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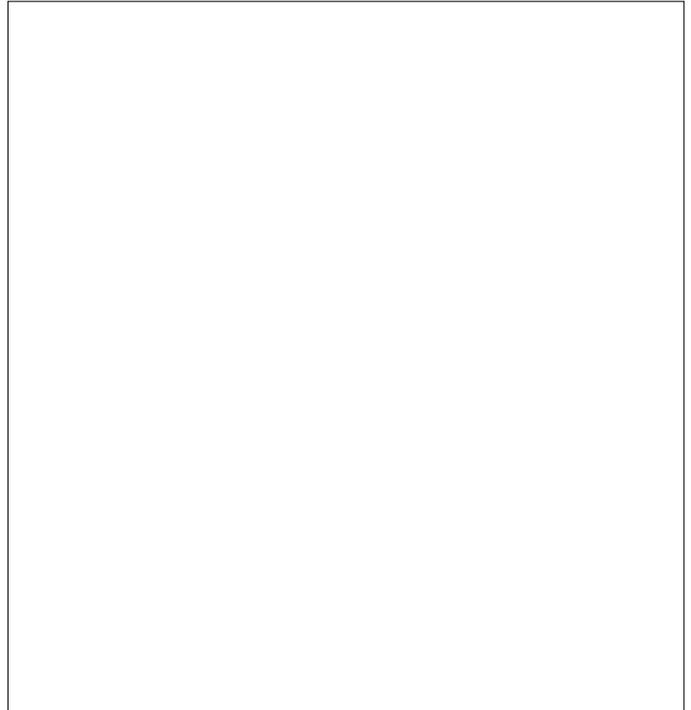
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DICHIARAZIONE DI CONFORMITA'
DECLARATION OF CONFORMITY
DÉCLARATION DE CONFORMITÉ
KONFORMITÄTSESKLÄRUNG
DECLARACIÓN DE CONFORMIDAD
DECLARAÇÃO DE CONFORMIDADE
VERKLARING VAN OVEREENSTEMMING
INTYG OM ÖVERENSSTÄMMELSE
OVERENSSTEMMELSESERKLÆRING



Valbrembo, 04/04/00

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.

Zanussi 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.

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THE EUROPEAN NETWORK FOR QUALITY SYSTEM ASSESSMENT AND CERTIFICATION

This is to state that

ZAMUSSI VENDING S.p.A.
Via Roma, 24 - 24030 VALEREMBO (BG)

holds the Quality System Certificate

CISQ/CISQ 9130-ZA18

*for the standard from the
ISO 9000 / EN 29000
series, and the scope as specified therein*

Signed for and on behalf of EQNet member

Federazione CISQ
IL PRESIDENTE

Dr. Ing. 

DATE

June 1st, 1994

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CERTIFICAZIONE ITALIANA DEI SISTEMI
QUALITA' AZIENDALI
ITALIAN CERTIFICATION OF COMPANIES
QUALITY SYSTEMS



CERTIFICATO n.
CERTIFICATE No. 9130-ZA18

SI CERTIFICA CHE IL SISTEMA QUALITA' DI
WE HEREBY CERTIFY THAT THE QUALITY SYSTEM OPERATED BY

ZAMUSSI VENDING S.p.A.

Via Roma, 24 - 24030 VALEREMBO (BG)

UNITA' OPERATIVA
OPERATIVE UNIT

Via Roma, 24 - 24030 VALEREMBO (BG)

E' CONFORME ALLA NORMA
IS IN COMPLIANCE WITH THE STANDARD UNI-EN 29001-ISO 9001

PER I SEGUENTI TIPI DI PRODOTTI - PROCESSI - SERVIZI
CONCERNING THE FOLLOWING KINDS OF PRODUCTS - PROCESSES - SERVICES

Progettazione, produzione e commercializzazione di
apparecchiature elettromeccaniche/elettroniche per
la distribuzione automatica e la ristorazione
*design, manufacturing and sale of
electromechanical/electromechanical vending machines*

IL PRESENTE CERTIFICATO E' SOGGETTO AL RISPETTO DEL REGOLAMENTO
DELL'IMQ PER LA CERTIFICAZIONE DEI SISTEMI QUALITA' DELLE AZIENDE
THIS CERTIFICATE SHALL SATISFY THE REQUIREMENTS ESTABLISHED BY IMQ
FOR THE CERTIFICATION OF SUPPLIERS' QUALITY SYSTEMS

25 Luglio 1994

DATA DI RILASCIO
ISSUED ON


IMQ

Il presente certificato annulla e sostituisce il precedente 9130.ZA18 del 01.06.94
This certificate supersedes the previous one 9130.ZA18 issued on 01.06.94

CISQ è un sistema internazionale di
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The CISQ is an international system of
independently certification of Suppliers'
Quality Systems, which is coordinated
by national certification bodies.

IMQ 373-379-500-694

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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 transfer of ownership, so as to allow consultation by different operators.

Before starting installation 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 installation, operating and maintenance safety.

This manual is divided into three sections.

The **first section** describes the loading and routine maintenance 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 rating plate placed internally on the right side.

This plate (see figure below) is the only one acknowledged by the manufacturer as the identification of the apparatus, and carries all the data which readily and safely give technical information supplied by the manufacturer. It also assists in the 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, then contact the following:

NECTA VENDING SOLUTIONS S.p.A.
Via Roma 24
24030 Valbrembo
Italy
Tel. +39 - 035606111

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 40° 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 OF HOT DRINKS IN OPEN CONTAINERS (e.g.: plastic cups, ceramic cups, jugs)

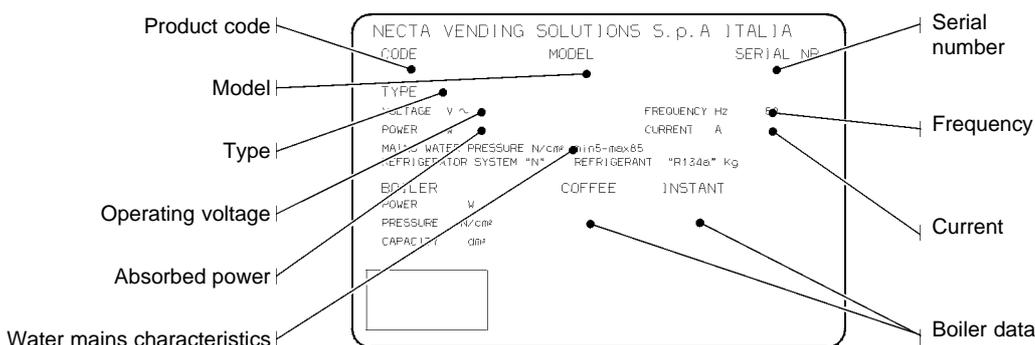
The vending machines of drinks in open containers should be used only to sell and dispense drinks obtained by:

- brewing products like coffee and tea;
- 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 provisions should be made for the machine to be rotated, thus allowing removal of the back panel.

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 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 routinely.

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

When 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 DATA

DIMENSIONS

Height (base)	765 +165 mm
Width	565 mm
Depth	490 mm
Depth with drip tray	550 mm
Weight without packing	70 Kg

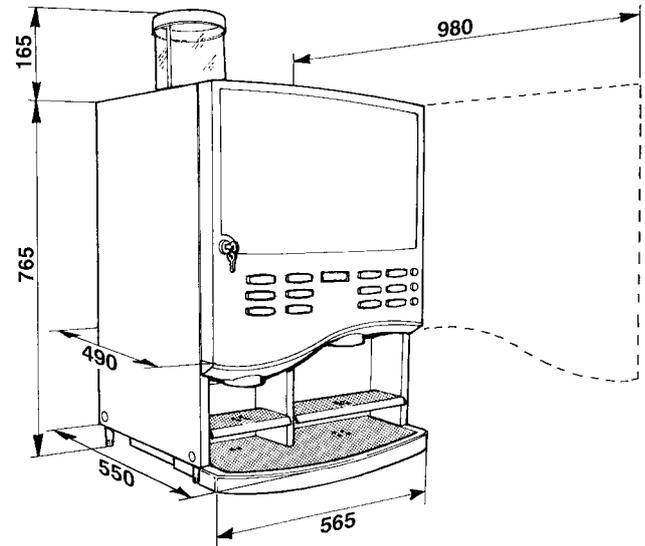


Fig. 1

RATINGS

According to the type of power connection, the relevant data contained in the following table will apply:

Ratings	Type of connection		
	Three-phase+N (recommended)	Single-phase (full power)	Single-phase
Power supply voltage	400 V ~	230 V ~	230 V ~
Frequency	50 Hz	50 Hz	50 Hz
Max. absorbed power	7.400 W	7.400 W	3.150 W
Max. absorbed current	11.8 A	32 A	13 A
Heating elements power	6.950 W	6.950 W	2700/1450 W

BOILERS

Instant products: 7.2 litre capacity with two 2700 W armored-type heating elements;

Coffee: 0.6 litre capacity with one 1450 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

Coffee beans	1,2	Kg
Instant coffee	0,6	Kg
Powdered milk	0,8+0,8	Kg
Sweetened chocolate	1,4	Kg
Hot water output per hour	60	l/h
Liquid waste tray	2,5	l
Coffee grounds tray - selections 130		

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
- Coffee boiler temperature:	98°	C
- Inlet water temperature:	20°	C

- Water (average) for instant products:	135	cc
- Water (average) for coffee:	40	cc

the following power consumption levels resulted:

- To reach operating temperature	725	Wh
- Hourly stand-by power consumption	136	Wh
- Average consumption for instant products	9.3	Wh
- Average consumption for coffee	6.9	Wh

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

VARIABLE COMBINATION LOCK

The lock is supplied with two silver colour keys to be used for normal opening and closing.

The lock can be customised by using a kit, available as accessory, which permits the combination of the lock to be changed.

This kit includes a change key (black) for the current lock combination as well as the change (gold) and use (silver) keys for the new combination.

Sets of change and use keys with other combinations can be supplied on request.

Additional sets of use keys (silver) may be requested, indicating the combination stamped on the keys.

Generally, only the use key (silver) is used, while the combination change keys (gold) can be kept as spares.

Do not use the change key for normal opening, as it may damage the lock.

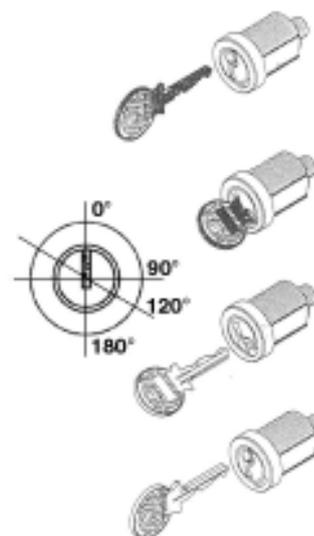


Fig. 2

TO CHANGE COMBINATION DO AS FOLLOWS:

- insert the current change key (black) and rotate to the change position (reference notch at 120°);
- remove the current change key and insert the change key (gold) with new combination;
- rotate to the close position (0°) and remove the change key.

The lock will now have the new combination.

The keys with the old combination cannot be used for the new combination.

LOADING AND CLEANING

PUSH-BUTTON PANEL SWITCH

When opening the door using the special key, a switch disconnects the electricity from the machine, allowing access to the area where the product containers and the parts to be cleaned are housed.

The machine is equipped with a switch (see Figure 3) which disconnects the push-button panel, leaving the heating unit switched on.

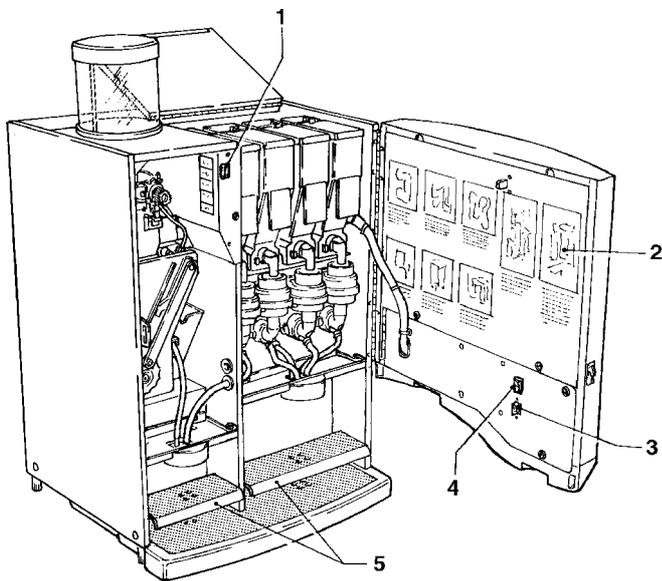
IMPORTANT NOTICE!!

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

All operations requiring the machine with the power on and without the protective covers must be carried out by qualified personnel, trained to use the machine and aware of the specific risks of such operations.

Fig. 3

- 1 - Push-button panel switch
- 2 - Washing and cleaning instructions plate
- 3 - RS232 serial port
- 4 - Door switch
- 5 - Tilting cup support



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).

The push-button panel may be assigned the functions listed in the selection dose table.

The identification plates shall be inserted accordingly.

Fig. 4



- 1÷12 Selection buttons
- P Programming access button
- J "Jug" button for instant black coffee
- S "Jug" selection stop button

Button P (programming access) can be enabled or disabled; in any case a password is required for access to programming.

