE
- TEA LEAVES + MILK

- reset
- complete test
- Fresh brew movement unit
- Fresh brew coffee unit washing
- Fresh brew tea unit washing
- Milk mix washing
- Tea mix washing
- Chocolate mix washing
- Soup mix washing
- Spout movement
- Total entries

### 7.1.1 Language selection

So as to go into programming again it is necessary to know the access code or password.

**code 00000**

The code to be entered is composed of five digits.

The cursor appears under the first; with the keys "+" and "-" (1<sup>st</sup> and 2<sup>nd</sup> of the keyboard) increase or decrease the digit with the 3<sup>rd</sup> key ("digit") move the cursor.

Repeat the operations until the access code is composed

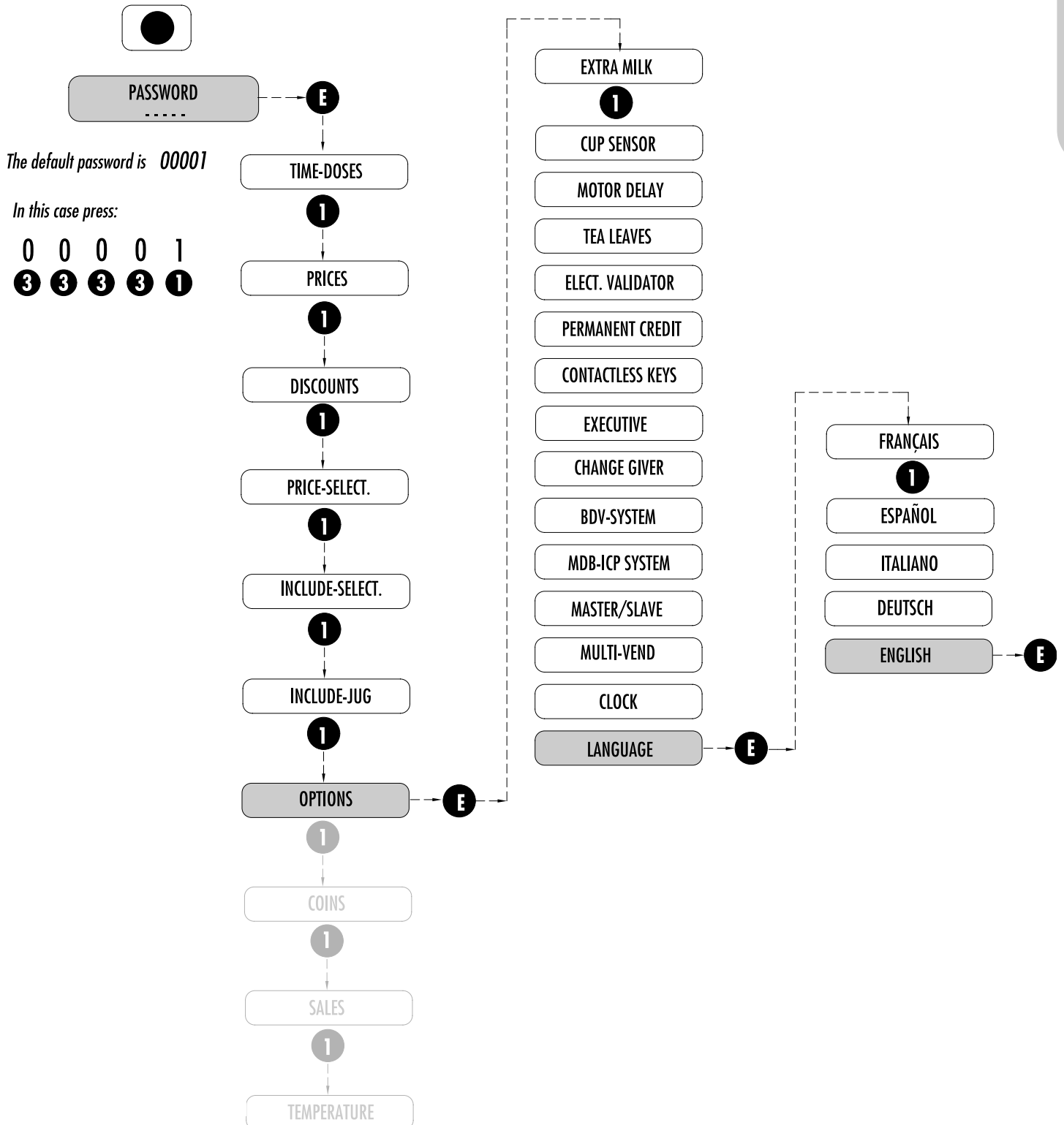
Once the code is composed, press the key "Enter" (4<sup>th</sup>) so as to accede to programming.

**il codice di default è 00001**

On the display, after entering the code, the first function is displayed:

- press ENTER for access to the latter
- pressing + the next function will be displayed
- pressing PRG you exit from the submenu of operation

**N.B.:** If you are in selection mode you can go to programming mode.



**Fig. 7.2**

If you are in SERVICE mode, firstly go to SELECTION mode and then go into PROGRAMMING mode.

The main menu is composed of:

**TIME-DOSES**

**PRICES**

**DISCOUNTS**

**PRICES -SELECTIONS**

**INCLUDE-SELECTIONS**

**INCLUDE-JUG**

**OPTIONS**

**COINS**

**SALES**

**TEMPERATURE**

#### **EURO OPTIONS**

To exit from programming mode press "PROG" until one of the above listed functions appears, then press the programming button placed on the CPU board and return to the selection mode.

After machine setting, it is possible to memorize the data in a portable programmer (PAGE P 3000), and use the same settings for other machines of the same model.

The CPU and the programmer are connected by means of a flat cable, check the position of the connector referring to the topographic diagrams of the cards (Fig. 7.3).

Data is stored in the programmer until a new configuration reading is carried out or when the programmer's batteries run out.

- For the reading of the configuration press in sequence:

F ⇒ 1 ⇒ 1 ⇒ F ⇒ 1 ⇒ F

- to update the machines' memory:

F ⇒ 1 ⇒ 2 ⇒ F ⇒ 1 ⇒ F ⇒ 1 ⇒ F

Connect and disconnect the programmer from the CPU board with the distributor switched off.

## **7.2 Function description**

### **7.2.1 TIME-DOSES (Fig. 7.4)**

This menu gives access to the water and product powder dose settings for each available drink.

Press ENTER once and the following appears on the display:

**"01 Coffee key"**

press ENTER again to start the dose setting operation for the first selection:

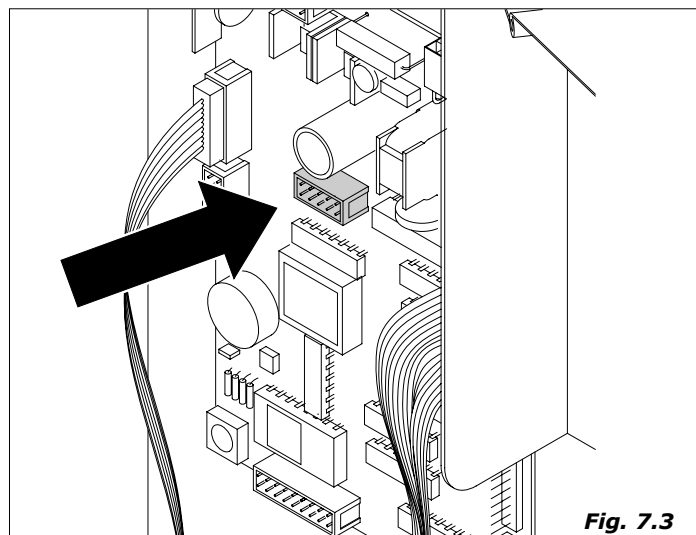
**"water 065"**

to indicate the water dose.

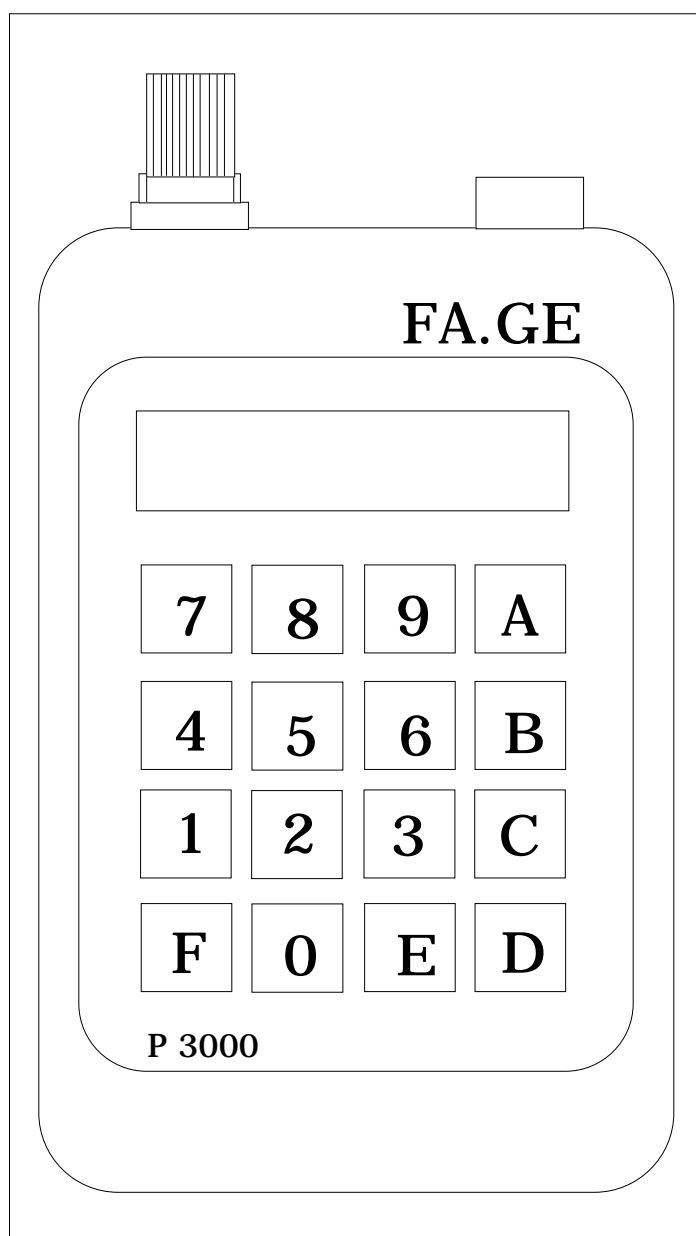
With "+", "-", "digit" keys, the value of the water dose relative to the espresso coffee selection no. 1 is changed.

