



***SPIRALI LUX  
& PANZER***

*Issue 00 - 03/2004*

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on automatic vending machines

Refer to quality manual for details of applications to ISO 9001:2000 requirements  
has implemented and maintains a

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### ISO 9001:2000

Issued on: 2003 - 05 - 15

Registration Number: IT - 8691



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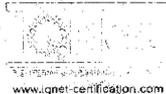
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DECLARATION DE CONFORMITE - DECLARACION DE CONFORMIDAD  
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Déclare sous sa propre responsabilité que le produit :  
Declara bajo propia responsabilidad que el producto :  
erklären unter eigener Verantwortung, daß das Produkt,  
Declara sob sua responsabilidade que o produto :  
Bekendtgør på vort ansvar at nedennævnte produkt :

Matricola                    **200449042**  
Serial Number  
Modello 990371XF04  
Model     SPIRALI 6 39 M LUX (SELECTA FRA)

al quale questa dichiarazione si riferisce è conforme alle seguenti norme :  
to which this declaration relates is in conformity with the following standards :  
auquel cette déclaration se réfère est conforme aux normes suivantes :  
objeto de esta declaración es conforme a los siguientes estandares :  
auf das sich diese Erklärung bezieht, folgenden Normen entspricht :  
objecto desta declaração está conforme as seguintes normas :  
auf das sich diese Erklärung bezieht, folgenden Normen entspricht :

**EN 60335-1 - EN 60335-2-75**  
**EN 55014-1 - EN55014-2 - EN 61000-3-2 - EN 61000-3-3**

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suivant les clauses des Directives :  
seguiendo las clausolas de las Normas :  
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**73/23 EEC Directive (Low Voltage Directive) and subsequent amendments**  
**89/336 EEC Directive (EMC Directive) and subsequent amendments**

Schio, 20 febbraio 2004

**Dott. BUTTAZZONI GOFFREDO**  
AMMINISTRATORE DELEGATO

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## **CHI CONTATTARE IN CASO DI GUASTO**

Nella maggior parte dei casi, molti degli inconvenienti tecnici sono risolvibili con piccoli interventi, consigliamo quindi di leggere attentamente il presente manuale, prima di chiamare il servizio di Assistenza. Nel caso di anomalie o malfunzionamenti non risolvibili l'utente può rivolgersi alla rete di concessionari riportata in allegato, o direttamente al costruttore.

## **WHOM TO CONTACT IN CASE OF DEFAULT**

In most of the cases, many technical inconveniences can be solved with small interventions and therefore we advise to carefully read this booklet before calling the Assistance Service. In case of anomalies or bad functioning which are not solvable, the user can apply to the network of agents hereafter enclosed or directly to the builder.

## **QUI APPELER EN CAS DE PANNE**

Dans la plupart des cas, beaucoup des inconvénients techniques peuvent être résolus avec de petites interventions. Pour cela on vous conseille de lire attentivement ce manuel avant d'appeler le service assistance. En cas de nécessité ou pour d'éventuels renseignements le client peut s'adresser au service technique et commercial de la maison:

## **MIT WEM SICH IM STÖRUNGSFALL IN VERBINDUNG SETZEN**

In den meisten Fällen sind viele der technischen Schwierigkeiten durch kleine Operationen lösbar; deshalb raten wir Ihnen diese Betriebsanleitung sorgfältig zu lesen, bevor Sie den Kundendienst benachrichtigen. Falls nötig oder um eventuelle Erklärungen zu erhalten, sich an den Technik-und-Geschäftskundendienst der firma:

## **A QUIEN CONTACTAR EN CASO DE AVERIA**

En la mayor parte de los casos, muchos inconvenientes técnicos se pueden resolver con intervenciones menores; aconsejamos, por lo tanto, leer atentamente el presente manual, antes de llamar al servicio de Asistencia. En el caso de mal funcionamiento o de anomalias irresolubles, el usuario puede dirigirse a la red de concesionarios que se adjunta o directamente al constructor.

## **HVOR HENVENDER MAN SIG I PROBLEMTILFÆLDE**

I de fleste tilfælde kan de tekniske ulemper løses med mindre indgreb, og det tilrådes derfor at læse denne håndbog grundigt, inden der sendes bud efter servicehjælp. I tilfælde af uregelmæssigheder eller dårlig funktion, som man ikke selv kan klare, kan brugeren henvende sig til en forhandler i vedlagte forhandlerliste eller direkte til konstruktøren.

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Le istruzioni, i disegni, le tabelle e quant'altro è contenuto nel presente fascicolo sono di natura tecnica riservata e, per questo, ogni informazione non può essere riprodotta né completamente né parzialmente e non può essere comunicata a terzi, senza l'autorizzazione scritta della FAS.

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## INDEX

<b>1</b>	<b>FOREWORD</b> .....	<b>2</b>
1.1	TO IDENTIFY THE MACHINE .....	2
1.2	LOCATION OF THE STICKERS.....	2
1.3	SAFETY.....	4
1.4	EMERGENCY SITUATIONS.....	4
1.5	CONSULTATION GUIDE.....	5
<b>2</b>	<b>USE OF THE VENDING MACHINE FOR THE SALE OF FOOD PRODUCTS</b> .....	<b>6</b>
<b>3</b>	<b>TECHNICAL FEATURES</b> .....	<b>7</b>
<b>4</b>	<b>DOOR LAYOUT</b> .....	<b>8</b>
<b>5</b>	<b>CABINET LAYOUT</b> .....	<b>9</b>
<b>6</b>	<b>TRANSPORT, STORAGE, UNPACKING PROCEDURE</b> .....	<b>10</b>
6.1	TRANSPORT AND STORAGE  .....	10
6.2	STORAGE  .....	10
6.3	UNPACKING PROCEDURE  .....	10
6.4	INSTALLATION  .....	11
6.5	WARNINGS FOR THE INSTALLATION  .....	13
6.6	WARNINGS FOR THE DEMOLITION OF THE MACHINE  .....	13
<b>7</b>	<b>OPERATION ON THE MACHINE</b> .....	<b>14</b>
7.1	DOOR MICROSWITCH  .....	14
7.2	PRODUCT LOADING PROCEDURE FOOD ZONE  .....	14
7.3	SPACER FOR PRODUCTS ON FOOD ZONE (FIG. 4) .....	15
7.4	PRODUCT EXPELLER (FIG. 4).....	15
7.5	VENDING A PRODUCT.....	15
<b>8</b>	<b>PROGRAMMING PROCEDURE</b> .....	<b>16</b>
8.1	EXPLANATION OF THE PROGRAMME COMMANDS .....	16
8.2	CHECK SELECTION .....	16
8.3	LIST OF PROGRAMME COMMANDS .....	17
8.3.1	ACCESS TO THE SUBMENU.....	18
8.3.2	TO SET REFRIGERATION PARAMETERS  .....	20
8.3.3	TO SET MACHINE PARAMETERS.....	22
8.3.4	SETTING THE CLOCK AND DAILY TIMERS .....	30
8.4	USE OF COINMECHANISM BDV.....	32
8.5	USE OF PAYMENT SYSTEMS MDB.....	34
8.6	USING THE EXECUTIVE PRICE HOLDING PAYMENT SYSTEMS .....	36
<b>9</b>	<b>ADJUSTMENTS</b> .....	<b>37</b>
9.1	SPIRALS (FIG. 7).....	37
9.2	PROCEDURE FOR REPLACING SPIRALS AND EXPELLER MOTOR GROUP (FIG. 8) .....	37
9.3	PROCEDURE FOR REMOVING THE TRAYS (FIG. 9 - FIG. 10) .....	38
9.4	TO ALTER THE NUMBER OF TRAYS.....	38
9.5	PROCEDURE FOR CHANGING THE TRAYS FROM A LARGE SPACE TO TWO LITTLE SPACES (FIG. 11) .....	39
9.6	PROCEDURE FOR CHANGING THE TRAYS FROM TWO LITTLE SPACES TO ONE LARGE SPACE (FIG. 11).....	39
9.7	BOTTLE UNLOADING KIT .....	40
9.8	FLUORESCENT LAMP DISASSEMBLY INSTRUCTIONS .....	40
<b>10</b>	<b>CLEANING INSTRUCTIONS</b> .....	<b>41</b>
10.1	IMPORTANT CLEANING POINTS .....	41
10.2	INACTIVITY.....	41
<b>11</b>	<b>LAYOUT OF THE CONNECTORS</b> .....	<b>42</b>

## 1 FOREWORD

**This documentation is an integral part of the machine and must therefore accompany every transfer of property or of the company.**

Before proceeding to the installation and the use of the distributor, it is necessary to carefully read and understand the content of this booklet as it gives important information concerning safety of installation, rules for the use and operations for the maintenance.

This manual serves to provide all the information necessary for ensuring safe working conditions for machine operators and maintenance personnel.

Furthermore, we recommend contacting the Manufacturer for information regarding spare parts and accessories; it is forbidden to perform any operation without being aware of its exact working procedure.

**The manual or a copy thereof must always be kept close to the machine for consultation by the operator;** it should be kept away from heat, damp and corrosive agents (oil, lubricants, corrosive products).

When consulting the manual, ensure that it is not damaged; do not remove the pages, replace or delete the information or modify its contents in any way.

Any revisions and pages illustrating the accessories form an integral part of this manual and should therefore be added to it.

### 1.1 TO IDENTIFY THE MACHINE

The immediately subsequent pages of this booklet show the user how to identify the product VENDING MACHINE; this information is very important in time in order to guarantee the builder the possibility to give the user quickly and safely technical information of whichever type or to facilitate the management of the spare parts.

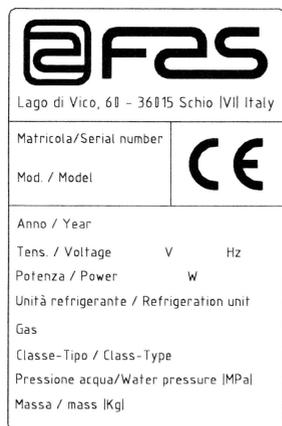


It is therefore **advised** not to damage or remove the means which are necessary for the identification of the product.

The identification means are the plasticized plate on which you can find all data you should mention to the builder in case of need.

This plate is the only one recognized by the builder as a means of identification of the product.

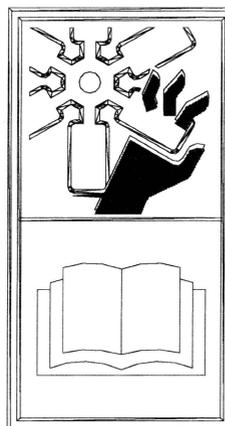
### 1.2 LOCATION OF THE STICKERS



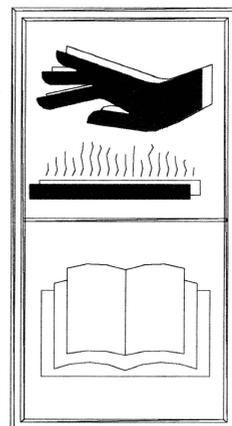
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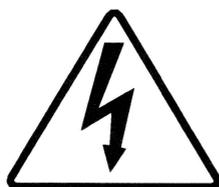
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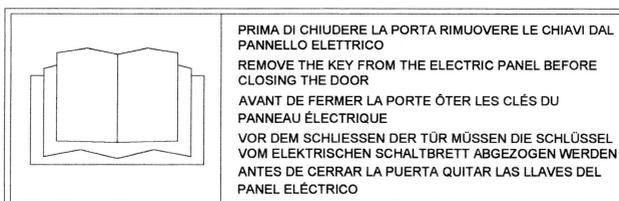
D



E



F



G



### 1.3 SAFETY



**The vending machine construction and analysis relevant to safety issues refer to the requirements in force.**

**The installation and maintenance procedures, including replacing the power supply cable, must be carried out by competent personnel.**

**Any interventions other than routine maintenance procedures must be carried out with the plug of the power supply disconnected.**

It is obligatory to wear suitable clothing as stipulated in this manual and by the ruling in force in the country in which the machine is used; avoid wearing baggy or loose clothing, belts, rings and chains; long hair must be kept under a suitable cap.

It is strictly prohibited to operate the machine with the fixed and/or mobile protections disassembled or with the safety devices switched off.

It is strictly prohibited to remove or tamper with the safety devices.

Do not perform machine maintenance operations or adjustments of any kind without first having read and familiarised yourself with the contents of this manual.

Adjustment carried out with reduced safety protections or with some switched off must be performed by one person only: During the adjustments, access to the machine by non-authorized personnel must be prohibited. If possible keep only one protection open at a time.

After having performed adjustments or maintenance operations with reduced safety protections, the machine must be restored as soon as possible to its original conditions with all the protections active.

Comply rigidly with the periodical maintenance operations described in this manual to ensure safe working conditions and to maintain machine efficiency.

Keep the safety labels in good condition and learn their significance: these are necessary for preventing accidents; if the labels are damaged, lost or belong to replaced parts, they must be replaced with other original labels which can be requested from the Manufacturer. Position new labels in the exact positions indicated in this manual.

**Remember that an alert operator in good mental-physical conditions is the best assurance against accidents.**

### 1.4 EMERGENCY SITUATIONS



**In the event of fire, do not direct jets of water against the machine as this could cause short-circuiting and result in accidents, even fatal, for persons nearby.**

## 1.5 CONSULTATION GUIDE

SYMBOL	MEANING	COMMENT
	DANGER	Indicates a danger, even mortal, for the User.
	WARNING	Indicates a warning or notes on key functions or useful information. Pay careful attention to those parts of the text indicated by this symbol. The maintenance personnel are requested to take a measurement value, check a signal, check the correct position of any machine element, etc. prior to performing a determined command or operation.
	OPERATION / ROUTINE MAINTENANCE	<i>By routine maintenance</i> , it is intended: the reloading operations, setting the control parameters, emptying out the coins, and the cleaning operations in the areas in contact with the food products.
	OPERATION / EXTRAORDINARY MAINTENANCE	<i>By extraordinary maintenance</i> , it is intended: the more complex maintenance operations (mechanical, electrical, etc.) in particular situations, or those agreed with the user which are not considered ordinary maintenance.
	RECYCLING	Obligation to dispose of the materials respecting the environment.

Pay particular attention to those parts of the text which are written in bold type, with larger letters or underlined as these are used to highlight particularly important operations or information.

The enclosed wiring diagrams are intended for use exclusively by specialised technical personnel authorised by the manufacturer to carry out extraordinary maintenance operations and checks.

