

INSTALLATION, OPERATION,
MAINTENANCE

Melodia

Top

EN

English



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ad unico socio

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Reg. Produttori A.E.E.: IT08020000001054

Valbrembo, 01/01/2012

**DICHIARAZIONE DI CONFORMITA'
DECLARATION OF CONFORMITY
DÉCLARATION DE CONFORMITÉ
KONFORMITÄTSERKLÄRUNG
DECLARACIÓN DE CONFORMIDAD
DECLARAÇÃO DE CONFORMIDADE
VERKLARING VAN OVEREENSTEMMING**



Italiano Si dichiara che la macchina, descritta nella targhetta di identificazione, è conforme alle disposizioni legislative delle Direttive Europee elencate a lato e successive modifiche ed integrazioni.

English The machine described in the identification plate conforms to the legislative directions of the European directives listed at side and further amendments and integrations

Français La machine décrite sur la plaquette d'identification est conforme aux dispositions légales des directives européennes énoncées ci-contre et modifications et intégrations successives

Deutsch Das auf dem Typenschild beschriebene Gerät entspricht den rechts aufgeführten gesetzlichen Europäischen Richtlinien, sowie anschließenden Änderungen und Ergänzungen

Español Se declara que la máquina, descrita en la etiqueta de identificación, cumple con las disposiciones legislativas de las Directrices Europeas listadas al margen y de sus sucesivas modificaciones e integraciones

Português Declara-se que a máquina, descrita na placa de identificação está conforme as disposições legislativas das Diretrizes Europeias elencadas aqui ao lado e sucessivas modificações e integrações

Nederlands De machine beschreven op het identificatieplaatje is conform de wetsbepalingen van de Europese Richtlijnen die hiernaast vermeld worden en latere amendementen en aanvullingen

Italiano Le norme armonizzate o le specifiche tecniche (designazioni) che sono state applicate in accordo con le regole della buona arte in materia di sicurezza in vigore nella UE sono:

English The harmonised standards or technical specifications (designations) which comply with good engineering practice in safety matters in force within the EU have been applied are:

Français Les normes harmonisées ou les spécifications techniques (désignations) qui ont été appliquées conformément aux règles de la bonne pratique en matière de sécurité en vigueur dans l'UE sont :

Deutsch Die harmonisierten Standards oder technischen Spezifikationen (Bestimmungen), die den Regeln der Kunst hinsichtlich den in der EU geltenden Sicherheitsnormen entsprechen, sind:

Español Las normas armonizadas o las especificaciones técnicas (designaciones) que han sido aplicadas de acuerdo con las reglas de la buena práctica en materia de seguridad vigentes en la UE son:

Português As normas harmonizadas ou as especificações técnicas (designações) que foram aplicadas de acordo com boas regras de engenharia em matéria de segurança em vigor na UE são:

Nederlands De geharmoniseerde normen of technische specificaties (aanwijzingen) die toegepast werden volgens de in de EU van kracht zijnde eisen van goed vakmanschap inzake veiligheid zijn de volgende:

**Targhetta di identificazione
Identification label**

Direttive europee European directives	Sostituita da Repealed by
2006/42/EC	
73/23/EC + 93/68/CE	2006/95/CE
89/336/EC + 92/31/CE + 93/68/CE	2004/108/EC
90/128/EC	2002/72/CE
80/590/EEC and 89/109/EEC	EC 1935/2004
EC 10/2011	
2002/96/EC	

Norme armonizzate / Specifiche tecniche	Harmonised standards Technical specifications
EN 60335-1:2002 + A1:2004 + A11:2004 + A12:2006 + A2:2006+ A13:2008	
EN 60335-2-75:2004 + A1:2005 + A11:2006 + A2:2008 + A12:2010	
EN 62233:2008	
EN 55014-1: 2006 + A1: 2009	
EN 55014-2: 1997 + A1: 2001 + A2: 2008	
EN 61000-3-2: 2006 + A1: 2009 + A2: 2009	
EN 61000-3-3: 2008	
EN 61000-4-2: 2009	
EN 61000-4-3: 2006 + A1: 2008	
EN 61000-4-4: 2004	
EN 61000-4-5: 2006	
EN 61000-4-6: 2009	
EN 61000-4-11: 2004	

Il fascicolo tecnico è costituito presso:

The technical file is compiled at:

N&W GLOBAL VENDING S.p.A.


ANDREA ZOCCHI

C.E.O

Declaration of conformity

The declaration of conformity with the European Directives and Standards provided for by the laws in force is supplied by the first page of this manual, which is an integral part of the machine.

 It is declared that the machine described by the identification plate is in compliance with the provisions of the European Directives, its subsequent amendments and integrations as well as with the harmonised standards or technical specifications (designations) applied in compliance with the safety rules of good practice enforced in the EU and listed on the same page.

Warnings

FOR INSTALLATION

The installation and any subsequent maintenance operation shall be carried out by the personnel skilled and trained on the utilisation of the machine according to the rules in force.

The machine is sold without any payment system. As a consequence, only the installer will be liable for any damage that may be caused to the machine or to things and persons by an incorrect installation of the payment system.

The intactness of the machine and its compliance with the standards of relevant installations must be checked by skilled personnel at least once a year.

Package materials must be disposed of in observance of the environment.

Important!

The machine is equipped with an automatic washing system for the mixers with the relative water circuit and the brewing unit.

If the machine is not used for some time (weekends, etc.) even for pauses longer than two days, it is recommended to enable the automatic washing functions (e.g. before starting to use the VM).

FOR USE

The machine can be used by children and by people having reduced physical, sensorial or mental skills under the supervision of people responsible for their safety or specifically trained on the use of the machine. Children shall be prevented from playing with the machine by the people in charge of their supervision.

FOR THE ENVIRONMENT

Some tricks will help you to protect the environment:

- use biodegradable products to clean the machine;
- properly dispose of all the packages of the products used to fill and clean the machine;
- power off the machine during inactivity for energy saving.

FOR DISMANTLING AND DISPOSAL



When dismantling the machine, it is recommended to destroy the machine rating plate.

The symbol shows that the machine can not be disposed of as common waste, but it must be

disposed of as it is established by the 2002/96/CE (Waste Electrical and Electronics Equipments - WEEE) European Directive and by the national laws arising out of it in order to prevent any negative consequence for environment and human health.

The differentiated collection of the machine at the end of its life is organised and managed by the manufacturer.

For the correct disposal of the machine contact the sales point where you have purchased the machine or our after-sales service.

The unlawful disposal of the machine implies the application of the administrative sanctions provided for by the rules in force.

Attention!

If the machine is equipped with a cooling system, the cooling unit contains HFC-R134a fluoridised greenhouse effect gas ruled by the Kyoto protocol, the total heating potential of which is equal to 1300.

Symbology

The following symbols may be present inside the machines, according to models:



Attention: dangerous voltage
Power off before removing the cover



Attention
Danger of crushing your hands



Attention
Hot surface



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CERTIFICATE

IQNet and its partner
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hereby certify that the organization

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VIA DELEDDA 16 - 24030 MAPELLO (BG)
VIA SALVO D'ACQUISTO 7/9 - 24050 GRASSOBBIO (BG)

for the following field of activities

Design and manufacturing of electronical and electromechanical vending machines

Refer to quality manual for details of applications to ISO 9001:2008 requirements

has implemented and maintains a

Quality Management System

which fulfills the requirements of the following standard

ISO 9001:2008

Issued on: 2010 - 04 - 27

Registration Number:

IT - 12979



René Wasmer

President of IQNET



Gianrenzo Prati

President of CISQ

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VIA GRAZIA DELEDDA 18/20 - 24030 MAPELLO (BG)

for the following field of activities

Design, production and sales of vending machine

has implemented and maintains a

Environmental Management System

which fulfills the requirements of the following standard

ISO 14001:2004

Issued on: 2011 - 06 - 27

Expiry date: 2013 - 05 - 14

Registration Number:

IT - 8753



Michael Drechsel

President of IQNET



Gianrenzo Prati

President of CISQ

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INTRODUCTION

The technical documentation supplied is an integral part of the equipment and it must therefore accompany the equipment whenever it is either moved or transferred to enable the various operators to consult it.

Before starting to install and use the machine, it is necessary to carefully read and understand the content of the documentation since it can supply important information on installation safety, utilisation rules and maintenance operations.

THE MANUAL IS DIVIDED INTO THREE CHAPTERS.

The **first** chapter is intended to describe the ordinary filling and cleaning operations that shall be carried out in areas of the machine that can be accessed with the simple use of the door key, without using any other tool. The **second** chapter contains the instructions for correct installation as well as the information necessary for optimal utilisation of the machine performance. The **third** chapter is intended to describe the maintenance operations involving the use of tools for access to potentially dangerous areas.

The operations described in the second and third chapter must be carried out only by the personnel who have a specific knowledge of the machine operation from the point of view of electric safety and health rules.

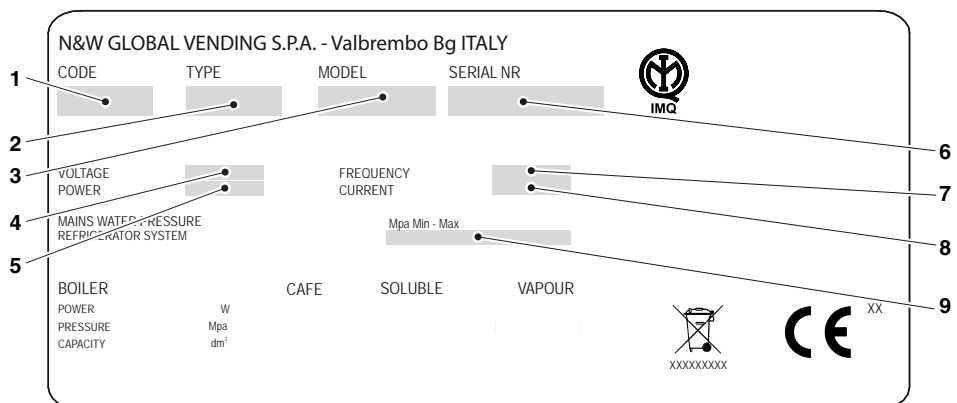
IDENTIFICATION OF THE MACHINE AND ITS FEATURES

Every single machine is identified by a specific serial number that can be found on the rating plate arranged inside on the right side.

The plate (see fig. 1) is the only one recognised by the manufacturer and it contains all the data that enable the manufacturer to supply technical information of any kind in a quick and safe manner and to facilitate the management of spare parts.