Button J (Jug facility) can be enabled or disabled; if enabled, it can be used to fill a jug instead of a cup of instant black coffee.

Button S (Stop) stops dispensing of coffee into the jug.

OPERATOR MENU

The "operator menu" can be accessed with button "P" (if enabled).

To avoid inadvertent use of the external button, the button must be pressed twice in quick sequence and then enter a 5 number programmable password. The default password is "55555".

The machine displays a menu which allows automatic washing of the mixers, reading and resetting of the selection counters.

The machine stores quantity data regarding the selections in a global or partial mode.

From this menu partial counters only can be read and reset; the general counters can be accessed only by following the programming procedures.

When in the "operator menu", the external buttons have different functions (see fig. 4), allowing scrolling through the menu, and namely:

- P = ⬆ previous function
- J = ⬇ following function
- S = ⬅ exit function
- 8 = ➡ confirm function.

WASHING

Press button 8 when the message "Washing" is displayed, a washing cycle is then started.

Washing comprises simultaneous actuation of all mixers and intermittent operation of all solenoid valves. The intermittent operation allows easier removal of any scale deposits.

The washing cycle can be stopped with button "S".

LOADING INSTANT PRODUCTS

Before filling the product containers, following the indications of the instructions plate (Figure 3), 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.

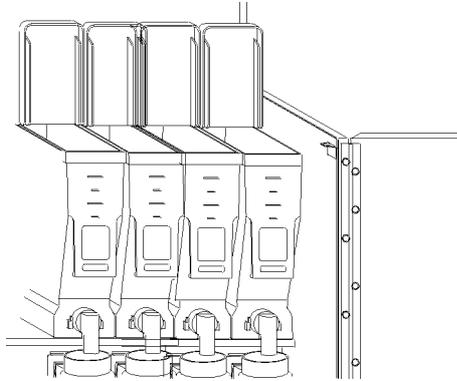


Fig. 5

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.

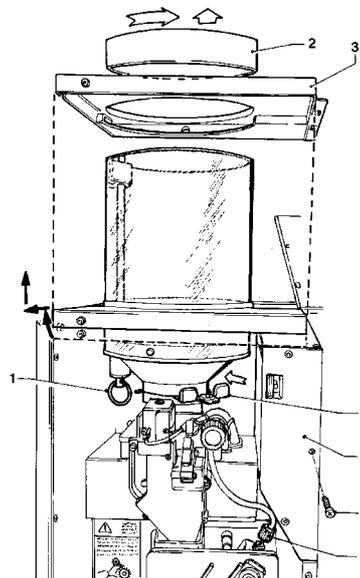
LOADING COFFEE BEANS

Pull the release ring downwards and rotate the container lid at the same time.

Fill the container and replace the lid, ensuring that the shutter is completely open.

Fig. 6

- 1 - Lid release ring
- 2 - Coffee container lid
- 3 - Top panel of machine
- 4 - Shutter
- 5 - Board cover
- 6 - Cover fastening screw
- 7 - Boiler connection hose



Each time the machine is filled with coffee, the coffee grounds container must be emptied and cleaned as indicated in the user manual.

To remove the container for weekly cleaning do as follows:

- close the shutter;
- remove the lid from the container;

- lift the front edge of the top panel of the machine and slightly pull it outwards, then extract it from the container;

- remove the container from the grinder.

Proceed in the inverse order when replacing the container.

MAINTENANCE 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, as well as for its maintenance.

At installation 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 to use specific sanitising agents (such as chlorine-based detergents or similar) also for cleaning the surfaces that 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 non compliance with health regulations in force.

Disconnect the machine from the power supply before any maintenance requiring the disassembly of components.

ROUTINE CLEANING

To ensure perfect operation for a long time, the machine must be subjected to some regular maintenance as indicated in the user manual.

In order to reduce maintenance time, spare items of all mixer components which must be cleaned regularly are supplied.

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

Switch the machine off with the main external switch before any maintenance requiring the disassembly of components.

SUSPENDING FROM USE

Should the machine be out of 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.

The holes for the anchoring bracket securing the machine to the pallets must be closed with the plastic plugs provided.

Packing materials must be disposed of in authorised areas and all the 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 according to the order indicated in the "selection dose" table supplied with the machine.

The labels must be inserted into the three push-button panels as follows

- after removing the three fastening screws, open the push-button panel protective hatch;
- remove the two fastening knurl nuts of the button support frame of each push-button panel;
- disconnect the push-button panel connector and disassemble the machine button support frame;
- remove the button cover stop frame;
- remove the clear cover and insert the relevant product label between the rubber cover and the clear one for each button;
- reposition the clear covers, ensuring that the button stop tang coincides with the rubber cover of the button.
- reassemble the push-button panels proceeding in the reverse order.

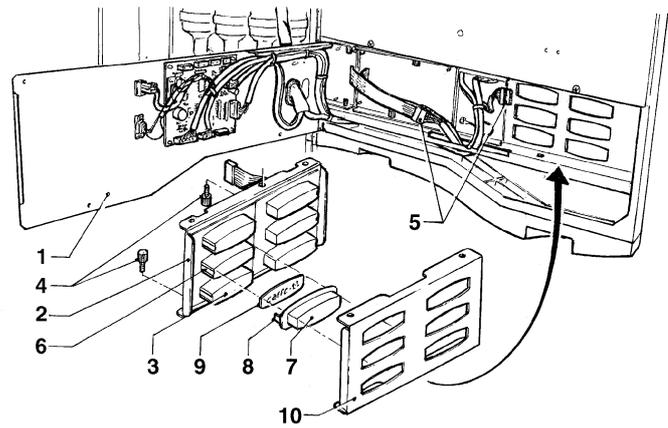


Fig. 7

- 1 - push-button panel protective hatch
- 2 - button support
- 3 - rubber cover
- 4 - support fastening knurl nuts
- 5 - push-button panel connectors
- 6 - groove
- 7 - clear cover
- 8 - stop tang
- 9 - label
- 10 - button cover stop

INSTALLING THE TILTING GRATINGS

Tilting stainless steel gratings are supplied, used to support cups as alternative to jugs; these must be fitted on the special pins.

To facilitate positioning of the cups by the user, red colour markers (plastic made) are also supplied, to be inserted in the gratings.

SANITISING

Before installing the machine the same procedure planned for 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 foodstuff (minimum inside diameter of 8 mm) to connect the water supply to the 3/4" gas-type union of the water inlet solenoid valve.

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

OVERFLOW DEVICE

The water inlet solenoid valve (see Fig. 8) is fitted with an overflow device which mechanically stops the water flow when there is a malfunction to the 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.

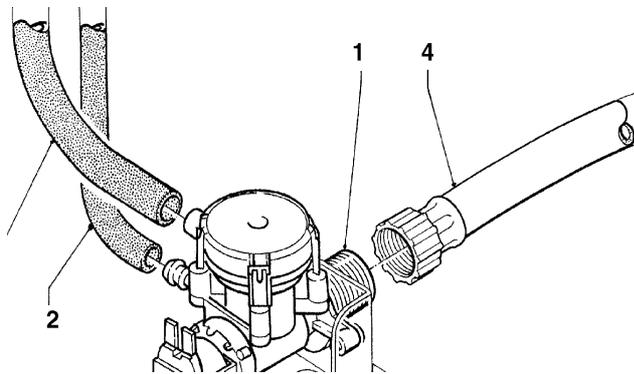


Fig. 8

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

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

CONNECTING THE POWER SUPPLY

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

Considering the power absorbed by the machine, it is advisable to connect it to a three-phase 400 V 3+N line; a line with the following characteristics can be used for the power connection:

- Three-phase + N 400 V~ 50 Hz (recommended)
(see Fig. 9)
- Single-phase 230 V~ 50 Hz (see Fig. 10 and 11)

The machine is supplied without power cable; for connection to the power grid use only cables type H05 VV-F or H05 VV H2-F with adequate section. Before making the connection ensure that the ratings correspond to those of the power grid, and more specifically that the supply voltage rating is within the range recommended for the connection points

A main switch, suitable for withstanding the required peak load required, must be located within easy reach, and at the same time must ensure proper omnipolar disconnection from the power grid with the opening gap of the contacts of at least 3 mm.

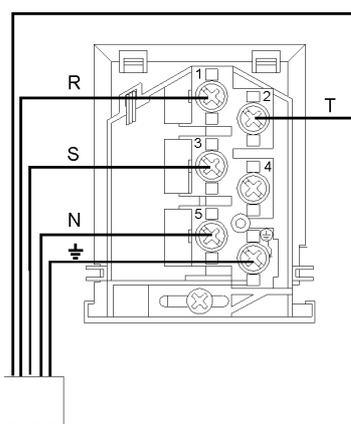
The machine electrical connections must be permanent. Do not use adapters, multiple sockets and/or extensions.

The electrical safety of the machine is ensured only when it is correctly earthed according to the safety regulations 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 must be connected to the specific terminal box located on the back panel of the machine, ensuring correct position of the phases as indicated in the diagrams.

Fig. 9



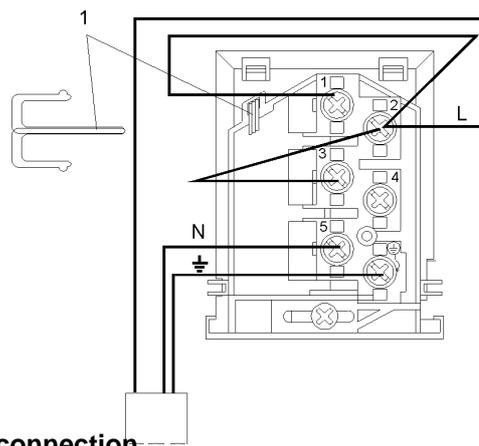
Three-phase + N connection

400 V*3N~ 50 Hz 11.8 A 7400 W
5 x 1,5 mm² cable

If a three-phase line is not available, the machine may be connected to a 230 V~ single-phase line, only after it is checked by qualified technicians to ensure that it is adequately sized for withstanding the required load of 7400 W.

The electrical connection, as indicated in the diagram of Fig. 10, is made using the special plates housed in the terminal box as jumpers.

Fig. 10
1 - Plates



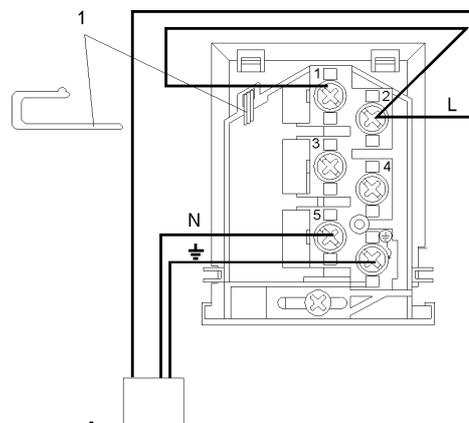
Single-phase connection

230 V~ 50 Hz 32 A 7400 W
3 x 4 mm² cable

If the line is not suitable for withstanding a load of 7400 W, it is possible to reduce the absorbed power to 3150 W, by excluding one of the two heating elements in the instant product boiler when making the electrical connection. In this case the performance of the machine regarding hot water output will be halved.

The electrical connection, as indicated in the diagram of Fig. 11, is made using the special plate housed in the terminal box as jumper.

Fig. 11
1 - Plates



Single-phase connection

230 V~ 50 Hz 13 A 3150 W
3 x 1,5 mm² cable

The electrical connection must be made ensuring correct position of the phases as indicated in the diagram; the machine may not function with a different connection.

Setting the power supply minidip

Minidip 2 on the control board defines the control settings for the boiler heating elements according to the available power; if the electrical connection is as indicated in figure 9 or 10, the minidip must be set to OFF allowing simultaneous operation of the boilers (maximum output).

If the electrical connection is as indicated in figure 11, the minidip must be set to ON, and the boilers will operate in alternation, with priority given to the coffee boiler.

To carry out the machine setting and configuration operations it is sufficient to insert the special key into the slot (see Fig. 3).

The door can be closed only after removing the key from door switch.

THE MANUFACTURER DECLINES ALL RESPONSIBILITY FOR ANY DAMAGE CAUSED BY THE NON-COMPLIANCE WITH THE ABOVE MENTIONED PRECAUTIONS.

FILLING THE WATER SYSTEM

Before switching the machine on, ensure that it is correctly connected to the water mains and that the check valve is open.

If the air-break device indicates a water failure for more than 10 seconds after switching the machine on, an installation cycle will start automatically, and namely:

- the message "Installation" will be shown on the display for the entire duration of the cycle;
- the water mains solenoid valve will be opened;
- the air-break will be filled;
- the coffee dispenser solenoid valve is opened to bleed the air from the boiler allowing it to be filled with 600 cc. of water.

N.B.: If there is no water flow from the mains during the installation cycle, the machine will stop until water is resumed or the machine is switched off.

This operation must be carried out manually after any maintenance requiring the boiler to be emptied but not the air-break, using button 1.

INSTANT PRODUCT 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 selection, the powder for 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 selection 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 button "S".

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 and coffee, 20 cc/sec for milk, and 30 cc/sec for water.

WASHING CYCLES

A mixer washing cycle can be started either with the special button on the push-button card (**for qualified personnel only**), or by means of the "operator menu". Washing consists of simultaneous actuation of all mixers, and the intermittent operation of all solenoid valves. Such intermittent operation ensures easier removal of scaling. The washing cycle can be interrupted with button "S".

