

Piccolo Mattino

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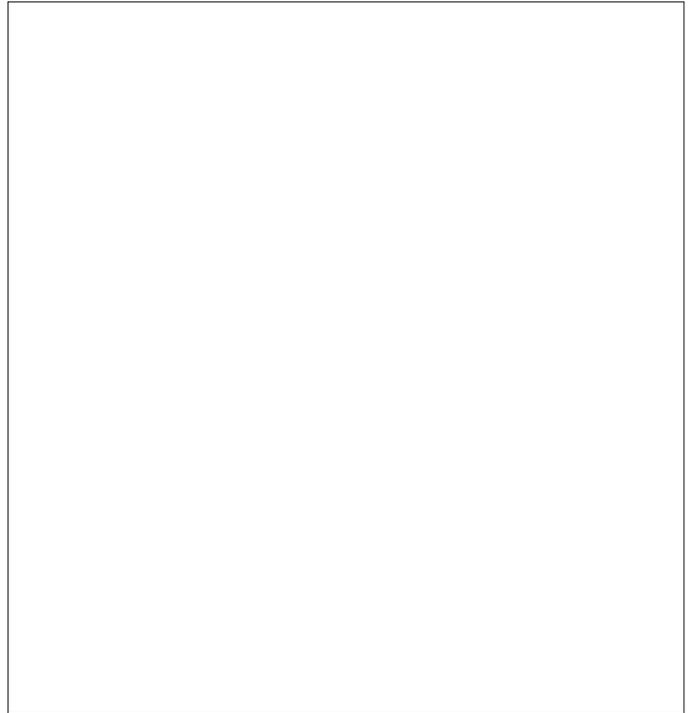
NECTA
VENDING SOLUTIONS SpA
A company of
N&W GLOBAL VENDING GROUP

Sede legale: Via Roma 24
24030 Valbrembo (BG) Italia
Web: www.nwglobalvending.com

Telefono +39 035 606111
Fax +39 035 606460
Trib. Bergamo Reg. Imp. n. 2534
R.E.A. Bergamo n. 319295

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DICHIARAZIONE DI CONFORMITA'
DECLARATION OF CONFORMITY
DÉCLARATION DE CONFORMITÉ
KONFORMITÄTSEKTLÄRUNG
DECLARACIÓN DE CONFORMIDAD
DECLARAÇÃO DE CONFORMIDADE
VERKLARING VAN OVEREENSTEMMING
INTYG OM ÖVERENSSTÄMMESE
OVERENSSTEMMESESERKLÆRING



Valbrembo, 03/05/2001

Dichiara che la macchina descritta nella targhetta di identificazione, è conforme alle disposizioni legislative delle direttive: **89/392, 89/336, 73/23 CEE** e successive modifiche ed integrazioni.

Declares that the machine described in the identification plate conforms to the legislative directions of the directives: **89/392, 89/336, 73/23 EEC** and further amendments and integrations.

Déclare que l'appareil décrit dans la plaque signalétique satisfait aux prescriptions des directives: **89/392, 89/336, 73/23 CEE** et modifications/intégrations suivantes.

Erklärt, daß das im Typenschild beschriebene Gerät den **EWG** Richtlinien **89/392, 89/336, 73/23** sowie den folgenden Änderungen/Ergänzungen entspricht.

Declara que la máquina descrita en la placa de identificación, resulta conforme a las disposiciones legislativas de las directivas: **89/392, 89/336, 73/23 CEE** y modificaciones y integraciones sucesivas.

Declara que o distribuidor descrita na chapa de identificação é conforme às disposições legislativas das directivas **CEE 89/392, 89/336 e 73/23** e sucessivas modificações e integrações.

Verklaart dat de op de identificatieplaat beschreven machine overeenstemt met de bepalingen van de **EEG** richtlijnen **89/392, 89/336** en **73/23** en de daaropvolgende wijzigingen en aanvullingen.

Intyggar att maskinen som beskrivs på identifieringsskylten överensstämmer med lagstiftningsföreskrifterna i direktiven: **89/392, 89/336, 73/23 CEE** och påföljande och kompletteringar.

Det erklæres herved, at automaten angivet på typeskiltet er i overensstemmelse med ovsdirektiverne **89/392, 89/336** og **73/23 CEE** og de senere ændringer og tillæg.


ANTONIO CAVO

C.E.O

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INTRODUCTION

This technical documentation is part and parcel of the vending machine and must always follow the machine in case it is moved or ownership is transferred, so as to permit consultation by different operators.

Before installing and using the machine, it is first necessary to carefully read and understand the instructions contained in this manual, as they offer important hints on safe installation, use and maintenance.

This manual is divided into three sections.

The **first section** describes the loading and routine cleaning operations which are carried out in areas of the machine accessible with simple use of the door key, without using any other tools.

The **second section** contains the instructions for correct installation and all information necessary for optimum use of the machine.

The **third section** describes maintenance operations which involve the use of tools to access potentially dangerous areas.

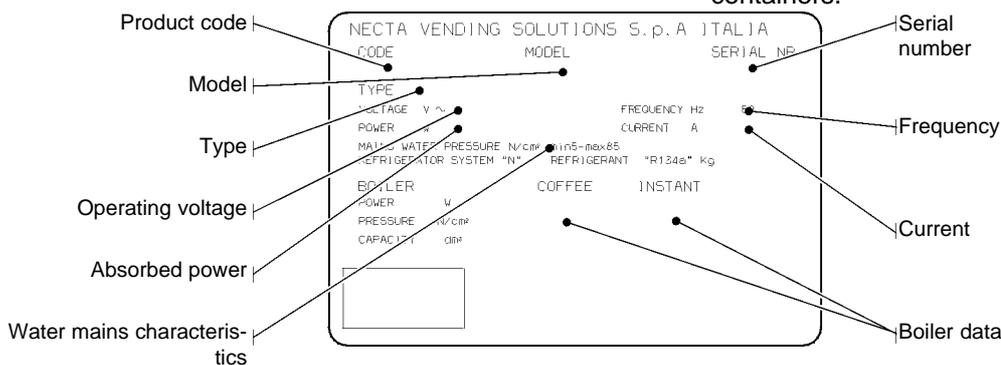
The operations described in the second and third sections must be carried out only by personnel who have the specific knowledge of the machine functioning from a point of view of electrical safety and health regulations.

IDENTIFICATION OF THE VENDING MACHINE AND ITS CHARACTERISTICS

Every machine is identified by its own serial number, indicated on the data plate attached to the cabinet on the right-hand side.

This plate (see Figure below) is the only one acknowledged by the manufacturer and indicates all of the data which readily and safely gives technical information supplied by the manufacturer. It also assists in spare parts management.

It is therefore recommended that this plate be neither damaged nor removed.



IN CASE OF FAILURE

In most cases, any technical problems are corrected by small repair operations; however, before contacting the manufacturer we recommend that this manual be read carefully.

Should there be serious failures or malfunctions, contact the following:

NECTA VENDING SOLUTIONS SpA
Via Roma 24
24030 Valbrembo
Italy
Tel. +39 - 035 - 606111

TRANSPORT AND STORAGE

To prevent any damage, special care should be taken when loading or unloading the vending machine.

The machine can be lifted by a motorised or manual fork lift truck, and the forks are to be placed underneath the machine from the side clearly indicated by the symbol on the cardboard package.

At least two persons are required to move the machine by hand.

Do not:

- overturn the vending machine;
- drag the vending machine with ropes or similar;
- lift the vending machine by its sides;
- lift the vending machine with slings or ropes;
- shake or jolt the vending machine and its packing.

The machine should be stored in a dry room where the temperature remains between 0° C and 32° C.

Avoid stacking machines one on top of the other and always keep it upright as indicated by the arrows on the packing.

USING THE VENDING MACHINES FOR HOT DRINKS IN OPEN CONTAINERS

(Ex.: plastic cups, ceramic cups, jugs)

The vending machines of drinks in open containers should only be used to sell and dispense drinks obtained by reconstituting instant and lyophilized products.

These products should be declared by the manufacturer as "suitable for automatic vending" in food-safe open containers.

The dispensed products should be consumed immediately. They should never be preserved and/or packed for later consumption.

Any other use is unsuitable and thus potentially dangerous.

POSITIONING THE VENDING MACHINE

The vending machine is not suitable for outdoor installation. It must be installed in a dry room where the temperature is between 2°C and 32°C, and not where water jets are used for cleaning (e.g. in large kitchens, etc.).

The machine should be placed close to a wall, so that the back panel is at a minimum distance of 8 cm from it and correct ventilation may be ensured.

The machine should never be covered with cloth or the like.

The machine should be positioned with a maximum inclination of 2°.

If necessary provide proper levelling by way of the adjustable feet included.

The feet are not sized for withstanding impacts. Therefore they should be removed prior to moving the machine to another location.

Important notice!!

Access to the machine interior for maintenance and/or repairs is via the back panel.

Therefore the machine is designed to be rotated, thus allowing removal of the back panel.

INSTALLATION ON A CABINET

The machine can be installed on a table or on any other suitable stand (recommended height is 820 mm).

If possible, it is advisable to use the special cabinet, which can house the liquid waste tray and the self-contained water supply kit.

WARNING FOR INSTALLATION

The machine installation and the following maintenance operations should be carried out by qualified personnel only, who are trained in the correct use of the machine according to the standards in force.

The machine is sold without payment system, therefore the installer of such a system has sole responsibility for any damage to the machine or to things and persons caused by faulty installation.

The integrity of the vending machine and its conformity with the rules and regulations in force for its relevant systems must be checked by qualified personnel at least once a year.

PRECAUTIONS IN USING THE MACHINE

The following precautions will assist in protecting the environment:

- use biodegradable products only to clean the machine;
- adequately dispose of all containers of the products used for loading and cleaning the machine;
- switch the machine off during periods of inactivity, thus achieving considerable energy savings.

WARNING FOR SCRAPPING

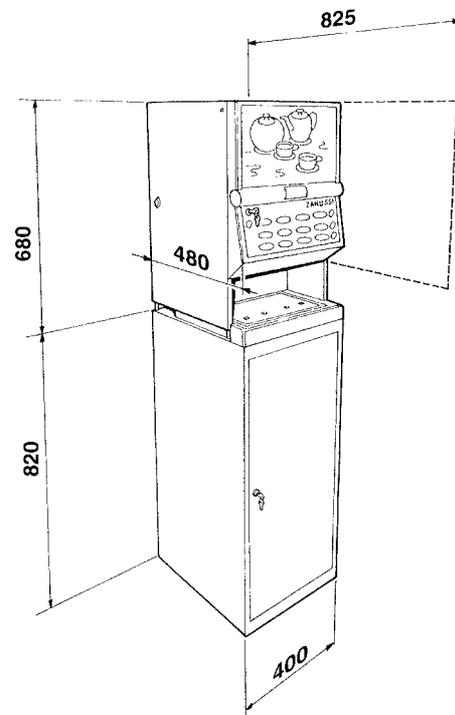
Whenever the machine is to be scrapped, the laws in force regarding environment protection should be strictly observed. More specifically:

- ferrous and plastic materials and the like are to be disposed of in authorized areas only;
- insulating materials should be recovered by qualified companies.

TECHNICAL SPECIFICATIONS

Height	(base)	680	mm
	(110 mm high jug kit)	790	mm
	(180 mm high jug kit)	860	mm
Width		400	mm
Depth		480	mm
Weight	(without packing)	43	Kg

DIMENSIONS



RATINGS

Power supply voltage	230	V~
Power supply frequency	50	Hz
Installed power	3150	W
Current	13	A
Boiler capacity	9	l

BOILER

9 litre capacity with one 2700 W armored-type heating element.

WATER SUPPLY

From the mains, with a pressure of 0.05 to 0.85 MPa (0.5 to 8.5 bar).

AUTONOMY OF OPERATION

Instant coffee	= 0,6 Kg
Powder milk	= 0,8 Kg
Sweetened chocolate	= 1,5 Kg
Tea	= 2 Kg
Hot water hourly output	= 30 l/h

DOSI PROGRAMMABILI

PROGRAMMABLE DOSES

The machine is supplied with a "self-service" configuration, i.e. one cup of product is dispensed in a single point only; in this case only one dose is programmed for each selection and the products cannot be dispensed at the same time.

However, it is also possible to configure the machine for the "Hotellerie" version. In this case three doses are programmed for each selection and two products can be dispensed at the same time.

ACCESSORIES

Besides the cabinet, the following is also available:

- Two 110 and 180 mm height extension kits, permitting the use of jugs instead of cups.
In this case a fold-up cup support grille is provided;
- back illuminated advertising panel;
- illuminated front panel
- application of a coin front validator directly on the machine;
- application of other payment systems, using a special additional module;
- external programmer unit, permitting the transfer of programming routines from one machine to another.