Fig. 1

- 1- Product code
- 2- Type
- 3- Model
- 4- Operating voltage
- 5- Absorbed power
- 6- Serial number
- 7- Frequency
- 8- Current
- 9- Type and quantity of refrigerating



IN CASE OF FAILURE

In most cases, any technical problem can be solved by carrying out minor operations. As a consequence, we suggest carefully reading this manual before contacting the manufacturer.

In case of failures or malfunctions that can not be solved, please apply to:

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Via Roma 24
24030 Valbrembo
Italy - Tel. +39 - 035606111

TRANSPORT AND STORAGE

To avoid damaging the machine, loading and unloading operations shall be performed with great care. It is possible to lift the machine by means of a motor-driven or manual lift truck by positioning the forks beneath the machine and on the side clearly stated by the symbol on the cardboard package.

Please avoid:

- overturning the vending machine;
- dragging the vending machine by means of ropes or alike;
- lifting the vending machine by its sides;
- lifting the vending machine by means of slings or ropes
- shaking the vending machine.

For storage it is necessary to keep the room dry at a temperature between 0 and 40 °C.

Never stack several machines and never forget to keep the vertical position specified by the arrows on the package.

USING THE VENDING MACHINES OF HERMETICALLY SEALED PRODUCTS

The control electronics of the machine enables you to separately assign every single selection a different sales price. The various functions are programmed by means of the selection pushbutton-panel without adding any specific equipment.

All models are equipped with variable-configuration trays.

In its maximum configuration, the machine can be used at the same time to:

- Dispense products requiring no refrigeration (snacks)
- Dispense products requiring refrigeration (food)
The preservation of these products is guaranteed by the "food" area of the machine; the "food" area (area with a temperature between 0 and 4°C) can be recognised by the presence of plates on dividing trays.
- Dispense food drinks originally sealed

Foodstuffs (in particular "food" products) shall be managed in full compliance with hygiene and food safety.

Strictly comply with the producer's instructions on the temperature of preservation and the pull date for each product.

Any other use shall be considered as improper and thus potentially dangerous.

POSITIONING THE VENDING MACHINE

The machine is not suitable for installation outdoors. It must be installed in a dry room **and far from any source of heat** at a temperature ranging from 5°C to 34°C. It can not be installed in a room where water jets are used for cleaning (e.g. large kitchens, etc.).

The maximum inclination shall not exceed 2 degrees. If necessary, level it by using the adjustable feet.

The ventilation system enables you to place the back of the machine against the wall, thus saving space, since air is aspirated from the bottom and discharged through the feet cover grid.

Attention!!!

If not correct, ventilation can compromise the good operation of the cooling unit.

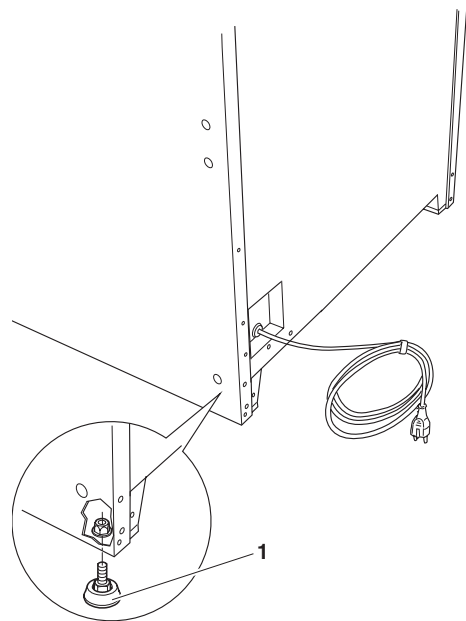


Fig. 2

1- Adjustable foot

TECHNICAL FEATURES

Height	mm	1700
Width	mm	717
Depth	mm	874
Overall dim. with open door	mm	1358
Empty weight	Kg	200
Power supply voltage	V~	230/240
Power supply frequency	Hz	50
Absorbed power	W	420
Absorbed current	A	3.0

MAXIMUM OPERATING CONDITIONS:

Room temperature	°C	34
Relative humidity	%	65

COOLING SYSTEM:

Compressor refrigerating capacity	W	530
Ventilated evaporator		
Programmable defrost cycle		

LIGHTING

By means of class 1 LEDs.
LEDs are generally shielded by transparent panels (glassfront). If lighting is active and the glassfront is open for any reason whatsoever, the light of LEDs may be noxious if you directly look at it.

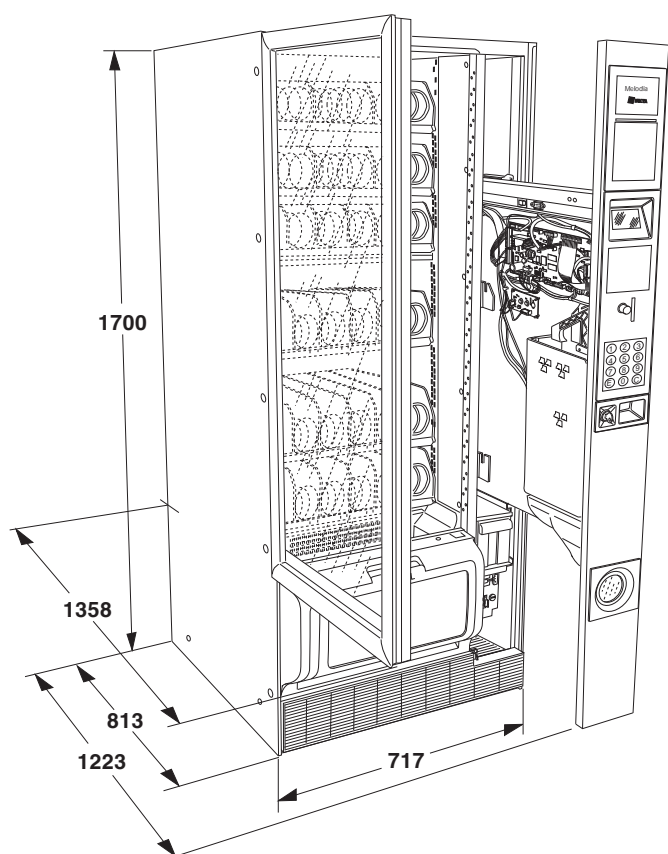


Fig. 3

PAYMENT SYSTEM

The machine is electrically arranged for the systems with Executive or MDB or BDV protocol and for the assembly of 24 Vdc validators.

The space is not only arranged to accommodate the coin mechanism, but also to assemble the most widespread payment systems (optionals).

SALES PRICES

You can set a different sales price for every single selection.

COIN BOX

You can also mount a cover and a lock.

CONTROLS AND SAFETY DEVICES

- payment system compartment switch
- maximum sales motor supply time
- compressor heat protection
- line fuses
- fuses on the primary and secondary transformer

ACCESSORIES

A wide range of accessories can be mounted on the machine to vary its performances:

The assembly kits are supplied with mounting and testing instructions that shall be strictly followed to preserve the machine safety.

The installer is the sole person responsible for any damage improper installation may cause to the machine or to things and people.

Important!!!

The use of kits not type-approved by the manufacturer can not guarantee the observance of safety standards, in particular for live parts.

The manufacturer declines all responsibility for the use of non type-approved components.

Assembly and any subsequent testing operation must be carried out by qualified personnel who have a specific knowledge of the machine operation from the point of view of electric safety and health rules.

ELECTRIC ENERGY CONSUMPTION

The electric energy consumption of the machine will depend upon many factors such as the temperature and ventilation of the room where the machine is installed, the product load temperature and the temperature inside the refrigerated boxes.

On average operation conditions, i.e:

- room temperature:	°C	25
- refrigerated box :	°C	3.5
- humidity:	%	60
- temperature of loaded products	°C	25

The following energy consumption values have been measured:

- daily average consumption	KW	4,4
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The energy consumption calculated on the average values above shall be understood as merely indicative.

VARIABLE COMBINATION LOCK

Some models are supplied with a variable combination lock.

The lock is complete with a silver key for normal opening and closing operations.

It is possible to customise the locks by using a kit made available as an accessory and intended to change the lock combination.

The kit is composed by a change key (black) of the current combination as well as by change (gold) and use (silver) keys of the new combination.

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

Moreover, further sets of use keys (silver) may be requested by specifying the combination stamped on the keys.

Generally, only the use key (silver) shall be used whereas the combination change keys (gold) can be kept as spare keys.

Do not use the change key for usual opening operations since this may damage the lock.

TO CHANGE THE COMBINATION:

- open the machine door to avoid having to force the rotation;
- slightly lubricate by using a spray inside the lock;
- insert the current change key (black) and turn it until you reach the change position (reference notch at 120°);
- remove the current change key and insert the change key (gold) with the new combination;
- turn it until you reach the close position (0°) and remove the change key.

The lock has now assumed the new combination.

The keys of the old combination can be no longer used for the new combination.

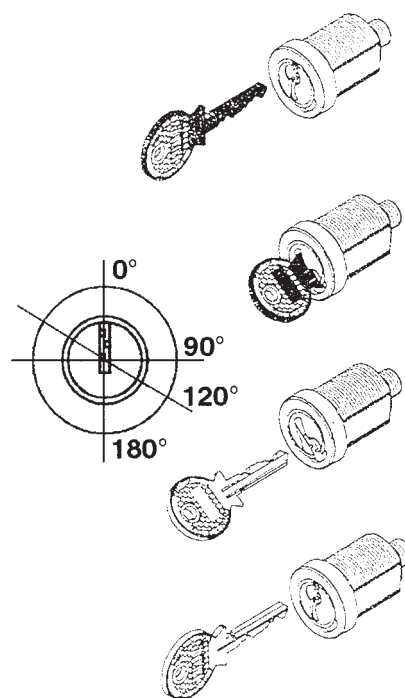


Fig. 4

Chapter 1 FILLING AND CLEANING

HYGIENE AND CLEANING

The operator of an automatic vending machine is responsible for its hygiene and cleaning on the basis of the health and safety rules in force.

The machine must be installed in a dry room at a temperature ranging from 5°C to 34°C. It can not be installed in a room where water jets are used for cleaning.

The vending machine can be used to sell and dispense packaged products that do not need refrigeration to be preserved (snacks).

The vending machine is also arranged to sell and dispense products that need to be refrigerated for preservation (food).

Packaged and refrigerated foodstuffs (food) shall be managed in full compliance with food safety needs.

For all products strictly comply with the producer's instructions on the storage method and pull date for each product.

Any other use shall be considered as improper and thus potentially dangerous.

It is recommended to use sanitising products to clean the surfaces, even if not directly in contact with foodstuffs.

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

The manufacturer will disclaim all responsibility for any damage caused to people by the non-observance of the rules in force.