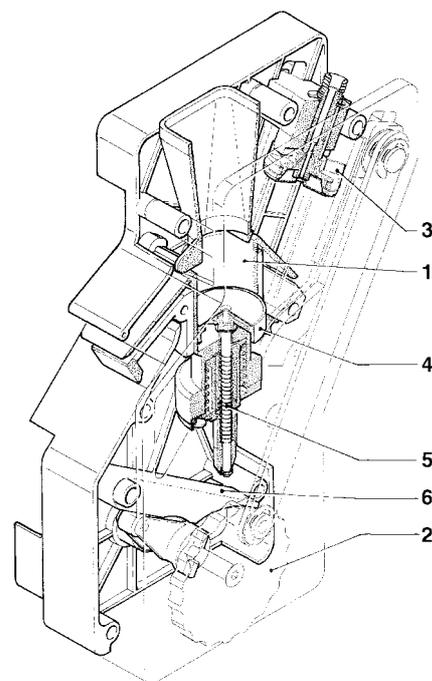
COFFEE DISPENSING CYCLE

When selecting coffee, the grinder is started and will continue until the coffee doser unit chamber is full (see Figure 12).

When the doser unit is full, the ground coffee dose is released into the coffee unit.

The coffee is dropped into the vertical brew chamber (1) (see Figure 12).

Fig. 12



- 1 - Brew chamber
- 2 - External disk
- 3 - Upper piston
- 4 - Lower piston
- 5 - Pre-brewing spring
- 6 - Swinging lever

The ratiomotor handle engaged with the disk (2) located outside the assembly rotates by 180°, swinging the brew chamber and lowering the upper piston (3) (see Figure 13).

CHECKING AND ADJUSTING THE MACHINE SETTINGS

To get the best results from the product used, the following should be checked:

for coffee

That the used coffee dose is lightly compressed and damp.

The grade of the ground coffee.

The weight of the ground coffee.

The dispensing temperature.

The water dose.

For instant products

The weight of the instant products.

The drink temperature.

The water dose.

Should the standard settings be varied, proceed as indicated in the next paragraphs of this manual.

The weight of the instant products, the water dose and temperature are directly controlled by the microprocessor. To change them it is therefore necessary to follow the programming procedures.

STANDARD SETTINGS

The vending machine is supplied with the following standard settings:

- coffee temperature (at the spout) approx. 85-89° C;

- instant product temperature (at the spout) approx. 75° C.

The standard setting of the machine assigns the same price, expressed in number of basic coins, to all selections.

ADJUSTING THE SETTING OF THE COFFEE UNIT PISTON STROKE

When the upper piston is correctly positioned, the coffee unit can operate with coffee doses of 5.5 to 7.5 g.

To change the piston position (see Figure 14):

- remove the snap ring from its seat;

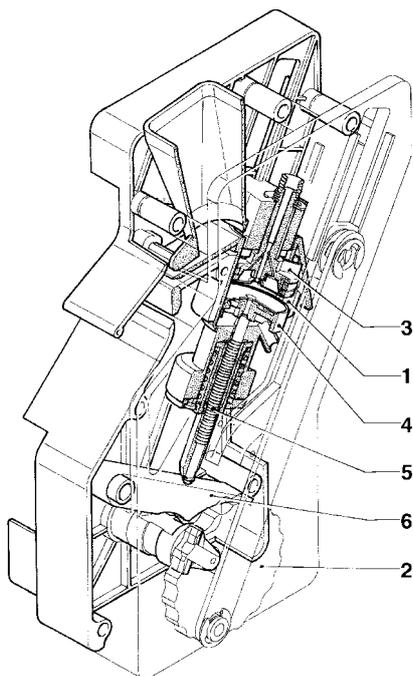
- place the piston in the proper adjusting notches:

.less deep notches for 5.5 to 6.5 g. doses;

.deeper notches for 6.5 to 7.5 g. doses.

Fig. 13

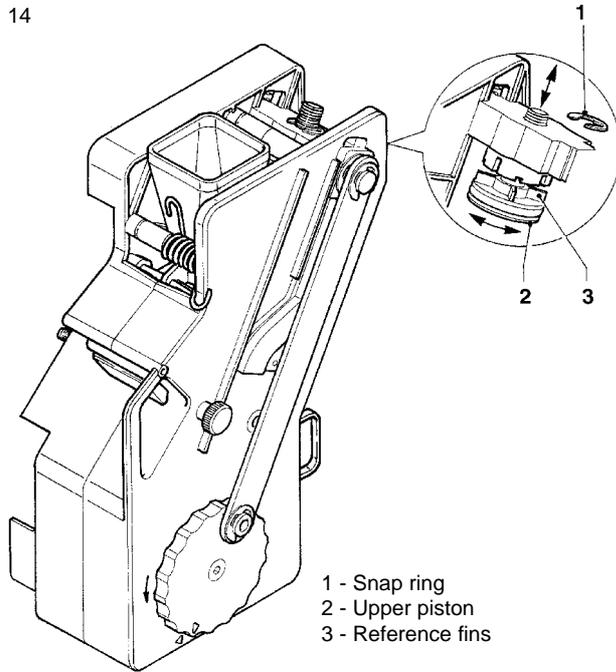
- 1 - Brew chamber
- 2 - External disk
- 3 - Upper piston
- 4 - Lower piston
- 5 - Pre-brewing spring
- 6 - Swinging lever



Due to the water pressure, the pre-brewing spring (5) sinks and the lower piston (4) is lowered 4 mm, thus forming a water cushion which allows an even use of the coffee dose. At the end of the dispensing cycle and during a pause of 3 seconds, the pre-brewing spring (5) will discharge the water through the third way of the dispensing valve, lightly pressing the used coffee dose.

By completing its rotation, the ratiomotor causes the swinging lever (6) to lift the pistons and the coffee dose. At the same time, when the brew chamber returns to its vertical position, the scraper on the coffee hopper holds the used coffee dose and drops it. The lower piston then returns to the bottom dead centre.

Fig. 14



Important notice!!!

To refit the coffee unit, pay special attention to the piston position. Reference notches on the external disk and on the unit case must match (see Figure 19).

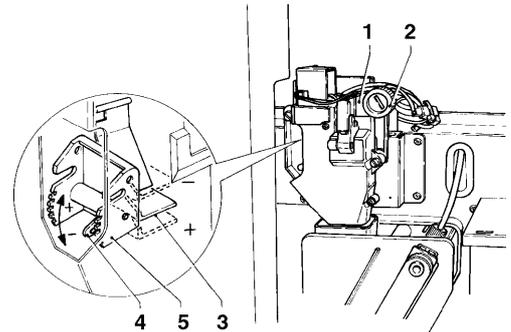


Fig. 15

ADJUSTING THE GRADE OF GRINDING

When a variation in the grade of grinding is necessary, turn the relevant adjusting knob on the grinder (see Figure 15) as follows:

- turn the knob anticlockwise for coarser grinding;
- turn the knob clockwise for finer grinding.

For optimum results, it is good practice to vary the grade of grinding with the coffee grinder motor running.

N.B.: After adjusting the grade of grinding, at least 2 test selections must be made to check the new granulometry of the ground coffee:

the finer the grade of grinding the longer the time necessary for dispensing the coffee and vice versa.

ADJUSTING THE COFFEE DOSE

The dose adjusting lever can be positioned in one of the 6 reference notches, bearing in mind that:

- the dose is increased by lifting the lever;
- the dose is reduced by lowering the lever;
- every notch changes the dose by approx. 0.25 g.

In addition, when the lever is fully rotated upwards, the ratchet can be released from the dose regulator groove (see Figure 13) and replaced into a different groove to change the average dose setting to:

- low 6 g. ± 0.5
- medium 7 g. ± 0.5
- high 8 g. ± 0.5

To take the dose simply remove the coffee unit and press button "2" from the "maintenance" menu (see relevant section).

COFFEE TEMPERATURE CONTROL

If the temperature needs to be changed, adjust the special trimmer (see figure 23), keeping in mind that:

- tightening increases the temperature;
- loosening reduces the temperature;
- every 2 turns the temperature varies by approx. 1° C

INSTANT PRODUCT 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 thermostat screw by hand (see Figure 16).

However, temperature should never exceed 90°, to prevent water from boiling.

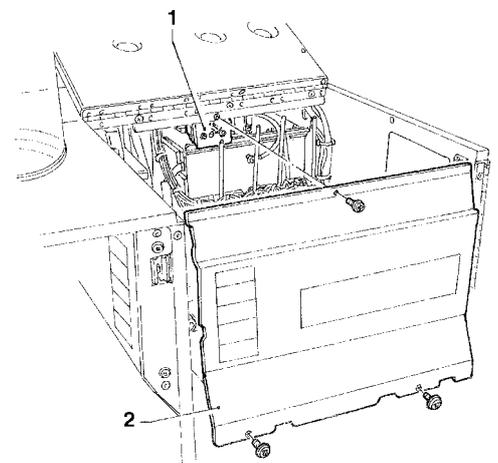


Fig. 16

- 1 - Instant products thermostat
- 2 - Protective panel

OPERATING MODES

The machine has three different operating modes where the buttons will have different functions.

The available operating modes are as follows:

- normal operating mode, in this case the machine will display "Working".
- temporarily out of service for heating, boiler filling or cleaning.
- out of service due to a lockout failure or with the push-button panel disabled through the special switch (Figure 3)

NORMAL OPERATING MODE

After switching on the machine, the message "Starting" is displayed for a few seconds, after which the machine goes into normal operating 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
"Temperature"	Wait time before reaching operating temperature
"Filling"	Boiler filling
"Sel. not avail."	Selection disabled
"Suspended serv."	Selection buttons disabled
"Coffee out of S."	Only for espresso models Coffee unit out of service

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 4).

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 buttons of the external push-button panel are assigned different functions (see Figure 17), used for moving inside the menu and namely:

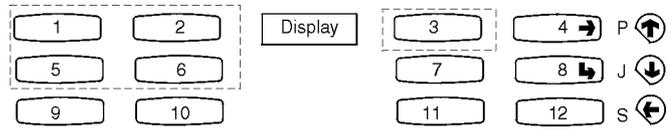


Fig. 17

- ↑ 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 buttons shown within the dotted line (Figure 17) are assigned direct functions and namely:

- 1 - coffee boiler installation
- 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
"Jug facility"	for a few seconds, selection 8 operates dispensing of test selections with jug doses instead of cup.
"Special functions"	selection 1 operates the coffee unit, if this is connected to the electrical system, it releases a coffee dose if disconnected. selection 2 starts a mixer washing cycle.

Scrolling through the menus and confirming of operations is obtained as in programming mode.

PROGRAMMING

When selecting the programming functions from the main menu, the machine goes into "Programming" mode and the buttons on the panel are assigned the functions shown in Figure 17.

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
"Curr. failure"	current failure reading
"Initialise"	RAM initialising
"Machine code"	machine code setting
"M. Lock Count."	sets the number of selections after which the machine is stopped.
"Password"	new password entry

In addition, the following direct operations are provided:

- failure reset;
- display of total and partial statistics;
- printing of total and partial statistics
- reset of total and partial.

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 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 button "→" to access the dose code list, which can be scrolled up and down with buttons "↓" and "↑".

Press the correction button "↩" to display this value blinking, and which 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 button "→" to access the push-button list, which can be scrolled with buttons "↓" and "↑".

The selection buttons are identified by a number (see Figure 4) while the others are identified by the following strings:

"Progr. button"	Programming button	(P)
"Jug button"	Jug dispensing button	(J)
"Stop button"	Jug dispensing stop button	(S)

When pressing the correction button "↩" the status of the button blinks.

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

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

DISPLAYING THE CURRENT FAILURES

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

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

The possible failures are highlighted in the following cases:

AIR-BREAK FAILURE

The machine will stop if, after 40 seconds of dispensing water, no lowering of the water level in the air-break is detected.

INSTANT PRODUCT BOILER FAILURE

The machine will stop if there is no temperature variation in the boiler for more than 120 minutes.

ESPRESSO BOILER FAILURE

The machine will stop if there is no temperature variation in the boiler for more than 10 minutes.

RAM DATA FAILURE

The data contained in the EEprom (i.e. the chip that stores the setting variations) are wrong and must be retrieved from the Eprom, losing all statistics information.

WATER FAILURE

The water inlet solenoid valve remains energized for more than 30 seconds (or 4 minutes if the machine has just been started) without reaching the minimum level in the boiler.

LIQUID WASTE CONTAINER FAILURE

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

VOLUMETRIC COUNTER FAILURE

Failed computation of the volumetric counter within a max. set time.

COFFEE UNIT FAILURE

This failure is due to a mechanical lock of the unit or when the unit is not present. The machine is not locked, but all coffee-based selections are disabled.

COFFEE FAILURE

If after a period of 15 seconds of grinding coffee a full dose is not obtained, all coffee-based selections are disabled.

COFFEE RELEASE FAILURE

If after releasing the ground coffee dose the micro-switch of the coffee dosing unit indicates the presence of coffee in the dosing unit chamber, all coffee-based selections are disabled.

INITIALISING

When the "Initialise" 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 button "➤" and the message "Confirm?" will be displayed. Press button "➤" 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 button "➤" and the current code number is displayed; then using the correction button "➡" and the first digit will blink. The buttons have now numeric values (see Figure 18).