POWER CONSUMPTION

The machine power consumption depends on many factors, such as the temperature and ventilation of the room where it is installed, the inlet water and boiler temperature, etc.

Under average conditions, and namely:

- Ambient temperature:	20° C
- Instant product boiler temperature:	94° C
- Inlet water temperature:	20° C
- Water (average) for instant products:	135 cc

the following power consumption levels resulted:

- To reach operating temperature	805 Wh
- Hourly stand-by power consumption	169 Wh
- Average consumption for instant products	9.0 Wh

The above power consumption calculated from average data should only be taken as an indication.

LOADING AND CLEANING

PUSH-BUTTON PANEL SWITCH

When opening the door using the special key, access is gained to the area housing the containers and the parts to be cleaned.

The machine is equipped with a switch (see Figure 1) which disconnects the push-button panel, leaving the heating unit switched on.

IMPORTANT NOTICE!!

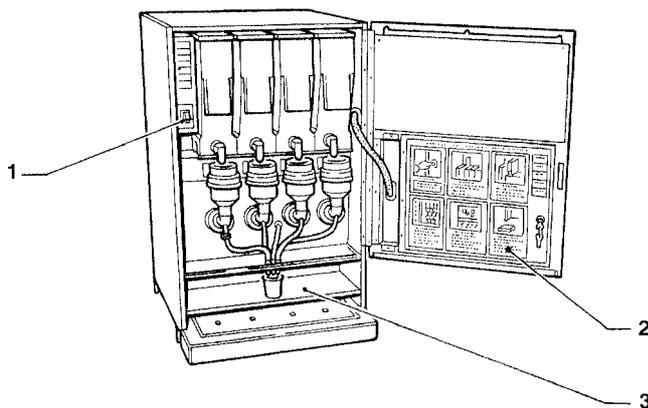
The push-button panel switch DOES NOT disconnect the power.

In order to switch the machine off, the main switch must be used and the plug removed.

All operations requiring the machine to be energized and the protective covers removed should be carried out by qualified personnel only.

Fig.1

- 1 - Push-button panel switch
- 2 - Washing and cleaning instructions plate
- 3 - Fold-up cup support (optional)

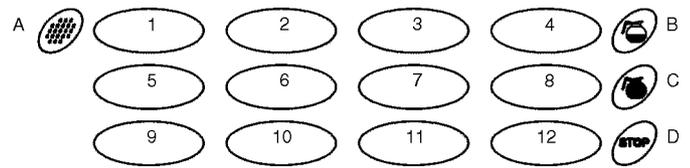


CONTROLS AND INFORMATION

All user controls are located on the external side of the door (see Figure 2); the machine condition information and the operating instructions are shown on the Liquid-Crystal Display (LCD).

According to the unit configuration (either Self-service or Hotellerie) the push-buttons may be assigned the functions listed in Figure 2. The identification plates shall be inserted accordingly.

Fig. 2



VERSION

self-service		hotellerie	
1 -	Espresso coffee		Espresso coffee
2 -	Coffee with milk		Milk
3 -	Chocolate		Chocolate
4 -	Tea		Tea
5 -	Double espresso		Double espresso
6 -	Cappuccino		Disabled
7 -	Strong chocolate		Strong chocolate
8 -	Tea with milk		Disabled
9 -	Long coffee		Long coffee
10 -	Cappuccino with chocolate		Disabled
11 -	Chocolate with milk		Disabled
12 -	Hot water		Hot water
A -	Cleaning/programming		Cleaning/programming
B -	Disabled		Half jug
C -	Disabled		Full jug
D -	Stop cleaning		Stop jug dispensing/cleaning

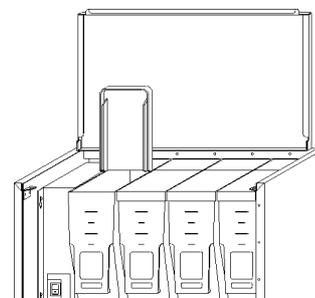
The cleaning/programming push-button can either be enabled or disabled; in any case a password is required for cleaning and another one to access programming. Buttons B and C, when pressed before a selection push-button, among only the ones marked with in the above table, allow a choice of dispensing dose; if such buttons are not pressed a normal dose will be dispensed.

LOADING INSTANT PRODUCTS

Before filling the product containers, following the indications of the instructions plate (Figure 1), check that:

- the type of product is suitable for automatic dispensing;
- the package is intact and the product is not past the expiry date;
- the product does not contain any clots.

Fig. 3



It is advisable to load only the product amount sufficient for the expected use, so that excessive exposure to the environment is avoided.

Do not press the product in the container.

HYGIENE AND DISINFECTION

According to current health regulations, the operator of an automatic vending machine is responsible for the hygiene of the foodstuff circuits, to prevent formation of bacteria.

The hydraulic circuits and the parts in contact with foodstuff should be fully sanitised by qualified personnel to remove any bacteria which might have formed during storage.

It is advisable that specific sanitising agents (such as chlorine-based detergents or similar) be used also for cleaning the surfaces which are not directly in contact with foodstuff.

Some parts of the machine can be damaged by strong detergents.

The manufacturer declines all responsibility for any damage caused by the use of strong or toxic chemicals.

PERIODICAL CLEANING

To ensure perfect operation for a long period, the machine must be subjected to some regular maintenance as indicated on the internal plate.

Always disconnect the power from the machine using the main external switch before any maintenance operations which require removal of components.

Before disinfection, all solid residue and product films must be mechanically removed from the mixer components (see Figure 4), using a brush or similar implements, if necessary.

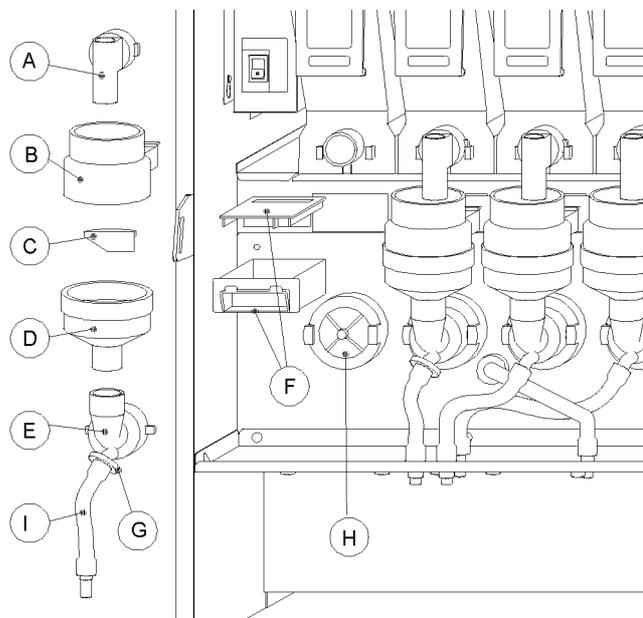


Fig. 4

SUSPENDING FROM USE

Should the machine be not in use for a period of time exceeding the product expiry dates, the following will be necessary:

- Turn off the main switch and disconnect the electrical plug;
- Completely empty the containers and thoroughly wash them with the chlorine-based detergents used for cleaning the mixers;
- Completely drain the water from the boiler by loosening the special clamp (refer to the hydraulic system).

INSTALLATION

The machine installation and the following maintenance operations should be carried out by qualified personnel only, who are trained in the correct use of the machine and are aware of the specific risks of such operations.

The machine must be installed in a dry room with temperature between 2°C and 32° C.

At installation the hydraulic circuits and the parts in contact with foodstuff should be fully sanitised to remove any bacteria which might have formed during storage.

UNPACKING THE VENDING MACHINE

After unpacking, ensure that the machine is intact. If in doubt, do not use it.

No packing elements (i.e. plastic bags, polystyrene foam, nails, etc.) should be left within the reach of children, as they are potentially dangerous.

Packing materials must be disposed of in authorised areas and all recyclable ones must be recovered by qualified companies.

INSERTING THE PRODUCT LABELS

The labels indicating the available product selections in the desired language shall be inserted into the special slots following the procedure shown in Figure 2.

SANITISING

Before installing the machine the same procedure planned for the annual sanitising should be carried out (see relevant section) to eliminate any bacteria which may have formed during storage.

CONNECTING THE MACHINE TO THE WATER MAINS

The machine must be connected to the drinking water mains. The water pressure must be 0,05 to 0,85 MPa (0,5-8,5 bar).

N.B.: On the long run the water characteristics considerably affect the correct operation of the machine and increase the need of maintenance, particularly regarding the boiler and the dispensing solenoid set.

Run water from the mains until it is clear and without any traces of impurities.

Use a hose capable of withstanding the water mains pressure and suitable for use with foodstuffs (minimum inside diameter of 8 mm) to connect the water supply to the 3/4" gas-type union of the water inlet solenoid valve.

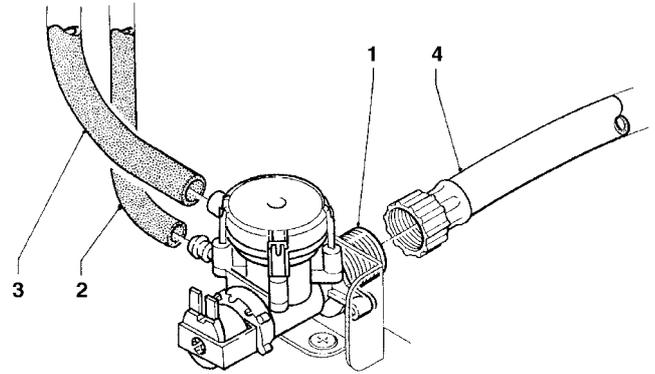


Fig. 5

- 1 - 3/4" gas-type water inlet union
- 2 - Supply tube
- 3 - Overflow tube
- 4 - Inlet hose union

As an optional, a "water supply hose kit", composed of a 1.5 m hose and all necessary fittings, is available.

It is good practice to install a suitable cutoff valve on the water supply outside the machine in an easily accessible position.

OVERFLOW DEVICE

The water inlet solenoid valve (see Fig. 5) is fitted with an overflow device which mechanically stops the water flow when there is a malfunction to the solenoid valve or to the boiler water level control device.

To restore normal operations, proceed as follows:

- Turn off the external main switch and disconnect the electrical plug;
- Drain the water contained in the overflow pipe;
- Shut off the water supply valve outside the machine;
- Loosen the nut which secures the solenoid valve supply hose to relieve the water mains residual pressure and then tighten it again;
- Open the valve and switch on the machine.

CONNECTING THE MACHINE TO THE POWER SUPPLY

The machine is designed to operate under a single-phase 230 V~ voltage and is protected by 15 A fuses.

Before making the connection make sure that the ratings correspond to those of the power grid, and more specifically:

- the supply voltage rating should be within the limits recommended for the connection points;
- the main switch should be capable of withstanding the peak load required, and at the same time ensure proper omnipolar disconnection from the power grid with an opening gap of the contacts of at least 3 mm.

The main switch, the power outlet and the plug should be located within easy reach.

The electrical safety of the machine is ensured only when it is correctly and efficiently earthed according to the safety standards in force.

This fundamental safety requirement must be duly verified, and if in doubt the system must be carefully tested by qualified technicians.

The power cable is of the type fitted with a fixed plug. Any replacement should be done by qualified personnel only, using exclusively cables of the type HO5 RN - F or HO5 V V-F or H07 RN-F with a 3x1-1,5 mm² section.

Do not use adapters, multiple sockets and/or extensions.

THE MANUFACTURER DECLINES ALL RESPONSIBILITY FOR ANY DAMAGE CAUSED BY NONCOMPLIANCE WITH THE ABOVE MENTIONED SAFETY RULES.

FILLING THE BOILER

- When turning on the main external switch, water flows in automatically and the display will indicate the message "FILLING".
- When the water reaches the correct level inside the boiler, the heating element is switched on and the display will indicate the message "HEATING".

CONFIGURING THE MACHINE

The machine is supplied with a "self-service" configuration, i.e. one cup of product is dispensed in a single point only (see fig. 6-A) and with the preselection buttons disabled (see fig. 2).

However, it is possible to make simple changes to the preset machine configuration by appropriately rearranging the piping and setting the minidip switches on the CPU card differently (see the selection dose table), thus obtaining the "hotellerie" version, i.e. preset for dispensing more products in variable doses (see fig. 6-B).