	<b>It is strictly prohibited to use the wiring diagrams to modify the machine.</b>
---	--

Throughout the manual, when referring to the machine, the terms "at the front" or "front" indicate the door side while the terms "at the back" or "rear" indicate the other side; the terms "right" and "left" refer to the operator facing the front of the machine.

For each operation to be carried out on the machine, a level of expertise (see below) is given to indicate the persons qualified to perform the operation concerned.

<b>Final user</b>	Person without specific expertise able to perform the operations of purchasing and retrieving the product only by using the controls displayed on the machine or by following the instructions given on the display.
<b>Ordinary maintenance operator</b>	Person capable of carrying out the operations in the above point and, in addition, of operating on the machine following the instructions in this manual marked with the symbol  .
<b>Extraordinary maintenance operator</b>	Person capable of carrying out the operations in the above points and, in addition, of operating on the machine following the instructions in this manual marked with the symbols  In each case, the specialised technicians must also be capable of operating with the protections disabled and therefore in reduced safety conditions. Any operations to be carried out with the parts of the machine in movement and/or on live equipment must only be performed in exceptional cases and once the impossibility of operating in suitable safety conditions has been established.

The operations described in this manual relative to each phase of the life cycle of the machine have been carefully analysed by the manufacturer. The number of operators and the level of expertise requested are therefore the most suitable for best performing each specific operation.



Failure to respect the number of personnel or the level of expertise specified can endanger the safety of the persons involved or those found in the vicinity of the machine.

## 2 USE OF THE VENDING MACHINE FOR THE SALE OF FOOD PRODUCTS



### **WARNING:**

**To determine and to set the conservation temperatures of the food products, comply with the instructions provided by the producer and by the relative laws in force.**

**These operations must be assigned to adequately qualified personnel as defined by the responsible of the equipment.**

The vending machine can be used for the sale of food products.



The food products distributed by the vending machine must be carefully wrapped. Comply rigidly with the producer's instructions regarding the expiry date of each product and the conservation temperature.

The vending machine should be considered equipment suitable for maintaining the temperature of the products and **NOT** for cooling them.

For fresh and/or perishable food products and, nevertheless, in all cases provided for by the ruling laws, it is necessary:

- to set the internal temperature of the vending machine in accordance with the laws in force;
- during transportation to the vending machine, to maintain the products at the temperatures provided for by the laws in force.

Some **examples** are:

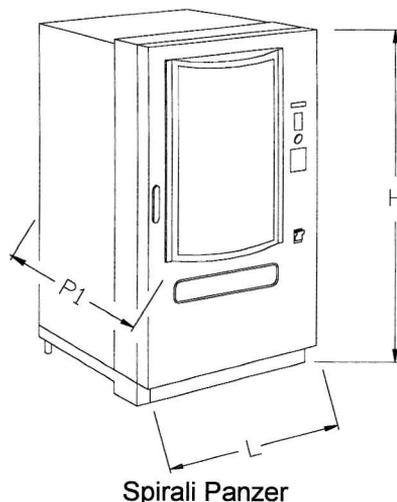
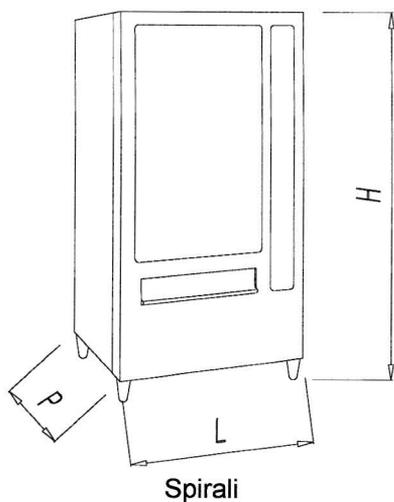
- Chips, pop corn, cracker, etc.;
- Sweets, chocolates, chewing gum, etc.;

It is also possible to sell drinks in containers, such as:

- Bottles;
- Cans;
- Cartons;

for which the conditions given above are also valid.

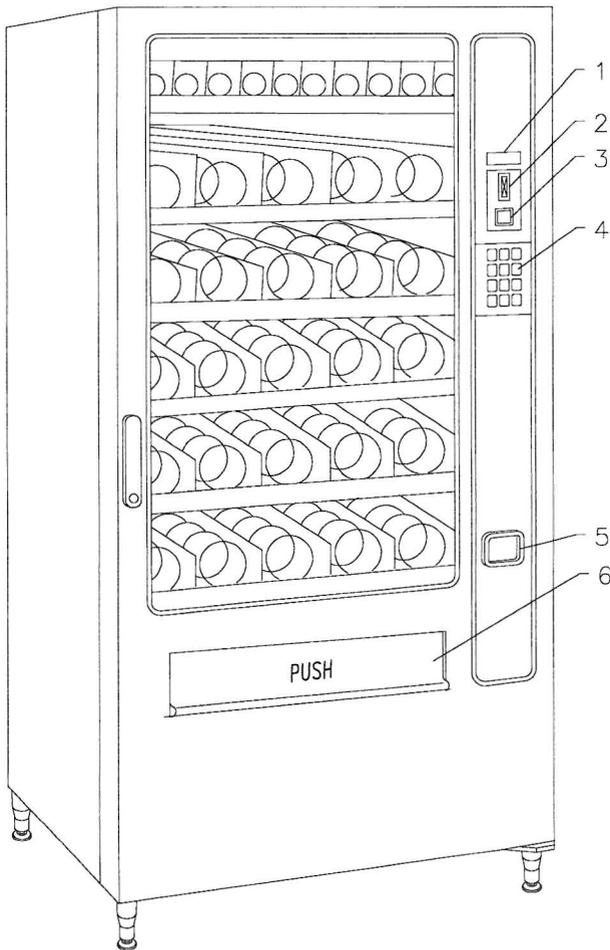
### 3 TECHNICAL FEATURES



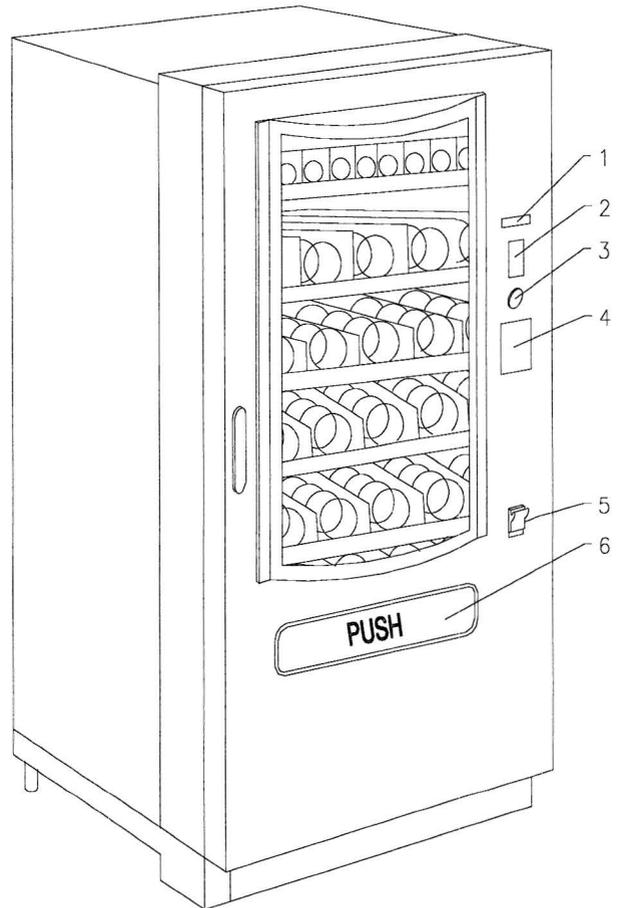
- Height	: H = 1830 mm
- Width	: L = 710 mm ( <b>Spirali S</b> ) : L = 860 mm ( <b>Spirali M</b> ) : L = 1040 mm ( <b>Spirali L</b> ) : L = 780 mm ( <b>Spirali S Panzer</b> ) : L = 930 mm ( <b>Spirali M Panzer</b> ) : L = 1110 mm ( <b>Spirali L Panzer</b> )
- Depth	: P = 760 mm : P1 = 860 mm ( <b>Panzer</b> )
- Weight	: 220 kg (without packing) ( <b>Spirali S</b> ) : 240 kg (without packing) ( <b>Spirali M</b> ) : 250 kg (without packing) ( <b>Spirali L</b> ) : 285 kg (without packing) ( <b>Spirali S Panzer</b> ) : 310 kg (without packing) ( <b>Spirali M Panzer</b> ) : 350 kg (without packing) ( <b>Spirali L Panzer</b> )
- Rated Voltage	: 230 V single phase 50 Hz
- Rated power	: 500 W ( <b>Spirali S / Panzer</b> ) : 510 W ( <b>Spirali M / Panzer</b> ) : 530 W ( <b>Spirali L / Panzer</b> )
- Ambient working conditions (limit)	: max temperature 32°C : min temperature 3°C : relative humidity 70% max
- Refrigeration system	: Compression - class N - Ventilated evaporator - Cyclic defrosting
- Vending system	: FIFO
- Delivery door	: 1
- Max. weight per tray	: 15 kg Evenly distributed : 25 kg Evenly distributed (reinforced guides) <b>M</b> : 35 kg Evenly distributed (special guides) <b>L</b>
- Air noise	: less than 70 dB
- Refrigeration unit rated pressure 32°C	: 15 bar

#### 4 DOOR LAYOUT

- 1) **Display:** the total of inserted coins, the selection reference, the price of the selection and all the messages appear on the display.
- 2) **Coin insert slot:** the coin insert slot below the display is used by the customer to insert the amount required to buy products.
- 3) **Coin return push-button:** it is used to release coins stuck in the coin mechanism and to return them.
- 4) **Selection push-button panel:** the panel, under the light and the return pushbutton, consists of a switch set identified by letters and numbers. To select settle first the letter and than the number, which correspond to the wanted product.
- 5) **Coin return cup:** the coin return cup is in the lower part of the machine and collects the returned coins.
- 6) **Delivery door:** the delivery door is opened by the customer to collect purchases.



Spirali



Spirali Panzer

FIG. 1

## 5 CABINET LAYOUT

- 1) **Evaporator unit:** the evaporator unit placed behind the can/bottle modules consists of an evaporator and the cup mounted under the evaporator to collect moisture.
- 2) **Main card:** the main card in the inside of the coin mechanism manages the different functions of the machine.
- 3) **Refrigeration unit:** the refrigeration unit placed in the lower part of the cabinet maintains the products at the correct temperature. The defrost of the refrigeration unit happens automatically every 6 hours.
- 4) **Electrical control box:** the electrical control box in the cabinet base supplies power to all electrical circuits in the machine and contains the power card, the main switch and the fuses.

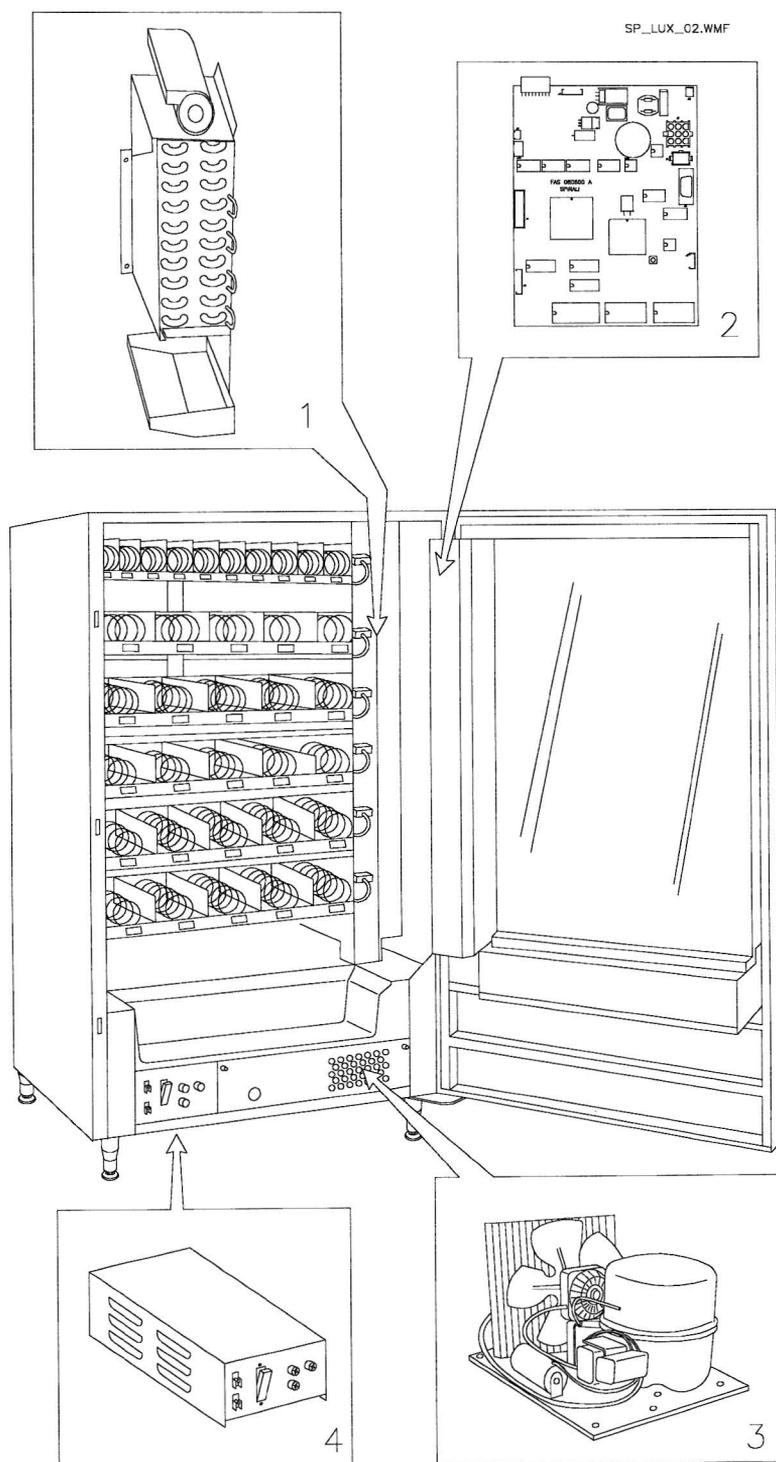


FIG. 2

## 6 TRANSPORT, STORAGE, UNPACKING PROCEDURE



**Examine the machine both inside and outside and notify the carrier immediately of any damage.**

### 6.1 TRANSPORT AND STORAGE

In order not to cause damages to the distributor, the loading and unloading manoeuvring have to be performed with particular care. The loading/unloading manoeuvres must be carried out by lifting the machine with a lifting truck, either motor-driven or manual, and by positioning the forks in the area under the pallet. To move the machine over short distances, for example inside a premises or office, the pallet need not be used. Proceed however with maximum caution to prevent damaging the machine. It is always **prohibited**:

- To lie the machine down;
- To turn the distributor upside down;
- To drag the distributor with ropes or similar;
- To lift the distributor from the side;
- To lift the distributor with whatever sling or rope;
- To shake the distributor and its packaging.