Fig. 18

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

Press the confirm button "➤" after setting the last digit and the new code will be stored.

OPERATION 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 push-button.

Press buttons "⬇" and "⬆" to alternate between the password requests for cleaning and for programming.

Press the confirm button "➤" and enter the current password, at this point the push-button panel will have numeric values (Figure 18), the first digit will blink and can be modified. Pressing any of the buttons, causes the blinking digit to take its value and the next digit starts blinking.

LANGUAGE SELECTION

With this function is possible to select the language used for the messages on the LCD display.

RESETTING THE FAILURES

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

DISPLAYING THE STATISTICS

The machine stores data, for amounts regarding selections, globally (since the last reset from the programming menu) and partially (since the last reset from the operator menu).

When pressing the statistics display button "5" the stored data is sequentially displayed, and namely:

1 - partial counters in normal operating mode or test mode, including:

single selection

total selections

2 - total counters in normal operating mode or test mode, including:

single selection

total selections

3 - 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 button "6" and the request message "Confirm?" will be displayed;
- before confirming connect the printer;
- press the confirm button "➡" to start printing.

RESETTING THE STATISTICS

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

When pressing the confirm button "➡" the message "In process" is displayed for a few seconds and the statistics are reset. To reset partial statistics follow the procedures in the "Operator menu".

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.

Turn the unit 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.

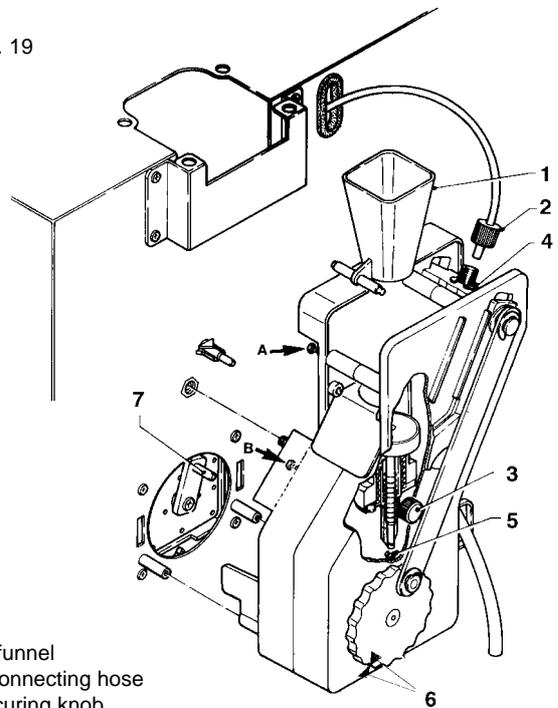
MAINTENANCE OF THE COFFEE UNIT

Every 10,000 coffee selections, or every 6 months, some basic maintenance of the coffee unit must be carried out.

Maintenance is carried out as follows:

- remove the teflon hose connection of the boiler from the upper piston, paying attention not to lose the seal (see Figure 19);
- undo the knob securing the unit to the bracket;
- remove the coffee unit;

Fig. 19



- 1 - Coffee funnel
- 2 - Boiler connecting hose
- 3 - Unit securing knob
- 4 - Upper piston snap ring
- 5 - Lower piston snap ring
- 6 - Reference notches
- 7 - Ratiomotor handle pin

Removing the upper filter

- Take the snap ring out of its seat;
- remove the piston from the crosspiece;
- remove the filter and the piston gasket.

Removing the lower filter

- Loosen screws A and B enough to release the coffee funnel (see Figure 19);
- remove the lower piston snap ring;
- take the piston from out of brew chamber and remove the filter.

Soak all components removed from the unit in a solution of boiling hot water and coffee machine detergent for approx. 20 minutes.

Thoroughly rinse and dry all parts, then reinstall them in the reverse order of disassembly, taking particular care that:

- the piston is positioned in the correct notch for the coffee dose used (see relevant section);
- the two reference notches match and that the coffee unit is inserted.

Important notice!!!

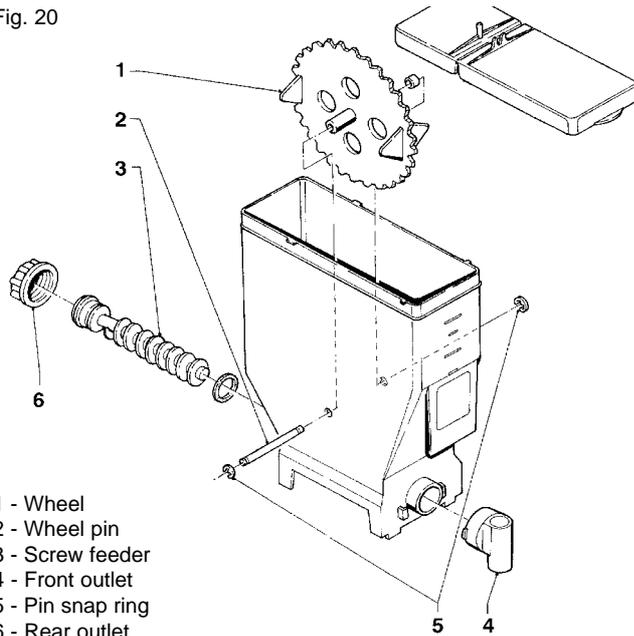
Check that the handle pin of the ratiomotor is correctly engaged in its seat.

ROUTINE CLEANING

CLEANING THE PRODUCT CONTAINERS

- Remove the product containers from the machine;
- after unscrewing the rear forks (left-handed thread), disassemble the product outlets and slide out the screw feeders (see Fig. 20);
- clean all parts in a solution of hot water and chlorine-based detergents and thoroughly dry before reassembling;
- the container for coffee beans can be cleaned the same way as all the other containers but without needing to be removed.

Fig. 20



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 hydraulic system parts in contact with food 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 3) must be carried out with all parts reinstalled.

INSTANT PRODUCT BOILER MAINTENANCE

According to the hardness of the water and the number of selections made, a periodic descaling of the boiler is necessary.

This operation should be carried out by qualified technicians only.

To descale the boiler, it is necessary to remove it from the machine.

For descaling use only biodegradable, nontoxic and mild products.

Thoroughly rinse all parts before reassembling.

When reassembling make sure that:

- the electrical contacts (terminals, fastons etc.) are thoroughly dry and correctly connected;
- the safety and anti-boiling thermostats are suitably positioned and fastened;
- the hydraulic connections are correctly made.

IMPORTANT NOTICE!!!

If for any reasons the heating system of the boiler is operating without water, check the correct functioning of the boiler temperature sensor before restarting the machine.

If the dry heating continues until the safety thermostat is activated (see hydraulic system) the boiler temperature sensor will be

PERMANENTLY DAMAGED

AND MUST BE REPLACED.

PRINTED BOARD FUNCTIONS AND INDICATOR LIGHTS

CONTROL BOARD

This board (see Fig. 23) 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 T fuse on the primary and by a 1.25 AT fuse on the secondary winding. The voltage supply 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 indicates heating of the coffee boiler.

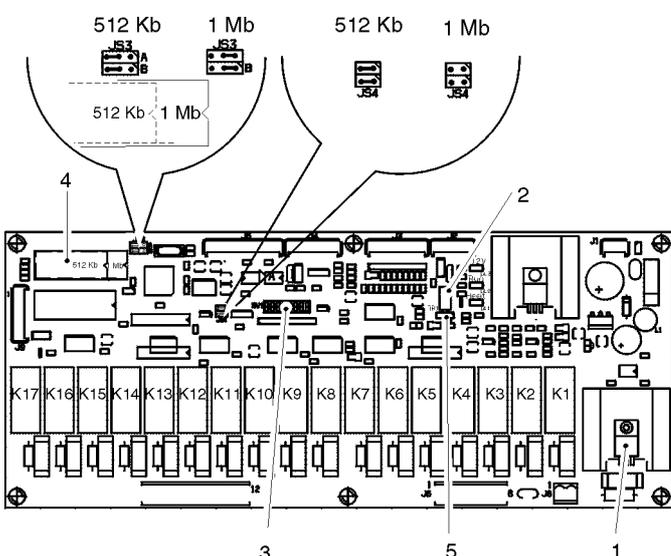


Fig. 21

- 1 - Triac of coffee boiler heating element
- 2 - Coffee boiler temperature adjusting trimmer
- 3 - Configuration minidips
- 4 - EPROM
- 5 - Jumper: fixed to 2-3

RELAY FUNCTION (see wiring diagram)

K1	=	ER
K2	=	ESC
K3	=	MAC
K4	=	PM
K5	=	M
K6	=	MF1
K7	=	MF2
K8	=	EV4
K9	=	EV2
K10	=	MD3
K11	=	MD2
K12	=	MD1
K13	=	EV1
K14	=	EV3
K15	=	TEL
K16	=	EIA
K17	=	MF

A row of minidips is located at the centre of the control board (see Figure 23), which are used to configure the board for use with the various machine versions and for different countries, as well as a jumper (5) used to configure the board for Instant or Espresso versions. The board is also able to support 512 kb and 1 Mb EPROMs by setting jumpers JS3 and JS4.

EXPANSION BOARD

This small board, housed on the left-hand side of the Espresso coffee module, controls whitener dispensing for espresso coffee.

PUSH-BUTTON BOARD

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

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

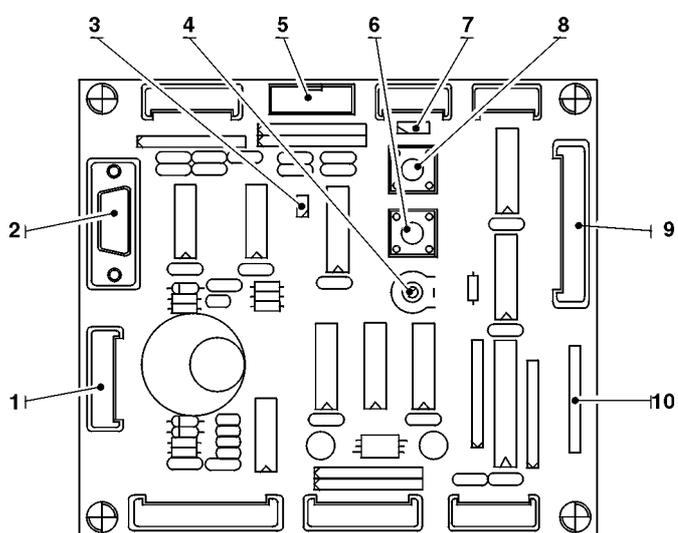


Fig. 22

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

CONFIGURING THE POWER SUPPLY

Minidip 2 defines the control settings for the boiler heating elements according to the available power; if the electrical connection is as indicated in Figure 8 or 9, the minidip must be set to OFF allowing simultaneous operation of the boilers (maximum output).

If the electrical connection is as indicated in Figure 10, the minidip must be set to ON and the boilers will operate in alternation, with priority given to the ESPRESSO coffee boiler.

Important notice!!!

If the configuration of minidips 1, 3 or 4 is changed, the machine must be initialised.

In this case initialising can be accessed only by means of the programming button located on the push-button board (fig. 22).

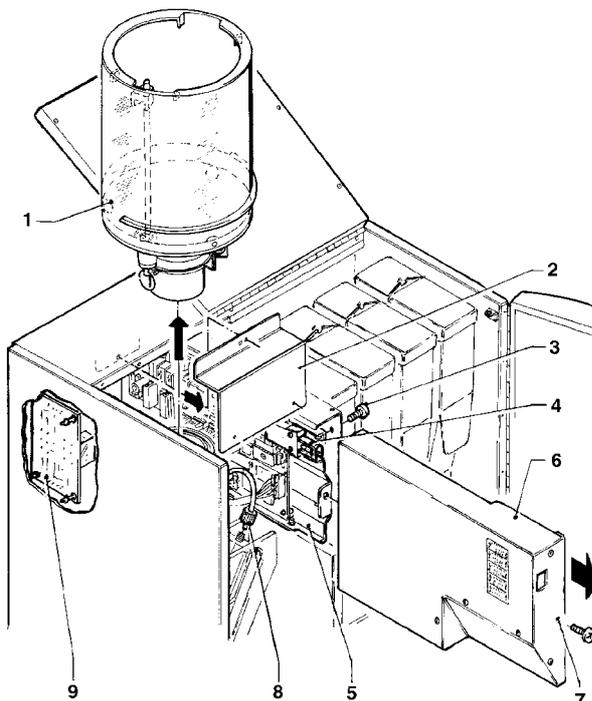
REPLACING THE BOARDS

Should for any reason the control or expansion boards need replacing, proceed as follows:

- disconnect the external main switch;
- remove the coffee container from the machine top panel (see Fig. 6);
- disconnect the boiler hose (see Fig. 23);
- completely undo the screw and slide out the boards cover;

Fig. 23

- 1 - Coffee container
- 2 - Expansion board cover
- 3 - Control board support securing screws
- 4 - Door switch
- 5 - Control board support
- 6 - Control board cover
- 7 - Board cover securing screw
- 8 - Boiler connection hose
- 9 - Expansion board



- remove the expansion board protective panel;
- disconnect the electrical connectors from the upper part of the control board, including the door switch cables;
- remove the securing screws and slide out the board support.
- disconnect the rest of the cables.

Proceed in the reverse order to reinstall the boards.