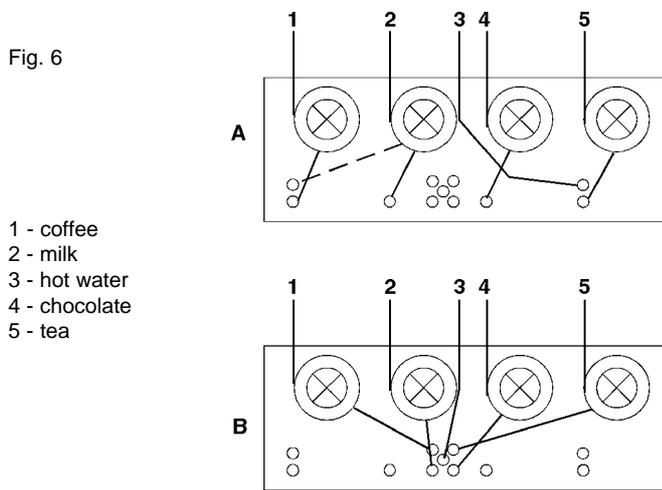
The different options of each configuration can be modified in the programming mode (refer to relevant section).

Also the disabled buttons can be activated, regardless of the selected configuration.

Great care should be taken for the compatibility between the selection push-button configuration and the piping layout.

For example, with the "hotellerie" configuration, the white coffee selection can be enabled only if the whitener and coffee pipes are fitted in the same position (see fig. 6-A).

Fig. 6



- 1 - coffee
- 2 - milk
- 3 - hot water
- 4 - chocolate
- 5 - tea

DISPENSING CYCLES

According to the type of product the dispensing cycles of the different selections are designed to obtain the best possible results concerning drink quality and output .

With the cup dose, the powder for milk and chocolate based drinks is dispensed intermittently, whereas for instant coffee based drinks the powder is dispensed before the water.

On the other hand, with the jug dose the powder is dispensed intermittently for all types of drink; the correct water/powder proportion is always maintained, even in the case of dispensing interruption with the "STOP" button. Intermittence times and number of operations are fixed.

It is therefore important not to alter the flow rate of the solenoid valves which is factory preset.

Only in the case of replacement or accidental tampering with the solenoid valves, the flow regulators should be adjusted to dispense 25 cc/sec for chocolate, water and tea, 20 cc/sec for milk.

CLEANING CYCLES

A mixer cleaning cycle can be started either with the special button on the push-button card (**for qualified personnel only**), or with button "A" on the external panel, if enabled (see Figure 2). To prevent any unintentional operations of the external cleaning button, this must be pressed twice in a short sequence and then a programmable 5-digit password should be entered. The default password is "55555".

During the cleaning cycle all mixers are operated at the same time, and all solenoid valves are actuated intermittently. Such intermittent operation ensures easier removal of scale deposits.

The cleaning cycle can be interrupted with the "STOP" button.

The cleaning cycle can be carried out also automatically after a programmed number of minutes from the last selection made.

TEMPERATURE CONTROL

The machine is supplied with a preset boiler temperature of 86°C. Water temperature adjustments can be made by qualified technicians by turning the manual thermostat screw, after having removed the protective panel (see fig. 11).

However, temperature should never exceed 90°, to avoid the risk of water boiling.

OPERATING MODES

Three different operating modes are provided for the machine, accordingly the buttons may have different functions based on the preset mode of the buttons.

The available modes are:

- Normal vending mode, in this case the machine indicates on the display the message "Ready for use".
- temporarily out of service for boiler heating or filling, or cleaning.
- out of service due to a lockout failure or with the push-button panel disabled through the special switch (see fig.1).

NORMAL VENDING MODE

After switching on the machine, the message "Starting" is displayed for a few seconds, after which the machine goes into normal vending mode.

The messages displayed according to the operation being carried out can be the following:

DISPLAY	FUNCTION
"Ready for use"	Machine ready.
"Out of service"	Machine out of service
"Drink in process"	Preparation of the drink
"Heating"	Wait time before reaching operating temperature
"Filling"	Boiler filling
"Sel. not avail."	Selection disabled
"Suspended serv."	Selection buttons disabled

When pressing a jug pre-selection button the message "half jug" or "jug" will be displayed for a few seconds.

PROGRAMMING MODE

The programming mode can be accessed either with the special button located on the push-button card (**for qualified technicians only**) or with button "A" on the external push-button panel, if enabled (see Figure 2).

To prevent any unintentional operations of the external button, this must be pressed twice in a short sequence and then a programmable 5-digit password should be entered. The default password is "11111".

The machine displays a menu which gives the option of either maintenance mode or programming.

When in programming mode, the keys of the external push-button panel are assigned different functions (see Figure 7), used for moving inside the menu and namely:

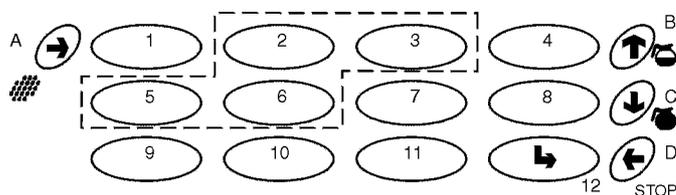


Fig. 7

- ↑ previous function or increase data (+1)
- ↓ next function or decrease data (-1)
- ← delete data or exit function
- change data
- ↵ confirm data or confirm function.

In programming mode, the keys shown within the dotted line (Figure 7) are assigned direct functions and namely:

- 2 - reset failures
- 3 - reset statistics
- 5 - display statistics
- 6 - print statistics

MAINTENANCE MODE

When selecting the maintenance functions from the main menu, the "maintenance" menu will be displayed, enabling the following functions:

"Complete Sel."	Complete test dispensing
"Powder only"	Dispensing powder only
"Water only"	Dispensing water only
"Set Jug"	Dispensing the doses for the jug selections

At this point, keys 1 and 5 (Figure 8) are used to set the program for dispensing the "half jug" and "jug" doses for all selections covered by this function.

The "STOP" button switches off the pre-selection and sets the program for dispensing the "cup" doses.

Key "A" starts a cleaning cycle.

Moving inside the menu and confirming of operations are as for the programming mode.

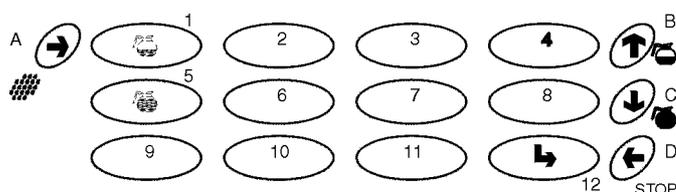


Fig. 8

PROGRAMMING

When selecting the programming functions from the main menu, the machine goes into "Programming" mode and the keys on the panel are assigned the functions shown in Figure 7.

The "programming" menu will be displayed, enabling the following functions:

"Powder dose"	powder dose setting
"Water dose"	water dose setting
"Buttons"	enabling/disabling of one selection, pre-selection, cleaning
"Present failures"	reading of present failures
"Initialising"	RAM initialising
"Machine code"	machine code setting
"Selec. counter"	setting the number of selections after which the machine will lock
"Password"	new password entry
"Cleaning"	setting the wait time for automatic mixer cleaning
"Whipping"	setting the whipping time after the water is dispensed

If the machine is equipped with a payment system, available as optional, also the following functions are enabled:

"Set Price"	price setting
"Set price/button"	prices/button setting
"Basic unit / DP"	basic coin value setting and decimal point position
"Validat. Lines"	setting the validator line value

In addition, the following direct operations are provided (see fig. 7):

- failure reset;
- display of statistics;
- printing of statistics;
- statistics reset.

PROGRAMMING THE WATER AND POWDER DOSES

When either the "Water dose" or the "Powder dose" functions from the "programming" menu are displayed, the corresponding doses can be changed.

The doses are identified by a code, which is different for "cup", "half jug" and "full jug", and is displayed each time. The dose code identifies the water and powder doses for a certain selection; changing the dose of one selection also affects the compound selections for which the dose code is used.

The dose codes are summarised in the "selection doses" tables supplied together with the machine.

The displayed doses are expressed in tenths of second. Press the confirm key "↵" to access the dose code list, which can be scrolled up and down with keys "↓" and "↑". Press the correction key "→", this value starts blinking and can be modified as necessary (see the summary table).

ENABLING THE PUSH-BUTTONS

When the "Buttons" function from the "programming" menu is displayed, the status of a push-button can be changed (enabled/disabled).

Press the confirm key "↵" to access the push-button list, which can be scrolled with keys "↓" and "↑".

The selection buttons are identified by a number (see Figure 2) while the others are identified by the following strings:

"Clean. Butt. = #"	Cleaning button Programming
"Half Jug = #"	Dose pre-selection button Half jug
"Jug = #"	Dose pre-selection button Full jug

The "STOP" button is activated with the "half jug", "jug" and "cleaning" keys.

When pressing the correction key "→" the status of the button starts blinking.

The status of the button can be changed from (enabled) to (disabled) with keys "↓" and "↑".

Press the confirm key "↵" again to store the current status present on the display (see the summary table).

DISPLAYING THE PRESENT FAILURES

When the "Present failures" function from the "programming" menu is displayed (see the summary table), press the confirm key "↵" to display the list of current failures; press key "↓" to display the next failure (if present).

If no failure is present, when pressing the confirm key "↵" the message "No Failure" is displayed.

The possible failures are highlighted in the following cases:

PROBE FAILURE:

The machine will lock if after dispensing water for 50 seconds no level decrease in the boiler is detected.

BOILER FAILURE:

The machine will lock if there are no temperature changes in the boiler for more than 120 minutes.

COIN MECHANISM FAILURE (if installed):

The machine will lock if it receives a pulse longer than 2 seconds on a validator line or the communication with the serial coin mechanism does not take place for more than 30 seconds.

RAM DATA FAILURE:

Data contained in the EEPROM (i.e. the chip that stores the setting variations) is wrong and must be retrieved from the EProm, whereas all statistics information will be lost.

WATER FAILURE:

The water inlet solenoid valve is triggered for more than 30 seconds (or 4 minutes if the machine was just switched on) without reaching the minimum level in the boiler.

LIQUID WASTE CONTAINER FAILURE:

This occurs after the float in the liquid waste container is triggered.

INITIALISING

When the "Initialising" function is displayed the vending machine can be initialized, restoring all default data.

This function should be used in the case of memory data error or when the EPROM is replaced.

All statistics information will be reset.

Press the confirm key "↵" and the message "Confirm?" will be displayed. Press key "↵" a second time and the message "In process" will be displayed for a few seconds.

PROGRAMMING THE MACHINE CODE

When the "Machine code" function is displayed the identification code number of the machine can be changed (from the default 0000 to 9999).

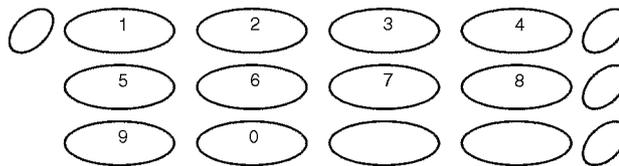
Press the confirm key "↵" and the current code number is displayed; then using the correction key "→" and the first digit starts blinking.

The buttons have now numeric values (see fig. 9).

Press a key to assign its value to the blinking digit and the next digit will start blinking.

Press the confirm key "↵" after setting the last digit and the new code will be stored.

Fig. 9



VENDING COUNTER

This function causes the machine to stop after a preset number of selections.

A non-programmable 4-digit password (4231) is required to have access to the counter.

After entering the password, it will be possible to enter the number of selections; upon reaching such number, the machine stops, reads the number of selections made and resets the counter (refer to related table).

WARNING: The counter default setting is zero;

With the counter set to zero this function is disabled.

PROGRAMMING THE PASSWORD

When the "Password" function is displayed it will be possible to change the passwords which are used to access the cleaning and programming procedures through the external button.

Press keys "↓" and "↑" to alternate between the password requests for cleaning and for programming.

Press the confirm key "↵" and enter the current password, at this point the push-button panel will have numeric values (see fig. 92), the first digit will start blinking and can be modified. Pressing any of the keys, causes the blinking digit to take its value and the next digit starts blinking.

PROGRAMMING THE PAYMENT SYSTEMS

If a payment system is installed, also the related functions are available for programming.

PROGRAMMING THE PRICES

When the "Price sett." (price programming) function from the "programming" menu is displayed, the 12 sales prices memorised can be varied.

The prices are indicated in number of basic coins.

Press the confirm key "↵" from the "programming" menu to access the price list, which can be scrolled up and down with keys "↑" and "↓".

and the price value is displayed.

When pressing the correction key "→", this value starts blinking and can be modified as necessary (see the summary table).

PROGRAMMING THE SELECTION PRICES

When the "Set Prices/Sel." (price assignment) function from the "programming" menu is displayed, the combination of each selection to one of the memorised prices can be changed.

Press the confirm key "↵" from the "programming" menu to access the selection/price list, which can be scrolled up and down with keys "↑" and "↓".

When pressing the correction key "→", the price number starts blinking and can be modified as necessary (see the summary table).

N.B.: The residual credit is controlled by the minidips located on the CPU card. Refer to the "selection doses" table for settings.