MAIN SWITCH

If you extract the slide-in compartment, a switch will power off the electric installation of the equipment to service and clean on fully safe conditions.

Only the parts protected by covers and highlighted by the label "power off before removing the cover" remain live.

CONTROLS AND COMPONENTS

The controls and information for the user are arranged outside the slide-in compartment (see fig. 5).

- Display: to display the credit and all operation messages of the machine;
- Numeric keyboard: to dispense the product, select the number corresponding to the product you wish. Press key © to delete a selection you have reserved. Key Ⓔ and Ⓕ are not available for the user. They are only used for programming.
- Coin insert, button and coin return flap.

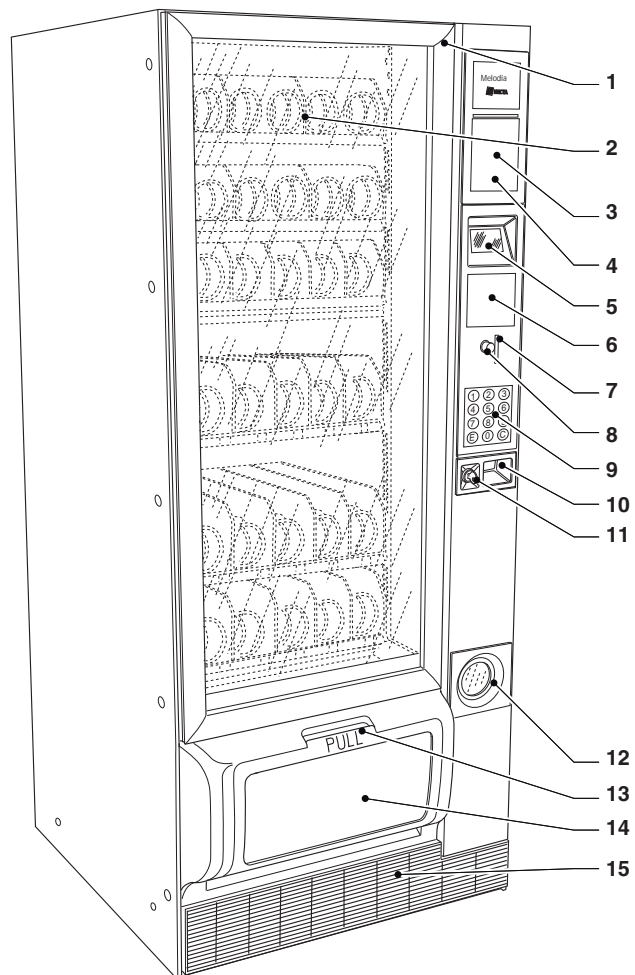


Fig. 5

- 1- Glassfront opening grip
- 2- Spiral trays
- 3- Space for instructions
- 4- Space for bill reader (optional)
- 5- Display
- 6- Space for cashless payment systems
- 7- Coin insert
- 8- Coin return button
- 9- Numeric keyboard
- 10- Slide-in compartment opening grip
- 11- Lock
- 12- Coin return flap
- 13- Dispensing compartment opening grip
- 14- Dispensing compartment with advertising space
- 15- Feet cover

The machine can have the following standard or optional components:

- Standard trays with double or single spirals
- Trays configured to dispense bottles and cans
- Trays configured to dispense sandwiches
- Tray lock
- Product detecting photocells (optional)
- Dispensing compartment lock

NOISE LEVEL

The continuous, equivalent, weighted sound pressure level is below 70 dB.

OPERATING TEMPERATURE

The machine can only work in rooms at a temperature between 5 and 34 °C.

The default temperature of the refrigerated box will vary according to the configuration of the machine (3.5°C if the food management is active or 8°C if the food management is not active).

STANDARD TRAYS

These trays can dispense most products. According to the size of products you wish to dispense, spirals can be housed either in 152 mm. compartments (two spirals: right-hand and left-hand) for large-size products or into 75 mm. compartments (one right-hand spiral) for smaller products.

Standard trays can be configured to:

- **dispense snacks**
No special accessory is required to dispense snacks. (see fig. 6)

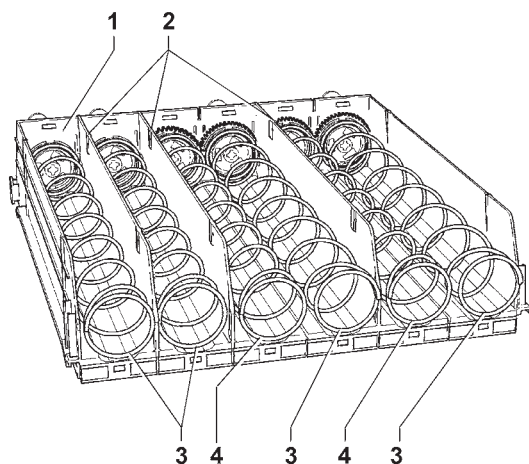


Fig. 6

- 1- Tray
- 2- Mobile walls
- 3- Right-hand spiral
- 4- Left-hand spiral

- to dispense thin products

These compartments can be recognised by the presence of a spacer (see fig. 7)

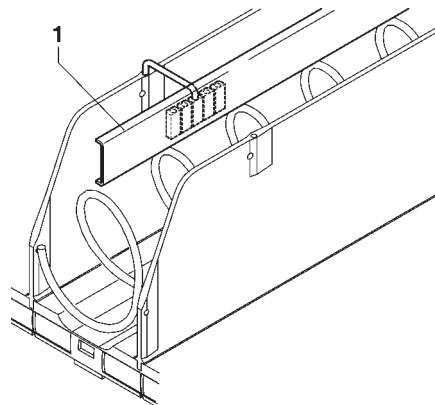


Fig. 7

- 1- Spacer

- dispense sticks of candies and alike.

These compartments can be recognised by the presence of a spiral complete with a divider; these spirals rotate just by 180°, instead of by 360°, thus doubling the compartment capacity.

You can insert a divider even into spirals that are already present. (see fig. 8).

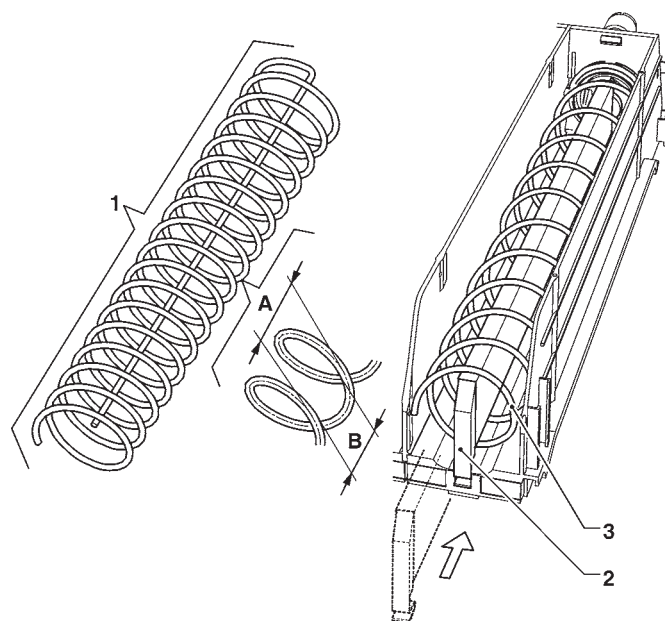


Fig. 8

- 1- Spiral for 180° rotation
- 2- Divider for 180° rotation
- 3- Spiral
- A- Spiral pitch
- B- Maximum product size

- dispense cans and tetrapacks

These compartments can be recognised by the presence of a product raised support (see fig. 9); cans up to 69 mm in diameter and 0.2l tetrapacks can be dispensed from these compartments.

Plastic bottles can be dispensed without any product raised support by loading the bottles up side down so that the cap slides in the compartment channel.

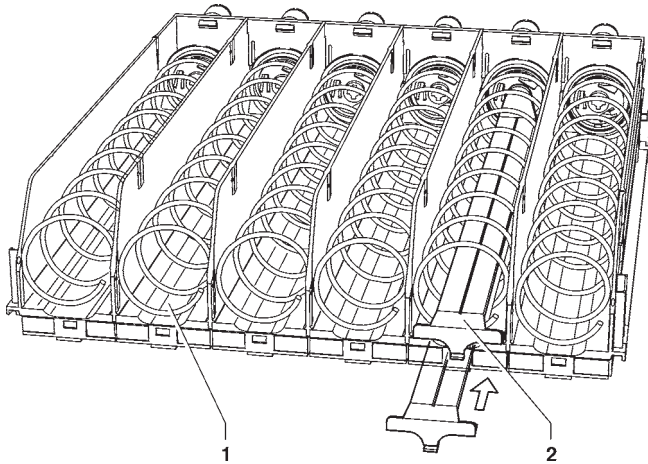


Fig. 9

- 1- Tray channel
- 2- Product raised support

BOTTLE / CAN TRAYS

These trays can be recognised by the presence of retaining springs for each compartment.

These trays can dispense 0.5 l and 0.33 l plastic bottles as well as 0.33 and 0.25 l "slim" cans vertically, thus improving the readability of the product label

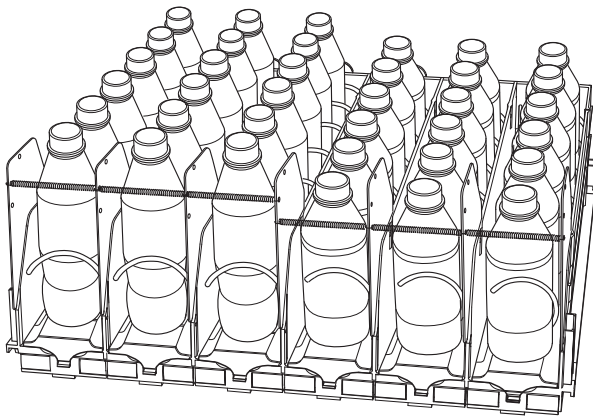


Fig. 10

SANDWICH TRAYS

Sandwich trays are suitable for **dispensing sandwiches only**; these trays can be recognised by the presence of the retainer bridge.

Sandwich trays are arranged in the machine food area.