REPLACING THE LAMPS

The lamps can be accessed by opening the special hatch (see Fig. 24), after removing the four securing screws. It is not necessary to open the push-button protective hatch to access the lamps.

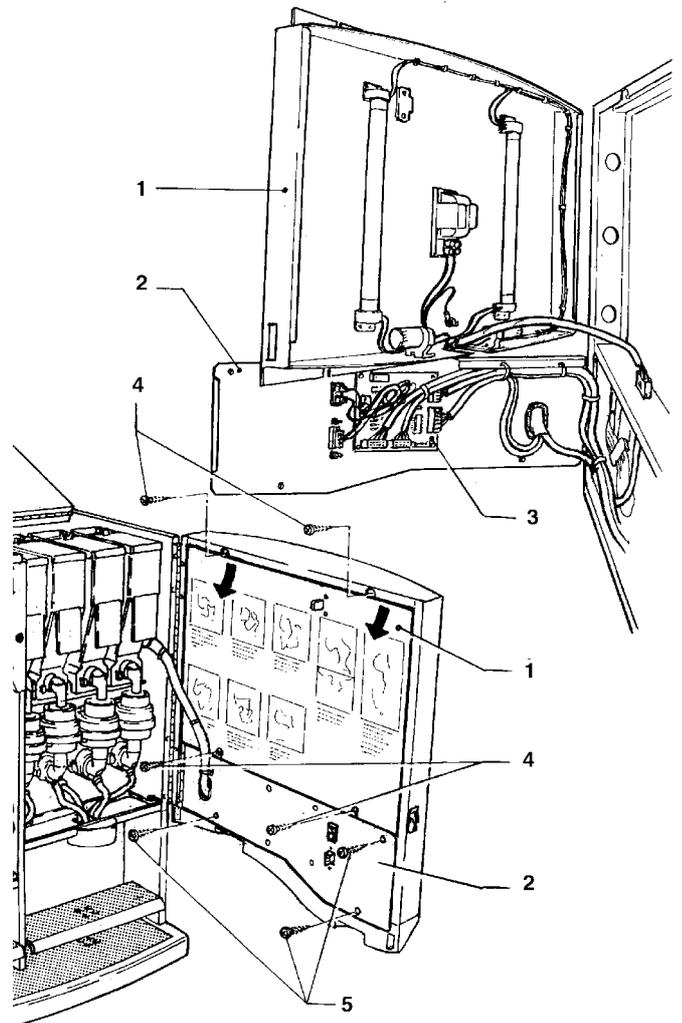
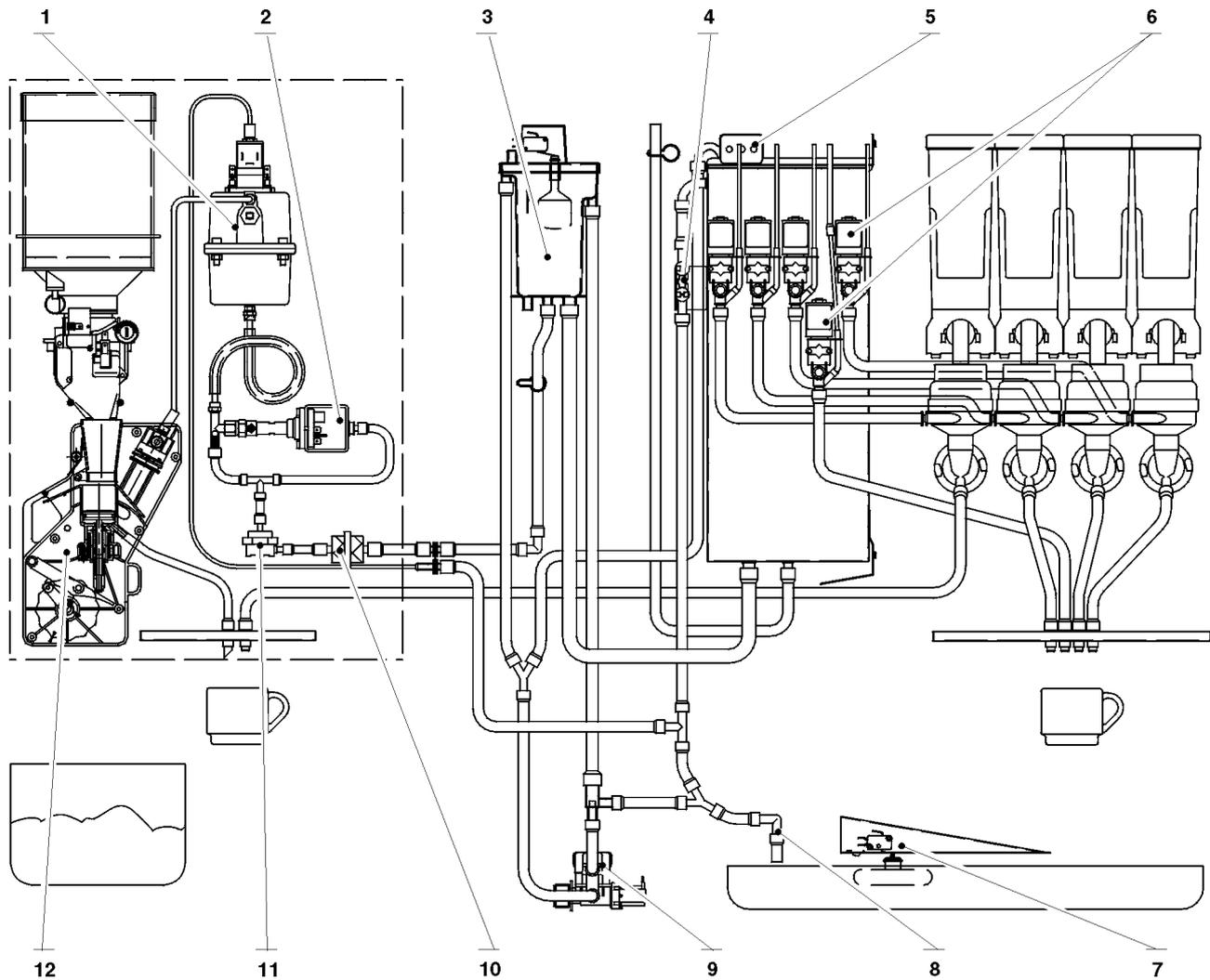


Fig. 24

- 1 - Lamp protective hatch
- 2 - Push-button protective hatch
- 3 - Push-button panel board
- 4 - Lamp hatch securing screws
- 5 - Push-button hatch securing screws

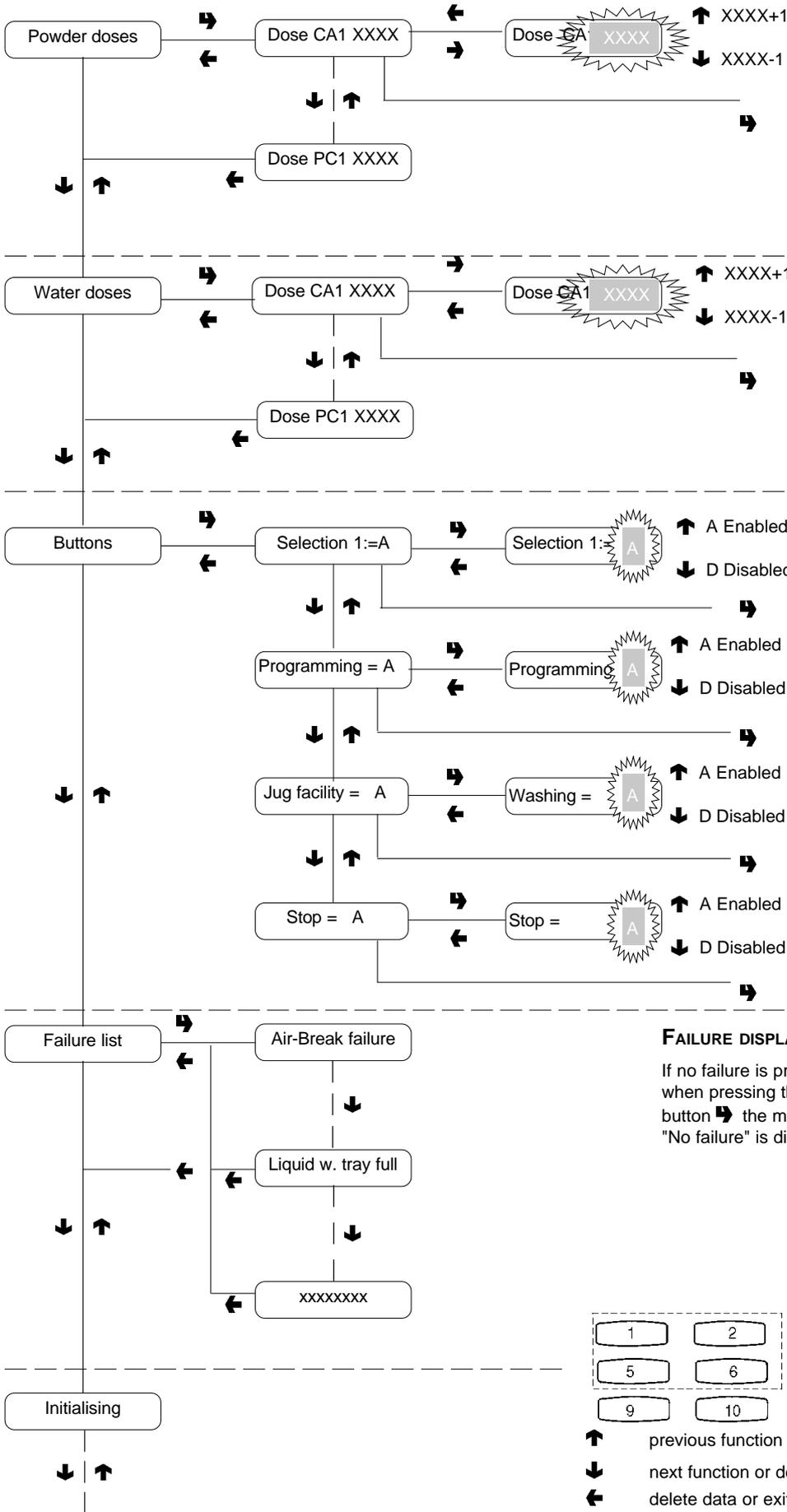
HYDRAULIC SYSTEM



- 1 - Coffee boiler
- 2 - Vibration pump
- 3 - Air-break
- 4 - Boiler temperature thermostat
- 5 - Anti-boiling thermostats
- 6 - Instant product solenoid valves

- 7 - Liquid waste container float
- 8 - Overflow pipe
- 9 - Water inlet solenoid valve
- 10 - Mechanical filter
- 11 - Volumetric counter
- 12 - Coffee unit

Programming menu



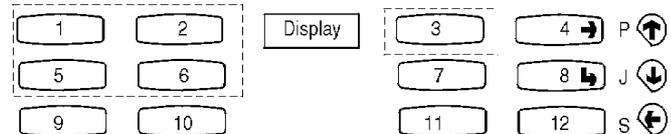
POWDER DOSES
Refer to the selection dose table for the correspondence between dose code and powder or water dose.