PROGRAMMING THE BASIC COIN AND THE DECIMAL POINT

When the "Basic coin / DP" (basic coin value) function from the "programming" menu is displayed, the value of the basic coin and the position of the decimal point can be modified.

Press the confirm key "↵" from the "programming" menu to display the current value of the basic coin.

Press keys "↑" and "↓" to alternate between the value of the basic coin and the number of the decimal point position "dP", i.e.:

0	decimal point disabled
1	XXX.X
2	XX.XX
3	X.XXX

When pressing the correction key "→", these values start blinking and can be modified as necessary (see the summary table).

PROGRAMMING THE VALIDATOR LINES

When the "Validat. lines" (lines programming) function from the "programming" menu is displayed, the value of the 6 coin lines of the validator can be changed.

The values of the lines are indicated as number of basic coins.

Press the confirm key "↵" from the "programming" menu to access the line list, which can be scrolled up and down with keys "↑" and "↓".

When pressing the correction key "→", this value starts blinking and can be modified as necessary (see the summary table).

RESETTING FAILURES

When pressing the failure reset key "2" the message "In process" is displayed for a few seconds and any present failures are reset.

DISPLAYING THE STATISTICS

When pressing the statistics display key "5" the stored data are sequentially displayed, with a time interval of 1 second if no other key is pressed (see the summary table), and namely:

1 - selection counters in normal operating mode, including:

- single selection
- total selections
- total half jugs
- total jugs

2 - counter for each price;

3 - counter for type of coin cashed;

4 - total cash counter;

5 - failure counter.

PRINTING THE STATISTICS

Connect an RS-232 serial printer with a Baud rate of 9600, 8 data bit, no parity, 1 stop bit (the CITIZEN I-DP 3110-24RF 230A p/n 9210219 printer is recommended) to the serial port located on the push button board, to print all the statistics described in section "displaying the statistics". The hardcopy printout will also contain the machine code number and the printout progressive number.

The progressive hardcopy printout number can be reset only by initializing the machine.

To connect the printer do the following:

- Press the statistics hardcopy printout key "6" and the request message "Confirm?" will be displayed;

- before confirming connect the printer;

- press the confirm key "↵" to start printing.

RESETTING THE STATISTICS

When pressing the statistics reset key "3" the request message "Confirm?" will be displayed blinking.

When pressing the confirm key "↵" the message "In process" is displayed for a few seconds and the statistics are reset.

MAINTENANCE

Important notice!!

Access to the machine interior for maintenance and/or repairs is via the back panel.

Therefore the machine is designed to be rotated, thus allowing removal of the back panel.

The integrity of the vending machine and its conformity with the rules and regulations in force for its relevant systems must be checked by qualified personnel at least once a year.

Always switch the machine off before any maintenance operations which require removal of components.

The following operations must be carried out only by personnel who have the specific knowledge of the machine functioning from a point of view of electrical safety and health regulations.

INTRODUCTION

To ensure perfect operation for a long period, the machine must be subjected to regular maintenance.

The following sections contain the procedures and the maintenance schedule, which are only a general indication, as they greatly depend on the operating conditions (e.g. water hardness, environmental humidity and temperature, type of product used, etc.).

The procedures described in this chapter are not exhaustive of all maintenance operations to be carried out.

More complex operations (e.g. boiler descaling) should be carried out by qualified technicians only having specific knowledge of the machine.

To prevent oxidation or the action of chemical agents, the stainless steel and varnished surfaces should be kept clean by using mild detergents (solvents must not be used).

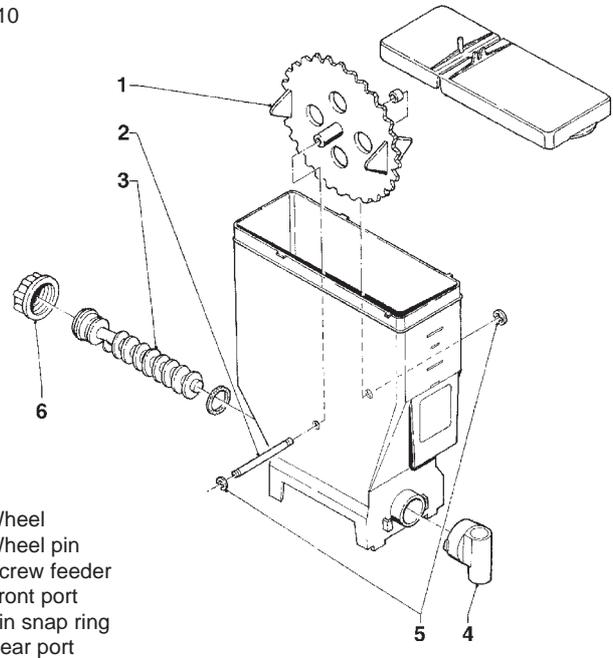
Never use water jets to clean the machine.

ANNUAL CLEANING

CLEANING THE INSTANT PRODUCT CONTAINERS

- Remove the product containers from the machine;
- after unscrewing the rear forks (left-handed thread), undo the product ports and slide out the screw feeders (see fig. 10);
- clean all parts in a solution of hot water and chlorine-based detergents and thoroughly dry before reassembling.

Fig. 10



ANNUAL SANITISING

At least once a year, or more frequently according to the use of the machine and the quality of the inlet water, the entire foodstuff circuit system must be sanitised (cleaned and disinfected) in the following way:

- all components in contact with food, including piping, must be removed from the unit and fully disassembled;
- all components must be washed with detergent, ensuring that all visible residue and product films are mechanically removed using a brush or similar implements, if necessary;
- all components must be soaked in the previously prepared chlorine-based detergent solution for at least 20 minutes;
- the unit internal surfaces must be cleaned with the same sanitising solution;
- after disinfection, thoroughly rinse all parts to remove all possible residue of the sanitising solution;
- reinstall all parts.

Before restarting the machine, the sanitising procedure described on the maintenance plate (see Figure 1) must be carried out with all parts reinstalled.

CLEANING THE LEVEL PROBE

At least once a year, or more frequently if the water is very hard, the boiler level probe must be cleaned to remove all scale deposits (see fig. 11).

The probe can be disconnected and removed from the boiler without using any tools.

PRINTED BOARD FUNCTIONS AND INDICATOR LIGHTS

CONTROL BOARD

This board (see fig. 11) processes the information from the push-buttons and from the payment system, it also controls the actuators and the push-button board.

The 15 V AC voltage required for board operation is supplied by a transformer which is protected by a 125 mA fuse on the primary and by a 1.25 A fuse on the secondary winding. The voltage is rectified and stabilised directly by the board.

The board also houses the EPROM chip.

- the yellow LED indicates the presence of 12 V DC;
- the green LED, when blinking indicates that the micro-processor is working correctly;
- the red LED is not used for this model

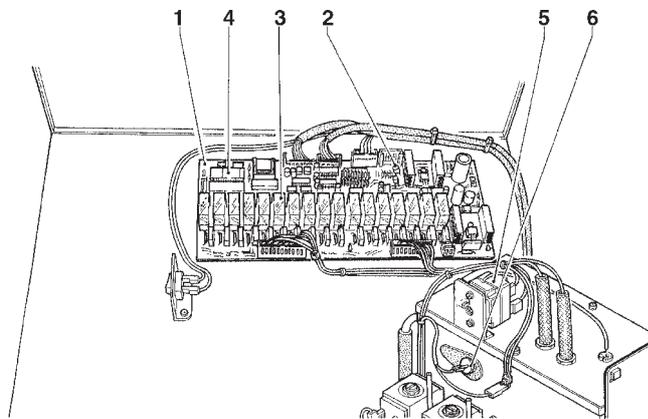


Fig. 11

- 1 - Control board
- 2 - LEDs
- 3 - Relay
- 4 - EPROM
- 5 - Boiler temperature thermostat
- 6 - Water max level probe

PUSH-BUTTON BOARD

This board controls the alphanumeric display, the selection keys and the service buttons.

It supports the coin mechanism connectors as well as the printer port.

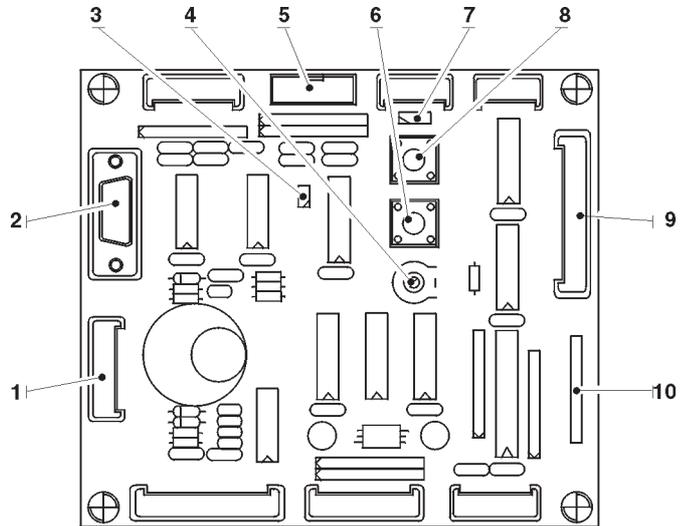


Fig. 12

- 1 - To the programmer
- 2 - Serial port RS232
- 3 - Jp1 = 
- 4 - LCD display contrast adjusting trimmer
- 5 - To the front validator
- 6 - Programming key
- 7 - Jp2 = 
- 8 - Mixer cleaning button
- 9 - To the LCD display
- 10 - To push-button panel

CONFIGURING THE ELECTRONIC BOARDS

The electronic boards are designed to be used in many machine models.

In case of replacement, or when wishing to change the unit performance, the configuration of the boards needs to be checked

A set of 8 minidips, allowing configuration of the board for use in the various versions and in the different countries, and a jumper (5), allowing configuration of the board for Instant or Espresso models, are located at the centre of the board (see fig. 13). The board is also designed to support 512 Kb and 1 Mb EPROMs by setting jumpers JS3 and JS4.