Pressing ENTER again confirms the dose set and on the display the subsequent setting appears if it is foreseen (in the case of instant selections the powder product) or, in the contrary case, the programme returns automatically to the starting point; following appears on the display:

**"01 coffee key"**



**Fig. 7.3**





With the key "+" you can scroll the menu and choose the next selection to be changed.  
Here below is the combination of the keys and the selections indicated in programming:

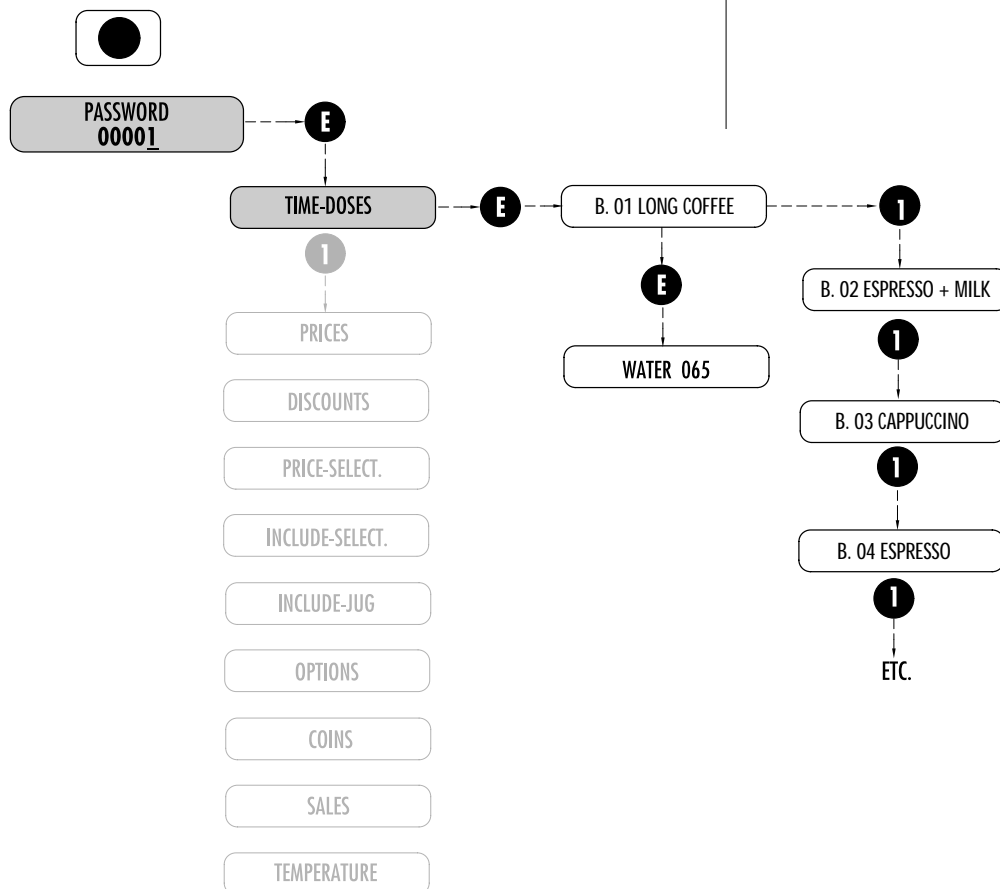
Key **A** = decaffeinated  
Key **B** = extra milk  
Key **C** = mocca  
Key **D** = tea +/-  
          coffee +/-  
Key **T 01** = black coffee  
Key **Tc01** = long / concentr. coffee  
Key **T 02** = white coffee  
Key **Tc02** = concentrated white coffee  
Key **T 03** = cappuccino  
Key **Tc03** = concentrated cappuccino  
Key **T 04** = concentrated espresso  
Key **Tc04** = ultra concentr. espresso  
Key **T 05** = coffee with chocolate  
Key **Tc05** = concentr. coffee with chocolate  
Key **T 06** = coffee + milk + chocolate  
Key **Tc06** = concentr. coffee + milk + chocolate  
Key **T 07** = coffee and milk  
Key **Tc07** = concentr. coffee and milk  
Key **T 08** = concentr. coffee  
Key **Tc08** = ultra concentr. coffee  
Key **T 09** = strong tea w/ tea leaves  
Key **T 10** = tea w/ leaves + milk  
Key **T 09** = instant tea  
Key **T 10** = instant tea + milk  
Key **T 11** = chocolate  
Key **T 12** = chocolate + milk  
Key **T 13** = soluble  
Key **T 14** = water

Key **T 21** = with ground decaffeinated coffee  
Key **Tc21** = with ground decaffeinated coffee  
Key **T 22** = with ground decaffeinated coffee  
Key **Tc22** = with ground decaffeinated coffee  
Key **T 23** = with ground decaffeinated coffee  
Key **Tc23** = with ground decaffeinated coffee  
Key **T 24** = with ground decaffeinated coffee  
Key **Tc24** = with ground decaffeinated coffee  
Key **T 25** = with ground decaffeinated coffee  
Key **Tc25** = with ground decaffeinated coffee  
Key **T 26** = with ground decaffeinated coffee  
Key **Tc26** = with ground decaffeinated coffee  
Key **T 27** = with ground decaffeinated coffee  
Key **Tc27** = with ground decaffeinated coffee  
Key **T 28** = with ground decaffeinated coffee  
Key **Tc28** = with ground decaffeinated coffee  
Key **T 21** = with instant coffee  
Key **Tc21** = with instant coffee  
Key **T 22** = with instant coffee  
Key **Tc22** = with instant coffee  
Key **T 23** = with instant coffee  
Key **Tc23** = with instant coffee  
Key **T 24** = with instant coffee  
Key **Tc24** = with instant coffee  
Key **T 25** = with instant coffee  
Key **Tc25** = with instant coffee  
Key **T 26** = with instant coffee  
Key **Tc26** = with instant coffee  
Key **T 27** = with instant coffee  
Key **Tc27** = with instant coffee  
Key **T 28** = with instant coffee  
Key **Tc28** = with instant coffee

TEA LEAVES  
**NO**

TEA LEAVES  
**YES**

Key **Tc** = with pre-selection



#### **Sugar time:**

Time for maximum sugar dose

#### **Extra milk time:**

time for the extra milk dose.

#### **Integral water time**

#### **Coffee infusion time**

#### **Tea infusion time**

#### **Bitter compensation time**

#### **Extra tea time**

#### **Minus tea time**

#### **Extra coffee time**

#### **Minus coffee time**

The control of the coffee water flow is done by means of a flow meter.  
The powder dosing of the instant powder products is expressed in seconds.

**Fig. 7.4**

**7.2.2 PRICES (Fig. 7.5)**

Up to 10 prices are available and singularly applicable to each selection.  
Press Enter for access to the price table programming; on the display appears:

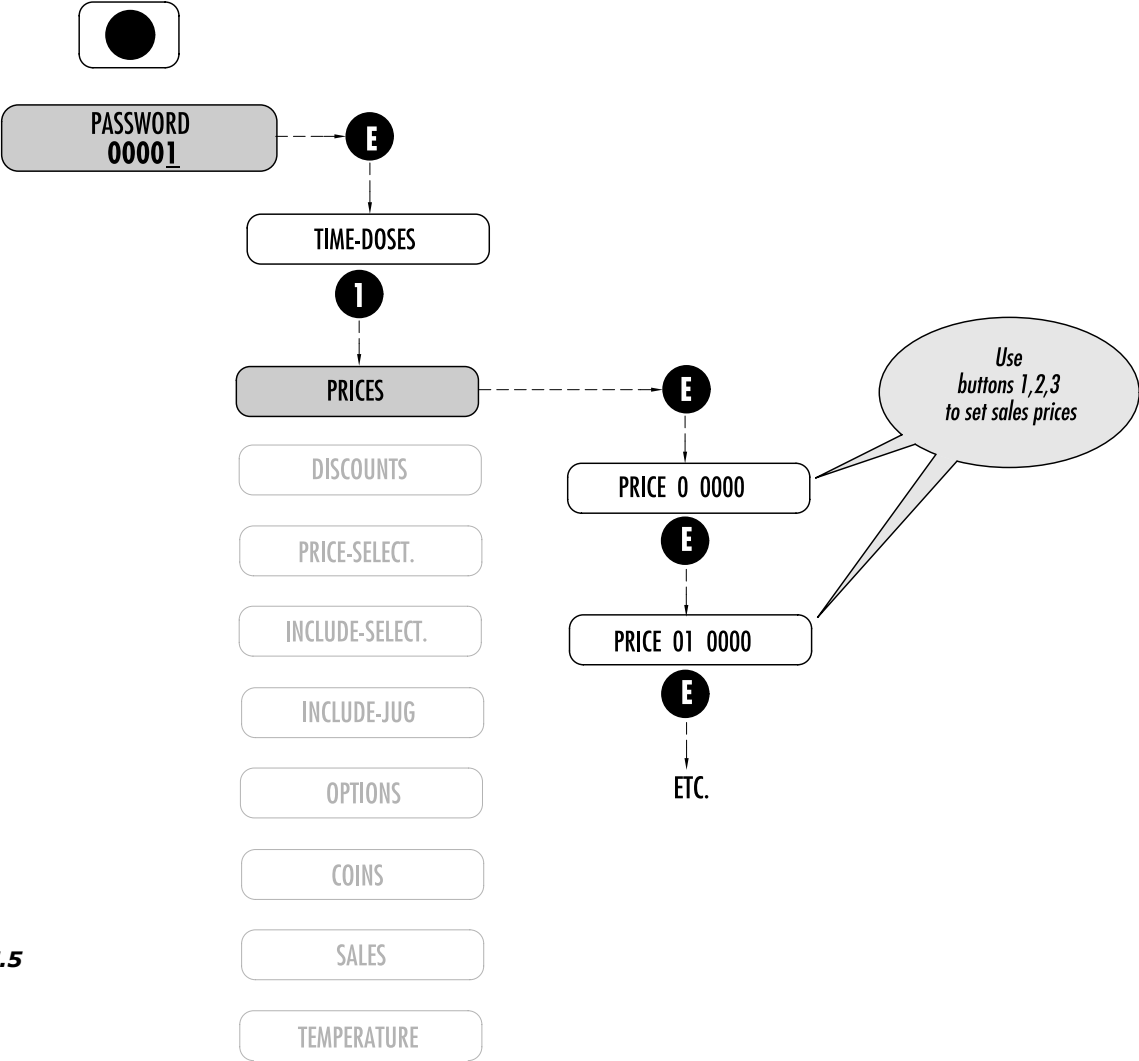
**"Price 0 0000"**

with the same procedure used for the dose settings, the sales prices are set using the keys "+", "-", "number".  
For free sales it is sufficient to set the vending price to zero.

Press ENTER again to confirm the value set and on the display the next price appears.

**"Price 01 0000"**

Press PROG to return to the PRICE menu.



**Fig. 7.5**

### 7.2.3 DISCOUNTS (Fig. 7.6)

Up to a maximum of 10 discounts can be programmed (from Discount 0 to Discount 9) as many as the vending prices. Furthermore it is possible to programme a special discount for the exclusion of the cup (indicated with SB).

**N.B.:** the discounts S0-S9 are tied to the time periods and consequently to the presence of the clock interface on the CPU board.

The discount for the cup is available without the presence of the clock interface.

Press ENTER once, on the display appears:

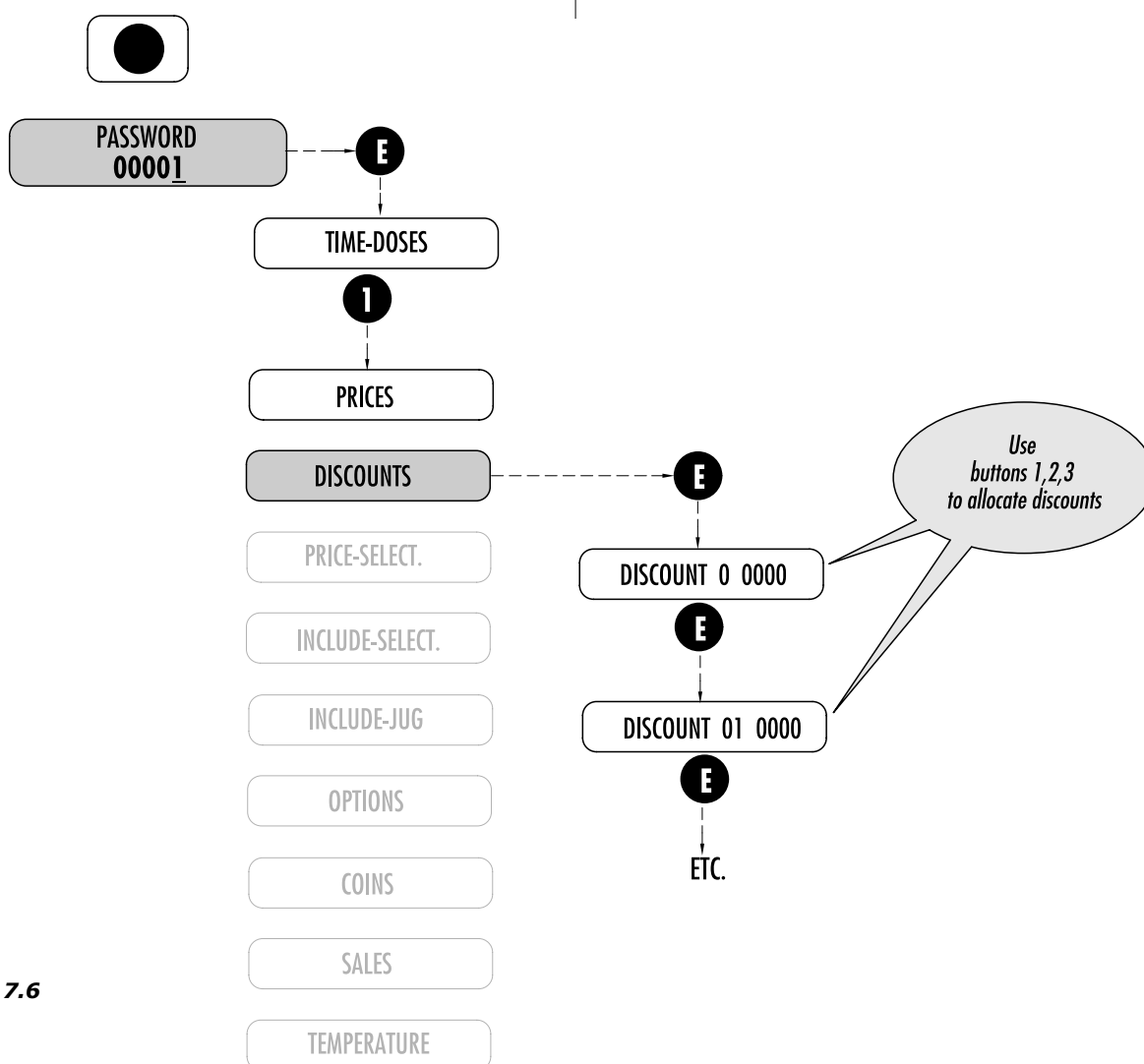
**"Discount 0 0000"**

with the keys "+", "-", "number", the discount setting is made.