Comidas refrigeradas Food products Prodotti refrigerati

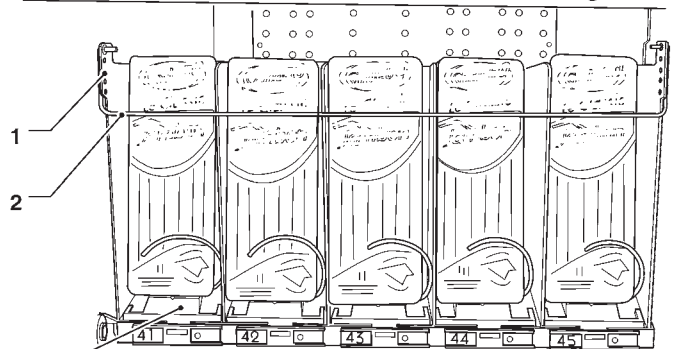


Fig. 11

- 1- Bridge regulation holes
- 2- Retainer bridge
- 3- Sandwich tray

LOADING PRODUCTS

STANDARD TRAYS

SNACK PRODUCTS

- Extract one tray at a time by pulling the tray as far as the tray retainer

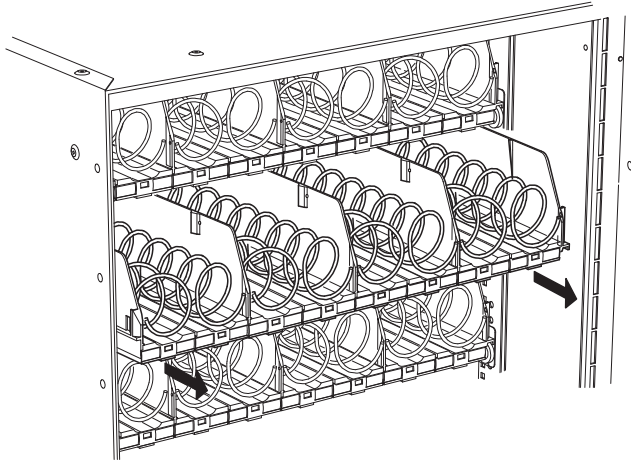


Fig. 12

The upper tray can be tilted downwards to facilitate product loading.

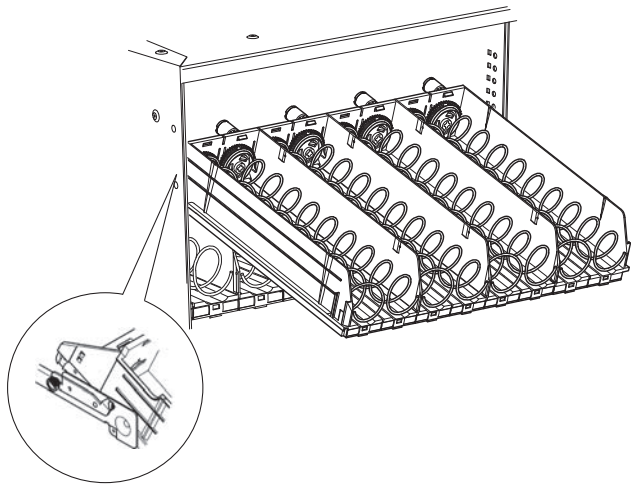


Fig. 13

- Load the products from the outside to the inside. Make sure that all spaces are filled. The product bottom must rest at the bottom of the compartment with the label facing the glassfront so that it can be recognised. The sealed edge of bags may slip beneath the spiral, thus preventing the bag from falling down. Fold the sealed edge forwards and upwards before inserting it into the spiral. Thin products can be dispensed only by using the special spacer (see fig. 13). Never insert any product that has been stored in a room at a temperature above **30°C**. **All products shall be easily insertable between the spirals. Avoid inserting any object that is too large.**

- Push the trays completely until the spring is released.

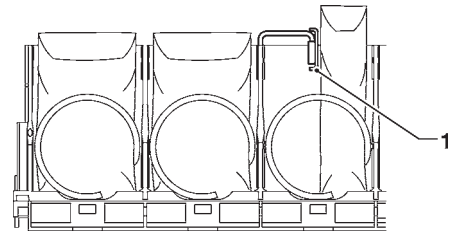


Fig. 14

1- Spacer

CANS, TETRAPACKS, BOTTLES

Load the products from the outside to the inside with the label facing the glassfront so that it can be recognised. Cans and tetrapacks shall be loaded into the compartments using raised supports. Most bottles can be also dispensed without any raised support, i.e. by loading the bottles up side down, so that the cap slides in the compartment channel (see fig. 9)

Make sure that products can be easily inserted between the spirals. Avoid inserting any object that is too large.

FOOD PRODUCTS

If the machine is configured to dispense refrigerated products, load them in the "food" area of the machine (area, the temperature of which is below 4°C). The "food" area can be recognised by the presence of identification labels.

If you power on the machine after a period of inactivity, wait until you reach the steady temperature (pull down up to 3 hours) before introducing any refrigerated product.

If the message "Safety temperature exceeded" appears and food selections are put out of order, **the refrigerated foodstuffs in the machine shall be considered as non-usable and therefore removed.**

In this case, power on the machine and wait until you reach the steady temperature before introducing any refrigerated product.

Attention !!!

Before loading, make sure that the "food" area temperature is below 4°C.

Avoid introducing any product at a temperature above 4°C

Sandwiches shall be loaded in the tray that can be recognised by the retainer bridge (see fig. 18)

All loading operations shall be carried out as quickly as possible (never exceed 10 min.) to prevent the "food" area temperature from exceeding 7°C.

SANDWICH TRAYS

Sandwich trays are **specifically conceived for dispensing sandwiches ONLY.**

Sandwich trays can be recognised by the retainer bridge and by the sandwich retainers and they are arranged in the food area of the machine (area with a temperature between 0°C and 4°C).

The "food" area is identified by the labels on the divider tray.

Make sure that the bridge is inserted into the highest hole and the spiral end set to 10 (see the figure).

Sandwiches shall be loaded with the lower edge being placed before the spiral.

Use sandwich retainers not to interfere with robovend handling.

Retainers are assembled in such a way that the sandwich will not come out of the tray.

Attention !!!

Before loading any sandwich, make sure that the "food" area temperature is below 4°C.

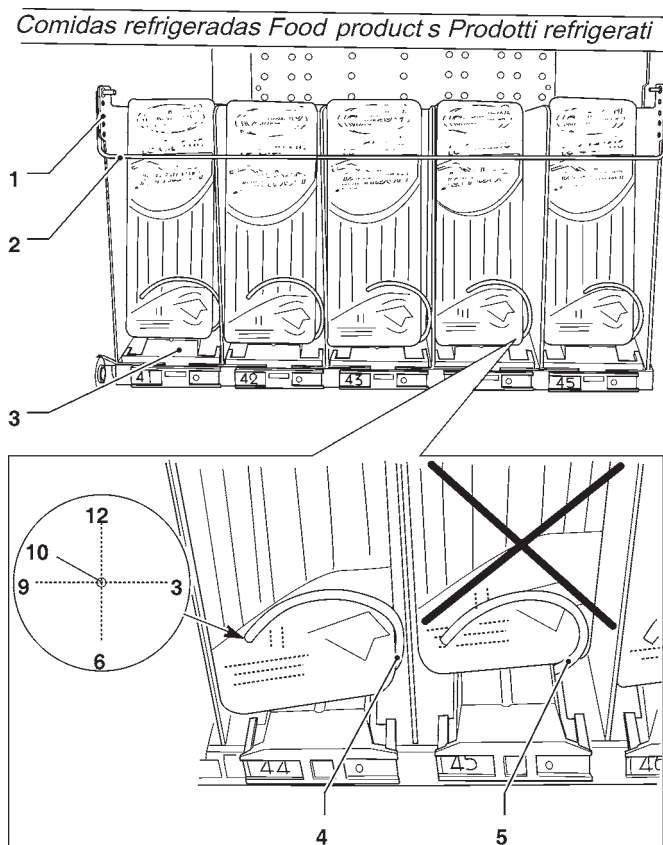


Fig. 15

- 1- Bridge regulation holes
- 2- Retainer bridge
- 3- Tray for sandwiches
- 4- Sandwich retainer
- 5- Right sandwich loading
- 6- False sandwich loading

BOTTLE / CAN TRAYS

Every single compartment is configured to dispense different products according to the spring position.

To extract the tray, never seize the fastening springs or brackets of the springs, but take the base of the tray.

Use the figure and table here below to learn which products can be loaded in each compartment.

Spring position	Products to be loaded
1	0.33 or 0.25cl "slim" cans
2	0.33cl bottles
3	0.50cl bottles
4	0.50cl "slim" bottles

Attention !!!!

It is important to know for which product and how the compartment has been configured to load it properly.

The table has got a general character. It is intended to specify the settings the manufacturer has experimentally established for some of the most common types of products.

Load bottles and cans vertically and with the label turned to the glassfront to make it recognisable.

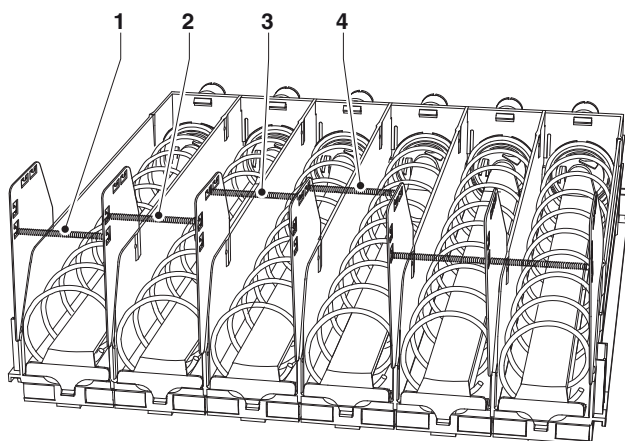


Fig. 16

- 1- Compartment for 0.33 or 0.25cl "slim" cans
- 2- Compartment for 0.33cl cans
- 3- Compartment for 0.50cl bottles
- 4- Compartment for 0.50 cl "slim" bottles

POWER ON

Whenever you power on the machine, the electronics controls the machine configuration.

Close the machine door:

- The display shows the name and software release of the machine.

```
Melodia Top
Rev. X.XX

Total vends = XXXXXX
```

- It shows the message that the photocells intended to detect the product dispensing cycle are present (optional).
- It checks and displays the number of trays and connected motors to make sure that all trays are connected after having loaded the trays.
- It shows the message that the device intended to lock the compartment opening is present (optional).
- It shows the internal temperature detected by the probe.

REFILL CODE (IF REQUIRED)

The refill code is a 4-digit code used to reset the counters managing any ending product signal.

```
TOTAL AUTO REFILL
Enter the code
[- - - -]
```

Enter the "refill code" (1234 by default) to reset the counters and set the machine to the "normal operation" mode.

As an alternative, press key © or after 1 minute, if no key is pressed, the machine will automatically switch to the "normal operation" mode without resetting any counter. In normal operation mode, the display shows the message requiring the user to select a product.

```
SELECT A PRODUCT

Temperature= XX °C
```

CLEANING AT REGULAR INTERVALS

The machine is to be cleaned at regular intervals; it is recommended to use a lukewarm water solution and non aggressive detergents.