**It is highly recommended not to lie the machine down as the oil contained in the compressor could enter the valves and cause irreparable damage when the compressor is switched on.**  
**In the event that the vending machine is laid flat, place it in an environment with a temperature no less than 18°C and wait at least 2 hours before setting the machine at work.**

### 6.2 STORAGE

As to the storage of the machines, it is appropriate that the environment of conservation is very dry with temperatures between 0° ÷ 40° C. Cover the machine after having positioned it in a protected environment and anchor it to prevent it from moving and to avoid accidental knocks.

It is **important** not to put one packed machine on the other and to maintain the vertical position shown by the arrows on the packaging itself.

### 6.3 UNPACKING PROCEDURE

The packing material must be removed carefully to avoid damaging the machine. Inspect inside and outside the cabinet for any damage. Do not destroy the packing material until the manufacturer's representative has examined it.



**Remember to remove packing materials or equipment inside the vending machine which could affect the correct function of the machine.**

To remove the machine from the pallet, simply loosen the 4 hexagonal-head screws (2 at the back of the distributor and 2 at the front) which secure the machine base to the pallet and which are reached by opening the door and the protection of the electric panel.

**N.B. The keys are fixed with tape inside the coin return cup.**



**The packing materials must be disposed of respecting the environment and the laws in force.**



**When lifting the vending machine, ensure that the supporting feet are removed from the pallet.**

## 6.4 INSTALLATION

Once the vending machine has been unpacked, it can be set at work following the instructions below:



The machine must not be exposed to direct sunlight or inclement weather. The machine must not be installed in areas where jets of water may be used. The machine can be installed in places with ambient temperature ranging from 3°C to 32°C.

- 1) Ensure that the main switch is in the "OFF" (O) position and that the fuses are securely in place.
- 2) The equipment must be supplied with single-phase voltage 230V 50Hz with the general switch off.



IT IS ESSENTIAL THAT THE EQUIPMENT BE CONNECTED TO A POWER SUPPLY MAINS EQUIPPED WITH EARTHING IN ACCORDANCE WITH THE LAWS IN FORCE. THE VENDING MACHINE MAINS MUST BE PROVIDED WITH A DISCONNECTING DEVICE WITH MIN. 3 mm CONTACT OPENING. ENSURE THAT THE PLUG IS ACCESSIBLE ONCE INSTALLATION IS COMPLETE.



**WARNING**      **The following instructions are relative to point 2 and only apply to the United Kingdom**

The wires in the cable are coloured coded as follows:

*GREEN AND YELLOW - EARTH ---- BLUE - NEUTRAL ---- BROWN - LIVE*

*As the colour of the wires in the cable of this equipment may not correspond to the colour marking in the terminals of your socket, proceed as follows:-*

*The GREEN and YELLOW wire must be connected to the socket terminal marked with the letter E or with the GREEN or GREEN and YELLOW earth symbol.*

*The BLUE wire must be connected to the socket terminal marked with the letter N or coloured BLACK or BLUE.*

*The BROWN wire must be connected to the socket terminal marked with the letter L or coloured RED or BROWN.*

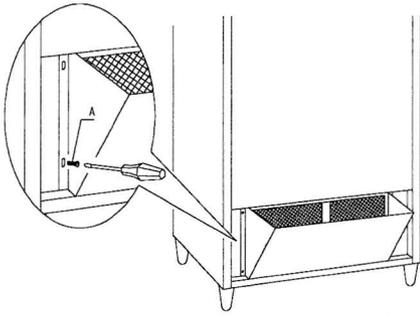
***The manufacturer cannot be held responsible for damages caused by the failure to observe the precautions given above.***

- 3) After having positioned the machine, adjust the four adjustable feet so that the machine is perfectly horizontal; all the feet must be in contact with the floor.
- 4) To ensure adequate air circulation of the refrigeration unit, install the conveyor supplied with the machine following the instructions given on the conveyor itself.  
Check that the grids behind and under the refrigeration unit are kept clean and unobstructed.  
It is not recommended to install the covers of the front legs in environments where the ambient temperature exceeds 30°C.



**Failure to install or incorrect installation of the rear conveyor annuls the guarantee.**

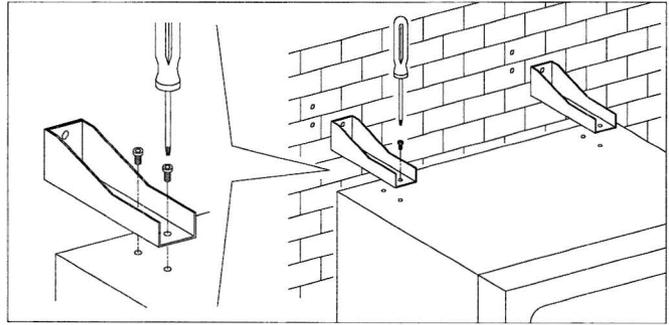
Check that the grills behind and under the fridge radiator are kept clean and unobstructed at all times. If the machine is to be fitted into a wooden cabinet or similar housing, ensure that the grills and the lower sides of the machine are kept clear for ensuring adequate air circulation.



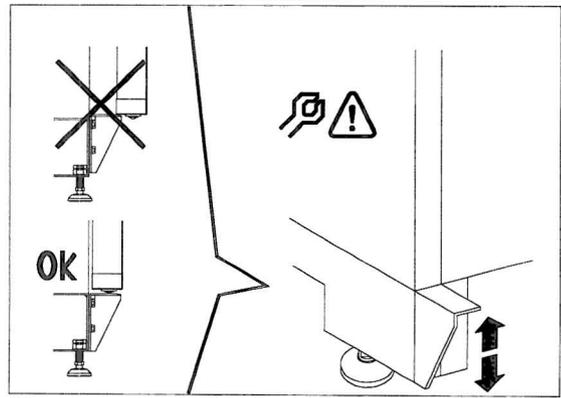
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### WALL FIXING BRACKETS:

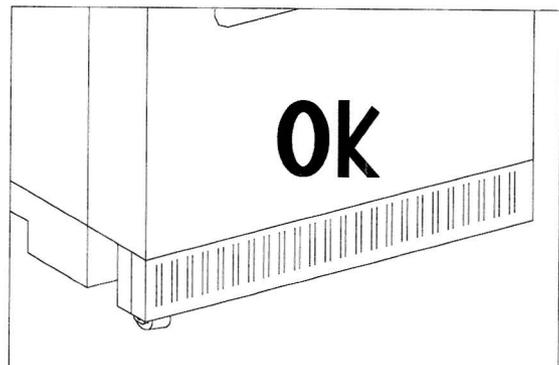
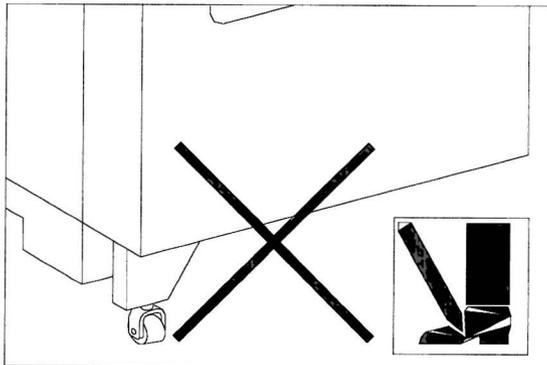
Fix the brackets above the V.M. by means of the screws provided in the kit. Fix them to the wall by making a suitable hole.



**For mod. "Panzer" S/M:**  
Regulate the support so that the door could be closed without any effort.



**For mod. "Panzer" L:** Regulate the support so that the door could be closed without any effort. Mount the leg cover which acts as a safety grill.



5) To switch on the machine, follow the instructions below:

- Open the door and switch the general switch to "I" (on)
- Insert the interlock key into the upper micro-switch (marked POWER) located close to the electrical panel.



**DO NOT insert the interlock key into the lower micro-switch (DOOR) as this will cause the movement of a number of parts and may cause accidents.**

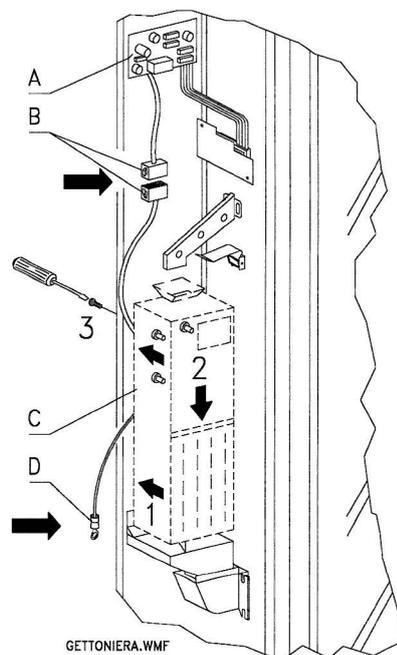
- If the message "MEMORY CLEARED" appears on the display, press the button on the main board inside the box of the coin dispensing mechanism to initialize the memory. The message "DOOR OPEN, MACHINE IN MAINTENANCE MODE" appears on the display. The vending machine will automatically start a self-test. If no errors are identified, the machine is ready to use.
- 6) Programme the machine (see chap. "PROGRAMMING") and set the prices.
- 7) If the machine is supplied with change-giving mechanism, insert the corresponding coins in the change-giving tubes.
- 8) Load the machine with products (see paragraph Loading the products).

## 6.5 WARNINGS FOR THE INSTALLATION

The machine is sold without payment system. Therefore whatever default to the machine or damages to person or things due to an incorrect installation, use or similar caused by the payment system will be only and exclusively charged to those who have carried out the installation of the machine.

**To install the coin mechanism, proceed following the example given in the diagram at the side:**

1. Secure the coin mechanism on the support, positioning it between the pins.
2. Press the coin mechanism downwards to block it correctly.
3. Secure the coin mechanism using the screw at the back of the support.
4. Secure the connectors (B) for connecting the main board to the coin mechanism (C).
5. Connect the earth wire of the coin mechanism to the earth wire of the machine.



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## 6.6 WARNINGS FOR THE DEMOLITION OF THE MACHINE

If the machine is deinstalled in order to be definitively demolished, it is obligatory to follow the rules in force regarding the protection of the environment.

All ferrous, plastic or similar materials should be taken to the authorized depots.

Particular care should be given to:



- Whichever type of **gases** (see identification plate) present in the refrigeration unit should be recovered with suitable equipment by specialized firms.
- **Insulation materials** should be recovered by specialized firms.

Should you have any queries, you are recommended to contact competent local refuse disposal authorities.

## 7 OPERATION ON THE MACHINE

### 7.1 DOOR MICROSWITCH

There are two microswitches A FIG. 3 on the electric panel protected against the fortuitous operations and which can be operated only through the proper equipment key.

The higher microswitch, which is in accordance to the rules, is used to switch off the feeding from all the electric parts of the machine when the door is opened. If necessary the feeding can be restored by inserting the proper key.

The lower microswitch signals to the machine that the door is open. The message "**door open machine under maintenance**" appears on the display. The ventilation and the refrigeration unit will be switched off. In this condition the vend cycle is inhibited and access is only available for programming and machine testing. Normal machine operation may be restored by inserting the proper key.

"REMOVE THE KEY FROM THE ELECTRIC PANEL BEFORE CLOSING THE DOOR".

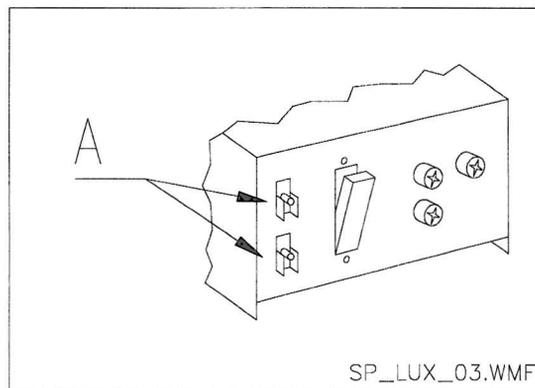


FIG. 3

### 7.2 PRODUCT LOADING PROCEDURE FOOD ZONE

Once the installation procedure and the programming of the machine have been done, proceed as follows:

- 1) Open the machine door.
- 2) Take out one tray each time and pulling outward till you reach the stop. The tray will tilt downward making the loading easier.
- 3) Start the loading from front to rear and make sure that all spaces are loaded. The bottom of the product should be placed on the base of the division right above the spiral, with label turned to the window so that it is recognizable by the customer. All products have to be easily placed in the spirals; do not introduce bigger objects. Spirals can have different pitches and therefore you should choose the spiral suitable for the product you want to vend or vice-versa choose the product according to the spirals you have.
- 4) After having loaded all trays, make sure that they turn to position "STANBY". They must be pushed to the inner side of the cabinet.

Each spiral can be turned each time of 45°. Most of the products can be sold without troubles when the spiral end is positioned at hour 6. For brik products adjust the end 90° in advance.

**NOTE:** Products in bags or boxes must be correctly placed. The sealed edge of the bag can slip under the spiral wire not allowing the fall of the bag. It is recommended to fold the edge forward and upward before inserting the bag in the space of the spiral.

Products like cakes, biscuits, "handle with care" objects, etc., should be placed in the lower trays so that they will not be damaged falling.