Press ENTER to confirm the value set, and on the display the next discount is visualised.

**"Discount 1 0000"**

Press "PROG" to return to the DISCOUNT menu.



**Fig. 7.6**

### 7.2.4 PRICE SELECTIONS (Fig. 7.7)

This menu allows the combination of each single selection (indicated as Key 1, Key 27) to the prices previously set (indicated with Price 0 ÷ Price 9).

Press ENTER for access to the submenu the first function of which permits the programming of all selections at price P0 on the price table; the following appears on the display:

**"All at price 0 ? S/N"**

Using the key "+" the desired option is chosen:

**Y** (=yes) o **N** (=no)

Selecting the option Yes and pressing ENTER gives access to the programming of:

**"Price extra-mil = 0000"**  
**"Price extra sugar = 0000"**

these regard eventual price increases for the pre-selections **extra milk and extra sugar**.

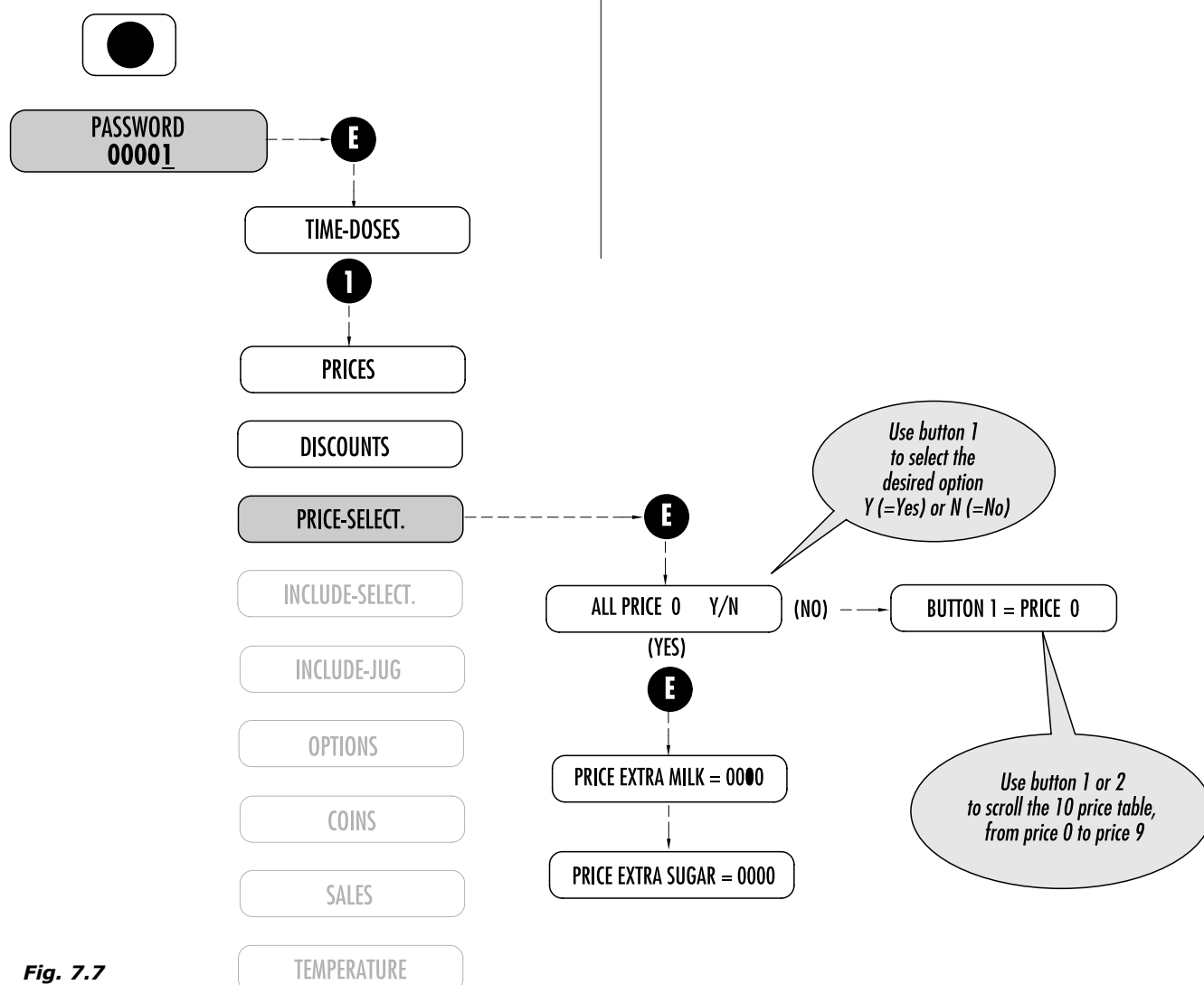
Vice versa, selecting the option NO gives access to programming of the single price for each single selection as follows:

**"Key 01 = Price 0"**

using the key "+" or "-" you can go through the 10 prices, from Price 0 to Price 9; once the desired price is chosen, it must be confirmed with ENTER passing in this manner directly to the programming of the next drink.

Of course it is possible to combine more than one selection to the same price.

As always, to exit from the sub menu press the PROG key.



### 7.2.5 INCLUDE –SELECTIONS (Fig. 7.8)

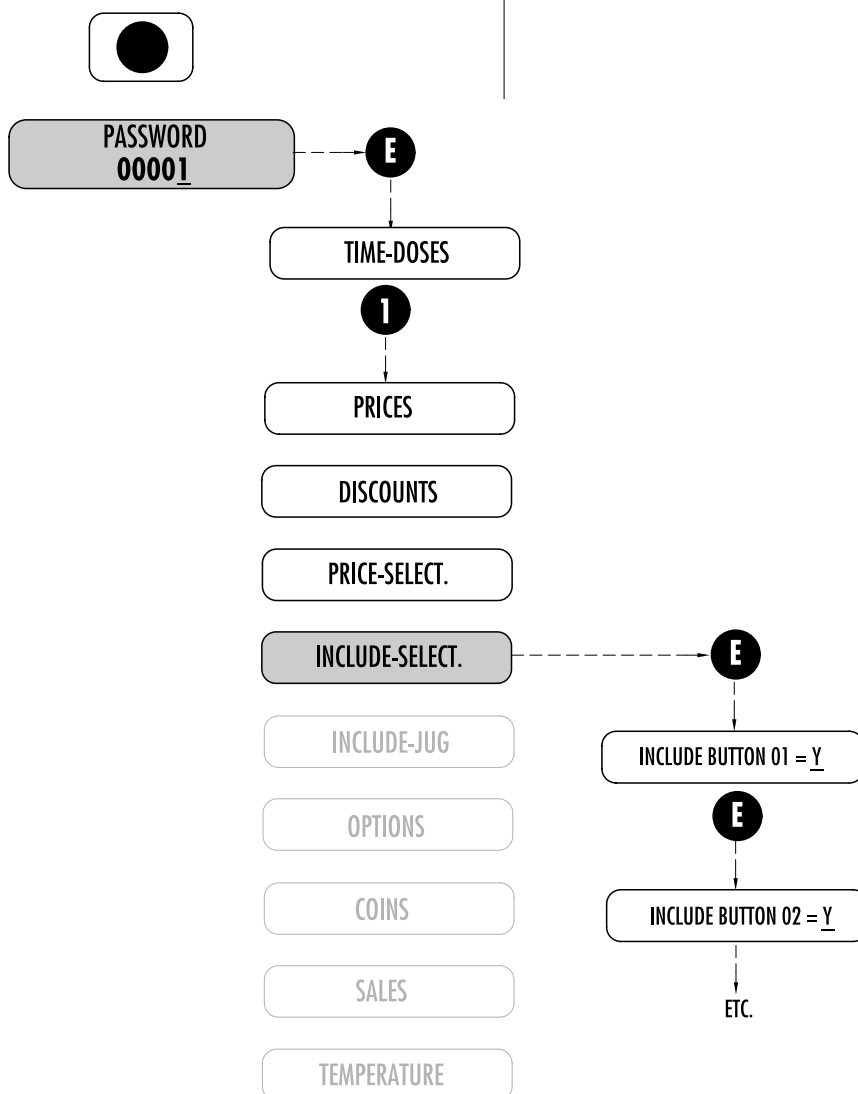
For activation or deactivation of selections (from key 01 to 20).

Pressing ENTER once, on the display appears:

**"Include key 01 = Y"**

with the keys "+" and "-", the desired option is selected.:  
DIGITISING "N" THE SELECTION IS EXCLUDED.

Press ENTER again to confirm the value and go ahead to the next selection.



**Fig. 7.8**

7.2.6 INCLUDE JUG (Fig. 7.9)

The JUG function permits the consecutive dispensing of a selection without cup for the number of times set (using the kit).

The INCLUDE JUG function makes it possible to activate the required selections under the JUG function.

On pressing ENTER once, the following appears on the display:

“Selection 01 Jug = Y”

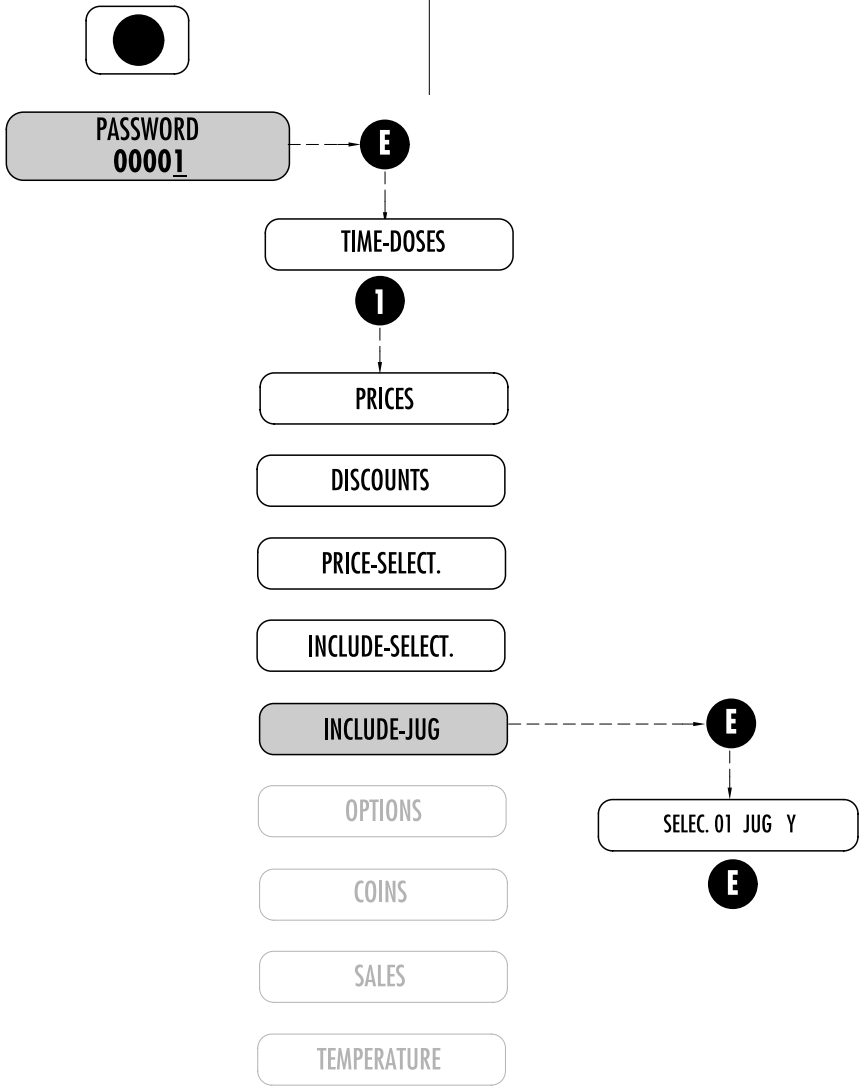


Fig. 7.9

with the keys “+” and “-” the desired option is selected in the same manner as the previous menu:

DIGITISING “Y” THE SELECTION IS INCLUDED.