To clean metal parts, never use any product containing abrasive or corrosive substances.

Attention !!!

It is absolutely forbidden to direct any water jet against the machine.

CLEANING THE VENTILATION GRIDS OF THE COOLING SYSTEM.

Clean the ventilation grids of the cooling system at least every 30 days by using a vacuum-cleaner.

Detach the machine from the supply mains and clean the feet cover grid.

Attention!!!

To clean the feet cover NEVER direct any water jet against the machine.

SERVICE INTERRUPTION

If the machine should be out of service for a long period of time for any reason whatsoever, take the following precautions:

- Remove all products from the trays.
- Detach the machine from the mains.
- Clean inside the machine by using a lukewarm water solution and non aggressive detergents and dry carefully.

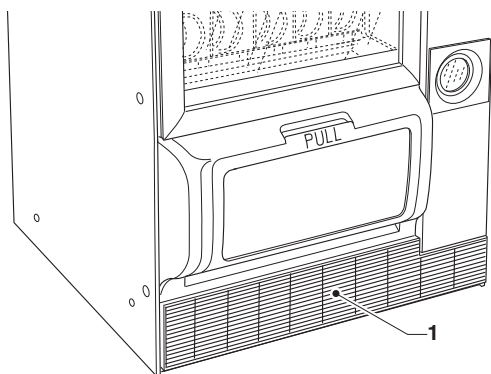


Fig. 17

1- Feet cover grid

Chapter 2 INSTALLATION

Installation and any subsequent maintenance operation must be carried out by the personnel skilled and trained on the use of the machine as well as aware of the specific risks such a condition may involve.

The machine is not suitable for outdoor installations:

- outdoors, it must be installed in a dry room at a temperature between 5° and 34°C
- in a room where relative humidity is above 65%
- in a room where water jets are used for cleaning (e.g. large kitchens, etc...)

MAIN SWITCH

A microswitch is assembled in the electric panel (see fig. 18). It is intended to power off the equipment as soon as you open the extractable compartment for payment systems.

Only the parts protected by covers and highlighted by the label "power off before removing the cover" remain live inside the equipment.

Before removing these covers, detach the power supply cable from the mains.

To power on the installation when the extractable compartment is open, just insert the key into the slot of the compartment switch.

Attention!!!

If you power on the machine when the door is open, the glassfront lighting is turned on: never look at any source of light directly.

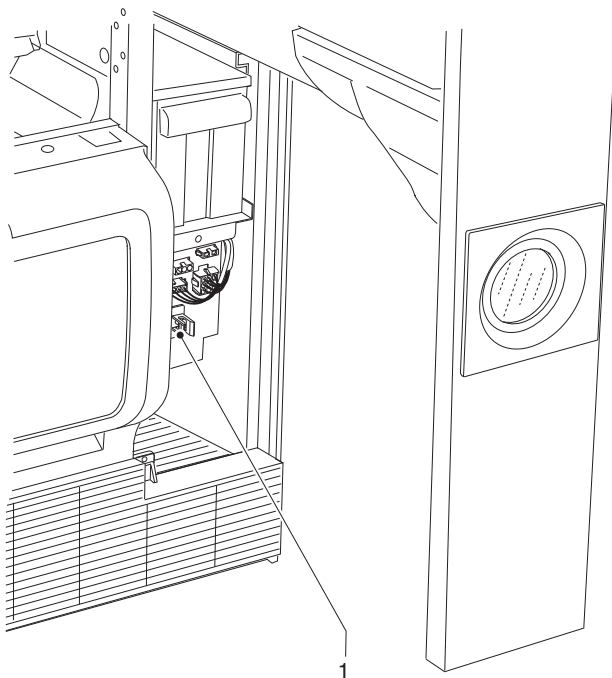


Fig. 18

1- Main switch

UNPACKING AND POSITIONING

After having unpacked the machine, make sure that the equipment is intact.

In case of doubt never use the equipment.

No packing material (plastic bags, foam polystyrene, nails, etc.) should be left within the reach of children since they are potential sources of danger.

Packing materials shall be disposed of in authorised dump sites and recyclable ones collected by specialised companies.

If the vending machine has been laid down during transportation, wait at least an hour before connecting it with the power mains..

The machine is not suitable for installation outdoors. It must be installed in a dry room and far from any source of heat at a temperature ranging from 5°C to 34°C. It can not be installed in a room where water jets are used for cleaning (e.g. large kitchens, etc.).

The maximum inclination shall not exceed 2 degrees. If necessary, level it by using the adjustable feet.

The ventilation system enables you to place the back of the machine against the wall, thus saving space, since air is aspirated from the bottom and discharged through the feet cover grid.

Attention!!!

If not correct, ventilation can compromise the good operation of the cooling unit.

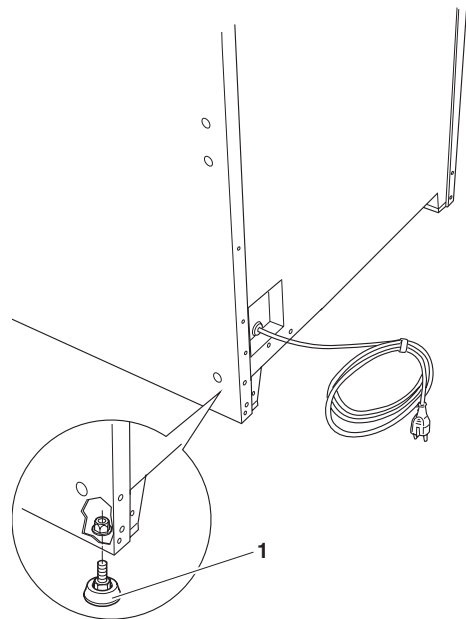


Fig. 19

1- Adjustable foot

PAYMENT SYSTEM ASSEMBLY

The machine is sold without any payment system. As a consequence, only the installer will be liable for any damage that may be caused to the machine or to things and persons by an incorrect installation of the payment system.

To mount the coin mechanism:

- Lift and turn the coin mechanism support plate
- Select the most suitable fastening holes according to the type of coin mechanism
- Loosen the fastening screw and adjust the coin insert chute according to the coin mechanism entrance;
- Loosen the fastening screws and adjust the lever intended to open the selector:

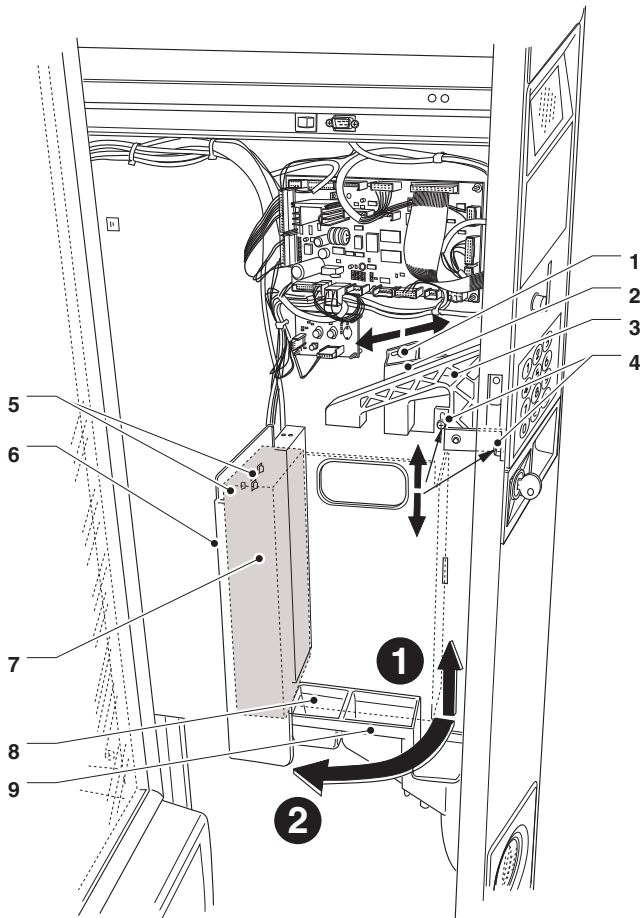


Fig. 20

- 1- Coin chute adjusting screw
- 2- Coin chute
- 3- Selector opening lever
- 4- Fastening screw or selector lever
- 5- Coin mechanism fastening holes
- 6- Coin mechanism support plate
- 7- Coin mechanism
- 8- Coin insert chute
- 9- Coin return chute

ELECTRICAL CONNECTION

The machine is arranged for electrical operation at a 230 V~ single-phase voltage and it is protected by T6.3A fuses.

For connection make sure that the rating will comply with the mains data, in particular:

- the supply voltage value shall lie within the limits recommended for the connection points;
- the main switch shall be featured in such a way that it can support the maximum load required and to ensure omnipolar disconnection from the mains with an opening gap of the contacts of min. 3 mm.

The switch, the power socket and the corresponding plug shall be located in an accessible position.

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

It is necessary to check this fundamental safety requirement and, in case of doubt, to require professionally qualified personnel to check the installation carefully.

The supply cable is of the type with a fixed plug. If necessary, the connection cable shall be replaced by qualified personnel by using only cables of the HO5 RN - F or HO5 V V-F or H07 RN-F type, 3x1-1.5 mm² in cross-section.

It is forbidden to use adapters, multiple sockets and/or extensions.

THE MANUFACTURER WILL DISCLAIM ALL RESPONSIBILITY FOR ANY DAMAGE CAUSED BY THE NON-OBSERVANCE OF THE PRECAUTIONS MENTIONED ABOVE

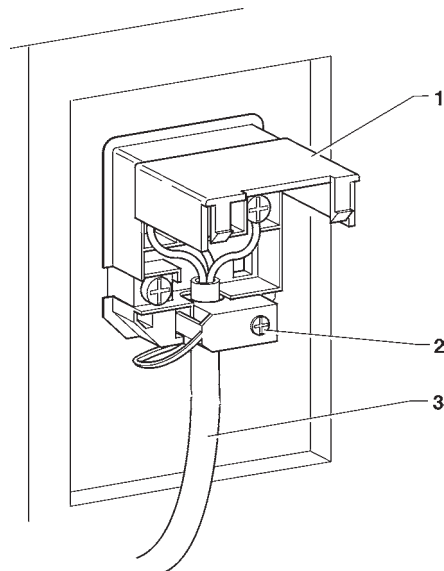


Fig. 21

- 1- Small lift cover
- 2- Cable clamp
- 3- Mains cable

INTERNAL COMPONENTS

The C.P.U. board (central process unit) is arranged inside the compartment of payment systems and intended to manage the various functions of the vending machine. The cooling unit is arranged at the bottom of the cabinet. The electric panel at the bottom of the compartment of payment systems is intended to arrange the relay board operating the compressor, the protection fuses, the main switch and the transformer intended to supply low voltage users.