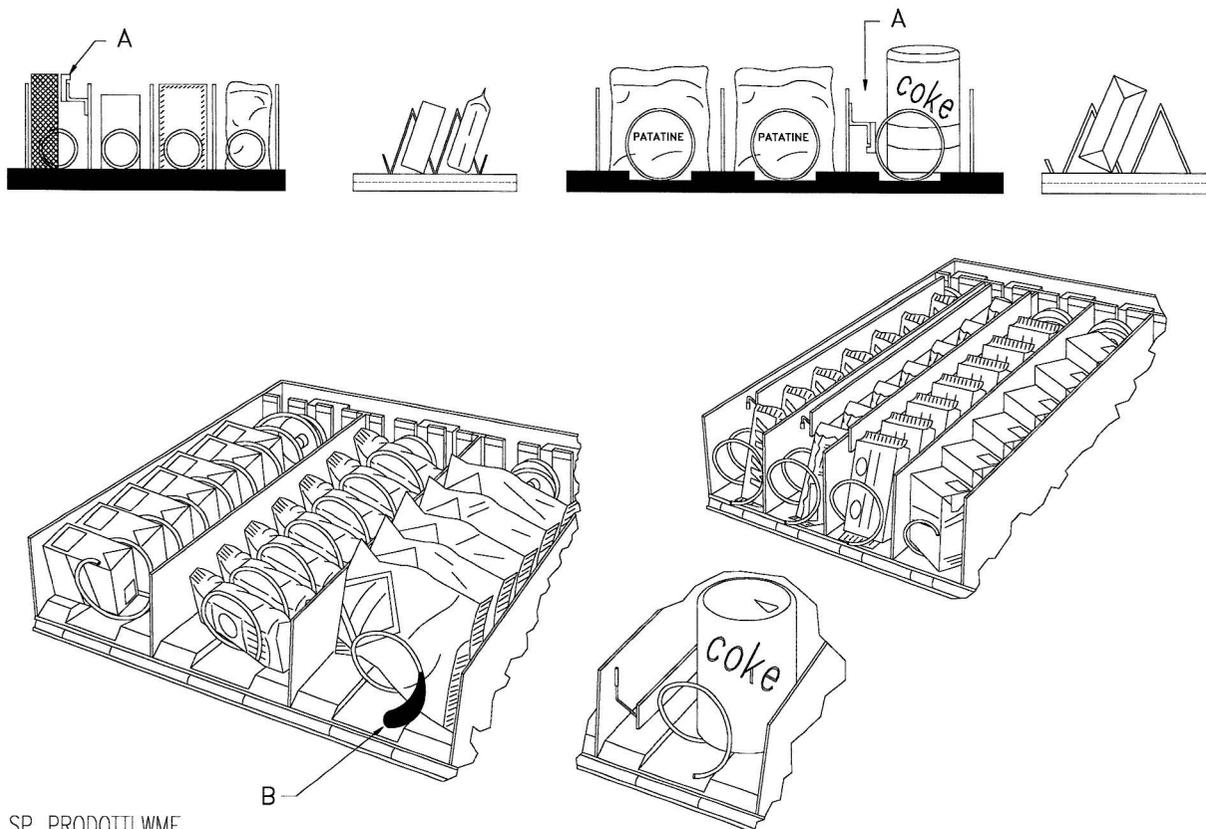


FIG. 4

### 7.3 SPACER FOR PRODUCTS ON FOOD ZONE (FIG. 4)

Spacers -A- should be used when "narrow" products are loaded.

Place them so that they push the product freely against the right side of the division and the product stands straight.

To settle the spacer, pull forwards to narrow the space, pull backwards to widen the space. Leave 3 mm between spacer and product.

### 7.4 PRODUCT EXPELLER (FIG. 4)

The expeller -B- can be used when there are products in sacks like chips or others. The expeller will help them coming out of the spiral. It is hooked up at the end of the spiral and acts as an additional part of the product to vend pushing it out of the tray.

### 7.5 VENDING A PRODUCT

After loading the machine, setting the selling prices for each product, positioning the price labels, checking that the trays have been turned in selling position, the machine is ready to vend.

- 1) Insert enough money to buy the product.
- 2) Dial on the panel the combination corresponding to the chosen product.
- 3) Take the product from the delivery door.

NOTE: if the MASTER/SLAVE is enabled, the selection on the SLAVE machine is preceded by the prefix "A".

## 8 PROGRAMMING PROCEDURE

When the machine is switched on for the first time the message "INIT" and then "memory cleared" will appear on the display. This message indicates that the memory has no stored data or that the data in memory are corrupted. The machine is in the same condition as it is after the "erase memory" command has been executed or the memory has failed.

Press the "test" push button on the board inside the coin mechanism box to reset the automatic vending machine for operation (FIG. 5).

The machine then carries out the temperature feeler test and indicates on the display, for several seconds, if there is a fault with the internal temperature feeler or the evaporator feeler through the message **TEST 10**; the same event is recorded as an error (see error table).

When the microswitch of the door is closed (FIG. 3 ref.A) the machine will start a self-configuration procedure that consist in checking the No. of spirals in every tray. In this phase the message **TEST 12** will appear for some seconds on the display and after this the machine can be put into service.

### 8.1 EXPLANATION OF THE PROGRAMME COMMANDS

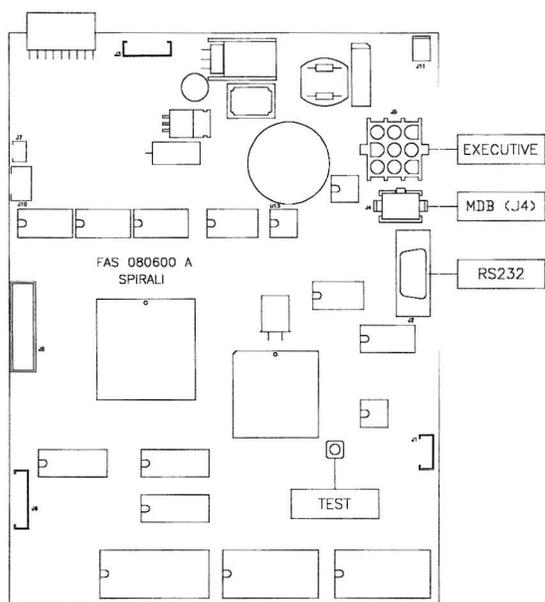


FIG. 5

Once the installation procedure has been carried out, open the door and insert the special key in the micro switch at the top of the electric panel, then hold down push button "TEST" on the main board, located inside the coin mechanism box, FIG. 2 for approximately 3 sec. until the buzzer starts to emit a continuous sound. This indicates that the machine is in programming mode and the message **Command 00** appear on the display. It is possible to read sales data and to set machine operating parameters from this level. To **Enter a Command**, press the corresponding command on the selection panel and press the button **B** to confirm the selection.

When a submenu is accessed an identification message appears on the display. Push-button B is used also to confirm the inserted board-data and to store them. In this case on the display appears for a few seconds the message "OK".

To leave programming mode or to pass from a submenu to the main menu press **A**.

On the "PANZER" type keyboard the "A" button is replaced by the asterisk (\*), whereas the "B" key is replaced by the hash sign (#).

*Caution: if push button "TEST" is released before the required time the vending machine enters the "check selection" mode described below. If so, exit this mode by pressing the push button "TEST" once again, then repeat the operations required to access the programming mode.*

### 8.2 CHECK SELECTION

It is also possible to carry out a function test of the machine by pressing the pushbutton TEST placed on the main card. The message "**SELECTIONS OK**" will appear on the display. As an alternative an indication (ex. 12, 14...) could appear to indicate that an irregularity has taken place during the functioning and the spirals indicated are out of service. Carry out the selection shown on the display to reset. If a working mistake happens during the test, the tag of the spiral or module will stay on the display; otherwise the test will go on to the next out-of-work spiral. If all the selections are all right the corresponding message will appear on the display.

It is possible to test all the selections typing in the corresponding tag. After having finished the test press again the push-button test on the main card to go back to normal working.

**N.B.:** To avoid errors the machine returns automatically to normal work after about 1 minute from the access to test mode, during which no operation is carried out.

If during the test or the reset there should happen some errors, it means that the anomaly is not occasional but could result from the breakage of some parts and a technical intervention is required.

## 8.3 LIST OF PROGRAMME COMMANDS

### ACCESS TO SUBMENUS (8.3.1)

<b>Command 01</b>	Machine test.
<b>Command 02</b>	Calls submenu for setting the clock & daily timers.
<b>Command 03</b>	Calls submenu for setting prices.
<b>Command 04</b>	Calls submenu for setting discounted prices.
<b>Command 05</b>	Call submenu setting references to prices.
<b>Command 06</b>	Setting the product code.
<b>Command 07</b>	Displays sales for selection full price.
<b>Command 08</b>	Displays sales for selection discounted price.
<b>Command 09</b>	Displays totals cashed not clearable.
<b>Command 10</b>	Displays totals clearable.
<b>Command 25</b>	Price set-up setting.

### COMMANDS 30-39:

<b>Mode EXECUTIVE</b>	<i>not used.</i>
<b>Mode BDV</b>	see paragraph <i>BDV</i> .
<b>Mode MDB</b>	see paragraph <i>MDB</i> .

### TO SET REFRIGERATION PARAMETERS (8.3.2)

<b>Command 40</b>	Enabling of refrigeration unit safety control.
<b>Command 41</b>	Sets cabinet temperature.
<b>Command 42</b>	Sets cabinet temperature difference.
<b>Command 43</b>	Sets defrost cycle frequency.
<b>Command 45</b>	Sets alarm off time.
<b>Command 46</b>	Sets safety control temperature.
<b>Command 47</b>	Sets the maximum switching off time.

### TO SET MACHINE PARAMETERS (8.3.3)

<b>Command 50</b>	Selects type of display used.
<b>Command 53</b>	Enabling the photoelectric cells.
<b>Command 54</b>	Collimation of photoelectric cells.
<b>Command 55</b>	Setting the operating parameters of the photoelectric cell barrier.
<b>Command 56</b>	System's operating options.
<b>Command 58</b>	Diagnostic level.
<b>Command 59</b>	Entering the code for sales counter display
<b>Command 60</b>	Erases the memory.
<b>Command 61</b>	Resets the security/access code
<b>Command 62</b>	Enables the discounts.
<b>Command 63</b>	Sets single/multi-vend.
<b>Command 64</b>	Sets display language.
<b>Command 65</b>	Displays the optional messages.
<b>Command 66</b>	Sets display cabinet temperature. 
<b>Command 67</b>	Setting the SLAVE internal temperature display. 
<b>Command 68</b>	Modifies displayed currency.
<b>Command 69</b>	Chooses functioning mode of the coin mechanism.
<b>Command 90</b>	Selects data sent to RS232.
<b>Command 91</b>	Addition of machine code.
<b>Command 92</b>	Reset sales data.
<b>Command 94</b>	Displays the last 10 power-offs. 
<b>Command 95</b>	Inputs user message 1 (max 63 characters).
<b>Command 96</b>	Inputs user message 2 (max 63 characters).
<b>Command 97</b>	Enables user message 1 display.
<b>Command 98</b>	Enables user message 2 display.
<b>Command 99</b>	Displays error events. 

## SUBMENU FOR SETTING THE CLOCK & DAILY EVENT TIMERS (8.3.4)

<b>Alarm set 01</b>	To set the year/month/day  
<b>Alarm set 02</b>	To set the hour/minute  
<b>Alarm set 11</b>	Timed display lighting, first period on hour/min
<b>Alarm set 12</b>	Timed display lighting, first period off hour/min
<b>Alarm set 13</b>	Timed display lighting, second period on hour/min
<b>Alarm set 14</b>	Timed display lighting, second period off hour/min
<b>Alarm set 21</b>	Timed discount feature, first period on hour/min
<b>Alarm set 22</b>	Timed discount feature, first period off hour/min
<b>Alarm set 23</b>	Timed discount feature, second period on hour/min
<b>Alarm set 24</b>	Timed discount feature, second period off hour/min
<b>Alarm set 31</b>	Selection disabled period start.
<b>Alarm set 32</b>	Selection disabled period end.
<b>Alarm set 33</b>	Second selection disabled period start.
<b>Alarm set 34</b>	Second selection disabled period end.
<b>Alarm set 36</b>	Setting of selections subjected to hourly disabled periods.

### 8.3.1 ACCESS TO THE SUBMENUS

#### **Command 01 Machine test (only MASTER machine):**

This is used to perform the test relative to the various selections. By keying in 01 followed by key B, the message "Selection nr. 00" appears. Set the number of the selections present in the machine (number of motors) and press B. The machine will check the selections that are effectively present (Test 12). If the number found does not correspond to the value set, the message " CONFIG ERROR" appears on the display. This indicates that one or more of the selections is not connected electrically. In this case, check the wiring. If however the number of the selections found corresponds to the value set, 3 vending cycles for each selection are performed. If during this phase, an anomaly in the function of a selection is encountered, the test is blocked and the corresponding selection code remains visualised on the display. If the test is performed successfully, the machine returns to the main programming menu (command 00).

#### **Command 02 Calls submenu for setting the clock & daily timers:**

Key in 02 and press the **B** pushbutton to enter the submenu for setting the clock and daily timers. **Alarm 00** will appear on the display. Follow the method described in the specific section to display and alter the parameters.

#### **Command 03 Calls submenu for setting prices:**

Key in 03 and press **B** to enter the submenu for setting the prices per selection. "**Selection number 00**" will appear on the display. Key in the selection you want to display or to modify the price and press the **B** pushbutton. "**Price.....**" will appear on the display. Key in the new value of the price and press again **B** to confirm the change. Press pushbutton **A** to return to the main menu if no alteration is required.

To set price of selection 16 to 40 pence, proceed as follows:

1. Go into programming mode to display ..... Command 00
2. Key in 03 and press B to display ..... Selection number 00
3. Key in 16 and press B to display the present value of the price..... Price NNNN
4. Set value to 40 and press B.

If **Command 25** is set at 1, the price value for each tray is programmed. Price number 1 refers to the first tray from the top. For example, tray 2 at a price of 0.25 pence:

1. Go into programming mode to display ..... Command 00
2. Key in 03 and press B to display ..... Price number 00
3. Key in 02 and press B to display the present value of the price..... Price NNNN
4. Set value to 25 and press B.

*N.B.: with the SPIRALI LUX (SLAVE) connection enabled (see command 69), after setting up the MASTER machine, press push button A, to access the setting of the same parameters for the LUX (SLAVE) machine.*

**Command 04 Calls submenu for setting discounted prices:**

This command has the same functions as command 03, but it shows the discounted prices.

In the MDB mode, these prices refer to key or credit card purchases or purchases made within a certain time band, or both (see description Command 61). Furthermore, if the MDB cashless system allows the product to be selected from two different price tables, this command is used to set the prices relative to table 2. The prices relative to table 1 are set at Command 03.

If **Command 25** is set at 1, program the discounted price value for each tray.