The number of consecutive drinks dispensed for the JUG can be set in the menu OPTIONS; JUG 1 is combined with selection 1; JUG 2 is combined with all the other selections.

7.2.7 OPTIONS (Fig. 7.10)

This function renders available in sequence a series of options as listed below; the ENTER key gives access to the submenus visualising the first option. For each OPTION it is necessary to set the logical status “Y” or “N” that either engages or disengages the function.

- Extra milk** =enabling of the extra milk pre-selection key.
- Cup sensor** =
- Motor delay** = option to introduce a delay on the powder product motors.
- Elect. validator** = coin slot- selector.
- Permanent credit<sup>1</sup>** = option for the choice of visualising the credit until the same is finished (Y) (set the multivend option to Y).
- Contactless keys** =option for the connection of FAGE NUOVA BIANCHI contactless keys.

- Executive** = Executive coin mechanism (set Y also for the electronic option).
- Change giver** =change giving option (with the COGES systems - set Y).
- BDV system** =enabling for BDV coin mechanisms. WARNING ! Should the BDV system not be connected the distributor will not work and the wording “PERMANENT DIAGNOSIS” appears, in which case it is necessary to repeat the entire programming operation by means of P3000 (available with kit).
- MDB-ICP system** = enabling for MDB coin mechanism (available with kit).
- Master/Slave** =possibility of controlling 2 dispenser with 1 token slot.

<b>Multi-vend<sup>1</sup></b>	= option to visualise the remaining credit for 3 minutes (Y) or zeroing of the same at the end of the drink dispensing (N).
<b>Clock</b>	= clock enabling (available with kit). For the on/off programming according to pre-set times and eventual washing operations.
<b>Language</b>	= language used for all messages on the display (6 or 7 languages available).
<b>Decimal point</b>	= display of the amount with the decimal point.
<b>Washing</b>	= enabling automatic washing (available with a clock kit).
<b>Washing cycle</b>	= activates a mixer washing cycle, without the need for any interfaces, 30 minutes after switching on, a second cycle being undertaken providing that no drinks are dispensed within the next 12 subsequent hours; for re-starting the cycle at least one selection must be made. Therefore at least one mixer washing cycle is guaranteed a day.

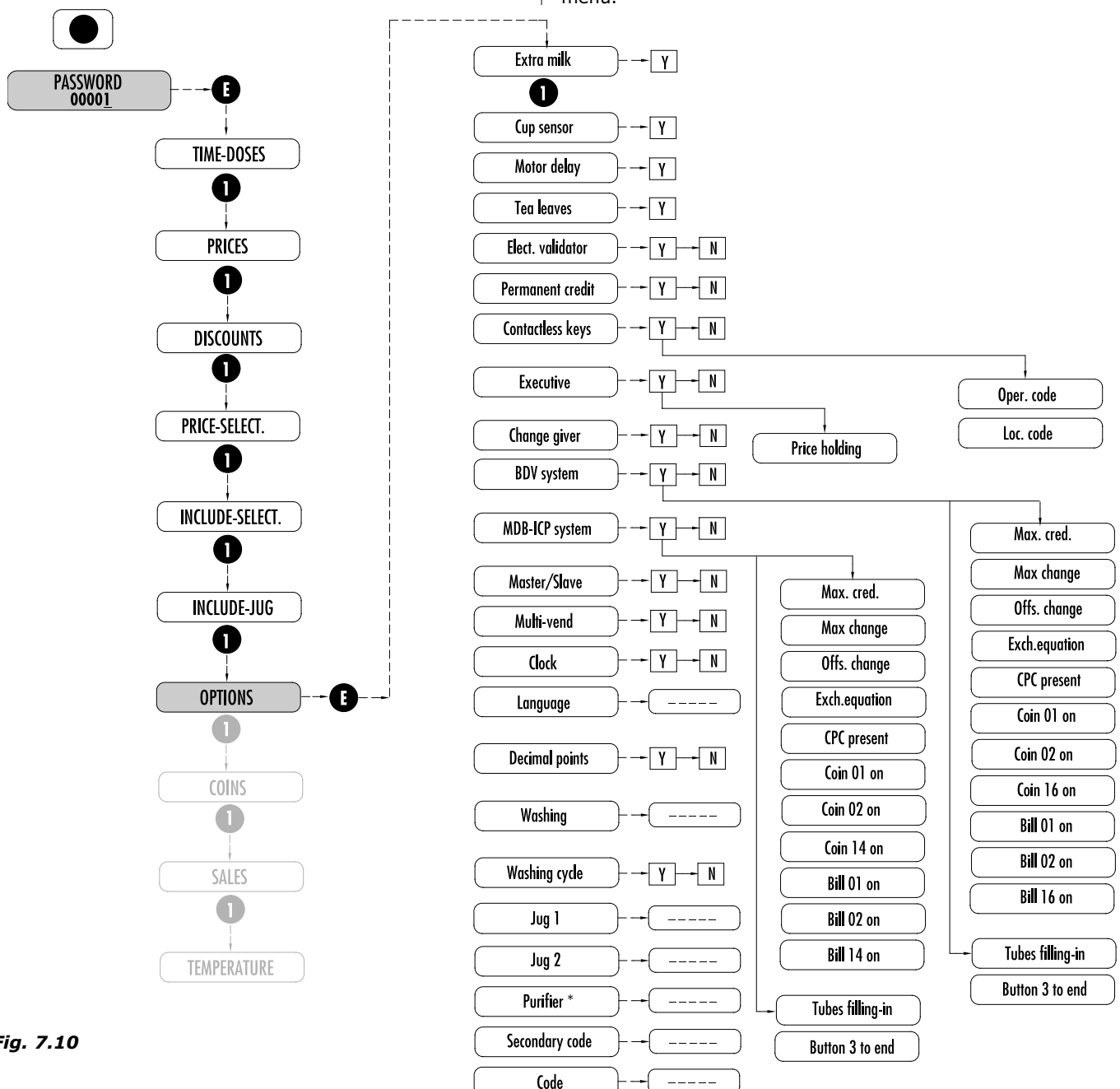
<b>Jug 1</b>	= number of consecutive CONCENTRATED COFFEE drinks to be dispensed in JUG mode.
<b>Jug 2</b>	= number of consecutive drinks to be dispensed, except for CONCENTRATED COFFEE, in JUG mode.
<b>Purifier *</b>	= decoupler, with indicator, for the regeneration of descaling resins.
<b>Secondary code</b>	=
<b>Code</b>	= new programming access code.

<sup>1</sup> The two functions are related, by setting "N" under the multivend options, any permanent credit operation will be cancelled.

\* this will not however stop the distributor function.

With the keys "+" and "-", the logical values status can be changed from "yes" (Y = enabled) to "no" (N = disabled) or with the keys "+", "-", "number" the numerical values can be changed.

Press ENTER again to confirm the value set and on the display the next operation is visualised; press PRG to return to the OPTIONS menu.



**Fig. 7.10**

**7.2.8 COINS (Fig. 7.11)**

Access to this menu permits the programming of the coins (from coin 1 to coin 8) in order to make them compatible with the system used ; subsequently verify that the coin mechanism channels correspond to the same vending machine channels.

Press ENTER once, on the display appears:

**"Coin 1 0050"**

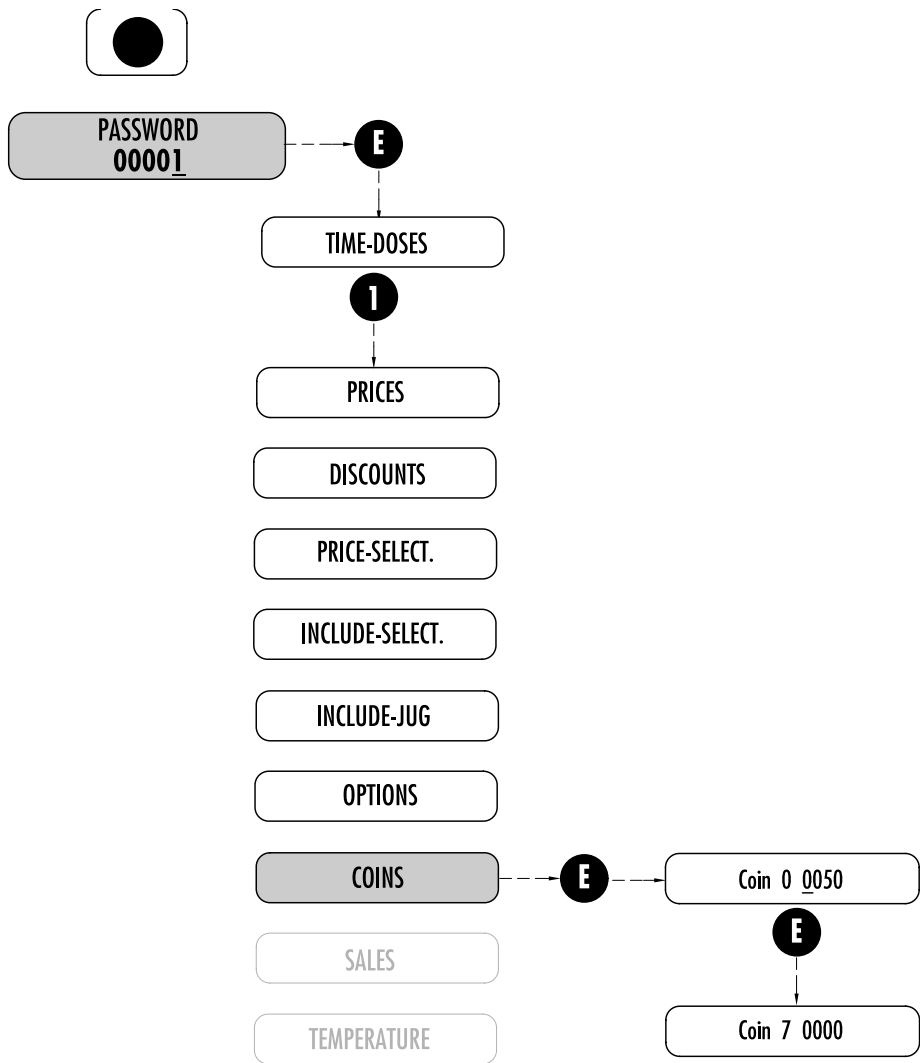
with the keys "+", "-", e "number" the value is changed.

Press ENTER to confirm the set modification and anyhow the value visualised on the display and passes on to the next coin i.e..

**"Coin 7 0000"**

this channel is used for setting the value for the obliterator cut or for the token using the specific interface kit.