The machine may be equipped with product detecting photocells (as a standard or as an accessory); they are mounted above the dispensing compartment.

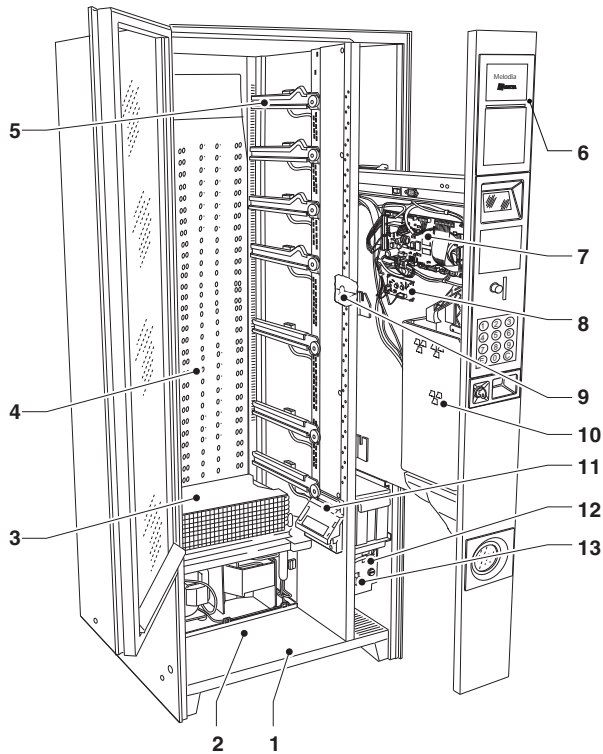


Fig. 22

- 1- Cabinet base
- 2- Product dispensing compartment seat
- 3- Cooling unit evaporator
- 4- Cold air distribution grid
- 5- Tray guides
- 6- Slide-in user interface
- 7- CPU board
- 8- Current regulator board
- 9- "food" microswitch
- 10- Coin mechanism seat
- 11- Photocell
- 12- Electric panel
- 13- Main switch

COOLING UNIT

The cooling unit is arranged at the bottom of the cabinet and activated by the relay board in the electric panel. The cool air from the cooling unit is dispensed by the grid at the back of the box.

The machine is supplied with shutters that can customise temperature stratification in the box (max. 3 areas at various temperatures).

The stratification level of the refrigerated box temperature will vary according to the number and position of shutters.

UNIFORM TEMPERATURE

One single temperature in the whole refrigerated box: cold air distribution grid completely open.

STRATIFIED TEMPERATURE

Maximum 3 zones with different temperatures (0-4°C for "food" products, 5-8°C for originally sealed food drinks, 8-16°C for snacks).

To vary the temperature stratification level, refer to the chapter Maintenance.

TEMPERATURE SOFTWARE REGULATION

The refrigerated box temperature can be set from the software between 3.5°C and 20°C.

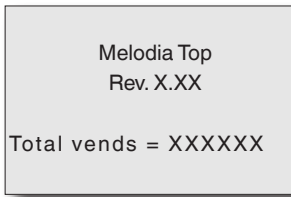
DEFROST

The cooling unit is automatically defrosted every 6 hours. The defrost time can be directly programmed from the software.

FIRST POWER ON

As soon as you power on the machine, the electronics controls the machine configuration.

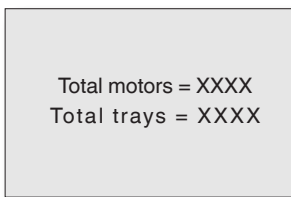
Close the machine door:



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Rev. X.XX

Total vends = XXXXXX

- It shows the message that the photocells intended to detect the product dispensing cycle are present (optional).
- It checks and displays the number of trays and connected motors to make sure that all trays are connected after having loaded the trays

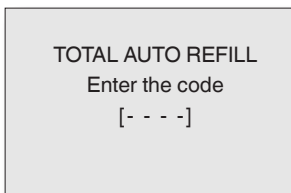


Total motors = XXXX
Total trays = XXXX

- It shows the message that the device intended to lock the compartment opening is present (optional).
- It shows the internal temperature detected by the probe

REFILL CODE (IF REQUIRED)

The refill code is a 4-digit code used to reset the counters managing any ending product signal.

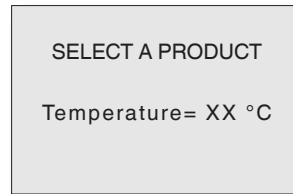


TOTAL AUTO REFILL
Enter the code
[- - -]

Enter the "refill code" (1234 by default) to reset the counters and set the machine to the "normal operation" mode.

As an alternative, press key © or after 1 minute, if no key is pressed, the machine will automatically switch to the "normal operation" mode without resetting any counter.

In normal operation mode, the display shows the message requiring the user to select a product..



SELECT A PRODUCT

Temperature= XX °C

Attention!!!

Wait for the steady-state temperature to be reached before inserting the products to be dispensed.

The manufacturer will disclaim all responsibility for any damage caused by the inobservance of the precaution mentioned above.

OPERATION

STANDARD TRAYS

To dispense a product included in a spiral compartment:

- the motor intended to rotate the spiral is activated
- the spiral will push the product forwards and let it drop into the tray.

COOLING UNIT DEFROST

The defrost cycle of the cooling unit is enabled and controlled by the machine software.

In compliance with the defrost cycle, the unit compressor is stopped and motor-driven fans are disabled, not depending upon the temperature.

The time interval between one cycle and the other one can be programmed (6 hours by default) and it will be determined according to the environmental humidity and the number of times the door is opened.

If the safety temperature is reached before the end of the defrost cycle, the cycle stops and the temperature setpoint restored inside the refrigerated box.

The cooling unit restarts working normally at the end of the defrost cycle.

DISPENSING COMPARTMENT LOCK

Some models are complete with a device intended to lock the dispensing compartment that is electrically released after a dispensing cycle to open the compartment manually and to take the dispensed product.

If you should open the compartment for any reason whatsoever in case of a power failure:

- remove the last tray;
- remove the vandal-proof grid;
- operate the lock device manually.

TELEMETRY AND REMOTE CONTROL

The machine can be equipped with remote control systems and telemetry (optional)

Use these systems to:

- set automatic alarms for "ending" product,
- have an update situation on sales, takings and failures in real time,
- modify prices remotely,
- monitor the machine;

programming notes

The electronics intended to control the machine will enable the operator to use many functions.

The following is supplied with the machine:

- Selection layout including the selections arranged for the specific model
- Flowchart of programming menus.

The main functions required to manage the machine operation as well as possible are briefly explained here below, not necessarily in the order they are displayed in the menus.

The machine software can be updated by using proper systems (Giga, Upkey. ...).

The machine can work in three different operation modes. The keyboard buttons may assume different functions, according to its operation state.

Possible states are listed here below:

NORMAL OPERATION MODE

- The machine is powered on (the door is closed) and all checks are performed.
- The selection is dispensed and messages are displayed for the user

FILLER MENU

- Statistical findings and execution of simple checks on the operation and on dispensing cycles.

TECHNICIAN MENU

- Test functions, the setups and the performances of the machine are programmed on two levels.

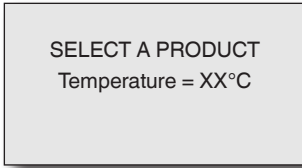
According to the operation mode, the functions of the display and keyboard change as described in the following paragraphs.

NORMAL OPERATION MODE

The machine is set to the normal operation mode when the machine is electrically supplied and the glassfront is closed.

The glassfront is lit up and the display shows the message requiring the user to select a product.

The messages can be bilingual according to the settings



SELECT A PRODUCT
Temperature = XX°C

If the machine is complete with a payment module and you insert some coins or a cashless payment system, the credit still available will appear on the display.



SELECT A NUMBER ##
Credit
0.50 €

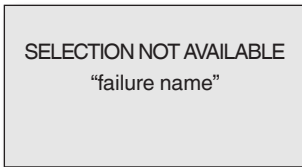
Dial the number corresponding to the product you wish by using the numeric keyboard.

At the end of the dispensing cycle, the message requiring the user to take the product will appear on the display for some seconds and the machine will get ready for another delivery.



TAKE THE PRODUCT

If the control system should find out a failure, an error message will appear and specify the type of problem



SELECTION NOT AVAILABLE
"failure name"

NAVIGATION

ACCESSING THE PROGRAMMING MODE

To be able to access the programming menus, power on the machine by acting on the door switch after having opened the door.

To access the programming menus, press the button on the slide-in shelf of the user interface.

The machine will access the "Filler Menu". Press key ← to switch from the "Filler Menu" to the "Technician Menu" and vice versa.

The interaction between system and operator occurs through display and numeric keyboard in the programming mode.

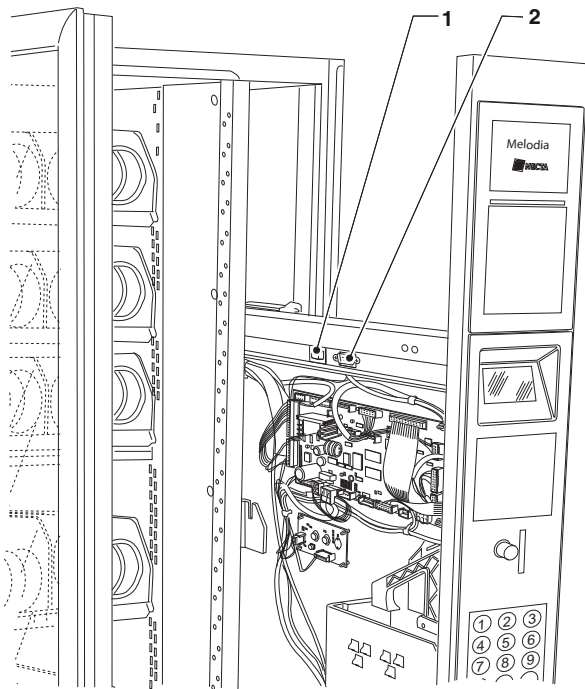
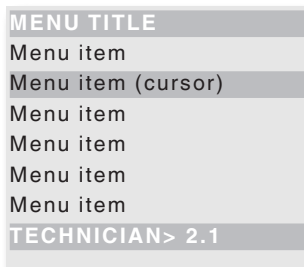


Fig. 23

- 1- Programming button
- 2- RS232 serial connector

DISPLAY

8-line graphical display intended to display the user messages or the menu function.