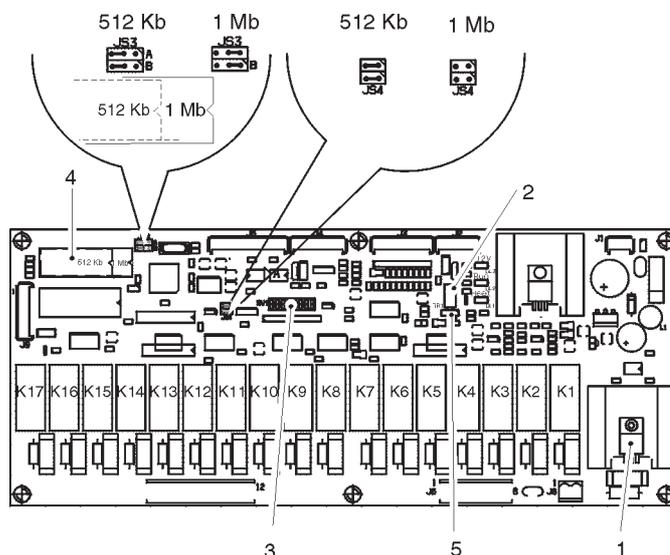


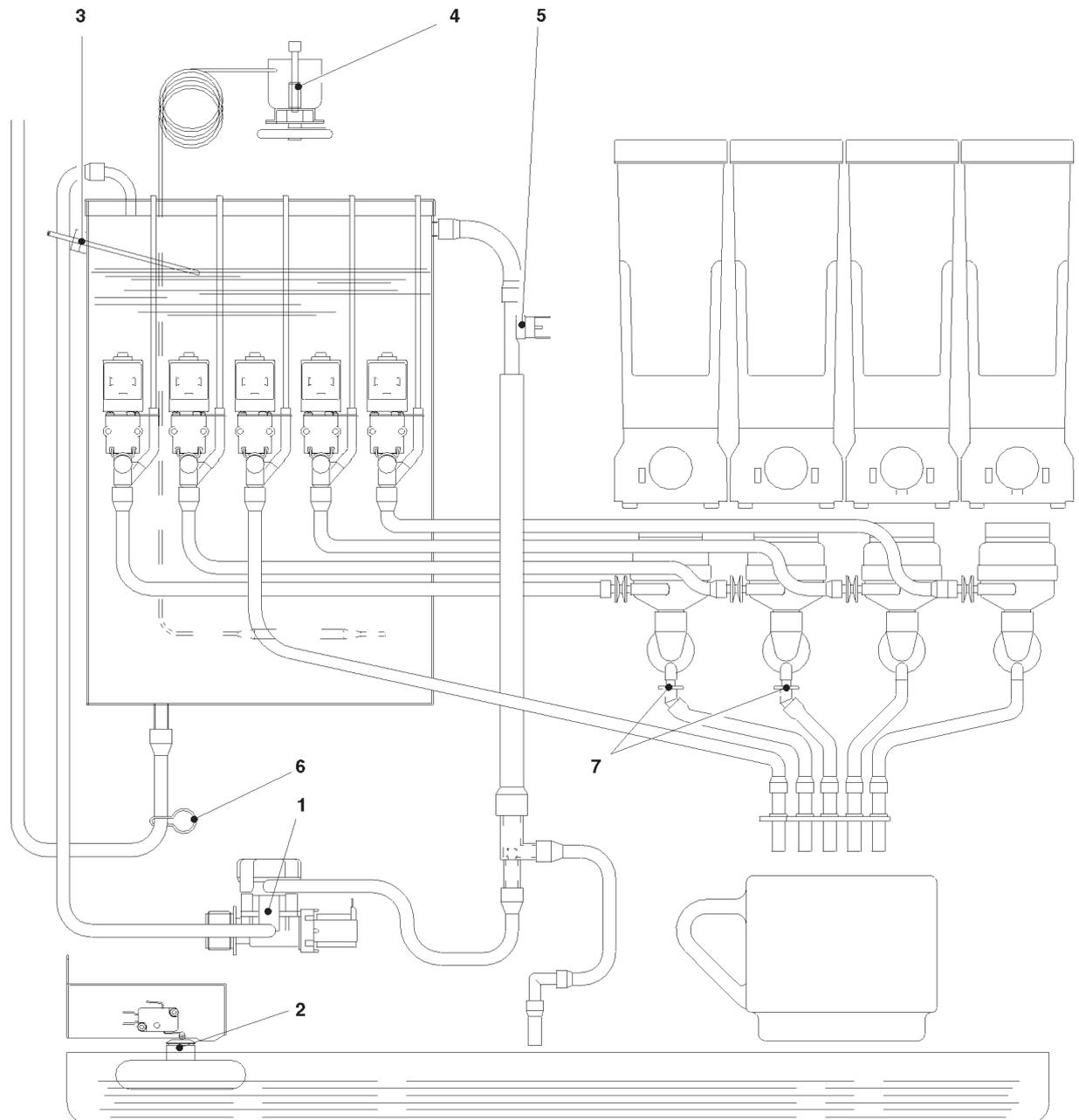
Fig. 13

- 1 - Triac of the boiler heating element
- 2 - Boiler temperature control trimmer
- 3 - Configuration minidips
- 4 - EPROM
- 5 - Jumper: fixed to 1-2

RELAY FUNCTION (see Wiring diagram)

K1	=	MF4
K2	=	MF3
K3	=	EV4
K4	=	not used
K5	=	EV3
K6	=	EV2
K7	=	EV1
K8	=	MF1
K9	=	MD4
K10	=	MD3
K11	=	MD2
K12	=	MD1
K13	=	LF and VENT
K14	=	EV5
K15	=	TEL
K16	=	EIA
K17	=	MF2

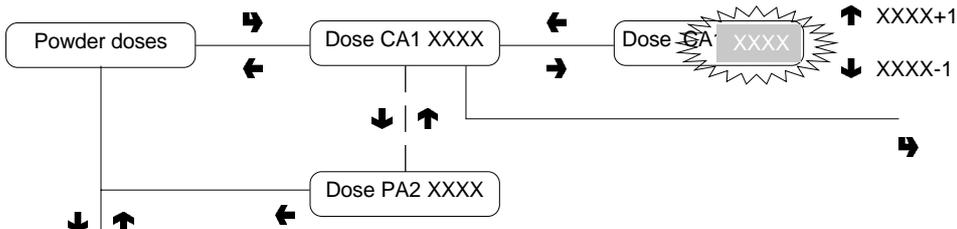
HYDRAULIC SYSTEM



- 1 - Water inlet solenoid valve
- 2 - Liquid waste container float
- 3 - Boiler water level probe
- 4 - Boiler temperature thermostat

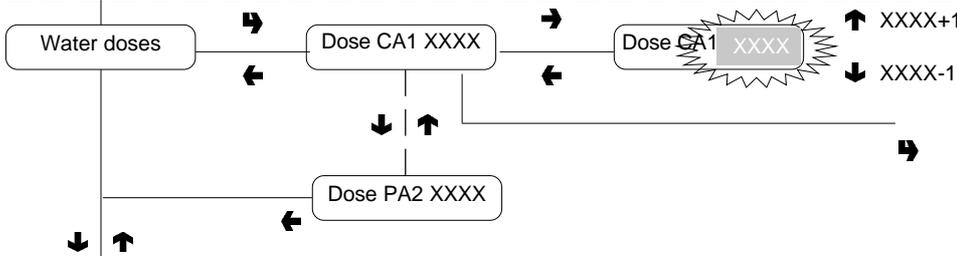
- 5 - Anti-boiling thermostat
- 6 - Boiler drain clamp
- 7 - Mixer "pinch" valves

Programming menu



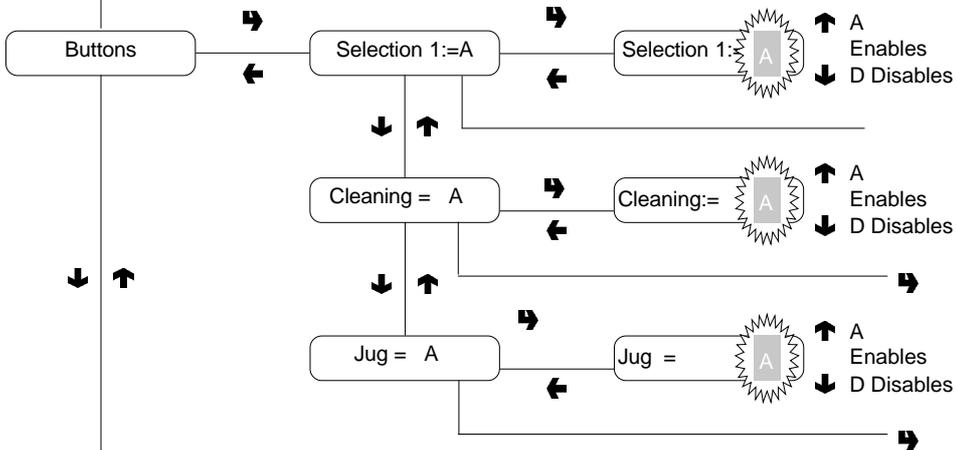
POWDER DOSES

Refer to the selection dose table for the correspondence between dose code and powder or water dose



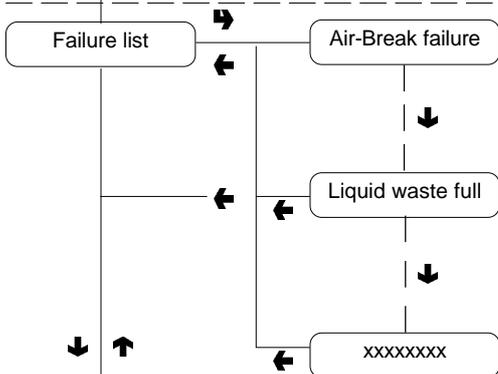
WATER DOSES

Refer to the selection dose table for the correspondence between dose code and powder or water dose



Selections 1 to 12

Buttons
Cleaning
Stop

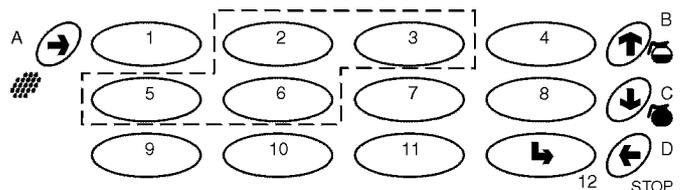
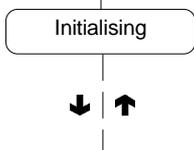


DISPLAYING FAILURES

If no failures are present, when pressing button the message "No failure" is displayed

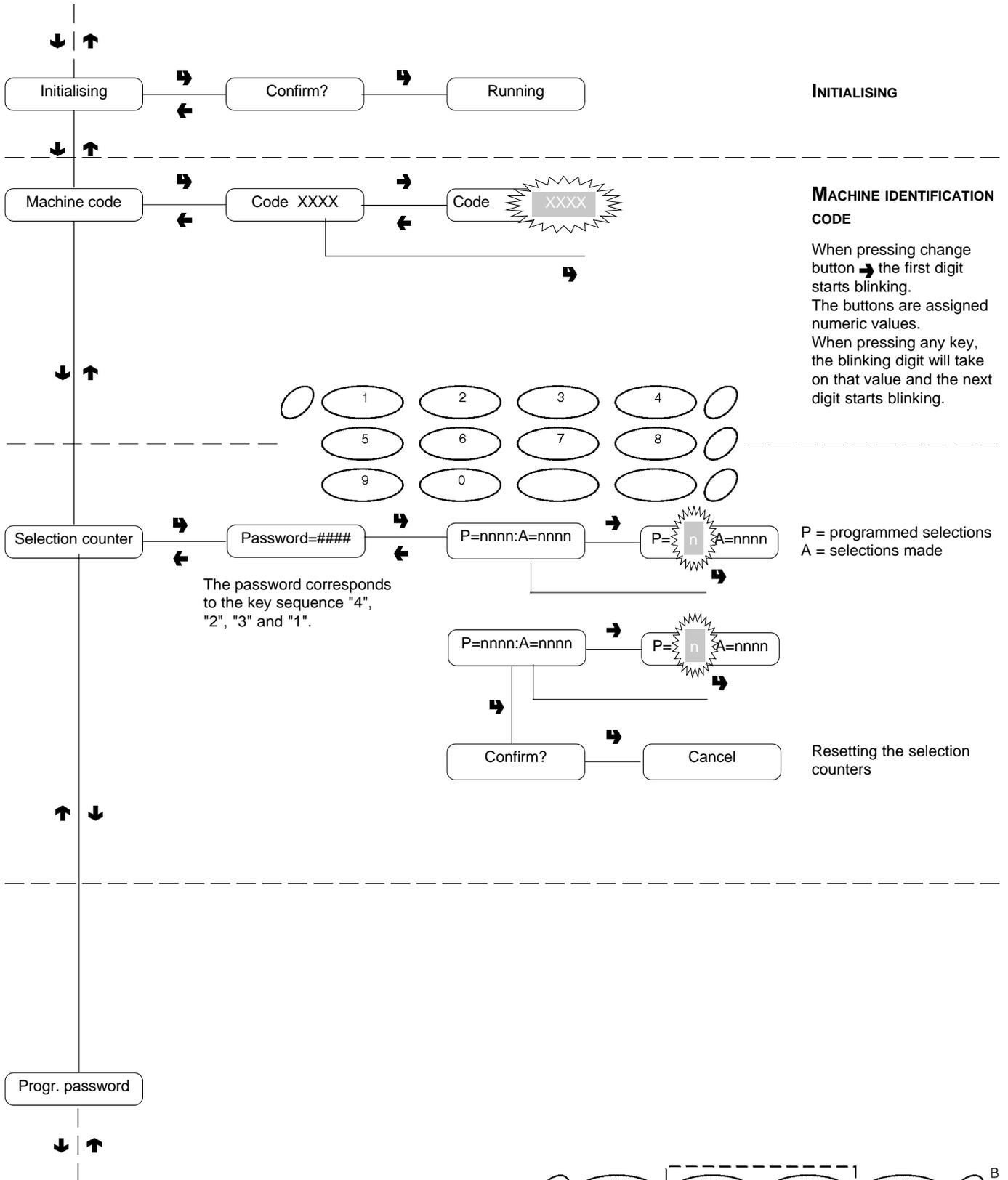
LIST OF FAILURES

- Probe
- Boiler
- Coin mechanism (if fitted)
- RAM data
- Water failure
- Liquid waste full



- ↑ previous function or increase data (+1)
- ↓ next function or decrease data (-1)
- ← delete data or exit function
- change data
- ↵ confirm data or confirm function

Programming menu



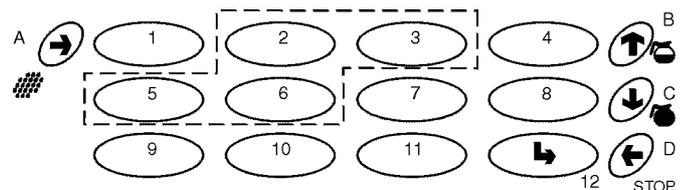
INITIALISING

MACHINE IDENTIFICATION CODE

When pressing change button → the first digit starts blinking.
The buttons are assigned numeric values.
When pressing any key, the blinking digit will take on that value and the next digit starts blinking.