Press PRG to return to COINS menu.



**Fig. 7.11**



### 7.2.9 SALES (Fig. 7.12)

Gives access to all the selling statistics audited by the machine. Confirming with the ENTER key, gives you access in sequence to the following menus for statistical data and the processing of the same:

<b>CASH</b>	= total per sales price.
<b>DISCOUNT</b>	= discounted value total
<b>OVERPAY</b>	= total cash without sales
<b>COUNT</b>	= total count of the selections made (sales + tests) and total count per each selection.
<b>FREE</b>	= total count and count per each single selection of the free selections (with free sale key).
<b>JUG</b>	= total count and count per each single selection of the jug selections (with the option jug key).
<b>TEST</b>	= total count and count per each single selection of the test selections.
<b>COINS</b>	= Total of pieces introduced for each single coin
<b>NOTES</b>	= Total pieces introduced for each single note (only with MDB)
<b>CANCEL</b>	= Function for zeroing all statistics.

Pressing the key "+" will take you through the menu up to the desired function; pressing the enter key gives access to the first data of the function selected; by pressing ENTER again gives you access to the other data, if present.

Pressing the PROG key takes you back to the original menu.

To reset the data operate as follows:

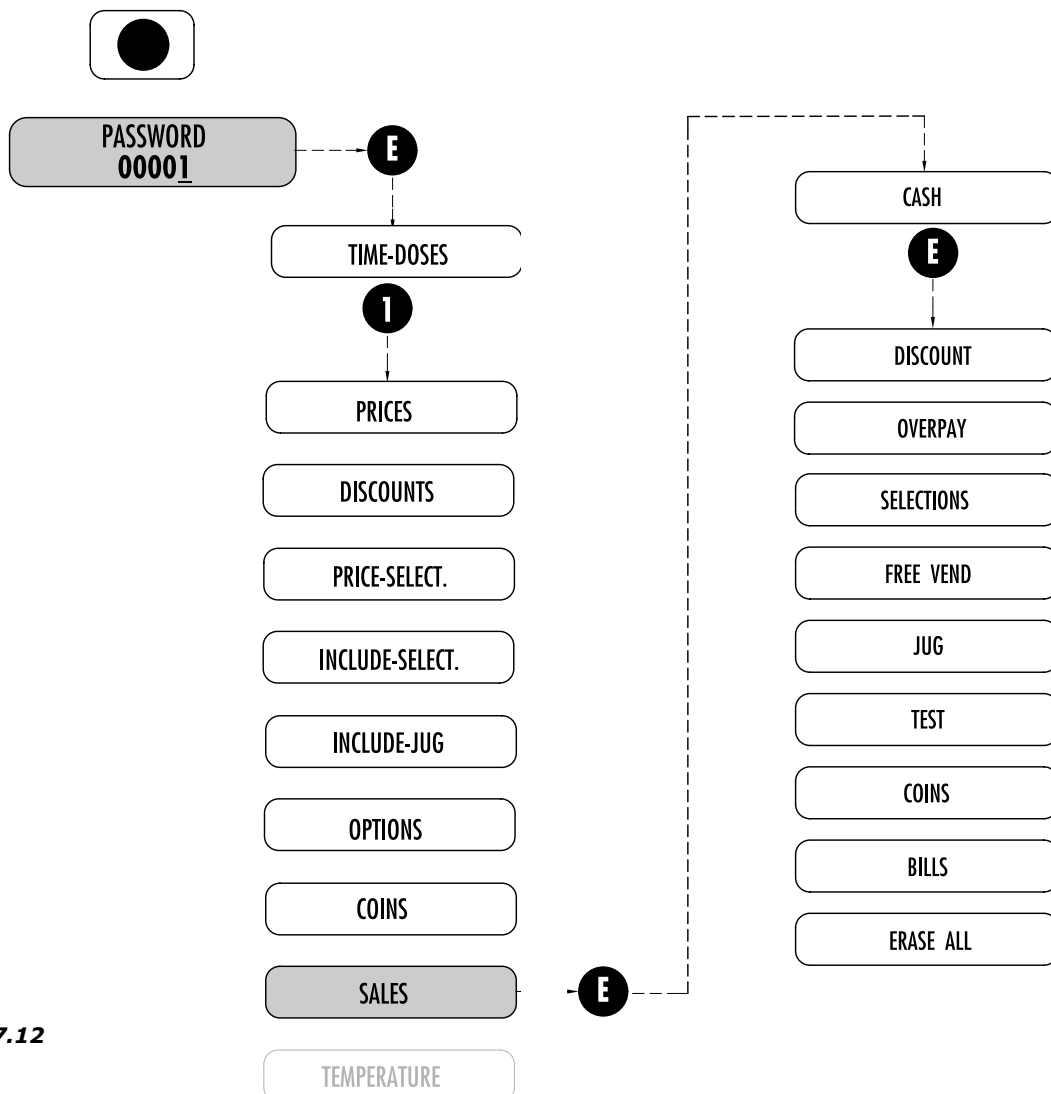
- go to CANCEL
- press ENTER key
- CODE **0000** will appear on the display
- input the resetting code using the same criteria
- press ENTER
- request if you wish to change the resetting code will appear
- press the key + if you do not wish to change the code
- ZERO ? will appear on the display
- confirm with the DIGIT key.

At the end of the resetting, pressing the PROG key takes you back to the original menu. The data resetting code (4 digits) is different to the programming access code (5 digits).

**The default code is 0001**

**N.B.** - If you want to change the default code proceed as follows:

- on the appearance of the change code ? request, press ENTER
- the old code will be displayed
- use the keys "+", "-" to compose the new code
- confirm with ENTER at the end.



**Fig. 7.12**

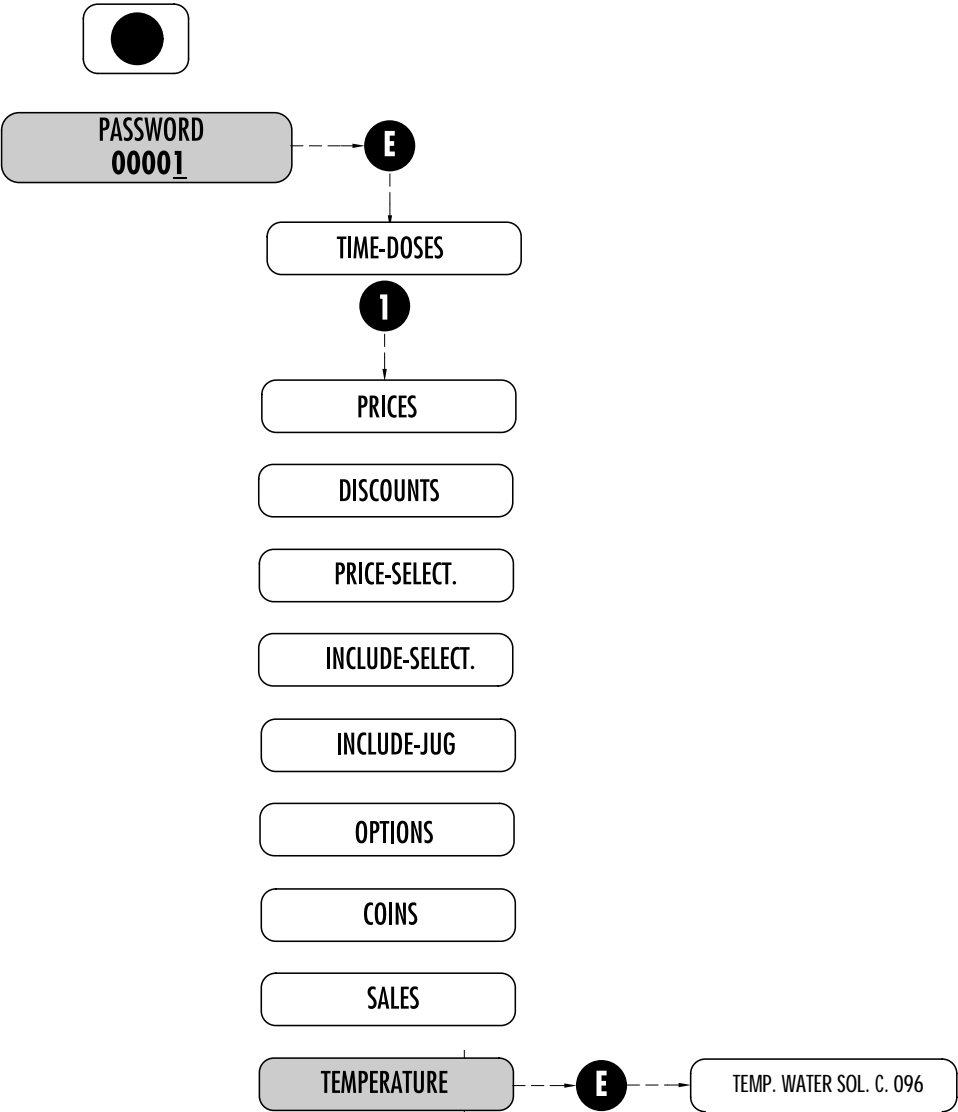
**7.2.10 TEMPERATURE (Fig. 7.13)**

This menu allows the regulation of the coffee boiler and instant boiler operating temperature.

On pressing ENTER the following appears for example:

**"temp. water sol. C.096"**

Use keys " + " and " - " and " cursor " to increase or decrease the temperature of the water in the boiler.



**Fig. 7.13**

### 7.2.11 EURO OPTIONS

Euro operation specifications with Nuova Bianchi distributors provided with updated release software.

The software used by Nuova Bianchi will make it possible to convert all machine data from the national currency, simply by entering a code.

The conversion will be divided into two stages:

#### 1<sup>st</sup> stage programming

The owner will firstly set the parameters for transfer into *Euro* on the VMC.

New menus will be introduced which include:

- a new price and surcharge table in Euro;
- the national currency reference for the calculation of the conversion factor;
- option to establish whether a parallel coin slot payment system is present to accept national currency even after passage to Euro.

On data entry the VMC is ready for passage to Euro.

Dual prices will now be displayed (Euro and national currency) according to whether the conversion factor has been engaged or not.

#### 2<sup>ND</sup> stage Transfer to accounting in Euro

The machine will be ready to operate with Euro currency on entering a special password on programming by the operator; this password does not involve access to the programming menu. The passage to Euro will be restricted (as it can only be undertaken once), therefore after having undertaken conversion it will be impossible to set the previous accounting data, unless a configuration is entered previously saved on P3000.

On transfer to Euro, the following data will be converted, according to the conversion factor:

- the audits;
- discounts;
- the digits relating to the payment system (max. change, max values, etc.) which are locally programmed);
- once the single currency comes into force, only the sum in Euro will be displayed.

**The field entitled "currency code 000" has been entered in the OPTIONS menu, this data which is manually set will be sent with audit data. Dient zur Ermittlung der Währungsart, mit der der VMC arbeitet.**

**Beim Wechsel zum Euro überschreibt das Programm alle eventuell eingegebenen Werte mit dem Code des Euro = 978**

For operation with Euro the EURO OPTIONS menu has been entered as follows

#### National currency

Sets the national currency for credit conversion.

#### Dual credit display

Permits the double display of credit both in EURO and national currency (depending on the currency set).

#### EURO currency

Functional after conversion to Euro, which tells the VMC whether national currency values have been set (in which case they are converted) or whether they are already in EURO on the 6 channels of the coin slot.