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

Selections 1 to 12

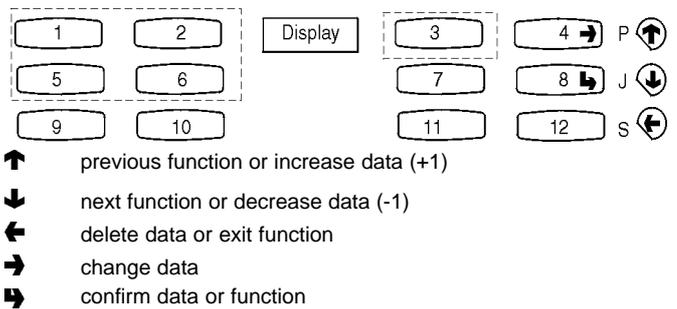
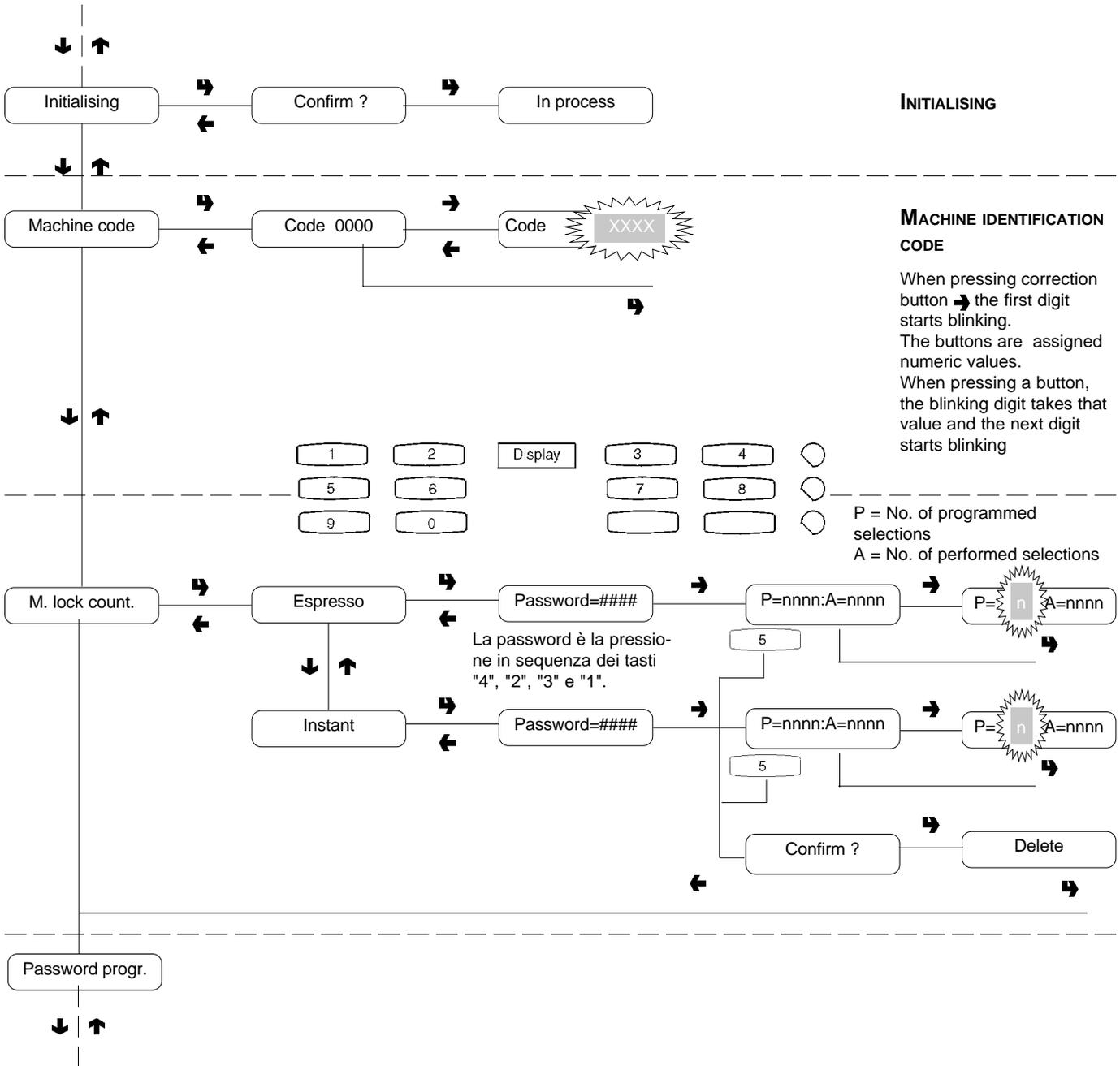
FAILURE DISPLAY
If no failure is present, when pressing the confirm button the message "No failure" is displayed.

- LIST OF FAILURES**
- Air-Break
 - Espresso boiler
 - Instant product boiler
 - EEprom data
 - Water failure
 - Liquid waste tray full
 - Volumetric counter
 - Coffee unit
 - Coffee failure
 - Coffee dose release

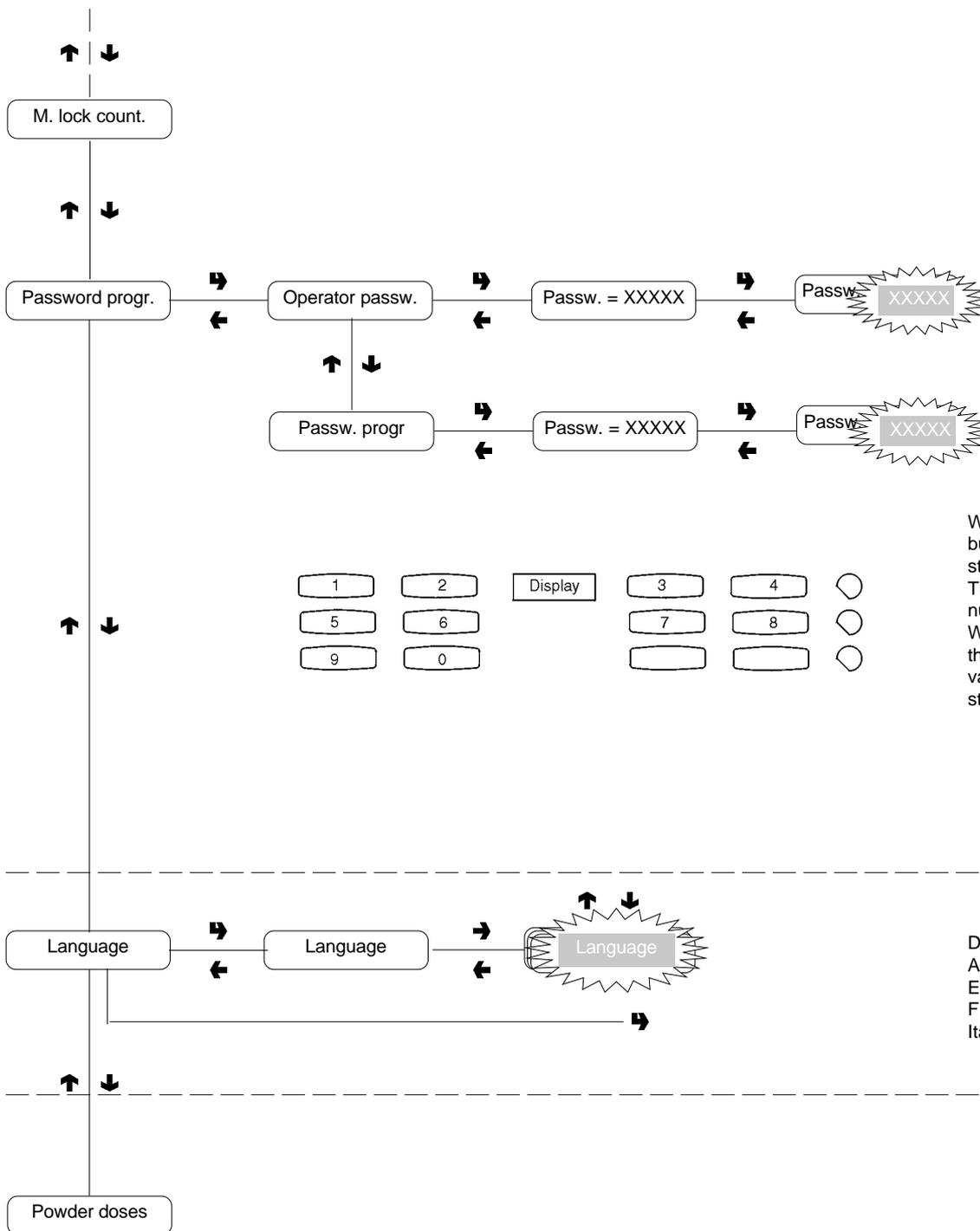


- ↑ previous function or increase data (+1)
- ↓ next function or decrease data (-1)
- ← delete data or exit function
- change data
- ↵ confirm data or function

Programming menu

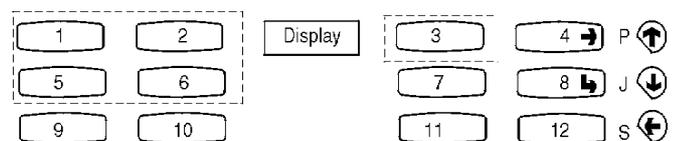


Programming menu



When pressing correction button → the first digit starts blinking.
 The buttons are assigned numeric values.
 When pressing a button, the blinking digit takes that value and the next digit starts blinking.

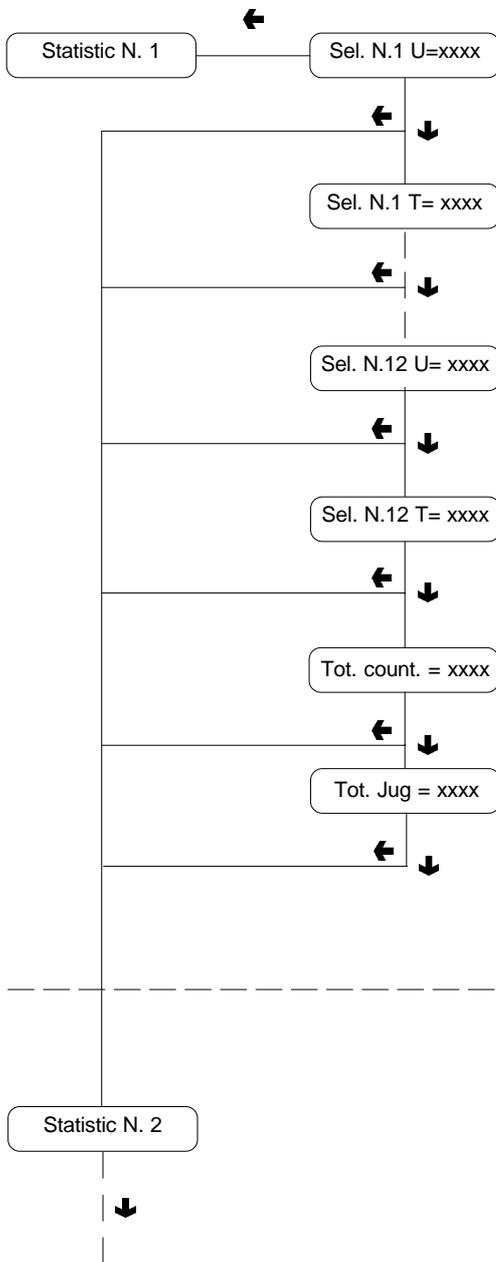
Display of messages
 Available languages:
 English
 French
 Italian



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

Reading data

PARTIAL DISPENSING BY SELECTION

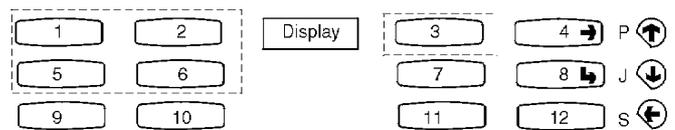


U = service dispensing

T = test dispensing

Sequence scrolling of data for
all selections

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



↑ previous function or increase data (+1)

↓ next function or decrease data (-1)