*N.B.: with the SPIRALI LUX (SLAVE) connection enabled (see command 69), after setting up the MASTER machine, press push button A, to access the setting of the same parameters for the LUX (SLAVE) machine.*

**Command 05 Call submenu setting references to prices:**

**This command is only used when the prices are set on the coin mechanism.**

Key in 05 and press B to enter the submenu for setting references to prices. "**Selection number 00**" will appear on the display.

This submenu allows to associate to each selection a number of price. Key in the code which identifies the selection and press B. The **number** of the price associated with the chosen selection will appear on the display. Key in the **number** of the new price you wish to associate with the selection and press B to confirm the change. Press A to return to the submenu and the previous value will be memorized. Repeat this procedure for another selection or press A to return to the main menu.

For example to associate to spiral 53 the price number 10, proceed as follows:

1. Go into programming mode to display ..... Command 00
2. Key in 05 and press B to display ..... Selection No.00
3. Key in 53 and press B to display the present value of the parameter ..... No. price
4. Key in 10 and press RET.

**Command 06 Setting the product code:**

This command associates a product code of 4 figures to each selection. This code will then be sent to the output RS232 together with the statistics of sale.

To associate a code to the products in selection 13, proceed as follows:

1. Go into programming mode to display ..... Command 00
2. Key in 06 and press B to display ..... Selection number 00
3. Key in 13 and press B to display ..... Product code 0000
4. Key in the wished code and press B.

*N.B.: with the SPIRALI LUX (SLAVE) connection enabled (see command 69), after setting up the MASTER machine, press push button A, to access the setting of the same parameters for the LUX (SLAVE) machine.*

**Command 07 Displays sales for selection full price:**

It enters the submenu to display the number of sales per spiral. "**Selection No. 00**" will appear on the display. Key in the code which identifies the selection of which you wish to know the sales-data about. The code is made of a No. with two figures: the first indicates the No. of the tray and the second the No. of the spiral. For instance to identify the fifth spiral of the third tray you have to key in 35. Press push-button B and the wished value will appear on the display. Press A to return to the submenu, from which you can display the No. of sales pertinent to another spiral repeating the above mentioned proceeding. Press for the second time A to return to the main menu.

For example to display the No. of sales completed at spiral 8 of tray 2, proceed as follows:

1. Go into programming mode to display ..... Command 00
2. Key in 07 and press B to display ..... Selection No.00
3. Key in 28 and press B to display the wished value ..... No. sales
4. Press B to display ..... Selection No.00

*N.B.: with the SPIRALI LUX (SLAVE) connection enabled (see command 69), after a display of the MASTER machine data, press push button A to access the display of the same data relevant to the LUX (SLAVE) machine.*

**Command 08 Displays sales for selection discounted price:**

Use this command to enter the submenu to display the number of sales per selection with full price. The display shows 'Selection number 00'. Key in the code identifying the selection of which you want to know the data of sales and press B to display the requested value. Press the pushbutton A to return to the submenu from which it is possible to display the number of sales regarding another selection by repeating the above said procedure. Press pushbutton A a second time to return to the main menu.

*N.B.: with the SPIRALI LUX (SLAVE) connection enabled (see command 69), after a display of the MASTER machine data, press push button A to access the display of the same data relevant to the LUX (SLAVE) machine.*

**Command 09 Displays totals cashed not clearable:**

Use this command to display the totals regarding the transactions carried out from the initialization of the machine. The available data are the following:

Total sold, tot. in counter, tot. in tubes, tot. banknotes, tot. given back, tot. given out manually by the tubes, tot. cashed overprice, tot. discounted sales, tot. sales with system cash less, tot. sold with exact amount, tot. cashed without sales, number of sales carried out, tot. value free vend, free vend number, total value of the free vends, total number of the free vends.

**Command 10 Displays totals clearable:**

This command has the same functions as command 09, but it can be cleared through command 92.

**Command 25 Price set-up setting:**

	To set the following option <b>ONLY</b> , enter the "programming mode" and when the message "command 00" appears on the display press the "test" button again for a further 3 seconds, after which the buzzer will sound again for a few seconds, and access to the second level of the menu is obtained. The message "Command 00" will appear again. To quit the programming mode press the "A" key .
---	--

Type 25 and press **B** to recall the option to set the prices either for the single selection, default value 0 (zero), or for the tray, value 1.

**8.3.2 TO SET REFRIGERATION PARAMETERS** **Command 40 Enabling of refrigeration unit safety control:**

	To set the following option <b>ONLY</b> , enter the "programming mode" and when the message "command 00" appears on the display press the "test" button again for a further 3 seconds, after which the buzzer will sound again for a few seconds, and access to the second level of the menu is obtained. The message "Command 00" will appear again. To quit the programming mode press the "A" key .
---	--

Upon access to the command, the machine asks for an access code: "Insert access code". If you type in 6003 and confirm by pressing the Enter key, the value of the parameter appears, which enables or disables the refrigeration unit safety control of the bottom two trays in the vending machine. The default value 0 = disabled; 1 = enabled.

**Command 41 Sets cabinet temperature:**

This command sets the lower internal cabinet temperature of the machine, i.e. the temperature below which the compressor is turned off. The preset value is +5°C. This value can be varied between +5-25°C.

To set the cabinet temperature of the machine to +10°C, proceed as follows:

1. Go into programming mode to display ..... Command 00
2. Key in 41 and press B to display the present value of the parameter ..... NN
3. Key in 10 and press B.

	If the refrigeration unit safety control (Command 40) is enabled, the minimum settable value is 3°C.
---	--

*N.B.: with SPIRALI LUX (SLAVE) enabled (see command 69), after setting the parameter on the MASTER machine, access is granted to the setting of the same parameter on the LUX (SLAVE) machine. The minimum settable value on the SLAVE machine is 5°C.*

**Command 42 Sets cabinet temperature difference:**

This command controls the upper limit of internal cabinet temperature by setting the temperature rise allowed before the compressor is started. This value can be varied from +1°C and +5°C and is preset at +3°C.

*N.B.: with the SPIRALI LUX (SLAVE) connection enabled (see command 69), after setting up the MASTER machine, press push button A, to access the setting of the same parameters for the LUX (SLAVE) machine.*

**Command 43 Sets defrost cycle frequency:**

This command sets the interval between defrost cycles expressed in hours. This value can be varied from 1h and 8h and is preset at 6h.

*N.B.: with the SPIRALI LUX (SLAVE) connection enabled (see command 69), after setting up the MASTER machine, press push button A, to access the setting of the same parameters for the LUX (SLAVE) machine.*

**Command 45 Sets alarm off time:**

The command is only accessible if the refrigeration unit safety control (Command 40) is enabled.

This command sets the fridge safety feature activation delay time. This delay prevents machine function from being blocked following an operation involving opening of the door and consequently an increase in the internal temperature. Delay in the intervention of the safety feature allows the machine to achieve the correct working temperature. The value of this command is preset at 60 minutes and can be varied between 30 - 60 minutes.

**Command 46 Sets safety control temperature:**

The command is only accessible if the refrigeration unit safety control (Command 40) is enabled.

This command sets the safety device tripping temperature, that is, the temperature above which the selection of products (in the bottom two trays) is blocked. An appropriate warning message appears on the display when an attempt is made to select one of these items. This control is disabled against starting and once the door is closed for the amount of time set in command 45. The preset value is +38°C and can vary between +8°C and +38°C. When the safety device is tripped, the selections remain out of service until the next time the door is opened.

**HEALTH CONTROL:** *The machine is allowed between 30 and 60 minutes to pull down to its correct working temperature after the main cabinet door has been opened, the sale will be inhibited if the temperature, which has been pre-set at command 46 (generally 8°) has been exceeded or if there has been a power cut. The display shows the message of the type: "Health control" ("Fridge safety has intervened") or "selection of lower trays not available". To restore the fridge safety: open the machine, insert the feeding key for some seconds (micro 230V) leaving the door micro switch open, remove the key and close the door.*

*The products must be introduced at the correct temperature for preservation as specified by the regulations in force. The non-observance of this regulation could activate the "refrigeration unit safety device".*

**Command 47 Sets the maximum switching off time:**

The command is only accessible if the refrigeration unit safety control (Command 40) is enabled.

This is the maximum time, expressed in minutes, in which the machine can remain switched off without the fridge safety feature intervening when the machine is switched back on. This can be used to prevent the sale of products which have altered as a result of a prolonged line voltage cut-out. The parameter can vary from 30 to 999 min. and is preset at 999.

*The control is active if the value of the parameter is between 30 and 998. If the value is set at 999, the control is excluded.*

### 8.3.3 TO SET MACHINE PARAMETERS

#### Command 50 Selects type of display used:

This command sets the type of display used on the machine. Set the command at zero if an LCD display (16x1) is used and at 1 when a VFD display (20x2) is installed with running messages on the first line. To ensure the correct display, it is imperative that the setting of this command corresponds to the type of display installed.

#### Command 53 Enabling the photoelectric cells:

This command should be set at 1 only if the photoelectric cell system is installed. Its function is to enable=1/disable=0 this device. *Note: This setting is valid for both machines (MASTER and SLAVE).* Set the command at 1 (photocells enabled), to automatically access the menu which allows this function to be disabled if necessary for the desired selections (delivery without photocell control). To disable the option corresponding to one or more selections, simply key in the selection number and then set the value at zero.

*N.B.: with the SPIRALI LUX (SLAVE) connection enabled (see command 69), after setting up the MASTER machine, press push button A, to access the setting of the same parameters for the LUX (SLAVE) machine.*

#### Command 54 Collimation of photoelectric cells:

This command is used for verifying that the photoelectric cells are functioning correctly. The 6 values shown on the display refer to the intensity of the signal received by the photodiodes which constitute the reception part of the photoelectric cell system. The values must be between 50 and 230  $\pm$  5%.

Values below the minimum value indicate that there is a problem with the alignment between the transmitters and the receivers, or that one or more transmitters/receivers are not functioning correctly.

Values above the maximum value indicate the need to install the attenuating filter (included in the filter). This filter is essential in the M and S models. Once the correctness of the values has been verified simply press any button for several seconds to return to the main programming menu.

*N.B.: with the SPIRALI LUX (SLAVE) connection enabled (see command 69), after a display of the MASTER machine data, press push button A to access the display of the same data relevant to the LUX (SLAVE) machine.*

#### Command 55 Setting the operating parameters of the photoelectric cell barrier:

This command permits viewing and if necessary changing the 2 operating parameters of the photoelectric cell barrier. To switch from one parameter to another simply press key B. One by one the following 2 values will appear:

Message	Default value	Meaning
"Hyster.HL"	60	This parameter acts on the reading sensitivity of the system. Values less than 80 make the reading of the system more sensitive. Contact the manufacturer's technical assistance service before changing these values.
"Timeout.HL"	80 (= 8 seconds)	This value is the maximum time for removing the product and it starts when vending begins.

Note: This setting is valid for both machines (MASTER and SLAVE).

#### Command 56 System's operating options ("FTC Options "):

Setting this command determines how the machine will react if the product is not delivered. The value can be set at between 0 and 3. Default = 0.

The meaning of the setting is as follows:

**0** = Possibility of another selection; in this case command 63 (single-multisale) must be set at 1 (if it is an executive payment system the multisale must also be set in the payment system).\*\*\*

**1** = Automatic credit delivery; in this case command 63 must be set at 0 (if it is an executive payment system the single sale must also be set in the payment system).\*\*\*

**2** = Further quarter turn: if the product is not delivered the spiral completes a further 1/4 turn and if the product has still not been delivered then the machine reverts to one of the preceding two options depending on the single or multisale parameter that has been set.

*This option is not applicable to the ½ turn spirals which must consequently be disabled. In order to do this, set the value 2 on command 56 to automatically enter the menu which permits the option for the individual spirals to be disabled/enabled. To disable the option relevant to a spiral simply key in the number of the selection and set the value at 0. Inversely by setting a value of 1 the option is enabled. If the payment system uses the Executive protocol, the single-multisale must also be set on the payment system.\*\*\**

**3** = Delivering the same product following another selection: in this case use command 06 to assign the same code number and price to the selections that contain the same product. Therefore if after a selection the product is not delivered, the machine considers that the selection is empty and automatically searches for a selection that has the same product code number and the same price and then delivers the product from this selection. When all the selections with the same product code number are empty then the machine returns to one of the two preceding options depending on the setting of the single or multisale parameter.

To "reset" the selections when they are being reloaded simply open the main door of the machine and insert the feed key so that "porta aperta / door open" is displayed.

*There can not be selections with the same code number but a different price. When the machine is turned on it carries out a control and signals any programming errors by displaying TEST 18 and the selection identifiers. If it is an executive payment system and there are more than 7 selections with the same code number which are "reset" but not loaded (they remain physically empty), after the door is shut carry out a sale cycle for any one of these empty selections.\*\*\**

\*\*\*At this point the machine offers the choice of whether or not to enable the empty option (1 enabled, 0 disabled). This option operates in the 0, 1 and 2 modes previously set; if enabled, when a product is not delivered ("not read by the photocell") the selection is considered empty and therefore no longer accessible. To "reset" the empty selections simply open the main door of the machine and insert the feed key so that "door open" appears on the display.

*N.B.: with the SPIRALI LUX (SLAVE) connection enabled (see command 69), after setting up the MASTER machine, press push button A, to access the setting of the same parameters for the LUX (SLAVE) machine. For the option which determines the machine's reaction if the product is not dispensed, only the values 0, 1 and 2 are available on the SLAVE machine.*

Once the operating function has been selected the machine suggests the activation or non-activation of a sound signal while waiting for the product to drop. Use any of the buttons on the keyboard except "B" to select either the activation "BEEP-ON" or the deactivation "BEEP-OFF" of the sound signal, and once the desired option is displayed, press "B" to memorise the option .

### Command 58 Diagnostic level:



To set the following option **ONLY**, enter the "programming mode" and when the message "command 00" appears on the display press the "test" button again for a further 3 seconds, after which the buzzer will sound again for a few seconds, and access to the second level of the menu is obtained. The message "Command 00" will appear again. To quit the programming mode press the "A" key .

The command can be set at 0 or 1. If the command is set at 1, in the event the selected spiral does not complete the whole rotation, that selection goes out of order. Whereas if the command is set at 0 - the default value - it does not go out of order.

Note: This setting is valid for both machines (MASTER and SLAVE).

**Command 59 Entering the code for sales counter display:**

This command is used for storing a 6-character code composed from any combination of the "A" and "B" keys. When the machine is in stand-by and this code is keyed in the value of the sales number counter which cannot be reset (see Command 09) is displayed for approximately 6 seconds on the screen.