### Prices and discounts

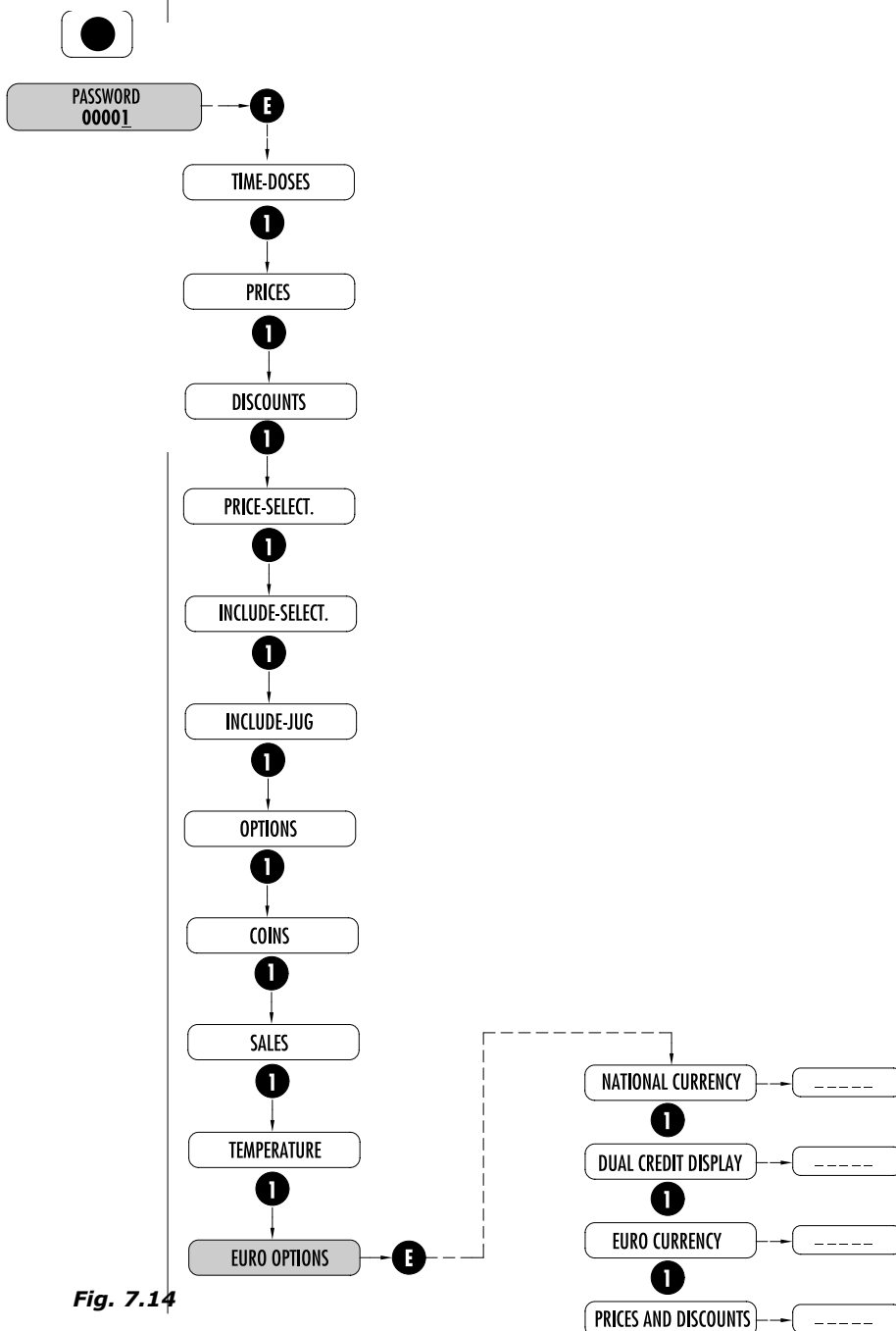
Consist of the alternative price and discount tables which are imposed over those normally used at the time of conversion.

**WARNING!** Due to the data entry configuration it is necessary to enter all the data without pressing ESC otherwise the data entered will be lost.

To engage conversion by means of password proceed as follows:

- Press the *PROG* key
- Enter code 12002
- Press enter
- After a few seconds the following will appear on the display "Conv. Euro OK".

After conversion, the double display feature will be disengaged, and the two figure decimal point will be forced, and only the EURO CURRENCY option will be accessible.



**Fig. 7.14**

## 8.0 MAINTENANCE

The service functions are accessed by pressing the service button located inside the distributor's door as indicated in Fig. 7.1.

"**SERVICE**" appears on the display.

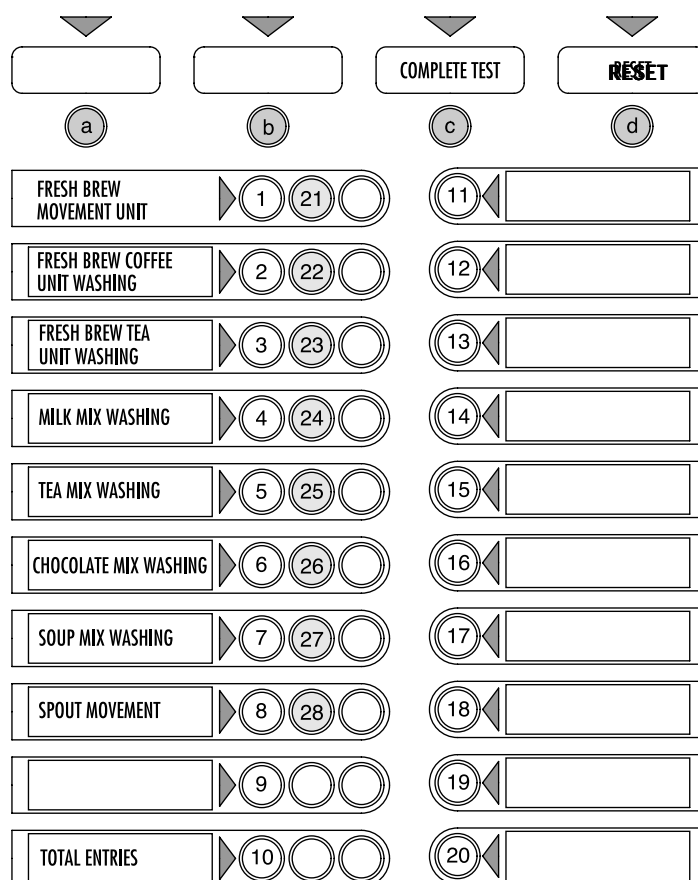
In service mode the keys of the external keyboard adopt the functions illustrated in drawing and i.e.:

- "**TEST**": after pressing the key it is possible to use the keyboard as in normal service so as to dispense any complete selection (counted as a test drink dispensing).

NOTE: so as to cancel a test pre-selection without dispensing drinks simply press the service key inside the door again. In this case the distributor will remain in SERVICE mode.

- "**RESET**": this function cancels the faults recorded by the distributor and begins a subsequent diagnosis check to ensure that no other faults are present.
- "**FRESH BREW UNIT MOVEMENT**": acts to begin the movement of the FRESH BREW unit.
- "**FRESH BREW UNIT WASHING**": acts to undertake a washing cycle on the FRESH BREW unit.
- "**MILK MIXER WASHING**": for milk mixer washing.
- "**TEA MIXER WASHING**": for tea mixer washing.
- "**CHOCOLATE MIXER WASHING**": for chocolate mixer washing.
- "**SOUP MIXER WASHING**": for soup mixer washing.
- "**NOZZLE MOVEMENT**": to move the nozzles when one wishes to open the heater support.
- "**TOTAL ENTRIES**": displays the number of drinks dispensed (general counter). To return to service mode it is necessary to press the service key inside the door again.

### Maintenance panel



## 9.0 MAINTENANCE AND INACTIVITY



### 9.1 Cleaning and Filling



In order to ensure the efficient operation of the distributor over time, certain periodic operations must be undertaken, some of which are essential in order to comply with the current health regulations in force. These operations, unless otherwise stated, are to be undertaken with distributor open and switched off. The cleaning operations must be undertaken before filling the dispenser with products. In order to guarantee normal working efficiency, the machine must be installed in areas with an environmental temperature of between  $-1^{\circ}\text{C}$  and  $+32^{\circ}\text{C}$  and with a humidity level of not over 70%. The distributor cannot be installed in places in which water jets are used for cleaning (ie. Catering kitchens) on contact with food products. The necessary elements for these operations are clean brushes and cloths and drinkable water for cleaning.

#### 9.1.1 Procedure for distributor cleaning

##### 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 straws;
- Roll of kitchen paper;
- Wood or plastic stick;
- Bottle of detergent;
- Desinfizierungsmitel;
- "Distributor out of action" sign;
- Small table for resting items (optional).

##### Never use:

- Sponges, scourers, cloths;
- Brushes;
- Screwdrivers or metallic objects.

##### To ensure hygiene:

- Use disinfectants.

##### For cleaning:

- Use detergents and/or cleansing agents

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

On application of the HACCP certain hygienic regulations are laid down for company self-checking procedures concerning:

- Cleaning of the premises
- Product transportation
- Machinery maintenance
- Waste disposal
- Drinking water procurement
- Personnel hygiene
- Food product characteristics
- Personnel training
- (EEC 93/43 Directive)

##### The cleaning operations may be undertaken:

- 1 at the site of installation of the automatic distributor;
- 2 at the premises of the company that provides the service.

##### 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.

#### 9.1.2 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.

#### 9.1.3 Daily cleaning

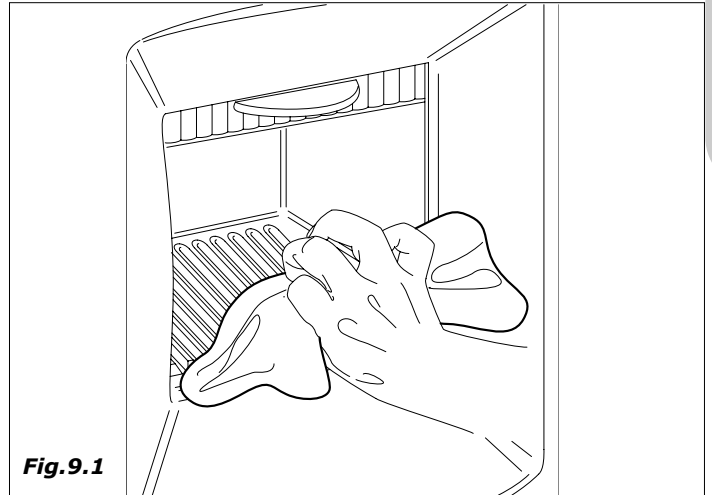
The purpose is to avoid the risk any bacteria building up in the zones in contact with food products. Clean brushes and cloths are necessary as well as drinkable water for cleaning.

Proceed as follows:

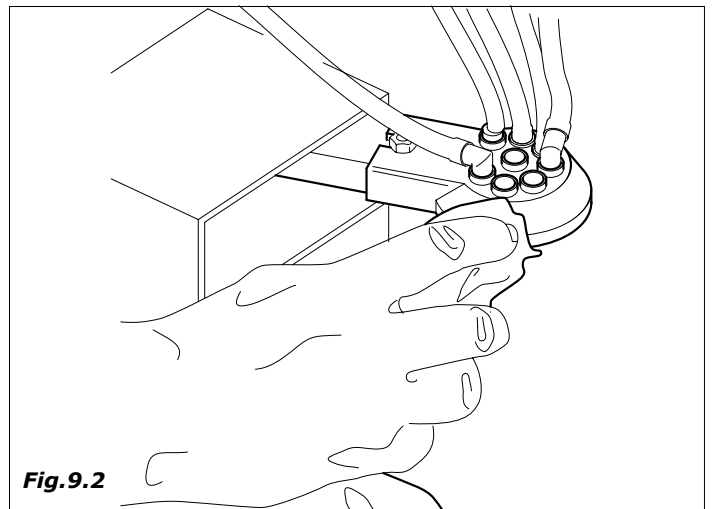
- clean all the visible parts in the dispensing area. (Fig. 9.1 and Fig. 9.2).