MENU TITLE

If required, it is highlighted on the first line, followed by all the options made available.

Menu item

The menu item made available

Menu item (cursor)

The menu item where the cursor is positioned

TECHNICIAN> 2.1

It specifies the menu, in which we are acting (Filler or Technician), followed by the numeric position of the function where the cursor is positioned (e.g. 2.1).

KEYBOARD

From 1 to 7, they are intended to select a menu item directly by typing the corresponding number shown by the summary tables in the appendix to this manual.

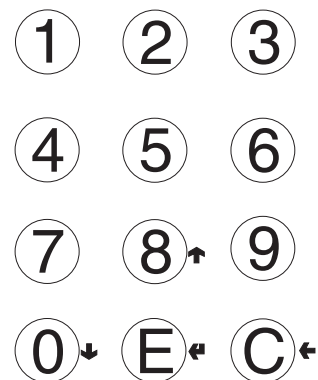


Fig. 24

NEXT MENU KEY (0):

↓ to move to the next menu option.
In the case of command management, it varies the logic status of a data item, where required, or it writes the value 0 in case of entry of a number.

PREVIOUS MENU KEY (8):

↓ to move to the previous menu option.
In the case of command management, it varies the logic status of a data item, where required, or it writes the value 8 in case of entry of a number.

ENTER KEY (E):

← to move from a menu to a sub-menu or to confirm the execution of a command.

EXIT KEY (C):

← to go back from a sub-menu to a higher level menu or not to execute the active command for the time being.

FILLER MENU

The first item of the "filler menu" appears on the display with a series of numbers next to it, enabling you to identify the menu level where you are positioned.

Press the Enter key **↵** to access the menu.

Press the Exit key **←** to go back to the previous menu..

Press the keys **↑** and **↓** to scroll the menu items.

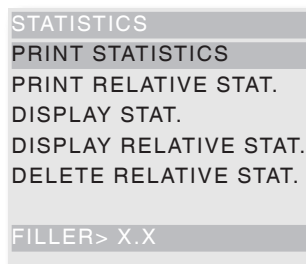
If a menu is not enabled in the programming mode, the title appears in the list of functions, but it is impossible to have access to it.

PRICE KEY **9**

Press the key to have direct access to the price-selection association of time band 0 if the function has been enabled in the "Programming" menu.

STATISTICS

The machine operation data are stored in total and relative counters that can be reset without losing total data.



PRINT

The function is intended to print the data that have been stored for the machine operation.

Connect an RS232 serial printer having 9600 baud rate, 8 data bits, no parity, 1 stop bit with the serial connector on the slide-in shelf of the user interface:

TOTAL COUNTERS



- 1 - counter for every single selection;
- 2 - counter for bands;
- 3 - failure counter;
- 4 - coin mechanism data;
- 5 - photocell errors;
- 6 - motor errors.
- 7 - dispensing compartment lock errors

RELATIVE COUNTERS


- 1 - counter for every single selection;
- 2 - counter for bands;
- 3 - failure counter;
- 4 - coin mechanism data;
- 5 - photocell errors;
- 6 - motor errors.
- 7 - dispensing compartment lock errors

The following is printed, i.e. the machine code, the print date and time, the software release, the operator code and the installation date of the machine.

To print, act as follows:

- from the print function press the Enter key  to display "Do you confirm?";
- connect the printer;
- press the Enter key  to start printing

DISPLAY

The function is intended to sequence-display the same data you can obtain by printing statistics. Press the Enter key  to sequence-display the following data:

TOTAL COUNTERS

- 1 - counter for every single selection;
- 2 - counter for bands;
- 3 - failure counter;
- 4 - coin mechanism data;
- 5 - photocell errors;
- 6 - motor errors.
- 7 - dispensing compartment lock errors


RELATIVE COUNTERS


- 1 - counter for every single selection;
- 2 - counter for bands;
- 3 - failure counter;
- 4 - coin mechanism data;
- 5 - photocell errors;
- 6 - motor errors.
- 7 - dispensing compartment lock errors

RESET

Statistics can be reset for relative counters either globally (all types of data) or selectively for:

- selections
- failures
- coin mechanism errors
- photocell errors
- motor errors

Press the Enter key  to display the request for confirmation.

Press the Enter key  to reset the statistics. The display will show the "Running" message during the operation to reset the statistics.

SELECTION PRICES

The machine can manage up to 4 different prices per selection, which can be active according to the time band you have set (standard or promotional) and/or the payment system in use.

Use this function to vary the sales price for every single selection by selecting among the price ranges available.

MANAGEMENT OF CHANGE TUBES

This function is active only if this operation can be carried out by the payment system you have set up.


Access the function to manually load or empty the change tubes.

LOAD THE TUBES

If you confirm loading, "Credit : ——" will appear on the display. This is the value of the money made available in the tubes for the change. If you insert a coin into the validator, the display will increase the value of the money made available in the tubes for the change.

UNLOAD THE TUBES

If you confirm unloading, you can establish the tube on which you wish to act.

Whenever you press the Enter key , a coin is ejected by the active tube.

SPECIAL SELECTIONS

Set up the following parameters from this group of functions:

VIRTUAL SELECTIONS

This function is used to define a pair of selections that can be sold at a price different from the sum of the two selections, using one single selection number. 10 virtual selections can be programmed (70 to 79).

VIRTUAL PRICE RETURN

This function is used to decide not to cash the price of the second selection if the second dispensing cycle of a virtual selection has failed (only if MDB payment systems or validators are in use).

Use the other payments systems to establish whether to return the whole amount or not.

TWO-MOTOR SELECTIONS

To dispense long products, you can mount the dividers in order to use two motors for one single selection. Use this function to combine the operation of two motors by specifying the selection number and the second motor.

The first motor number will be the selection number whereas the selection number of the associated motor will remain disabled.

Important!!!

After a failure to the motors of these selections, follow the procedure intended to configure the “Spirals/Selections” menu of the machine.

DETECTION OF THE DISPENSING CYCLE

The machine can be fitted (as a standard or as an option according to the models) with a device intended to detect the passage of dispensed products by means of photocells.

If no dispensing cycle is detected for a product, this device will enable you to:

- set a rotation time for the spiral beyond the limit switch, to overcome any jam;
- return the paid amount or not;
- lock any further selection on the spiral in question.

TEST

TEST SELECTION

Use this function to simulate the normal dispensing mode of products without inserting the amount to check the operation of the spiral rotation by pressing the selection buttons.

MOTOR TEST

It is intended to operate all motors in a sequence and to display the selection number in question.

AUTOTEST

A function is implemented in the software to check the correct operation of some devices half-automatically. Some tests occur automatically whereas others require the manual operation of the component under test. Press button **↩** to perform the next test.

The devices under test are listed here below:

- **Keyboard:** press the key required by the display; if it can operate properly, you will be required to press the next key.

- **Temperature:** to display the temperature value measured by the probe.

In case of interruption of the electric connection of the probe, -11.0 will appear.

In case of a short-circuit of the probe, 41.0 will appear.

- **Buzzer:** a series of sounds is produced to check the operation of the acoustic signaller.

- **Compressor:** press key **↩** and **↩** to activate and deactivate the compressor.

- **Selections:** to activate all selections in a sequence.

- **Coin mechanisms:** to make sure that the communication with the coin mechanism is properly working and to check which validator lines are set up as active.

- **Photocells:** If the device intended to detect the product passage is available, the light beam readout and interruption are checked.

- **Compartment Lock:** If the device intended to prevent the dispensing compartment from opening is available, press key **↩** and **↩** to lock and unlock the opening of the compartment.

GSM

This function is active only if the vending machine is properly set up and connected with a GSM data transmission device.

The control software can send an “ending product” signal via GSM modem when a well-defined (programmable) number of pieces or grams of powder of a given product is lacking.

RESET PREALARMS

Use this function to reset the counters intended to manage prealarms.

EVADTS

The EVA DTS (European Vending Association Data Transfer System) communication protocol can provide for the communication between the machine and the data transfer terminal:

CONNECTION

If you activate this function, the machine will be waiting for connection with a device for the purpose of acquiring EVADTS statistics.

TECHNICIAN MENU

The main software functions required to manage the machine operation as well as possible are briefly explained here below. They are grouped by logic of utilisation and not necessarily in the order they are displayed in the menus.

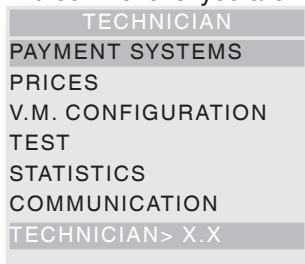
The software release can be updated by using proper systems (PC, Giga, Upkey etc...).

For more information and details refer to the dose table supplied with the machine. Please make reference to the machine software release.

Press key **←** from the “Filler” mode to set the machine to the “Technician menu” mode.

The display shows the first “Technician” menu item with the series of operations made available.

The last line shows the menu and the number enabling the operator to find out the level you are in.



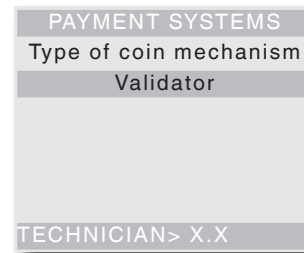
- Press the Enter key **↵** to access the menu.
- Press the Exit key **←** to go back to the previous menu.
- Press key **↑** and **↓** to scroll the menu items.

Notes:

Press key **←** to go back to the Filler mode from any first-level function.

PAYMENT SYSTEMS

You can decide which protocols to enable for the payment systems available and manage the relative functions.



The communication protocols for the payment systems available are listed here below:

- Validators
- Executive
- BDV
- MDB

Some parameters shared by several payment systems keep the set point even if you change the type of system. If necessary, they can be modified by the menus of the various payment systems.

VALIDATOR

IMMEDIATE CHANGE

The amount relative to a selection is generally cashed after the machine has sent the “Successful selection” signal.

If you enable this function, which is disabled by default, the cash signal is sent at the start of the dispensing cycle.

The setup of this parameter is compulsory.

DECIMAL POINT

Press the Enter key **↵** to display the position of the decimal point, i.e.

- 0 decimal point disabled
- 1 XXX.X (one decimal digit after the point)
- 2 XX.XX (two decimal digits after the point)
- 3 X.XXX (three decimal digits after the point)

If you press the Enter key **↵**, these values will flash on and off and they can be modified.

LINE/VALUE ASSOCIATION

When the display is positioned on the “LINE-VALUE ASSOC.” function (line programming) of the “programming” menu, you can vary the value of the 6 coin lines of the validator from A to F.