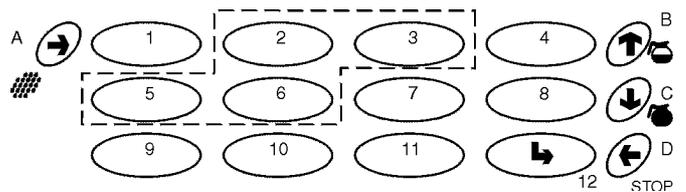
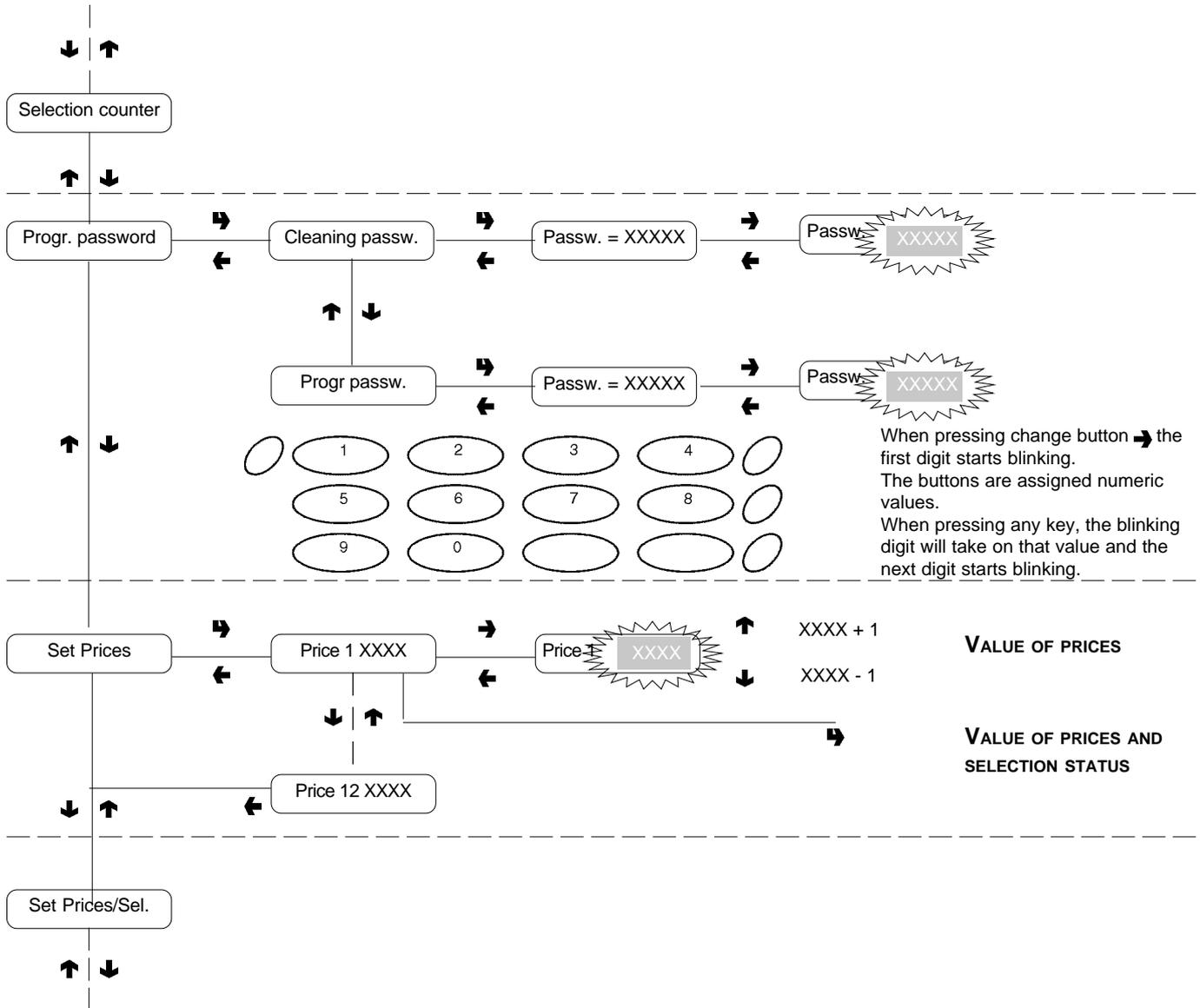
P = programmed selections
A = selections made

Resetting the selection counters



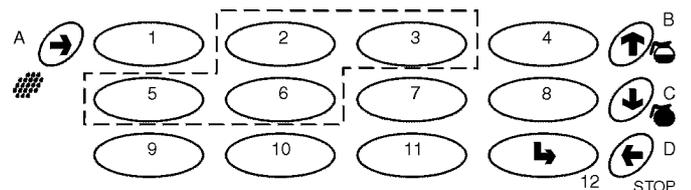
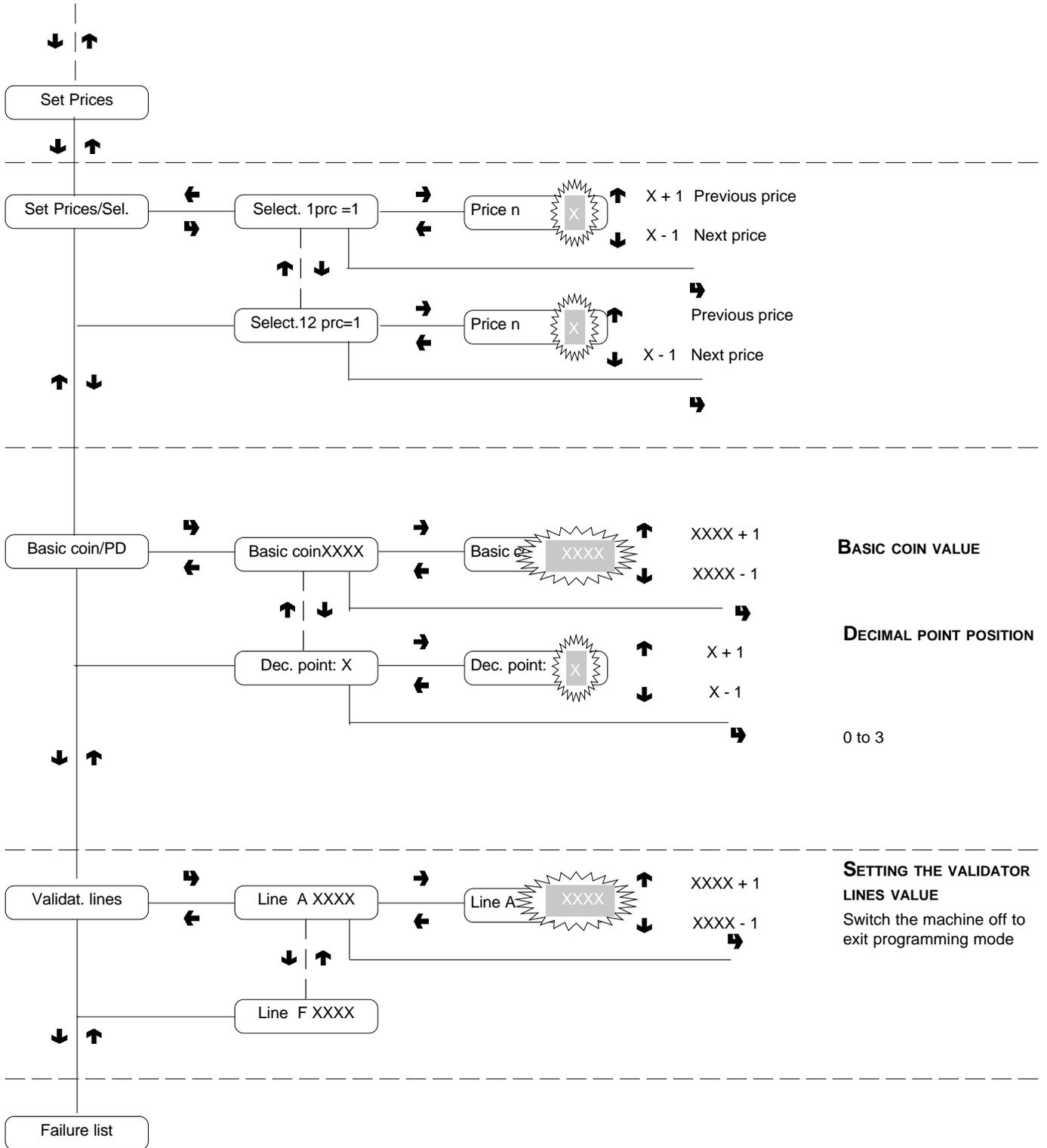
- ↑ previous function or increase data (+1)
- ↓ next function or decrease data (-1)
- ← delete data or exit function
- change data
- ⇒ confirm data or confirm function

Programming menu



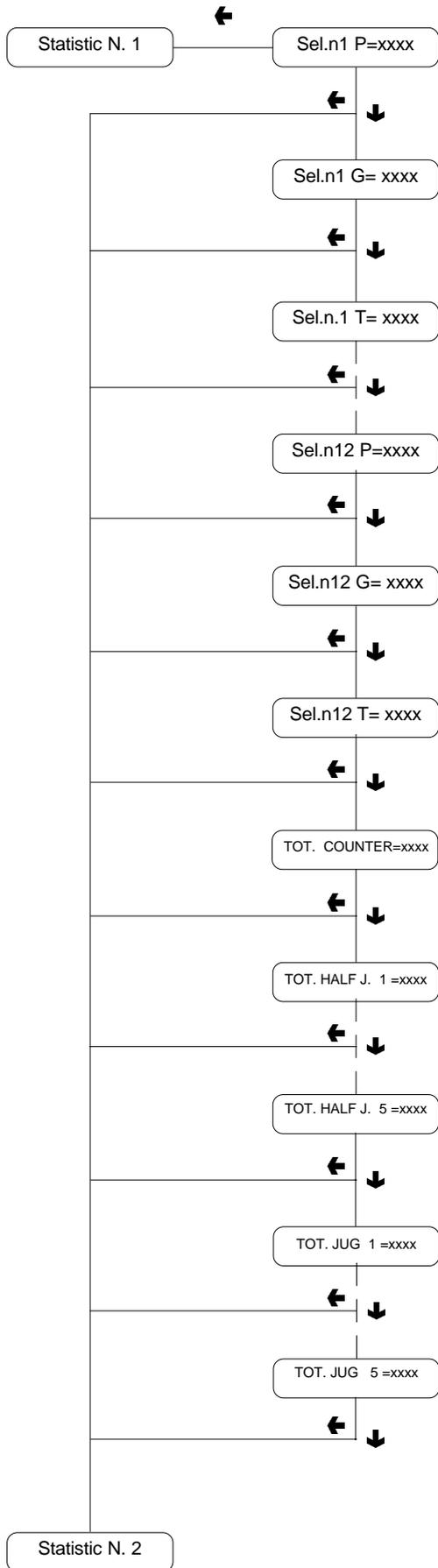
- ↑ previous function or increase data (+1)
- ↓ next function or decrease data (-1)
- ← delete data or exit function
- change data
- ↵ confirm data or confirm function

Programming menu



- ↑ previous function or increase data (+1)
- ↓ next function or decrease data (-1)
- ← delete data or exit function
- change data
- ↩ confirm data or confirm function

Data reading



P = paid dispensing

G = free dispensing

T = test dispensing

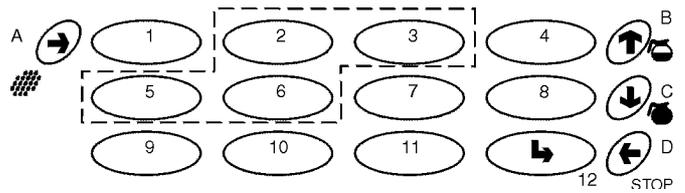
Scrolling data for all selections

Scrolling data for all selections with half jug

Scrolling data for all selections with full jug

COUNTER BY SELECTION

Press button **5** to display the statistic for each selection (1 - 12)



↑ previous function or increase data (+1)

↓ next function or decrease data (-1)