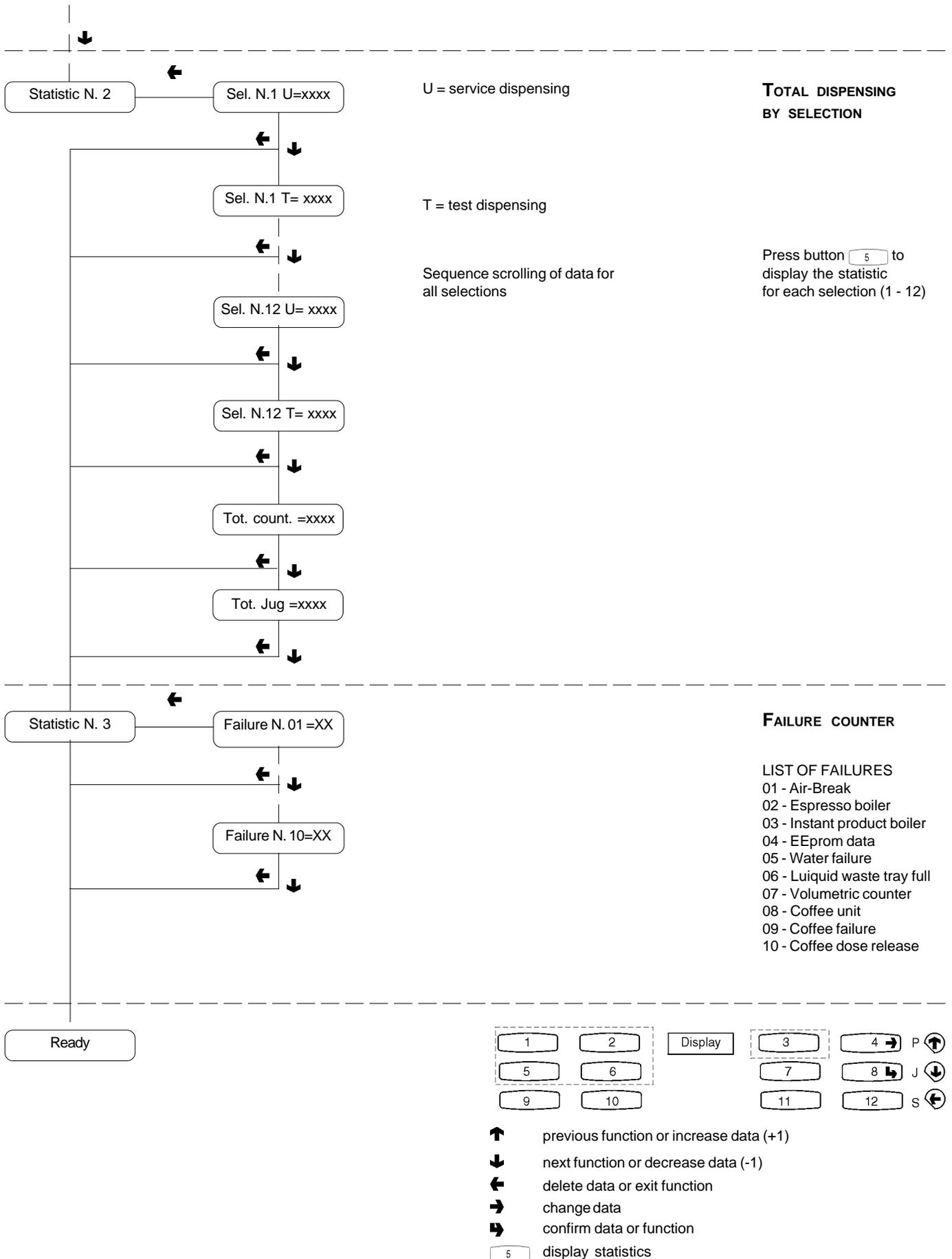
← delete data or exit function

→ change data

↵ confirm data or function

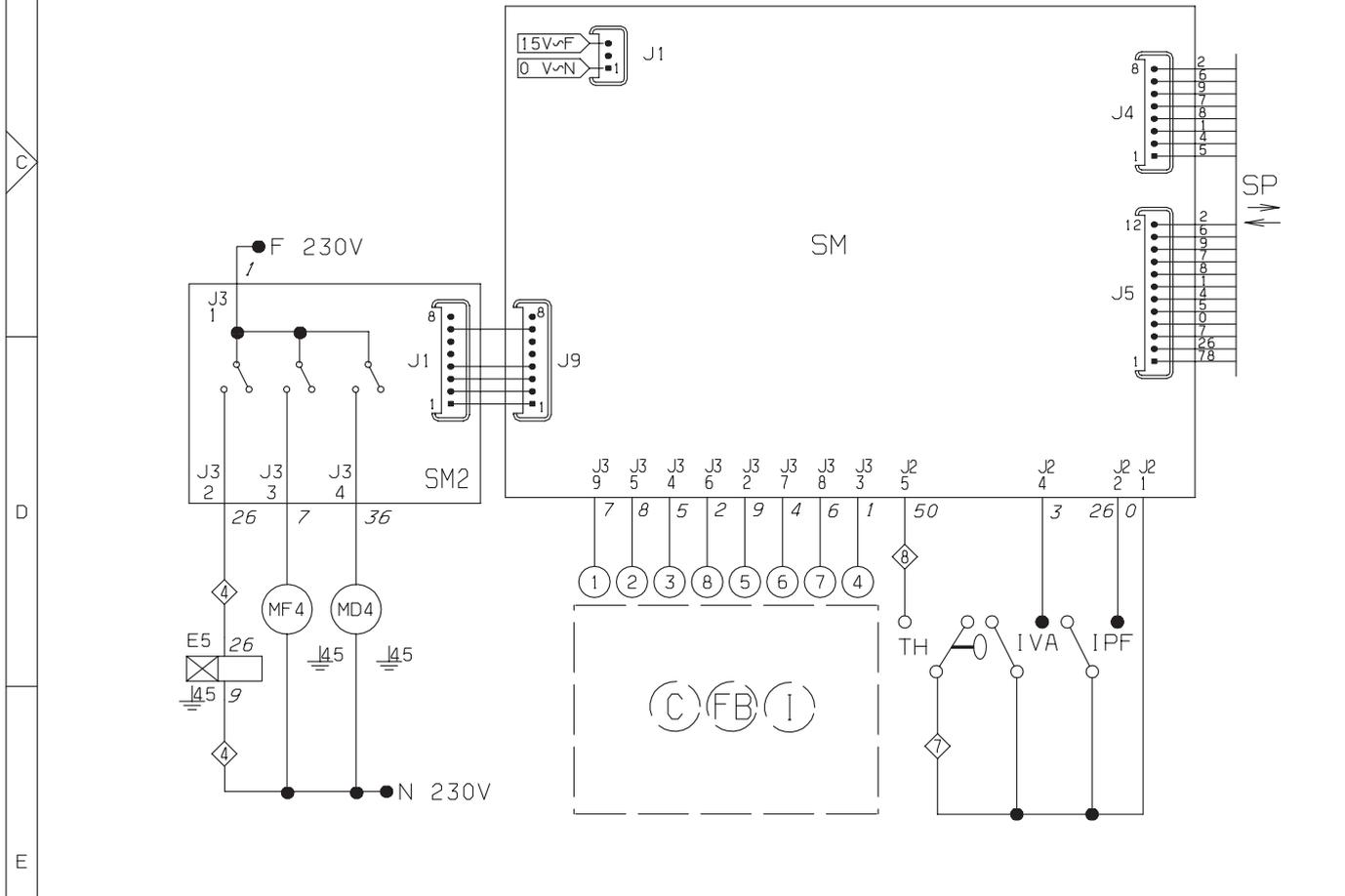
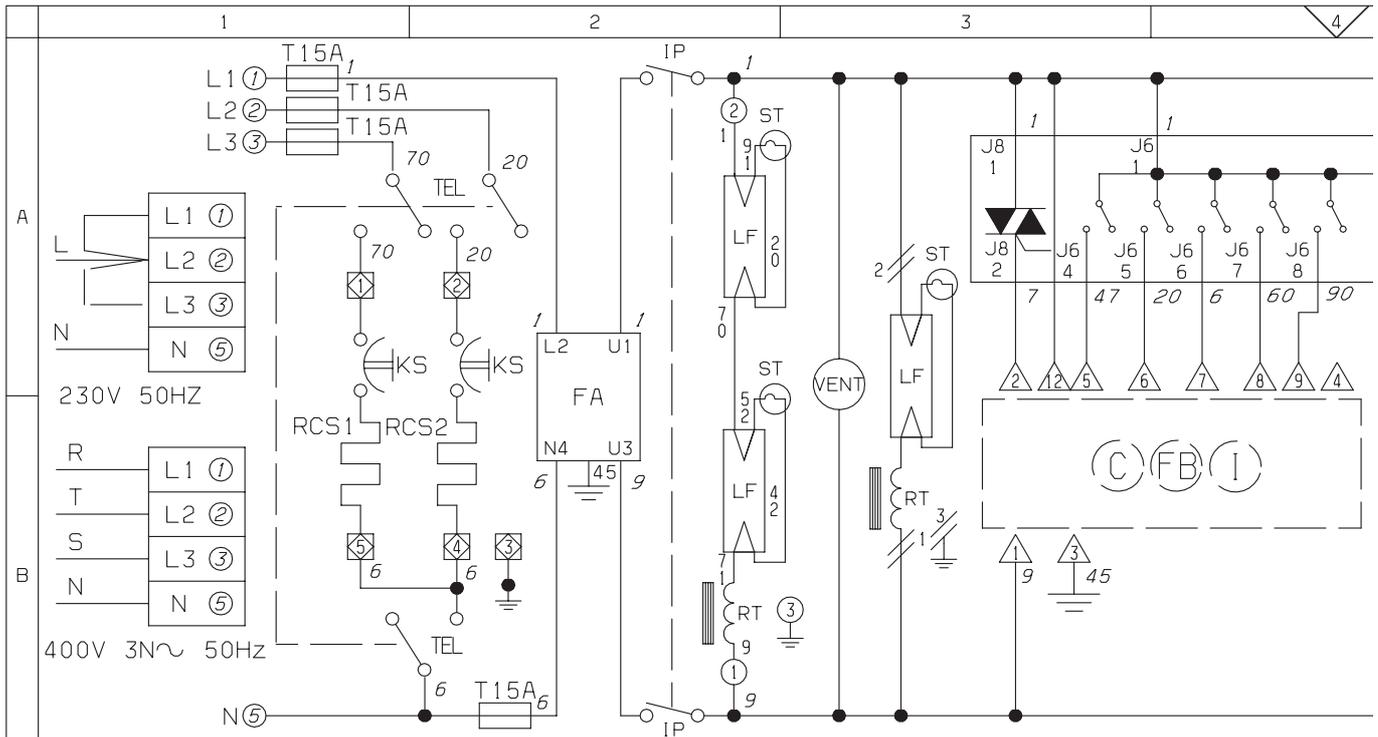
5 display statistics

Reading data



WIRING DIAGRAM LEGEND

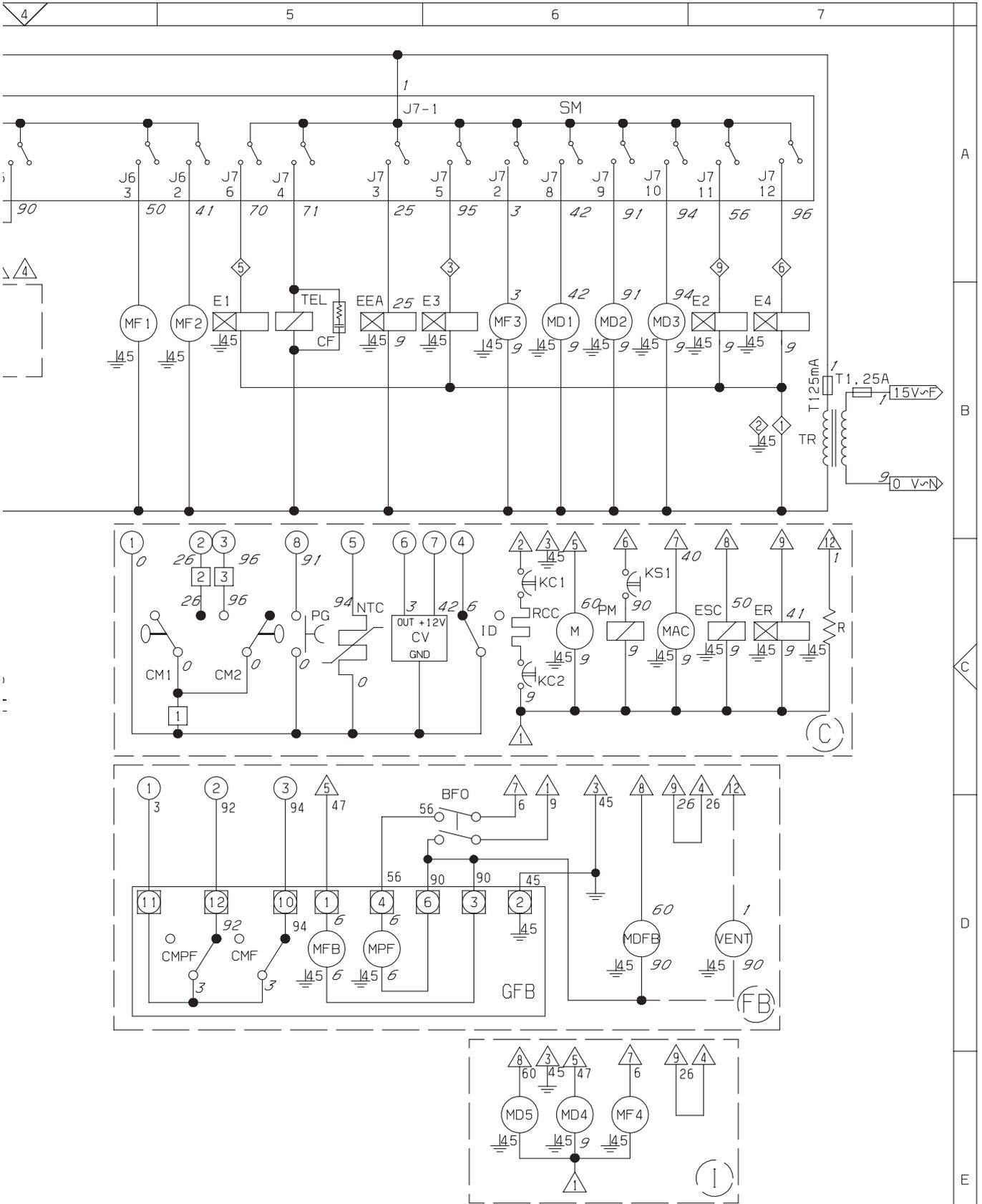
INITIALS	DESCRIPTION		
BFO	WASTE CONTAINER	M	COFFEE UNIT MOTOR
CF	FILTER CONDENSER	MAC	GRINDER
CM1	COFFEE UNIT MOTOR CAM	MAX	WATER LEVEL SENSOR
CM2	COFFEE DISPENSING POSITION CAM	MD1-..	DOSER UNIT MOTOR - INSTANT
CMF	FRESH-BREW MOTOR CAM	MF1-..	WHIPPER MOTOR
CMPF	FRESH-BREW UNIT PISTON MICROSWITCH	MFB	FRESH-BREW MOTOR
CV	VOLUMETRIC COUNTER	MP	PROGRAMMING MICROSWITCH
E1-...	INSTANT SOLENOID VALVE	MPF	FRESH-BREW PISTON MOTOR
EEA	WATER INLET SOLENOID VALVE	NTC1-.	TEMPERATURE PROBE
ER	COFFEE DISPENSER SOLENOID VALVE	PG	UNIT DETECTION MICROSWITCH
ESC	COFFEE RELEASE MAGNET	PM	PUMP
EX	EXECUTIVE COIN MECH CONNECTOR	RCC	COFFEE BOILER HEATING ELEMENT
FA	RADIO INTERFERENCE SUPPRESSOR	RCS	INSTANT BOILER HEATING ELEMENT
GFB	FRESH-BREW ASSEMBLY	RT	BALLAST
ID	COFFEE DOSE SWITCH	SM	CONTROL BOARD
IP	DOOR SWITCH	SM2	EXPANSION BOARD
IPF	WASTE CONTAINER OVERFLOW SWITCH	SP	PUSH-BUTTON BOARD
IVA	EMPTY BOILER MICROSWITCH	ST	STARTER
KC1-..	COFFEE BOILER CUTOUT	TEL	REMOTE CONTROL SWITCH
KS	BOILER CUTOUT SWITCH	TH	THERMOSTAT
KS1-..	SAFETY CUTOUT	TR	TRANSFORMER
LCD	LIQUID CRYSTAL DISPLAY	TX....	DELAYED FUSE (X=COURRENT)
LF	LAMP	VENT	FAN