Remove and clean carefully:

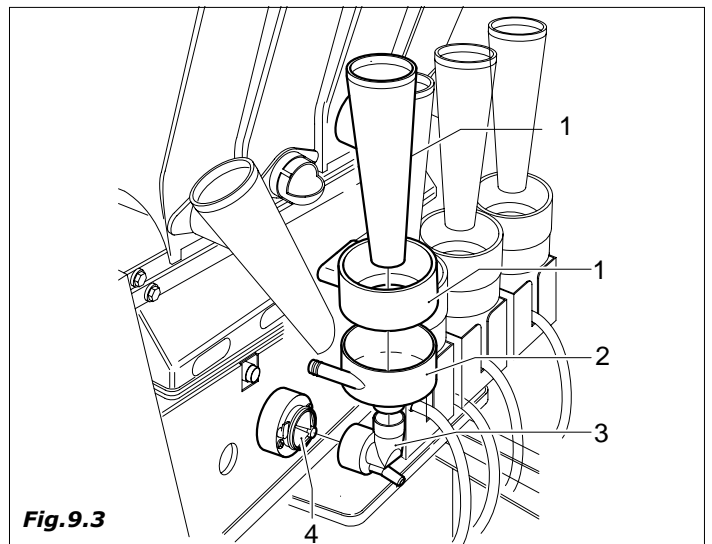
- funnels and powder chutes (Fig. 9.3 -pos. 1);
- water funnel (2), mixing bowls (3) whipper assembly (4);
- silicone water dispensing tubes;



**Fig. 9.1**



**Fig. 9.2**



**Fig. 9.3**

- dispensing chamber (Fig. 9.4).

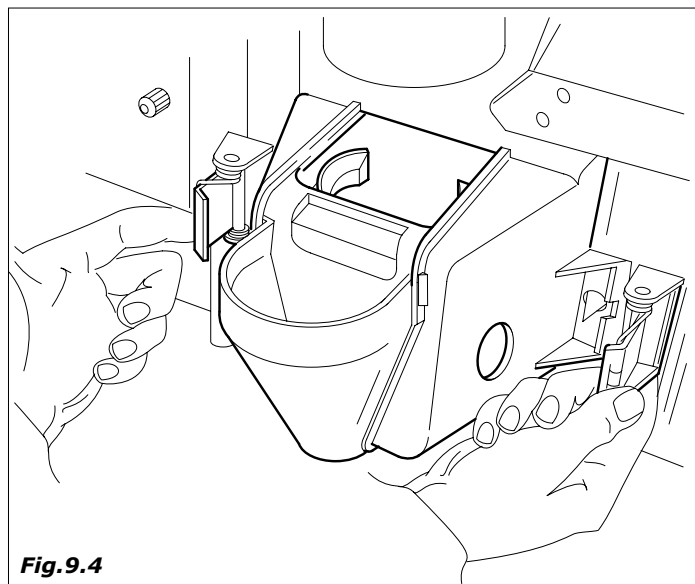
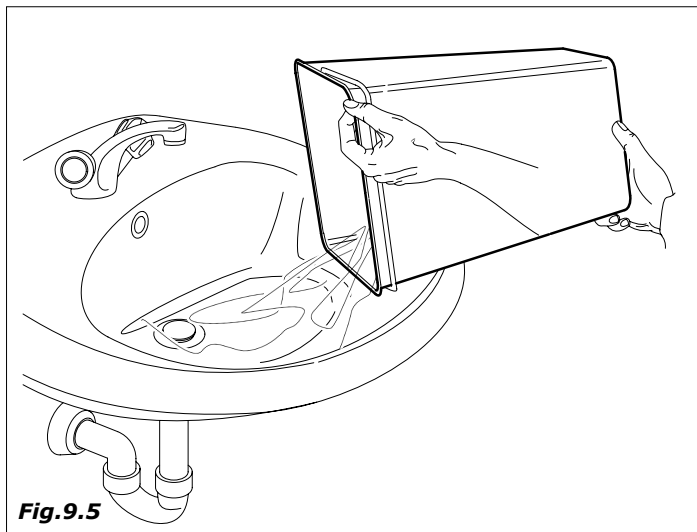
Before effecting the re-assembly operations clean all the elements carefully.

- remove all the liquid waste bags, clean and/or replace them (Fig. 9.5);
- remove all the waste coffee dregs bag (coffee in grains versions) (Fig. 9.6).

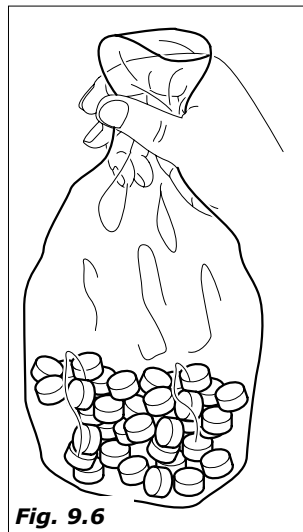
**Last step:** coin collection.

#### 9.1.4 Weekly cleaning

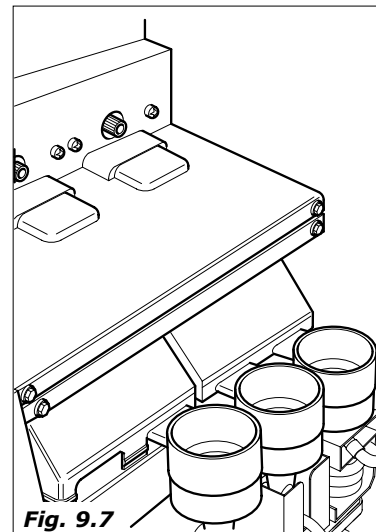
Remove all the containers and clean with a wet cloth all the container support parts, as well as the bottom of the distributor and the outside of the distributor, in particular the dispensing area (Fig. 9.7).



**Fig. 9.4**



**Fig. 9.6**



**Fig. 9.7**









#### 9.1.5 Product filling

Undertake to fill up the automatic vending machine with products and/or expendable materials as necessary. For these operations please refer to the operations described in chapter 6.6.

#### 9.1.6 Product storage advice

Conservation temperatures and times for some of the automatically distributed products:

PRODUCT TYPE	CONSERVATION T. - °C	CONSERVATION TIME
Canned, bottled drinks	+ 5°C	until expiry date
Fresh filled rolls	Max. +4°C	1 day
Long life filled rolls	Max. +4°C	until expiry date
Packed snacks	+ 20°C	in accordance with L.D. 109/92*
Cold dishes	Max. +4°C	1 day
Dishes for re-heating	Max. +4°C	1 day
Hot dishes	+ 65°C	5 hours
Frozen products	- 18°C	until expiry date
Soluble powder products		
Granulated coffee		
Sugar		
* AND SUBSEQUENT AMENDMENTS		

  <b>9.2 MAINTENANCE</b>	EVERY DAY	EACH WEEK	EACH MONTH	EVERY SIX MONTHS	EVERY 10.000 DRINKS
Remove and clean all the visible parts in the dispensing zone.					
Empty the waste liquid bins, clean them and/or substitute them.					
Replace the waste coffee dregs bag					
Remove all containers and clean all the support parts of the containers as well as the base and external parts of the distributor, the delivery area in particular, with a damp cloth.					
Disinfect all areas in contact with foods.					
Replace the water in the cooling unit.					

### 9.2.1 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.

Disinfect all the parts in contact with food substances monthly using chlorine based solutions following the operations already described under chapter 6.5.



## 9.3 Regulations

### 9.3.1 Regulation of the solubles 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 7.0 PROGRAMMING.

For problems relating to scale formation it is possible to make reductions on the water capacity of the solubles electro-valves.

- To ensure thorough rinsing of the bowls use the flow regulation screw if necessary (Fig. 9.8).

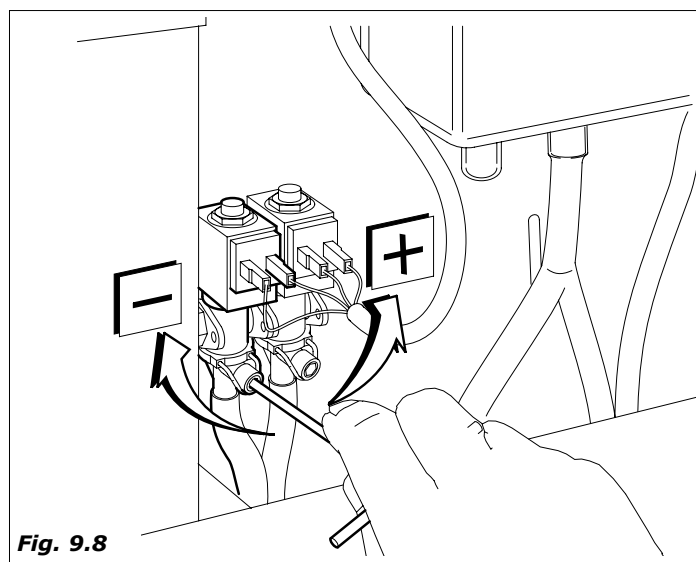


Fig. 9.8



### 9.4 Inactivity

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

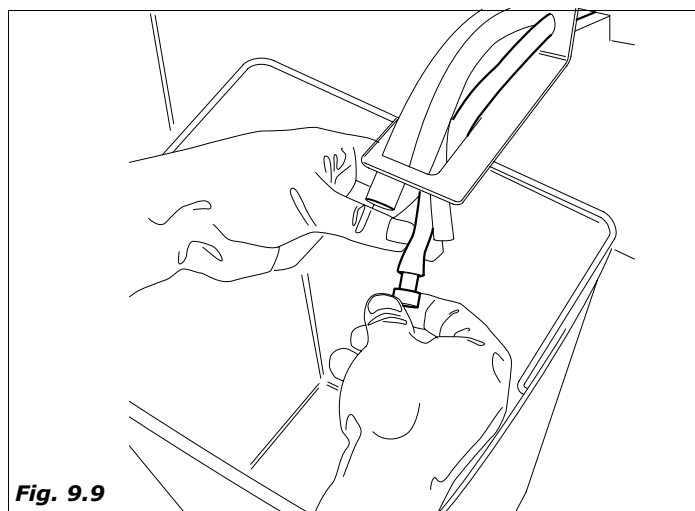
- disconnect the machine electrically and hydraulically;
- completely empty the instant boiler and the floater reservoir removing the plug located on the hose along the drain chute. Put the plug back in once the draining has been done (Fig. 9.9);
- discharge all the products from the containers;
- thoroughly clean all the parts in contact with food substances according to what has already been described;
- empty the liquid waste bucket and clean it carefully;
- eliminate the waste dregs bag;
- clean all the internal and external surfaces of the machine with a cloth;
- protect the outside of the machine with a plastic film wrapping or bag (Fig. 9.10);
- store in a dry and protected place where the temperature is not less than 1° C.

## 10.0 DISMANTLING

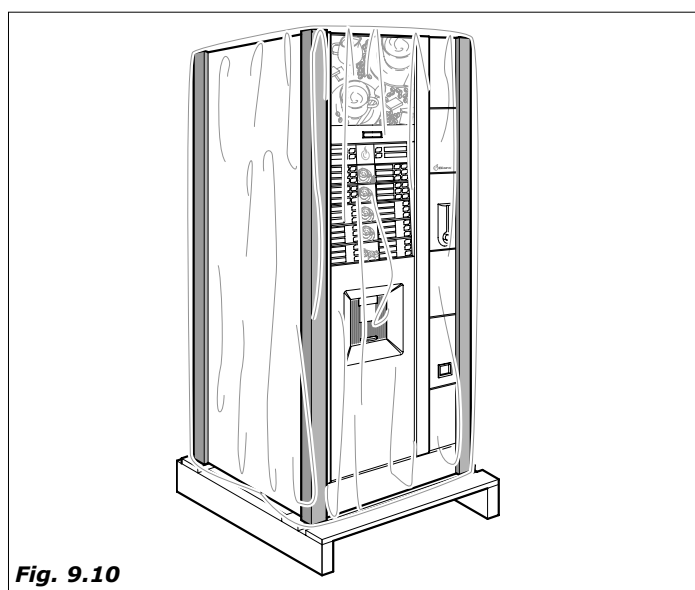
Proceed to empty both the water and products as described in the previous paragraph.

For disposal it is advisable to dismantle the machine separating the parts according to their composition (plastic, metal, etc.).

The parts divided in this way should then be sent to the relative specialised companies. If a cooling unit is present it should be consigned to the relative authorized disposal companies without disassembling it.