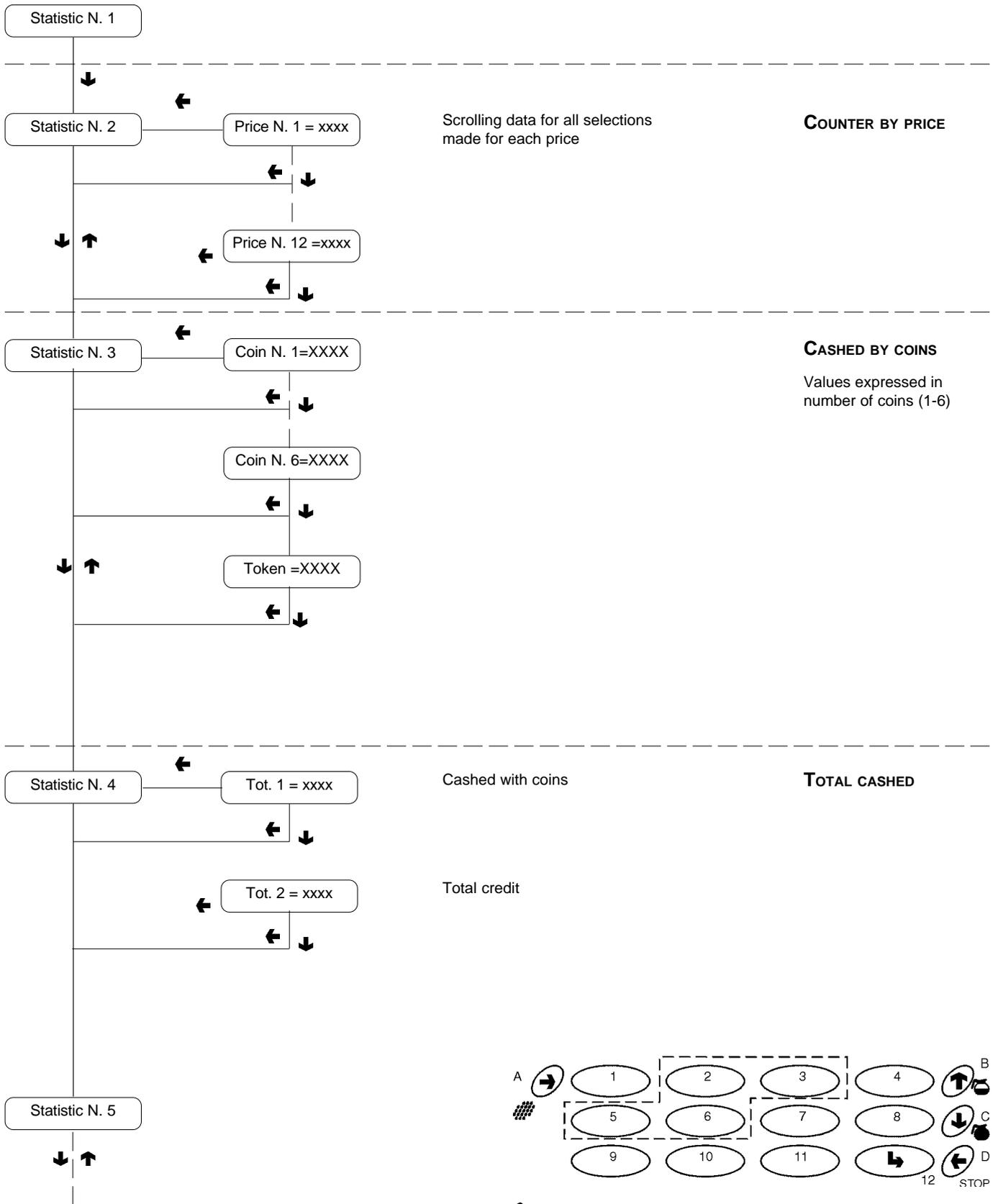
← delete data or exit function

→ change data

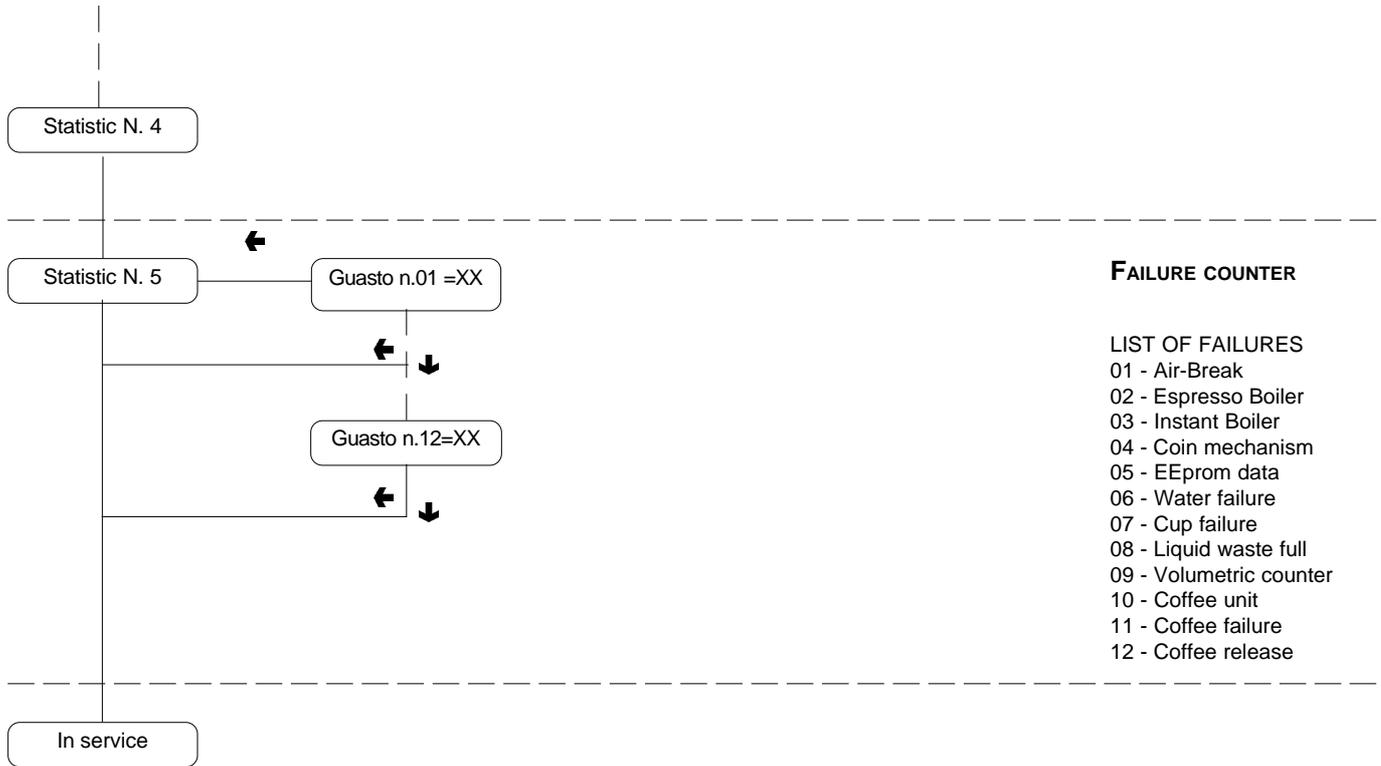
↵ confirm data or confirm function

5 Display statistics

Data reading



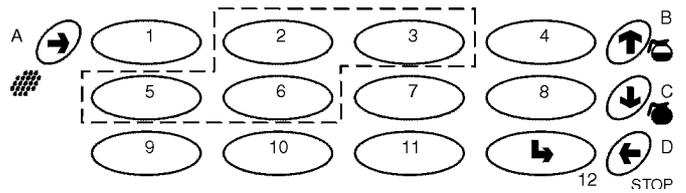
Data reading



FAILURE COUNTER

LIST OF FAILURES

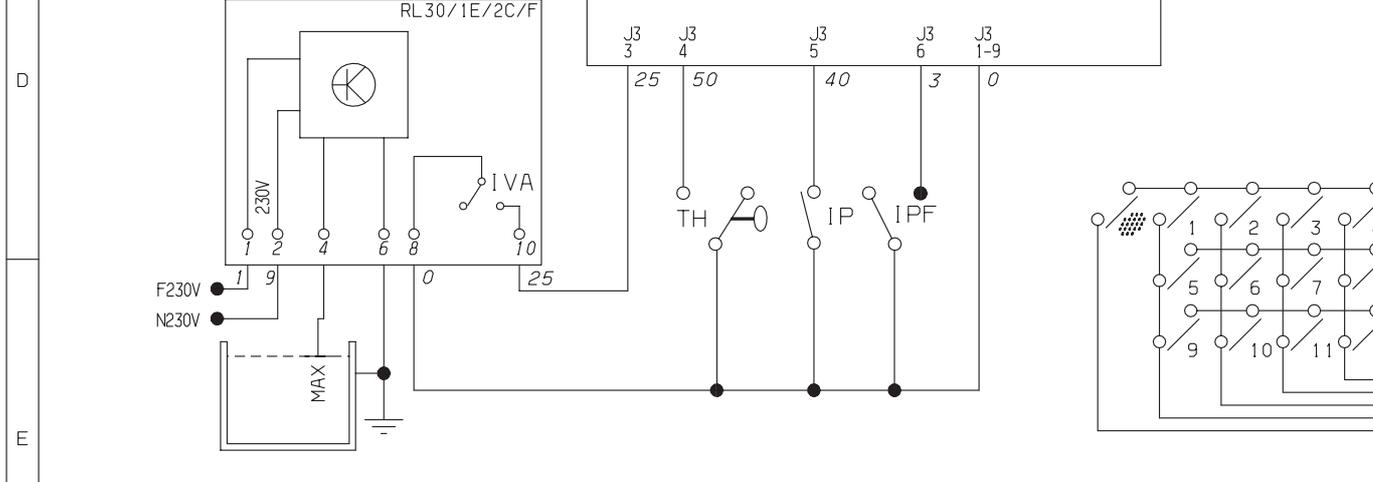
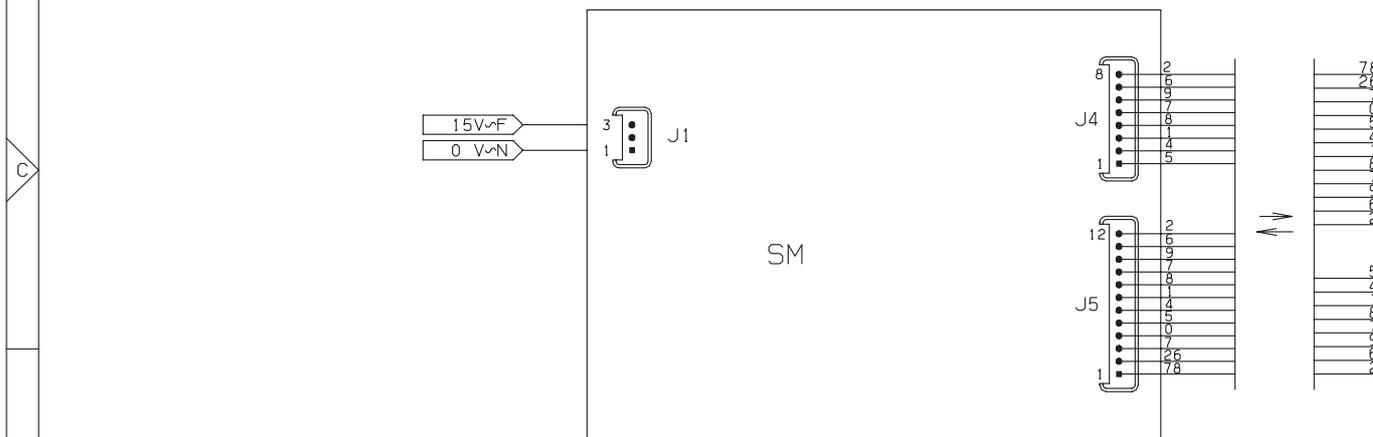
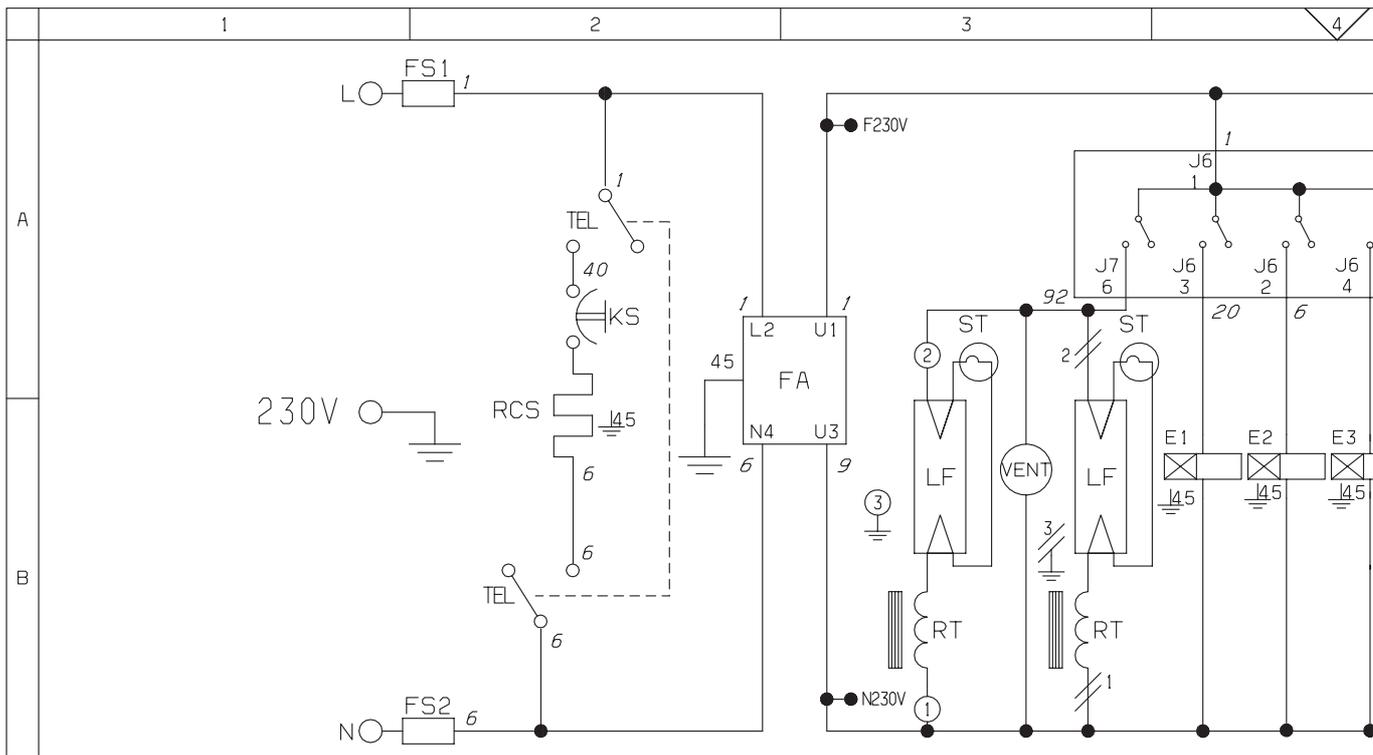
- 01 - Air-Break
- 02 - Espresso Boiler
- 03 - Instant Boiler
- 04 - Coin mechanism
- 05 - EEprom data
- 06 - Water failure
- 07 - Cup failure
- 08 - Liquid waste full
- 09 - Volumetric counter
- 10 - Coffee unit
- 11 - Coffee failure
- 12 - Coffee release