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

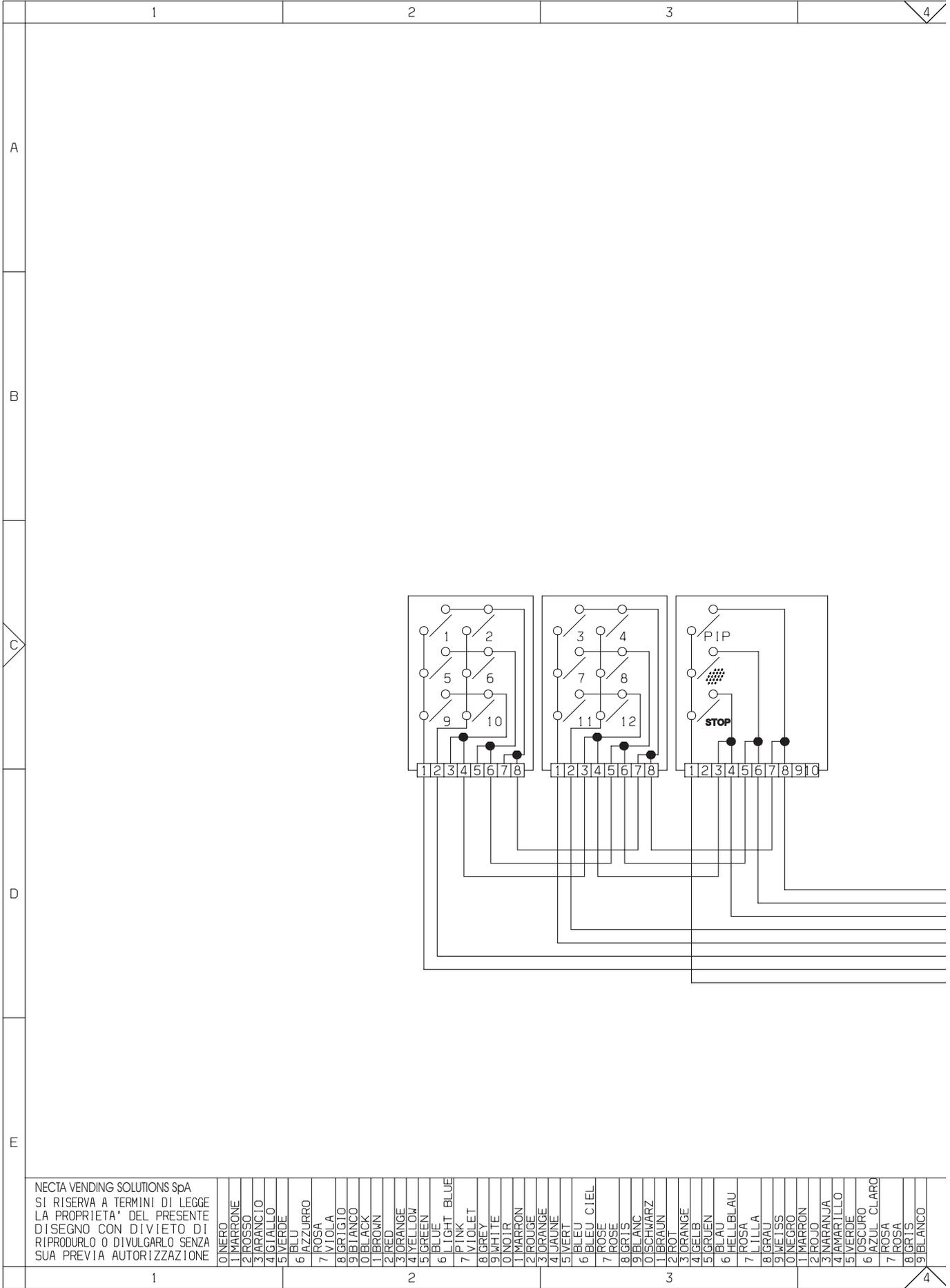
0	NERO	1	MARRONE	6	BLU	11	VIOLA	16	BLU CIELO	21	GRIGIO	26	GRIGIO
1	ROSSO	2	ARANCIO	7	ROSA	12	VIOLA	17	ROSA	22	GRIGIO	27	GRIGIO
2	ARANCIO	3	VERDE	8	GRIGIO	13	GRIGIO	18	GRIGIO	23	GRIGIO	28	GRIGIO
3	VERDE	4	VERDE	9	GRIGIO	14	GRIGIO	19	GRIGIO	24	GRIGIO	29	GRIGIO
4	VERDE	5	VERDE	10	GRIGIO	15	GRIGIO	20	GRIGIO	25	GRIGIO	30	GRIGIO
5	VERDE	6	VERDE	11	GRIGIO	16	GRIGIO	21	GRIGIO	26	GRIGIO	31	GRIGIO
6	BLU	7	ROSA	12	VIOLA	17	ROSA	22	GRIGIO	27	GRIGIO	32	GRIGIO
7	ROSA	8	GRIGIO	13	GRIGIO	18	GRIGIO	23	GRIGIO	28	GRIGIO	33	GRIGIO
8	GRIGIO	9	GRIGIO	14	GRIGIO	19	GRIGIO	24	GRIGIO	29	GRIGIO	34	GRIGIO
9	GRIGIO	10	GRIGIO	15	GRIGIO	20	GRIGIO	25	GRIGIO	30	GRIGIO	35	GRIGIO
10	GRIGIO	11	GRIGIO	16	GRIGIO	21	GRIGIO	26	GRIGIO	31	GRIGIO	36	GRIGIO
11	GRIGIO	12	VIOLA	17	ROSA	22	GRIGIO	27	GRIGIO	32	GRIGIO	37	GRIGIO
12	VIOLA	13	GRIGIO	18	GRIGIO	23	GRIGIO	28	GRIGIO	33	GRIGIO	38	GRIGIO
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14	GRIGIO	15	GRIGIO	20	GRIGIO	25	GRIGIO	30	GRIGIO	35	GRIGIO	40	GRIGIO
15	GRIGIO	16	GRIGIO	21	GRIGIO	26	GRIGIO	31	GRIGIO	36	GRIGIO	41	GRIGIO
16	GRIGIO	17	ROSA	22	GRIGIO	27	GRIGIO	32	GRIGIO	37	GRIGIO	42	GRIGIO
17	ROSA	18	GRIGIO	23	GRIGIO	28	GRIGIO	33	GRIGIO	38	GRIGIO	43	GRIGIO
18	GRIGIO	19	GRIGIO	24	GRIGIO	29	GRIGIO	34	GRIGIO	39	GRIGIO	44	GRIGIO
19	GRIGIO	20	GRIGIO	25	GRIGIO	30	GRIGIO	35	GRIGIO	40	GRIGIO	45	GRIGIO
20	GRIGIO	21	GRIGIO	26	GRIGIO	31	GRIGIO	36	GRIGIO	41	GRIGIO	46	GRIGIO
21	GRIGIO	22	VIOLA	27	GRIGIO	32	GRIGIO	37	GRIGIO	42	GRIGIO	47	GRIGIO
22	VIOLA	23	GRIGIO	28	GRIGIO	33	GRIGIO	38	GRIGIO	43	GRIGIO	48	GRIGIO
23	GRIGIO	24	GRIGIO	29	GRIGIO	34	GRIGIO	39	GRIGIO	44	GRIGIO	49	GRIGIO
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25	GRIGIO	26	GRIGIO	31	GRIGIO	36	GRIGIO	41	GRIGIO	46	GRIGIO	51	GRIGIO
26	GRIGIO	27	ROSA	32	GRIGIO	37	GRIGIO	42	GRIGIO	47	GRIGIO	52	GRIGIO
27	ROSA	28	GRIGIO	33	GRIGIO	38	GRIGIO	43	GRIGIO	48	GRIGIO	53	GRIGIO
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31	GRIGIO	32	VIOLA	37	GRIGIO	42	GRIGIO	47	GRIGIO	52	GRIGIO	57	GRIGIO
32	VIOLA	33	GRIGIO	38	GRIGIO	43	GRIGIO	48	GRIGIO	53	GRIGIO	58	GRIGIO
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35	GRIGIO	36	GRIGIO	41	GRIGIO	46	GRIGIO	51	GRIGIO	56	GRIGIO	61	GRIGIO
36	GRIGIO	37	ROSA	42	GRIGIO	47	GRIGIO	52	GRIGIO	57	GRIGIO	62	GRIGIO
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45	GRIGIO	46	GRIGIO	51	GRIGIO	56	GRIGIO	61	GRIGIO	66	GRIGIO	71	GRIGIO
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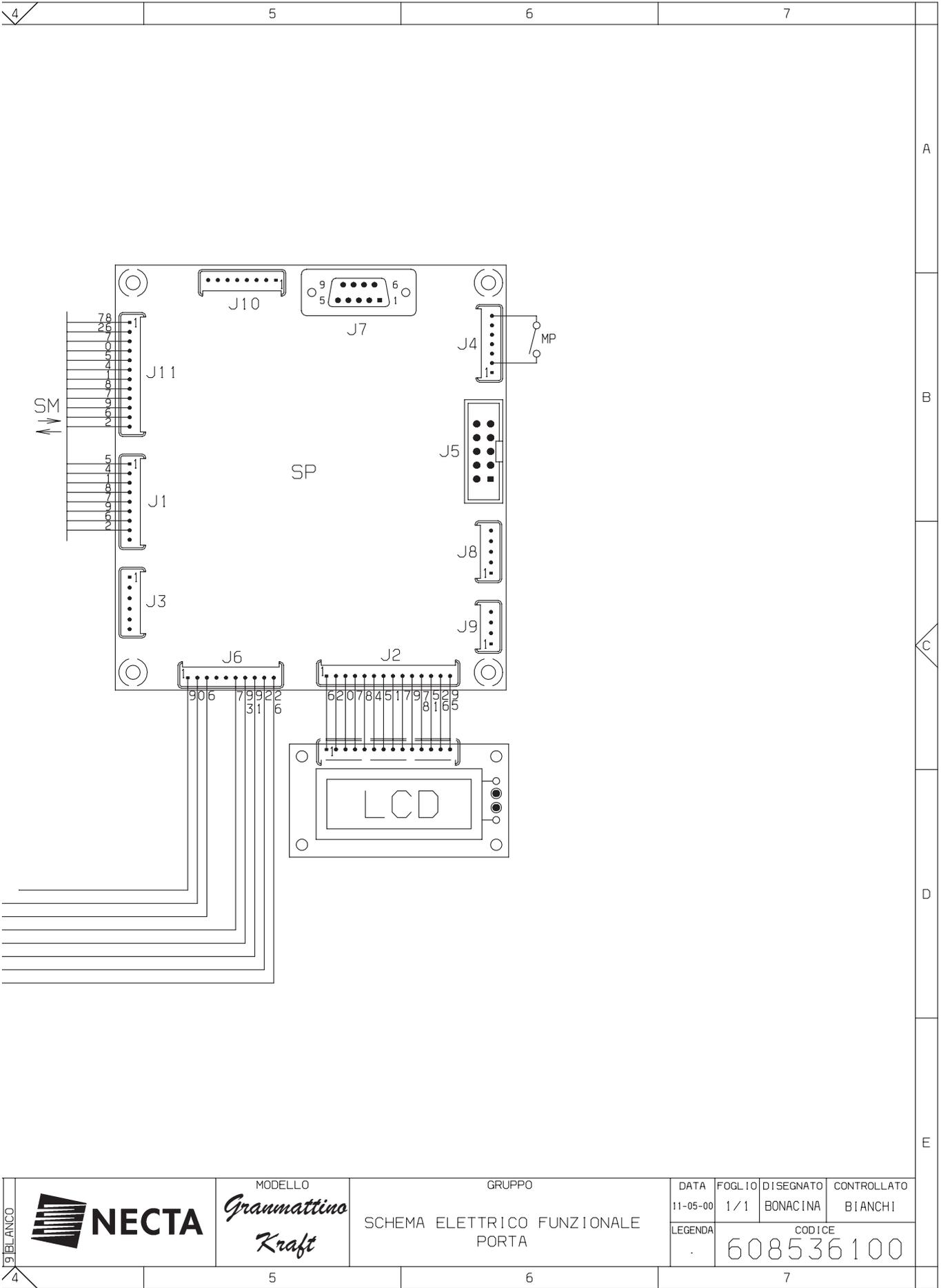




8 15 9 BLANCO		MODELLO	GRUPPO	DATA	FOGLIO	DISEGNATO	CONTROLLATO	
		<i>Graumann</i>		11-05-00	1/1	BONACINA	BIANCHI	
		<i>Kraft</i>		LEGENDA				CODICE
4		5	6	608536000			7	
		SCHEMA ELETTRICO FUNZIONALE MACCHINA						







9 BIANCO		MODELLO	GRUPPO		DATA	FOGLIO	DISIGNATO	CONTROLLATO
		<i>Granmattino</i>	SCHEMA ELETTRICO FUNZIONALE		11-05-00	1/1	BONACINA	BIANCHI
		<i>Kraft</i>	PORTA		LEGENDA	CODICE		
4		5	6	7				
				608536100				



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EDITION 11 00 CODE: H 156U 00