Example:

1. Programming mode, display shows ..... Command 00
2. Key in 59 + key "B", display shows ..... Code 000000
3. Key in "B", display shows ..... Code \_00000
4. Key in the desired combination of the characters "A" and "B" ..... Code ABBAB\_
5. When the sixth character is entered the code is stored and the display shows ..... ----- OK -----

**N.B.** If key "A" is selected in point 3, the main menu of the programme is called up and the code remains unaltered. If a 0 is selected in point 4, the code is completely zeroed and the relevant function impossible to activate.

Note: This setting is valid for both machines (MASTER and SLAVE).

**Command 60 Memory erasure:**

**Activation of this command cancels all the data programmed by the user and the new default parameters determined by the manufacturer are automatically set..**

This command will display the message "**Code 0000**". All data stored in the memory of the machine will be erased by typing in code **6203** and pressing the **B** button. This function must be used very carefully to avoid the accidental loss of all data. Electronically the machine is as new. The message "**memory cleared**" appears on the display. The procedure for erasing the memory is as follows:

1. Go into programming mode to display ..... \_Command 00\_
  2. Key in 60 and press the B button to display ..... \_Code 0000\_
  3. Key in 6203 and press the B button to display ..... \_memory cleared
- To exit the command press the "test" push button once.

**Command 61 Resets the security/access code:**

Allows the access code used in the EVA\_DTS protocol to be reset.

**Command 62 Enables the discounts:**

A number of discounts are possible by keying in the following values at this command:

0 = no discount

1 = discount per time band.

2 = discount for key/credit card purchases (only possible in the MDB mode).

3 = discount per time band and for key/credit card purchases (only in MDB mode).

**N.B.** In order for the discount to be applied, the values of the time bands required must be set on the daily timer 2

If the cashless system allows different price tables to be applied, the choice of the table to be used at the moment of the sale is made automatically by means of the communication protocol between the machine and reader (only possible for MDB cashless systems that feature this option).

**Command 63 Setting for single or multivend:**

This command determines the vend mode of the machine. With the value set at **0** the machine is working in single-vend mode, and when the machine is fitted with a suitable coin mechanism the overpaid credit will be returned automatically as change. Using a simple validator any excess credit is cancelled at the end of each vend and the amount added to the total value of overpaid cash. If the value is **1**, the machine is working in multi-vend mode. After a sale any excess credit will be displayed and can be retrieved by pressing the coin return push button or used for subsequent purchases. When an **executive coin mechanism** is fitted, this function is programmed through the coin mechanism.

**Command 64 Sets the message display language:**

This command controls the language in which the messages are displayed. Value **0** corresponds to Italian, value **1** to English, value **2** to French, value **3** to German, value **4** to Dutch, value **5** to Swedish, value **6** to Finnish and value **7** to Spanish **8** to Portuguese **9** to Danish **10** to Norwegian. To display the messages in English, proceed as follows:

1. Go into programming mode to display ..... \_Command 00\_
2. Key in 64 and press the B button to display the present value of the parameter ..... \_N\_
3. Set Value 1 and press the B button.

**Command 65 Displays the optional messages:**

This command is used to modify the messages displayed by the machine in stand-by (machine ready for vending). By setting the command at 1, the machine displays the message "insert card", which can be used when the payment system is the credit card type.

**Command 66 Display cabinet temperature:**  

This command enables or inhibits the display of the cabinet temperature. If the value set is 1 when the machine is at standby the cabinet temperature will be displayed. If the value set is 0 it is inhibited.

**Command 67 Setting the SLAVE internal temperature display:**  

This function gives a temporary view of the temperature inside the SLAVE machine .

**Command 68 Modifies displayed currency:**

This command is only available if an VFD display (20x2) with running messages is installed (Command 50 set at 1)

This command allows the currency displayed when a product is selected to be chosen. The currencies available are shown in the following table together with the code to be programmed:

p.	code 01 (Pence)	\$	code 14 (Australian dollars)
K*	code 04 (Czeches kronas)	ps.	code 15 (Argentinian Pesos)
kr.	code 05 (Krona) (* Slovenians thalers)	/	code 16 (No currency displayed)
Kr	code 09 (Danish krone)	Euro	code 17 (Euro)
Chf	code 10 (Swiss francs)	R\$	code 18 (Brazilian Real)
Rand	code 13 (South African rand)	Kr	code 19 (Norwegian krone)

(\* EPROM with second set of languages)

**Command 69 Chooses functioning mode of the coin mechanism:**

This command chooses the type and the mode of functioning of the coin mechanism. The parameter can have the following values:

- 0 System EXECUTIVE with prices controlled in the machine
- 1 System EXECUTIVE in mode PRICE HOLDING (i.e. prices programmed in the coin mechanism). In this case the prices programmed at command 03 and those programmed in the coin mechanism have to be the same.
- 3 System EXECUTIVE with prices controlled in the machine and data control of AUDIT coming from the coin mechanism (to enable the data sending of AUDIT see handbook of the coin mechanism).
- 4 System BDV 001 (see paragraph using the coin mechanism BDV)
- 5 Payment system MDB (see paragraph using payment system MDB).



Every time this value is altered, the vending machine must be turned off for a few seconds. By switching it on again the machine and the coin mechanism will communicate correctly.

**Command 90 Selects data sent to RS232:**

The control card has a jack RS232.

The connector I/O is a 9 poles with male container (see figure) in which the following pins are used:

- Pin 2 Tx

- Pin 7 DTR

- Pin 5 Ground

The transmission happens according to the following specifications:

- **9600 baud**

- **8 bit of data**

- **no parity**

The transfer of the data is ruled by a control signal DTR (active high) given by the device to fetch data.

The data fetch from the machine happens as follows:

**a)** Connection of the device to fetch data to the jack RS232.

**b)** Press pushbutton data sending.

**c)** After the transmission of data the request to disconnect the device is displayed.

Through command 90 it is possible to choose the quantity of data sent to the jack RS232. There are three levels:

- level 1 totals regarding the transactions
- level 2 totals regarding the transactions of level 1, plus sales per each selection
- level 3 totals regarding the transactions of level 1, data regarding the last 5 power off and on of the machine; data regarding the error events that have happened.

If the command is set at **4**, the machine dialogue with the outside world is achieved by means of an 082928 infrared interface, based on the specifications of the EVA-DTS protocol.

If the command is set at **5** the machine dialogues with the external world through an infrared 082925 interface (IRDA interface), according to the specifications of the protocol EVA-DTS vers.5.0.

Then, if the preceding option has been set at **4** or **5**, the machine proposes selecting the input / output direction: towards the infrared interface (082928 or 082925 OPTICAL LINK) or towards RS232 (connector situated on the card). In the latter case the connector pins used are 2= VMC Tx, 3=VMC Rx, 5= GROUND in which case the transmission speed is fixed at 9600 baud. To select press any key on the keyboard to scroll the various direction options and confirm the desired value by pressing "B"

If the initial option is set at **5** the machine requests that the peripheral address be inserted: key in the desired value and press "B".

If the initial option is set at **5** the machine proposes selecting the transmission speed which must be consistent with the setting of card no. 082925 (see relevant instructions). The setting range is between 2400 baud and 19200 baud. To select press any key on the keyboard to scroll the various speed options and confirm the desired value by pressing "B".

If the command is set at **6** the machine dialogues with the user by means of DEX-UCS protocol.

Printing example:

### Model SPIRALI

Machine code 0  
 Software ver. V.1.0  
 Data 02-20 ore 13:47

### Full price vends

		Sel.	N. Vend	Price	Code
		11	0	50	0000
		12	0	100	0000
		13	0	150	0000
		14	0	200	0000
<b>Total values</b>		15	0	250	0000
Pay Vend	500	16	0	300	0000
To cashbox	450	17	0	350	0000
To tubes	3100	18	0	400	0000
Banknotes	2000	19	0	450	0000
Change	0	20	0	500	0000
Inventory	3800				
Overpay	0	21	0	550	0000
Discount	0	22	0	600	0000
Cashless	0	23	0	650	0000
Ex. change	0	24	0	700	0000
Without vend	0	25	0	750	0000
No. Of Vends	5	26	0	800	0000
		27	0	850	0000
<b>Interim values</b>		28	0	900	0000
Pay Vend	400	29	0	950	0000
To cashbox	450	30	0	1000	0000
To tubes	2300				
Banknotes	2000	31	0	1050	0000
Change	0	32	0	1100	0000
Inventory	3800	33	0	1150	0000
Overpay	0	34	0	1200	0000
Discount	0	35	0	1250	0000
Cashless	0	36	0	1300	0000
Ex. change	0	37	0	1350	0000
Without vend	0	38	0	1400	0000
No. Of Vends	4	39	0	1450	0000
		40	0	1500	0000

### Discount price vends

Sel.	N. Vend	Price	Code
11	0	50	0000
12	0	100	0000
13	0	150	0000
14	0	200	0000
15	0	250	0000
16	0	300	0000
17	0	350	0000
18	0	400	0000
19	0	450	0000
20	0	500	0000
21	0	550	0000
22	0	600	0000
23	0	650	0000
24	0	700	0000
25	0	750	0000
26	0	800	0000
27	0	850	0000
28	0	900	0000
29	0	950	0000
30	0	1000	0000

31	0	1050	0000
32	0	1100	0000
33	0	1150	0000
34	0	1200	0000
35	0	1250	0000
36	0	1300	0000
37	0	1350	0000
38	0	1400	0000
39	0	1450	0000
40	0	1500	0000

### Power off events

POWER-OFF	02-20	10:50
POWER-ON	02-20	10:50
POWER-OFF	02-20	11:04
POWER-ON	02-20	11:04

### Error events

### Command 91 Addition of machine code:

The command allows to insert the machine code. This 8-figure code is sent together with the other data to the data fetch device and it is used to identify the machine.

### Command 92 Reset sales data:

It allows to reset the sales data of the machine. This operation is subordinated to the insertion of a particular access code. The procedure is as follows:

1. Go into programming mode to display ..... Command 00
2. Key in 92 and press B to display ..... Code 0000
3. Key in 1221 and press B to display ..... DATA RESET?
4. Pressing B all sales data are reset whereas pressing A you return to the main menu letting the data unchanged.

**Command 94 Displays the last 10 power-offs:** 

This command displays the last 10 periods in which the machine has been put off.

The following values are displayed:

POWER OFF	DATE	TIME
POWER ON	DATE	TIME

To pass to another display press pushbutton B.

**N.B.:** The clock has to be programmed to obtain reliable values.



**ATTENTION!** : Commands 95-96-97-98 are only available if the VFD type display (20x2) with running messages is installed.

**Command 95 Inputs user message 1 (max 63 characters):**

The command allows the first of the two messages that can be modified by the user to be input. This message is displayed in STAND-BY when the payment system can give change.

Key in 95 and press **OK**. On the first line of the display the message currently available appears while the second line shows the writing "**Character 00**". Key in the codes of the characters you wish to insert (see following table) and confirm from time to time with the **OK** pushbutton to compose the message required. At the end, press pushbutton **A** to return to the main menu.

CODE	CHARACTER	CODE	CHARACTER	CODE	CHARACTER
00	cursor ahead	28	G	56	i
01	cursor back	29	H	57	j
02	space	30	I	58	k
03	!	31	J	59	l
04	"	32	K	60	m
05	'	33	L	61	n
06	,	34	M	62	o
07	-	35	N	63	p
08	.	36	O	64	q
09	/	37	P	65	r
10	0	38	Q	66	s
11	1	39	R	67	t
12	2	40	S	68	u
13	3	41	T	69	v
14	4	42	U	70	w
15	5	43	V	71	x
16	6	44	W	72	y
17	7	45	X	73	z
18	8	46	Y	74	á
19	9	47	Z	75	â
20	:	48	a	76	û
21	;	49	b	77	£
22	A	50	c	78	ä
23	B	51	d	79	ñ
24	C	52	e	80	ö
25	D	53	f		
26	E	54	g		
27	F	55	h		

The character with code 00 moves the cursor by one position.



**ATTENTION!** : if the cursor is positioned beyond the first character of the message and you press **A** to return to the main menu, the message will be cut in the position corresponding to the cursor; therefore move the cursor to the end of the message before exiting.

**N.B.** It is advised to write the message on a piece of paper using the codes of the table (spaces included) and then to programme it into the machine.

**Command 96 Inputs user message 2 (max 63 characters):**

The command allows the second message that can be modified by the owner to be input. This message is displayed in STANDBY when the payment system cannot give change.

The instructions for inputting the message are the same as those given for the previous command.

**Command 97 Enables user message 1 display:**

By setting this command at 1 when the machine is in STAND-BY and the payment system is able to give change, message 1 programmed by the owner with command 95 is displayed.

If the command is set at 0, the standard message is displayed.

**Command 98 Enables user message 2 display:**

By setting this command at 1 when the machine is in STAND-BY and the payment system is unable to give change, message 2 programmed by the owner with command 95 is displayed.

If the command is set at 0, the standard message is displayed.

**Command 99 Displays error events:**  

It displays the last 20 error events; press pushbutton B to pass from one display to another.

ERROR CODE	SUB-CODE	MEANING
01	Number selection code	Motor blocked (the spiral does not rotate)
02	Number selection code	The spiral does not complete the rotation
05	Number selection code	Motor disconnected
10	/	Internal temperature feeler faulty
10	1	Internal temperature feeler faulty (SLAVE)
16	1÷6	Communication error between photoelectric cell board and main board
16	8÷9	Communication error between photoelectric cell board and main board (SLAVE)
18	Number selection code	Machine turns off during delivery and delivery is completed when mains power is turned on
31÷36	/	Receiver 1÷6 signal out of range
31÷36	8	Receiver 1÷6 signal out of range (SLAVE)
37	/	Interruption of barrier for period greater than "Time-out LH" (see command 55)
38	/	Exceeded signal's max level while delivering
51	1	MASTER/SLAVE connection interrupted
52	1	Time out NO RESPONSE (SLAVE)
71	Number selection code	Motor blocked (the spiral does not rotate) SLAVE
72	Number selection code	The spiral does not complete the rotation SLAVE
75	Number selection code	Motor disconnected SLAVE



In particular conditions (of temperature and humidity), the photoelectric cells could mist over when the door is opened. In this case, after the door is closed the machine will signal an error (Error 31) and for a few minutes operation of the photoelectric cells will be disabled.

### 8.3.4 SETTING THE CLOCK AND DAILY TIMERS

#### Alarm set 01 Sets the year/month/day:

This command is used to set the year, month and day on the clock in the control board. The introduction format is YYMMDD.