- previous function or increase data (+1)
- next function or decrease data (-1)
- delete data or exit function
- change data
- confirm data or confirm function
- Display statistics

WIRING DIAGRAM LEGEND

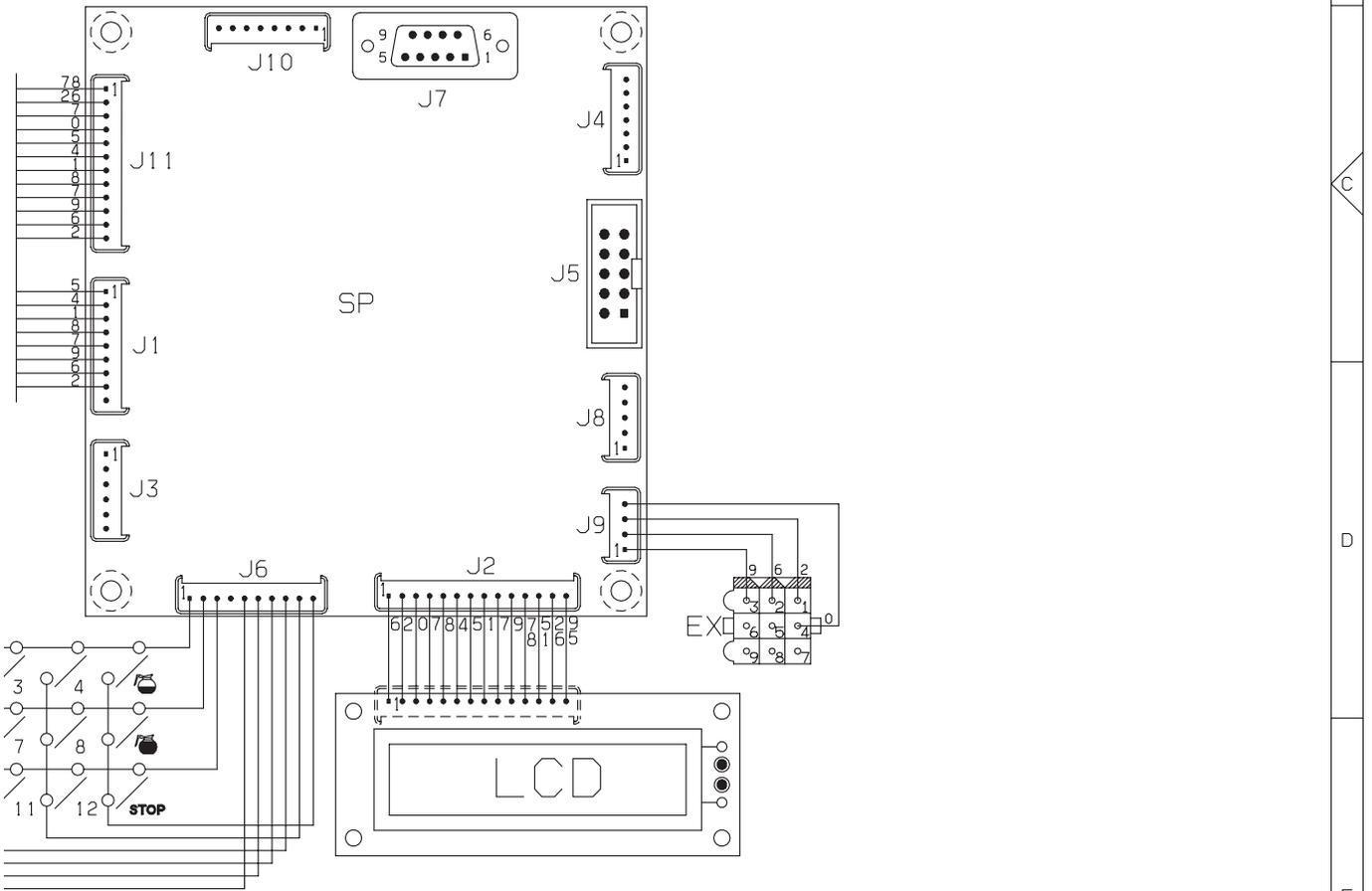
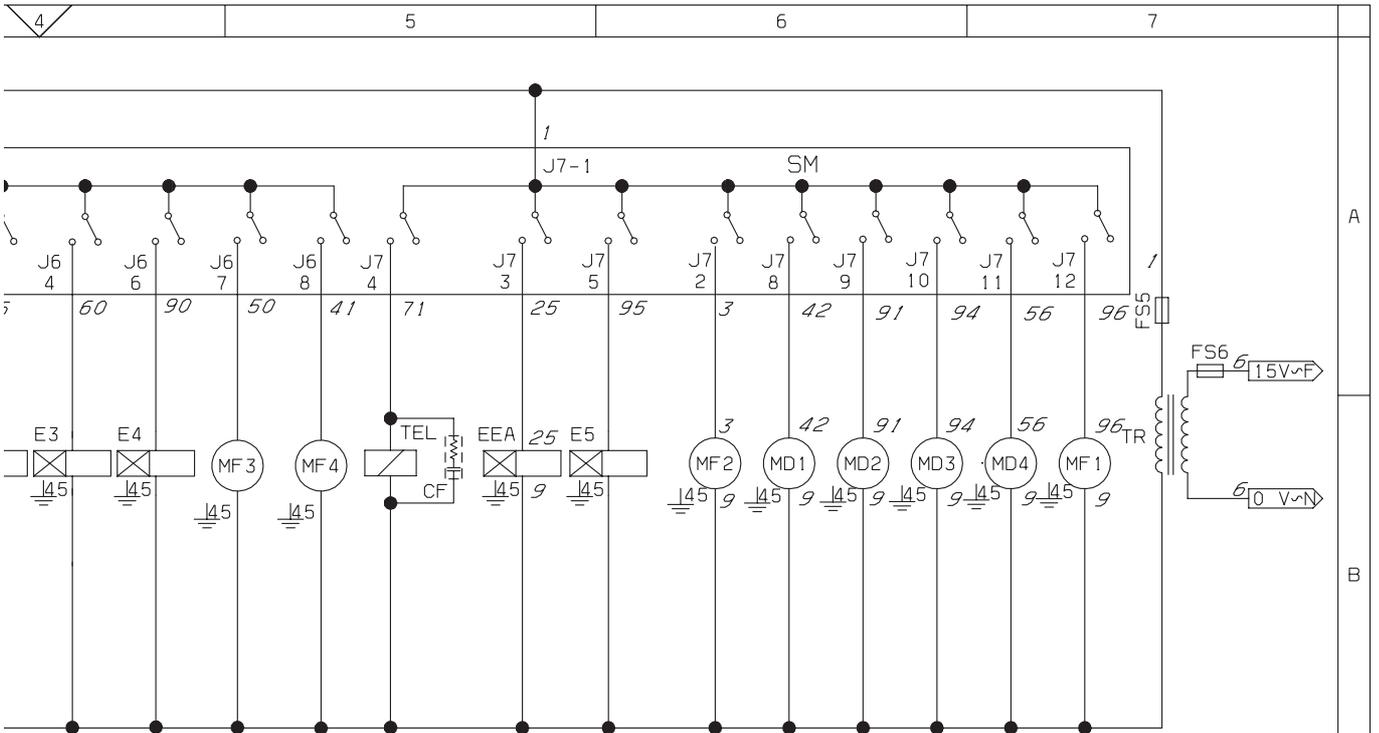
INITIALS	DESCRIPTION	INITIALS	DESCRIPTION
CF	FILTER CONDENSER		
E1-...	INSTANT SOLENOID VALVE		
EEA	WATER INLET SOLENOID VALVE		
EX	EXECUTIVE COIN MECH CONNECTOR		
FA	RADIO INTERFERENCE SUPPRESSOR		
FS1-..	FUSE		
IP	DOOR SWITCH		
IPF	WASTE CONTAINER OVERFLOW SWI		
IVA	EMPTY BOILER MICRO-SWITCH		
KS	BOILER CUTOUT SWITCH		
LCD	LIQUID CRYSTAL DISPLAY		
LF	LAMP		
MAX	WATER LEVEL SENSOR		
MD1-..	DOSER DEVICE - INSTANT		
MF1-..	INSTANT PRODUCT WHIPPER		
RCS	INSTANT BOILER HEATING ELEMENT		
RT	BALLAST		
SM	CONTROL BOARD		
SP	PUSH-BUTTON BOARD		
ST	STARTER		
TEL	REMOTE CONTROL SWITCH		
TH	THERMOSTAT		
TR	TRANSFORMER		
VENT	FAN		



NECTA VENDING SOLUTIONS SpA SI
 RISERVA ATERMINI DI LEGGE
 LA PROPRIETA' DEL PRESENTE
 DISEGNO CON DIVIETO DI
 RIPRODURLO O DIVULGARLO SENZA
 SUA PREVIA AUTORIZZAZIONE

- 0 NERO
- 1 MARRONE
- 2 ROSSO
- 3 ARANCIO
- 4 GIALLO
- 5 VERDE
- 6 BLU AZZURRO
- 7 ROSA
- 8 VIOLEA
- 9 GRIGIO
- 0 BIANCO
- 1 BROWN
- 2 RED
- 3 ORANGE
- 4 YELLOW
- 5 GREEN
- 6 BLUE
- 7 LIGHT BLUE
- 8 PINK
- 9 VIOLET
- 0 GREY
- 1 WHITE
- 0 NOIR
- 1 MARRON
- 2 ROUGE
- 3 ORANGE
- 4 JAUNE
- 5 VERT
- 6 BLEU CIEL
- 7 ROSE
- 8 GRIS
- 9 BLANC
- 0 SCHWARZ
- 1 BRAUN
- 2 ROT
- 3 ORANGE
- 4 GELB
- 5 GRUEN
- 6 BLAU
- 7 ROSA
- 8 LILLA
- 9 GRAU
- 0 WEISS
- 1 NEGRO
- 2 MARRON
- 3 ROJO
- 4 MARRONJA
- 5 AVARILLO
- 6 VERDE
- 7 OSCURO
- 8 AZUL CLARO
- 9 ROSA
- 0 GRIS
- 1 BIANCO





8 GRIS 9 BLANCO	NECTA VENDING SOLUTIONS SpA A company of N&W GLOBAL VENDING GROUP	MODELLO Piccolo Mattino 230 V	GRUPPO SCHEMA ELETTRICO FUNZIONALE	DATA 28-08-96	FOGLIO 1/1	DISEGNATO BONACINA	CONTROLLATO
				LEGENDA 6085561	CODICE 608528700		
	4	5	6	7			



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