**Fig. 9.9**













**Fig. 9.10**



## 11.0 TROUBLESHOOTING GUIDE FOR THE FAILURES OR MOST COMMON ERRORS

In the function SERVICE, the failures, when present are immediately displayed in the follow manner:

Display message	Probable cause	Remedy
<b>E01</b> CUPS	No cup (blocks machine).	 Fill up the relative column.
<b>E03</b> COFFEE UNIT	The Fresh Brew unit is blocked, either in piston movement or blockage of shower unit, which means that movement has not occurred within the timeout limit of 8/6 (blocks the coffee/tea selections).	
<b>E94</b> AIR PUMP	Lack of the pressure necessary during the infusion period (generated during a specific pressure withholding stage of the system) (blocks the tea/coffee selections).	
<b>E06</b> PRESSURE PROBE	The pressure probe has either short-circuited or is open (detached) (blocks the coffee/tea selections).	
<b>E07</b> SCALE FACTOR	The scale factor sent by the executive payment system exceeds 250 (non-blocking).	
<b>E08</b> NO WATER	Water fails to arrive from the water mains (machine blocking). After a period of 4 minutes in which no water presence is detected in the mains water system. The machine is blocked.	
<b>E21</b> OVERFLOW	Dregs bucket full (blocking the machine).	
<b>E11</b> NTC PROBE	Temperature probe has either short circuited or is open (detached) (blocking the machine).	
<b>E17</b> NOZZLE MOTOR	Nozzle system not working (blocking the machine).	
<b>E18</b> STEAM	Presence of steam in the boiler (non blocking).	

<sup>(1)</sup> The alarm E16-VOLUME is a mere signal, that does not cause a block, but that indicates a progressive reduction of the water flow in the pump - electro-valve circuit or an inefficiency of the volume meter, this signal pre-announces an imminent failure of the E04 - PUMP.

There are also other non-blocking signals which signal that the regeneration of the descaler resins, blades or filters is necessary.

The number of entries beyond which the regeneration is deemed necessary is set in the OPTIONS menu; the display messages foreseen are:

- \* to indicate the error **E16 VOLUME**
- α** to indicate **resin** regeneration
- &** to indicate the substitution of the **filters**
- \$** to indicate the substitution of the **grinder** blades
- #** to indicate the substitution of the **filters** and of the **grinder** blades
- %** to indicate **resin** regeneration and the substitution of the **grinder** blades
- Ω** to indicate **resin** regeneration and the substitution of the **filters**
- π** to signal the regeneration of **resins**, substitution of the **filters** and the **grinder** blades

If one of the above mentioned symbols appears on entering **SERVICE** mode an **ALARM** message will appear followed by a symbol indicating that regeneration is necessary.

There is also a “**unit presence**” safety device (micro-switch mounted on the boiler unit support) in versions with plastic unit; in the absence of this unit the machine indicates SELECTION WITHOUT ESPRESSO COFFEE.

### The presence of the following is also indicated:

- coffee unit
- water
- coffee
- cups
- dreg container empty

### safety elements:

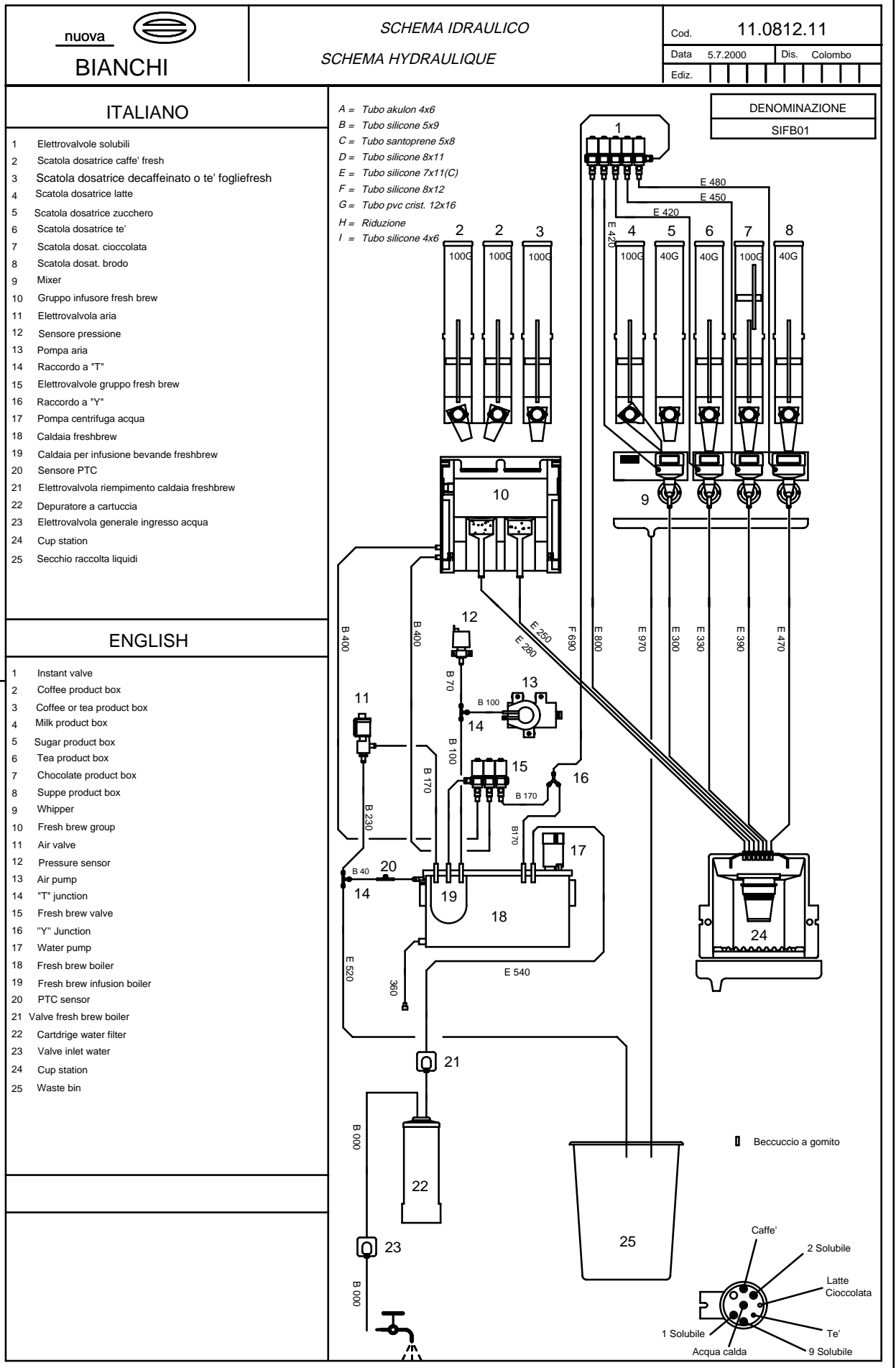
- coffee heater thermostat
- door switch
- mechanical anti- flooding
- pump, grinder, coffee delivery unit motor (timed regulation).

## 12.0 ACCESSORIES KIT

- PUMP KIT
- CLOCK AUDIT KIT
- MDB KIT
- ELECTROMECHANICAL STROKE COUNTER
- OVERSIZED PRODUCT CONTAINERS
- PURIFIER MONO-HEATER

**Fresh- Brew unit spares**

<b>NUOVA BIANCHI Code</b>	<b>Description</b>
05 1365 16	Snap couplings on left FB pipe exit
05 1366 16	Snap couplings on right FB pipe exit
36 2123 16	Seals (O-ring 5x1.2)
25 0197 16	Air solenoid valve with fixture spring
07 0208 16	Fixture spring for electro-valve
16 0161 16	Pump filter
21 0148 16	Pump rubber insert
27 0036 16	Air pump
05 1367 16	FB water inlet snap couplings with seals
36 2124 16	Seals for water inlet snap couplings
25 0198 16	Pressure sensor
96 0454 16	Complete FRESH-BREW unit
87 0078 16	Complete heater
26 0264 16	P.T.C and connection for unit assembly



APPROVATO:

VERIFICATO:


COMPONENT/DIVICES		
A	Interruttore generale di sicurezza	Safety switch
B		
C	Fusibili	Fuse
D	Filtro rete	Filter net
E	Reattore	Reactor
F	Lampada al neon	Neon Light
G	Startler	Startler
H	Micro sicurezza troppo pieno secchio	Safety high level box switch
I	Micro sicurezza supporto ugelli	Neckle motor safety switch
J	Micro fine corsa supporto ugelli	Neckle motor position switch
K	Micro fine corsa agniente bocchieri	Position cup motor switch
L		
M	Micro vado bocchieri	Lack of cup switch
N		
O	Micro antistrurt torze bocchieri	Position column cup switch
P	Sensore bocchieri infrarosso	Infrared cup sensor

CORDONE GENERALE 24V: — GENERAL CABLE 24V: —

USCITE FILE:  
Power Out


JP3

57	38	34	42
33	37	35	43




JP4

42	21	23	32	42
21	41	30	33	35




JP5

54	42	42	48
25			



JP6

42	67	42	48	42
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Trasmissione  
Supply

10	20	30
40	30	20

Trasmissione  
Door

30	34	32
54	40	30

Trasmissione  
Door

30	31	40
37	38	25
25	44	42

Trasmissione  
Door

22	55
21	40
30	25
30	18
42	39

Trasmissione  
Door

25	40
----	----

Trasmissione  
Door

44	43	40
47	46	45

Trasmissione  
Door

27	40
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Trasmissione  
Door

40	67	35
46	47	35

Trasmissione  
Door

50	50
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Trasmissione  
Door

CORDONE GENERALE 230V. — GENERAL CABLE 230 V		GENERAL LOW TENSION	
	<p>Resistenza /heating element</p>		
CORDONE GENERALE 230V. — GENERAL CABLE 230 V		GENERAL B.T. — GENERAL LOW TENSION	
	<p>Resistenza /heating element</p>		
CORDONE GENERALE 230V. — GENERAL CABLE 230 V		GENERAL B.T. — GENERAL LOW TENSION	
	<p>Resistenza /heating element</p>		
CORDONE GENERALE 230V. — GENERAL CABLE 230 V		GENERAL B.T. — GENERAL LOW TENSION	
	<p>Resistenza /heating element</p>		
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	<p>Resistenza /heating element</p>		
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	<p>Resistenza /heating element</p>		
CORDONE GENERALE 230V. — GENERAL CABLE 230 V		GENERAL B.T. — GENERAL LOW TENSION	

**PORTIERA 20V. — DOOR CABLE 20V**

Distro.bacche 24V / DC  
Distro. gomme

Portiere

Aliment. 24V / AC  
Aliment. 24V / AC Envelope

Enveloppe

Portiere 24V.

Aliment. 24V / AC Envelope

Contacstop 24V DC  
Compressor

Aliment. 24V / AC Envelope

Enveloppe

**PORTIERA 220V. — DOOR CABLE 220V**

Aliment. 220V / AC  
Ombrello. 220V / AC  
Cortina

Lampada  
Light

Lampada  
Light

Lampada  
Light

Aliment. 220V / AC

Ombrello. 220V / AC

Cortina

Lampada

Light

Lampada

Light

**PORTIERA 8 T. — LOW TENSION DOOR**

Low tension switch door

Spinnacore bachelieri  
Cap distributor

Low tension switch door

Spinnacore bachelieri  
Cap distributor

**PORTIERA 20V. — DOOR CABLE 20V**

Distro.bacche 24V / DC  
Distro. gomme

Portiere

Aliment. 24V / AC  
Aliment. 24V / AC Envelope

Enveloppe

Portiere 24V.

Aliment. 24V / AC Envelope

Contacstop 24V DC  
Compressor

Aliment. 24V / AC Envelope

Enveloppe

**PORTIERA 220V. — DOOR CABLE 220V**

Aliment. 220V / AC  
Ombrello. 220V / AC  
Cortina

Lampada  
Light

Lampada  
Light

Lampada  
Light

Aliment. 220V / AC

Ombrello. 220V / AC

Cortina

Lampada

Light

Lampada

Light

**PORTIERA 8 T. — LOW TENSION DOOR**

Low tension switch door

Spinnacore bachelieri  
Cap distributor

Low tension switch door

Spinnacore bachelieri  
Cap distributor