#### Alarm set 02 Sets the hour and minute:

This command is for setting the hour and minute in the realtime clock built into the electronic control board.

Key in the exact time in hours and minutes and press the **B** pushbutton to confirm the setting.

The following procedure will set the clock at 10.30:

1. Go into programming mode to display ..... \_Command 00\_
2. Key in 02 and press the B button to display ..... \_Alarm 00\_
3. Key in 2 and press the B button to display the hours and minutes previously set..... \_NNNN\_
4. Key in 1030 and press the B button.

**N.B.** It is necessary to set the clock precisely before using the features for controlling the sale of products by expiry dates and the time controls for switching lamps, discount periods, etc.

#### Alarms set 11–14 Switches on-off the fluorescent light:

With these commands it is possible to programme the fluorescent lamps to switch on and off for two periods each day. Even during those periods in which the fluorescent lamps are switched off, pressing a pushbutton on the keyboard or introducing money will switch on the light for 3 minutes, allowing enough time for a sale cycle to be completed. To exclude this timed control, simply programme the value 24 at command 11.

Fluorescent light switch-on cycle:

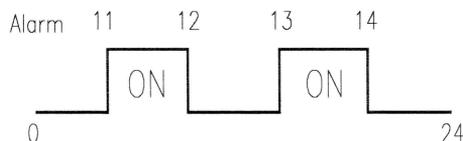


FIG. 6

If, for example, you wish to activate switching-on of the fluorescent light from 11.00 to 12.00 and from 13.00 to 14.00, proceed as follows:

1. Go into programming mode to display ..... Command 00
2. Key in 02 and press B to display ..... Alarm set 00
3. Key in 11 and press B to display the first fluorescent light switch-on time..... NNNN
4. Set the value 1100 and press B.
5. Key in 12 and press B to display the first fluorescent light switch-off time ..... NNNN
6. Set the value 1200 and press B.
7. Key in 13 and press B to display the second fluorescent light switch-on time..... NNNN
8. Set the value 1300 and press B
9. Key in 14 and press B to display the second fluorescent light switch-off time ..... NNNN
10. Set the value 1400 and press B.

**N.B.:** The periods must be programmed in the following order: 11-12-13-14.

#### Alarms set 21–24 Sets the timed discount periods:

Same as previous commands except that these commands serve to set the daily discounted sales periods. During those periods in which the discount is activated, the machine uses the prices set in the discount price submenu. Command 62 of the main menu must of course be set at 1.

For example, to set a discount period lasting from 10.30 to 13.30, proceed as follows:

1. Go into programming mode to display ..... \_Command 00\_
2. Key in 21 and press button B to display ..... \_Alarm set 00\_
3. Key in 21 and press button B to display the time when discounted prices are first activated..... \_NNNN\_
4. Set value to 1030 and press button B.
5. Key in 22 and press button B to display the time when discounted prices are first deactivated..... \_NNNN\_
6. Set value to 1330 and press button B,

**N.B.:** The periods must be programmed in the following order: 21-22-23-24.

**Alarms set 31-34 Selections disabled for daily time periods:**

These commands allow the selections set at command "Alarm 36" to be disabled for two time periods per day. To set only one disabled time per day, programme as follows:

**Alarm set 31** = selection disabled period start

**Alarm set 32** = selection disabled period end

**Alarm set 33** = second selection disabled period start

**Alarm set 34** = second selection disabled period end

If use of this function is not required, programme 2400 at **Alarm 31**.

**Alarms set 36 Setting of selections subjected to hourly disabled periods:**

This command allows the choice of selections to be disabled during the time periods in which the "disabled selections" function is activated (see programming of **Alarms 31-34**).

Example:

To activate the hourly disabled time period for selection 15 proceed as follows:

1. Programming mode, the screen displays..... Command 00
2. Key in 02 and press B, the screen displays ..... Alarms 00
3. Key in 36 and press B, the screen displays ..... Selection no.00
4. Key in 15 and press B, the screen displays ..... En./Dis. 1/0 N
5. Set value 1 and press B.

*N.B.: with the SPIRALI LUX (SLAVE) connection enabled (see command 69), after setting up the MASTER machine, press push button A, to access the setting of the same parameters for the LUX (SLAVE) machine.*

## 8.4 USE OF COINMECHANISM BDV



***The coin mechanism must only be connected/disconnected with the machine switched off.***

**Installation:** To connect the coin mechanism ask the manufacturer for the suitable connection cable (code 300238). After having carried out the connection, switch on the machine, enter the programming and set **command 69 to 4**, then switch off the machine for some seconds. By switching it on again the machine and the coin mechanism will communicate correctly.

<b>Command 30</b>	Purchase obligation before return	(def. 0)
<b>Command 31</b>	Maximum credit	(def. 0)
<b>Command 32</b>	Maximum value of returned coins	(def. 0)
<b>Command 33</b>	Inhibition single coins	(all enabled)
<b>Command 34</b>	Inhibition coins small return	(all enabled)
<b>Command 35</b>	Coin level message exact amount	(def. 0)
<b>Command 36</b>	Equation exact amount	(def. 0)
<b>Command 37</b>	Enabling credit card reader	(def. 0)
<b>Command 38</b>	Emptying of change giving tubes	
<b>Command 39</b>	Filling up of change giving tubes	

### **Command 30 Purchase obligation before return:**

By setting this command to 1 the customer is obliged to purchase before receiving back the return. This is to avoid to use the coin mechanism as a coin-changer. If the purchase fails to happen, the return will be given out.

### **Command 31 Maximum credit:**

The maximum credit accepted by the coin mechanism is set. By overtaking this value the acceptance of further coins is blocked.

### **Command 32 Maximum value of returned coins:**

This function is active only in multi-sale. If the value of the credit which remains after a sale is higher than the value set by the command, the allotment of return will be blocked. Therefore it will be necessary to carry out further purchases until the remaining credit will be lower than the set value. By moving the return lever it will be possible to obtain the return.

### **Command 33 Inhibition single coins:**

The acceptance of particular coins by the coin mechanism will be blocked through this command. If you want to block the acceptance of coin 5, proceed as follows:

1. Programming mode, display views..... Command 00
2. Dial 33 and press B, display views..... Coin no. 00
3. Dial 5 and press B, display views ..... 0
4. Dial 1 and press B.

### **Command 34 Coin inhibition with exact amount:**

This command blockes the acceptance of particular coins in case of small return, i.e. when the display views the message "Insert only exact amount".

### **Command 35 Coin level message exact amount:**

A value between 0 and 15 representing the number of coins to be added to the minimum level fixed in the coin return tubes - can be programmed, in order to quit the "exact amount" condition.

**Command 36 Equation exact amount:**

It represents the combination of empty spaces in the tubes so that the message exact amount can be activated. Here is a list of possible combinations:

0 = A or (B e C)	1 = A and B and C	2 = only A and B
3 = A and (B o C)	4 = only A	5 = only A or B
6 = A or B or C	7 = only A and C	8 = only A or C
9 = only B e C	10 = only B	11 = only B or C
12 = only C		

**Command 37 Enabling credit card reader:**

The functioning of the credit card will be enabled by setting this command to 1.

**Command 38 Emptying of change giving tubes:**

This command is used to inventory the coins in the tubes of the coin mechanism. To obtain the allotment from tube 1 (coins of lower value) proceed as follows:

1. Programming mode, display views..... Command 00
2. Dial 38 and press B, display views..... Tube no. 00
3. Dial 1 and press B,

The coin mechanism starts giving out coins from the chosen tube until the release of pushbutton B.

**Command 39 Filling up of change giving tubes:**

Proceed as follows:

1. Programming mode, display views..... Command 00
2. Dial 39 and press B
3. Insert the coins into the coin mechanism.
4. Press again pushbutton B

N.B. if the procedure is not correctly carried out, you can find wrong values in commands 09 - 10.

## 8.5 USE OF PAYMENT SYSTEMS MDB



***The coin mechanism must only be connected/disconnected with the machine switched off.***

**Installation:** The coin mechanism MDB has to be connected to the connector J4 of the control card (see figure). The command **69 has to be programmed to value 5**, then turn off the machine for some seconds. By putting it on again the machine and the coin mechanism will communicate correctly. There are the following additional commands for the use of these payment systems:

- Command 27**     Setting the signal for payment system out of order.
- Command 28**     Select change giving tube content counter.
- Command 29**     Cashless credit cannot be displayed.
- Command 30**     Purchase obligation before return.
- Command 31**     Sets the max. accepted credit.
- Command 32**     Minimum coin level in the tubes.
- Command 33**     Inhibits single coins.
- Command 34**     Inhibits coins during exact amount.
- Command 35**     Resetting coin meters in change giving tubes.
- Command 36**     Condition exact amount (no coins available for change).
- Command 37**     Inhibits note validator during exact amount.
- Command 38**     Emptying of change giving tubes.
- Command 39**     Filling in of the change giving tubes.

### **Command 27 Setting the signal for payment system out of order:**



To set the following option **ONLY**, enter the "programming mode" and when the message "command 00" appears on the display press the "test" button again for a further 3 seconds, after which the buzzer will sound again for a few seconds, and access to the second level of the menu is obtained. The message "Command 00" will appear again. To quit the programming mode press the "A" key .

If the command is set at 1, when the connection with the MBD payment system is interrupted the vending machine goes out of order and the message appears on the display; if the command is set at 0 (zero), the option is disabled. The default setting is 0.

### **Command 28 Select change giving tube content counter:**

This command allows the user to select whether to use the counters corresponding to the content of the coin mechanism change giving tube or use only the counters inside the machine. If the command is set at 1 at each power-up the counters inside the machine which correspond to the content of the change giving tubes are updated with the values transmitted by the coin mechanism. If, on the other hand, the command is set at 0 the values transmitted by the coin mechanism are ignored.

### **Command 29 Cashless credit cannot be displayed:**

This command allows the user to prevent or enable display of credit from the MDB cashless device (key or card reader). If the command is set at 1 the credit corresponding to the cashless device is not displayed, whereas if the command is set at 0 the machine also displays the credit available on the cashless device.

### **Command 30 Purchase obligation before return:**

By setting this command to 1 the customer is obliged to purchase before receiving back the return. This is to avoid to use the coin mechanism as a coin-changer. If the purchase fails to happen, the return will be given out.

### **Command 31 Sets the max. accepted credit:**

It sets the max. credit accepted by the coin mechanism. When this value is overtaken, the acceptance of other coins/notes is blocked.

### **Command 32 Minimum coin level in the tubes:**

This is the number of coins for each coin box mechanism which must remain in each tube in order to guarantee the correct function of the coin delivery system. (Consult the manual of the coin box mechanism for instructions on setting the correct value of this parameter). If a different value is associated to each tube, the maximum value set must be between those indicated. The setting of this parameter is fundamental for ensuring the correct coin management by the vending machine.

**N.B.** The inventory of the tubes, command 38, stops when the contents of each tube reaches the value set at command 32. To empty the tubes completely, use the delivery pushbuttons of the coin box mechanism.

**Command 33 Inhibits single coins:**

This command blocks the acceptance of particular coins by the coin mechanism. To block the acceptance of coin 5 proceed as follows:

1. Go into programming mode to display ..... Command 00
2. Key in 33 and press B to display ..... Coin No. 00
3. Key in 5 and press B to display ..... 1
4. Key in 0 and press B.

**N.B.:** To activate the possible modifications of command 33, turn the machine off and then on after the modification itself.

**Command 34 Coin inhibition with exact amount:**

This command blocks the acceptance of particular coins during small change giving, i.e. when the display shows the message "insert only exact amount".

1. Go into programming mode to display ..... Command 00
2. Key in 34 and press B to display ..... Coin No. 00
3. Key in 5 and press B to display ..... 1
4. Key in 0 and press B.

**N.B.:** To activate the possible modifications of command 33, turn the machine off and then on after modification itself.

**Command 35 Resetting coin meters in change giving tubes:**

Use this command when replacing token meter or emptying the change giving tubes with the machine off to synchronize the meters with the actual contents of the change giving tubes.

1. Programming mode, display views ..... Command 00
2. Key in 35 and press B , display views ..... Code 0000
3. Key in 6203 and press B.

**Command 36 Condition exact amount (no coins available for change):**

This command is for setting (for each change giving tube) the number of coins below which the machine can be considered to be in a condition of 'no coins available for change'. The set value must always take into consideration the coin minimum level in the tubes (command 32), that is it must be higher than the latter (example: if command 32 is set at 5, the command 36 values must have a setting of 6 as their minimum value). The tubes that are not included in this condition must be set at "0".

When the contents of any one of the tubes included in the condition drops below the corresponding set value the machine displays the warning that there are no coins available for change.

**Command 37 Inhibits note validator during exact amount:**

Setting this command to 1 during exact amount will inhibit the note validator.

**N.B.:** If only the note validator is installed, this command has to be set to 0.

**Command 38 Emptying of change giving tubes:**

This command is used to inventory the coins in the tubes of the coin mechanism. To obtain the allotment from tube 1 (coins of lower value) proceed as follows:

1. Programming mode, display views ..... Command 00
2. Dial 38 and press B, display views ..... Tube no. 00
3. Dial 1 and press B,

The coin mechanism starts giving out coins from the chosen tube until the release of pushbutton B.

**Command 39 Filling in of the change giving tubes:**

Proceed as follows:

1. Go into programming mode to display ..... Command 00
2. Key in 39 and press B
3. Insert the coins in the coin mechanism
4. Press again the pushbutton B

**N.B.** If the procedure is not correctly carried out, you can find wrong values in commands 09 - 10.

## 8.6 USING THE EXECUTIVE PRICE HOLDING PAYMENT SYSTEMS

**Executive Standard** ⇒ Command 69 programmed at 0

The Executive standard payment system manages the prices directly in the machine and not on the payment system.

For example, to set selection 21 at 30 pence, follow the instructions below:

- |  |                         |
|--|-------------------------|
| 1.1) Enter programming mode to display ..... | <b>Command 00</b>       |
| 1.2) Key in 03 and press B to display .....  | <b>Selection No. 00</b> |
| 1.3) Key in 21 and press B to display .....  | <b>Price 00</b>         |
| 1.4) Key in 30 and press B to display .....  | <b>Selection No. 00</b> |

If you wish to programme another selection, repeat the sequence from point 1.2. Alternatively, press A twice.

**Executive price-holding/price-display** ⇒ Command 69 programmed at 1

In the Executive price-holding/price-display price system, the prices are managed by the payment system. In this case, it is necessary to copy the price table (price list) programmed on the payment system to command 03 of the machine (from price 1 to price n) , while at Command 05 the prices will be matched to the selection by referring to their number.

For example, to set the selection 21 at 30 pence, proceed as described below:

Let us assume that the second price set on the payment system is 30 pence.

- |  |                        |
|--|------------------------|
| 1.1) Enter programming mode to display .....               | <b>Command 00</b>      |
| 1.2) Key in 03 and press B to display .....                | <b>Price Number 00</b> |
| 1.3) Key in 02 (second price) and press B to display ..... | <b>Price 00</b>        |
| 1.4) Key in 30 and press B to display .....                | <b>Price Number 00</b> |
| 1.5) Press A to display.....                               | <b>Command 00</b>      |
| 1.6) Key in 05 and press B to display .....                | <b>Selection No 00</b> |
| 1.7) Key in 21 and press B to display .....                | <b>Price Number 00</b> |
| 1.8) Key in 02 (second price) and press B to display ..... | <b>Selection No 00</b> |

If you wish to programme another selection, repeat the sequence from point 1.6. Alternatively press A twice.

## 9 ADJUSTMENTS

### 9.1 SPIRALS (FIG. 7)



Most of the products can be sold without problems when the end of the spiral is placed on hour 6.

To modify the end, draw the spiral forward until the base of the spiral support will come out from the pit; then turn the spiral in the wished position and put it again into the pit.

**Each spiral can be turned each time of 45°.**

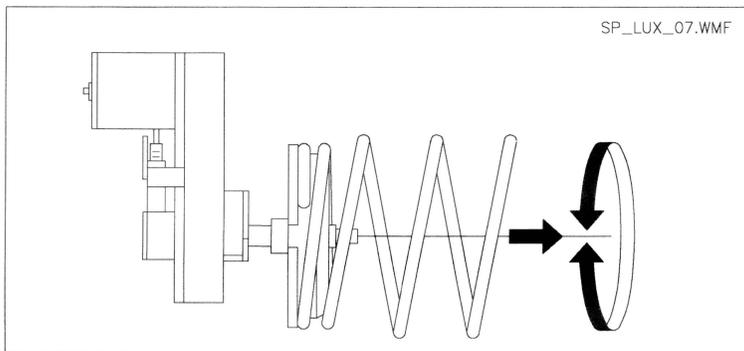


FIG. 7

### 9.2 PROCEDURE FOR REPLACING SPIRALS AND EXPELLER MOTOR GROUP (FIG. 8)



The machine is supplied with trays with spirals of different diameters and pitches. To vary their quantity or their order, proceed as follows:

- 1) Open the main door.
- 2) Pull out the tray on which you have to vary the spiral.
- 3) Switch off and take out the group motor-spiral.
- 4) Take out the spiral from the plastic support (lever between spiral and support) and replace with the other spiral or with the other expeller motor group.
- 5) Fit up the new spiral group reversing the above operations. After having finished this operation, make sure that the end of the spiral is put on hour 6, otherwise see paragraph 9.1.

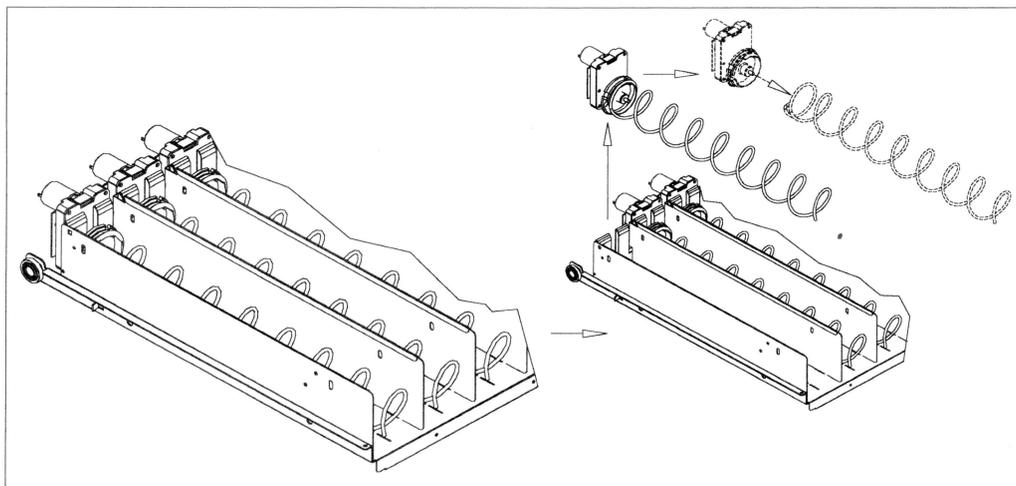


FIG. 8

### 9.3 PROCEDURE FOR REMOVING THE TRAYS (FIG. 9 - FIG. 10)



To remove the tray, proceed as follows:

- 1) Open the main door.
- 2) Switch off placing the main switch in position "off".
- 3) Disconnect the electric connector -A- FIG. 10.
- 4) Remove the tray by forcing the clamp of the positioning spring.
- 5) Pull the tray till the stop, lift it upwards, then rotate it downwards till the guide unhooks. Remove it from the machine FIG. 9.

To mount another tray proceed as follows:

- 1) Insert the tray.
- 2) Push till the tray sets itself into clamping position.
- 3) Insert the electric connector -A- FIG. 10.
- 4) Put the machine on by positioning the switch to "on".
- 5) Close the main door.

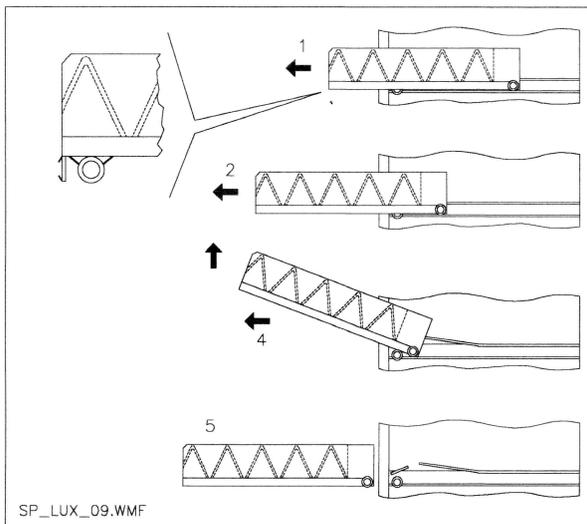


FIG. 9

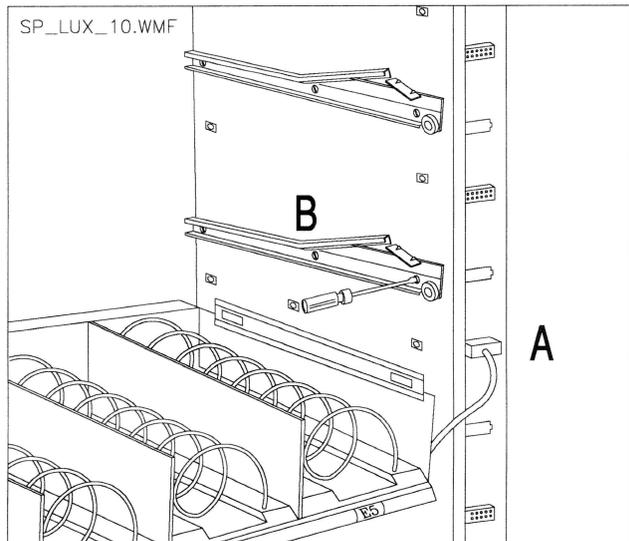


FIG. 10

### 9.4 TO ALTER THE NUMBER OF TRAYS



The number of trays of the machines supplied with 6 trays can be changed. To change from 6 to 7 trays proceed as follows:

- 1) Open the main door.
- 2) Switch off placing the main switch in position "off".
- 3) Take out all the trays.
- 4) Displace the guides ref. B FIG. 10 (the last from the bottom is already in the right position and is therefore not to displace).
- 5) Displace the connectors, ref. A FIG. 10, placed on the edge of the cabinet.
- 6) Remove a pair of guides and a connector wiring.
- 7) Re-assemble 7 trays checking that the clamping spring is engaged and the connectors well inserted.
- 8) Set the new prices.

## 9.5 PROCEDURE FOR CHANGING THE TRAYS FROM A LARGE SPACE TO TWO LITTLE SPACES (FIG. 11)



- 1) Open the main door.
- 2) Switch the main switch off.
- 3) Take out the tray you wish to alter.
- 4) Take out the group motor + spiral ref.1.
- 5) Take out the tray ref.3.
- 6) Replace the spiral with large diameter with one with small diameter.
- 7) Insert the group motor + spiral with small diameter in the left slot of the support ref.4.
- 8) Insert the new group motor + spiral with small diameter in the right slot connecting it to the wiring placed on the tray .
- 9) Add the new divider blades between the two spirals.
- 10) Insert the new price labels and the selections.
- 11) Insert the altered tray and switch the connector on.
- 12) Programme the new selections to the wished selling price.
- 13) Check the altered selections to make sure that they are working.

## 9.6 PROCEDURE FOR CHANGING THE TRAYS FROM TWO LITTLE SPACES TO ONE LARGE SPACE (FIG. 11)



- 1) Open the main door.
- 2) Switch the main switch off.
- 3) Take out the tray you wish to alter.
- 4) Take out the group motor + spiral ref.1.
- 5) Take one of the two groups apart. Replace on the other one the spiral with small diameter with a spiral with large diameter.
- 6) Take out the divider blade ref.2.
- 7) Insert the tray ref.3.
- 8) Insert the group motor + spiral with large diameter in the middle slot of the support ref.4.
- 9) Insert the new price labels and the selections.
- 10) Insert the altered tray and switch the connector on.
- 11) Programme the new selections to the wished selling price.  
**NOTE: By the selections with large spaces the number of selections will be odd. Example: If selections A1 and A2 will be changed to a single compartment, the selection becomes A1.**
- 12) Check the altered selections to make sure that they are working.

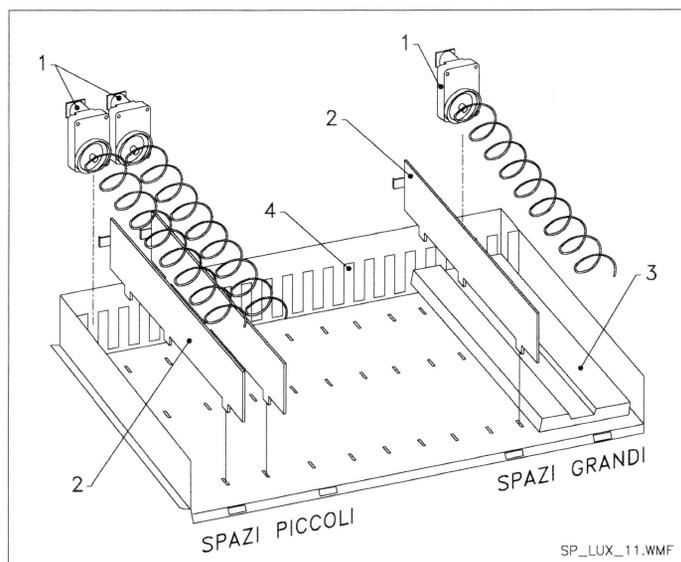


FIG. 11

## 9.7 BOTTLE UNLOADING KIT

(Fig. 12): If the spiral springs in the tray have a six product capacity, insert the bar in hole "A"; whereas if the spiral springs have a five product capacity then insert the bar in hole "B"; if the tray have selections by product support, insert the bar in hole "C".

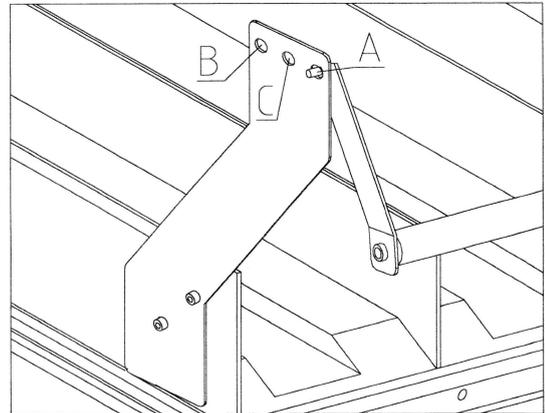


Fig. 12

## 9.8 FLUORESCENT LAMP DISASSEMBLY INSTRUCTIONS



### Door fluorescent lamp:

- A) Switch the main switch off.
- B) Release the fluorescent light unit from its supports.
- C) Cut the wire fastening bands.
- D) Remove the ends of the wiring.
- E) Replace the fluorescent light.
- F) Reassemble by proceeding in reverse order.

## 10 CLEANING INSTRUCTIONS



**These operations must be entrusted to suitably qualified personnel by the person in charge of the equipment.**

The machine should be periodically cleaned to maintain it in the hygienic condition required for the sale of foodstuffs using a routine based on the Code of Practice for Hygiene Machine Operation published by the AVAB.



***Before starting the cleaning procedure it is advised to turn the machine off acting on the main switch.***

### 10.1 IMPORTANT CLEANING POINTS

**A - With a bacteriocidal detergent solution:**

- 1) Inside of the cabinet
- 2) Tray
- 3) Evaporator cup

**B - Window cleaning solution:**

- 1) window

**C - Refrigeration system:**

Clean the condensator with a vacuum cleaner or filtrate air.

Check that there is air flow between the front and the rear part of the condensator.

Always clean the cabinet after this operation.



**If this operation is not performed correctly, the refrigeration system could be seriously damaged.**



- **NEVER IMMERSE THE COIN MECHANISM IN WATER**
- **DO NOT USE ABRASIVE MATERIALS**
- **DO NOT USE SPRAY LUBRICANTS**

### 10.2 INACTIVITY

If long periods of machine inactivity are expected, it is recommended to adopt adequate precautions to prevent dangerous situations when the machine is re-started; for long periods, it is intended complete machine inactivity exceeding one month.

For long resting period, it is necessary:

- To clean the machine thoroughly and to dry it;
- To check carefully for damaged or worn parts and to replace them;
- To check that the screws and bolts are securely tightened;
- To cover the machine after having stored it in a protected environment.

To re-set the machine at work, comply with the instructions given in the paragraph "Installation" of this manual and pay particular attention if food products are to be sold (see paragraph "Use of the vending machine for the sale of food products").

## 11 LAYOUT OF THE CONNECTORS