OVERPAY

You can decide whether to cash or leave the credit exceeding the selection amount at the user’s disposal.

EXECUTIVE

VERSION

You have to choose among the following payment systems for the Executive system:

- Standard
- Price holding
- Price holding price display (UKEY)

IMMEDIATE CHANGE

The amount relative to a selection is generally cashed after the machine has sent the "Successful selection" signal.

If you enable this function, which is disabled by default, the cash signal is sent at the start of the dispensing cycle.

The setup of this parameter is compulsory.

BDV

The BDV protocol menus will enable the user to define the following functions.

IMMEDIATE CHANGE

The amount relative to a selection is generally cashed after the machine has sent the "Successful selection" signal.

If you enable this function, which is disabled by default, the cash signal is sent at the start of the dispensing cycle.

The setup of this parameter is compulsory.

TYPE OF SALE

Used to set the operation mode by multiple or single dispensing. In case of multiple dispensing, the change is not automatically given at the end of a successful delivery, but the credit will remain available for further dispensing. If you press the coin return button, the remaining credit will be returned if its value is lower than the maximum change value.

CHANGE REFUSED

Used to enable/disable the credit return (escrow) if no dispensing has been performed.

If enabled, this function will provide for the return of the coins even if the first dispensing cycle has not occurred. If a delivery has failed for any reason whatsoever, the change will be paid upon request.

MAXIMUM CREDIT

Function used to define the maximum accepted credit for inserted coins.

MAXIMUM CHANGE

You can set a limit on the total amount of the change the coin mechanism will pay as soon as you press the change button or after one single dispensing.

The credit exceeding the amount you have programmed by this function will be cashed.

COINS ACCEPTED

Used to define which coins shall be accepted among those recognised by the validator.

For the coin/value correspondence check the label showing the position of the coins on the coin mechanism.

COINS NOT ACCEPTED

Used to program the refusal of a coin in case of "exact amount".

For the coin/value correspondence check the label showing the position of the coins on the coin mechanism.

"EXACT AMOUNT" VALUE

Used to define the combination of empty tubes intended to set the coin mechanism to the "exact amount" mode. All possible combinations of empty tubes are listed here below.

For reasons of simplicity, the combination is described with reference to tubes A, B and C, where tube A will receive the lowest-value coins and tube C the highest-value coins.

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

DISPENSING BUTTONS

Function used to enable or disable the buttons arranged on the coin mechanism in order to discharge the coins in the change tubes.

C.P.C. PERIPHERAL UNIT

It is intended to inform the coin mechanism whether some peripheral units have been installed or removed from the serial connection (peripheral units of the C.P.C type - the default control unit is always enabled).

MINIMUM TUBE LEVEL

Used to warn the user in advance to “Insert exact amount” by adding a number of coins between 0 and 15 to the number of coins that has been programmed to establish the status of full change tubes.

VMC FREE SALE

Most of the payment systems complete with a BDV protocol is intended to manage the free sale function.

However, there are some payment systems not having this function.

In this case, it is necessary to enable the VMC (vending machine control, disabled by default) free sale and to set the price of selections to zero if some selections are dispensed on a free basis.

MDB

The MDB protocol menus will enable the user to define the following functions.


IMMEDIATE CHANGE

The amount relative to a selection is generally cashed after the machine has sent the “Successful selection” signal.


If you enable this function, which is disabled by default, the cash signal is sent at the start of the dispensing cycle.

The setup of this parameter is compulsory.

DECIMAL POINT

Press the Enter key  to display the position of the decimal point, i.e.

- 0 decimal point disabled
- 1 XXX.X (one decimal digit after the point)
- 2 XX.XX (two decimal digits after the point)
- 3 X.XXX (three decimal digits after the point)

If you press the Enter key , these values will flash on and off and they can be modified.

The setup of this parameter is compulsory.

TYPE OF DISPENSING CYCLE

Used to set the operation mode by multiple or single dispensing. In case of multiple dispensing, the change is not automatically given at the end of a successful delivery, but the credit will remain available for further dispensing. If you press the coin return button (if the function is enabled), the remaining credit will be returned up to the maximum change value.

OBLIGATION TO BUY

To enable/disable the operation of the coin return button before dispensing a product.

- ON: the change is returned after having selected a product
- OFF: the change is returned just after having pressed the coin return key (the machine is acting as a coin changer)

MAXIMUM CREDIT

Function used to define the maximum accepted credit for inserted coins.

MAXIMUM CHANGE

You can set a limit on the total amount of the change the coin mechanism will pay as soon as you press the change button or after one single dispensing. The credit exceeding the amount you have programmed by this function will be cashed.

COINS ACCEPTED

Used to define which coins shall be accepted among those recognised by the validator when the change tubes are full.

For the coin/value correspondence check the coin mechanism configuration.

COINS RETURNED

Used to define which coins shall be used to give the change among those available in the tubes. This parameter is active only with the coin mechanisms not intended to manage the choice of the tube in use automatically (Auto changer payout).

For the coin/value correspondence check the coin mechanism configuration.

BILLS ACCEPTED

Used to define which bills shall be accepted among those recognised by the reader.

For the bill/value correspondence check the reader configuration

BELOW-THE-LEVEL ACCEPTANCE

Used to define which coins shall be accepted among those recognised by the validator when the machine is in the “exact amount” mode.

For the coin/value correspondence check the coin mechanism configuration.

BELOW-THE-LEVEL BILL ACCEPTANCE

Used to define which bills shall be accepted among those recognised by the reader when the machine is in the “exact amount” mode.

For the bill/value correspondence check the reader configuration.

CASHLESS PRIVATE

To protect the users’ privacy, this function is intended to display the string “----” in the place of the credit on the cashless system.

OVERPAY

You can decide whether to cash or leave the credit exceeding the selection amount at the user’s disposal.

CASH-SALE MANAGEMENT

Used to give evidence that cash transactions have occurred by means of a cashless system.

The values available are listed here below:

- **0** standard operation: cash transactions are recorded as such
- **1** forced sending to cashless 1: cash transactions are recorded as transactions performed by the first cashless system
- **2** forced sending to cashless 2: cash transactions are recorded as transactions performed by the second cashless system

PARALLEL MACHINE

Function used to enable the presence of a validator or parallel bill reader to recharge the keys.

EXACT CHANGE EQUATION

To choose among 12 different algorithms to enable the machine to give the change at the end of the selection. Every single algorithm checks a series of requirements, such as the amount of coins in the tubes or the (empty or full) state of the tubes the coin mechanism will use to give the change.

If one of these requirements is not fulfilled, the machine can supply no change. In this case, the display will show the “No change” message.

MAXIMUM CASHLESS CREDIT

Function used to set up the maximum credit a cashless key/card may have to be accepted by the system. If the key has got a higher value, it will be rejected.

The setup value shall always be higher than or equal to the value set for the “Maximum cash revalue” function. If modified and lower, it will be automatically set to the same value as the “Maximum cash revalue”.

MAXIMUM CASHLESS RECHARGE

Used to set up the maximum credit you can charge on a key or card system.

MINIMUM TUBE LEVEL

Used to set a number of coins between 0 and 15 in order to establish the status of full change tubes and to warn the user to “insert the exact amount”.

BILL READER FUNCTION (BILL REVALUE)

Used to enable the bill reader only to recharge the credit on the cashless system (key or card)

INDEFINITE CREDIT ACCEPTANCE

This function is intended to accept cashless payment systems (key or card) or not if the cashless system credit is not defined.

GROUPS OF USERS

The function is intended to associate a price list (list 1, list 2 and list 3) to the groups of users (from 1 to 5). All groups of users are associated to list 1 by default.

PRICES

From this menu you can set up prices individually (for every single selection) or globally (the same price for all selections) and define the ranges of the promotional time band.

The machine can manage up to 4 different prices for every single selection, which may be active according to the time band you have set up (either standard or promotional) and/or the payment system in use.



Prices are grouped into 4 lists and they can be programmed (from 0 to 65,535) for each one of the 4 lists either globally (the same price for all selections) and for every single selection.

The price of one single selection can be directly varied from the keyboard too.

If you have to sell most products at the same price, it will be advisable to programme the price globally and to change the price of the selections having a different sales price.

BDV, EXECUTIVE, VALIDATORS

These systems enable you to manage not only the standard price list, but also a promotional price list if the time band is enabled by the corresponding function. Selections will be dispensed at the price of the promotional list during the time intervals you have programmed.

MDB

These systems are intended to establish whether to use the 4 price lists at the same time or to use two alternative ranges according to the time band you have set up.

If you do not use the time band, you can manage not only the standard price list, but also three further price lists according to the type of cashless support in use (key 1-3).

If you use a time band, selections will be dispensed at a price other than the standard one for the cashless system. During the time intervals you may have programmed, selections will be dispensed at two different promotional prices for the standard list and the cashless system.

PROMOTIONAL TIME BAND

4 time ranges programmable for the sale at different prices.

Ranges can be set up by hour (from 00 to 23) and by minute (from 00 to 59).

The time of reference is supplied by an internal clock that can be set up from the configuration menu of the machine (see paragraph "V.M. Configuration").

V.M. CONFIGURATION

This group of functions is intended to check all parameters relative to the operation of the machine.

DATE AND TIME SET

Function used to set up the current date and time. The value is used to manage the time band and statistics. In case of power failure, the machine keeps the set up date and time by means of a buffer battery.

COOLING PARAMETERS

The operation of the cooling system can be programmed for the following functions.

COLD UNIT ENABLE

You can disable the operation of the cooling unit. The change will apply as soon as you restart the machine. After having enabled the cooling unit, modify the following parameters: temperature, defrost and temperature record enable.

TEMPERATURE

You can directly set the refrigerated box temperature value during the operation in degrees °C (from 3.5 to 20°C),

The default temperature is 8°C (if the "food" management is not active, otherwise 3.5°C if the food management is active).

The differential deviation from the temperature set for the start/stop of the cooling unit is 2°C.

DEFROST

The function allows for a 20-minute defrost cycle (the cooling unit is powered off, regardless of the temperature).

The time interval between one cycle and the other one can be programmed from 0 to 99 hours (every 6 hours by default); the time interval will be determined according to the environmental humidity and the number of times the door is opened.

If the time is set to 0, the function is disabled.

FOOD MANAGEMENT

The machine is arranged to manage the dispensing cycles of refrigerated foodstuffs.

- OFF: Food management disabled

- ON: the safety temperature control (3.5°C by default) is active, the time required to reach the temperature (pulldown) 45 minutes by default and you can define the tray range for control.

- CUSTOM: Use a password (1111 by default) to enable the control and customise the safety temperature value (from 4 to 15°C) and the "pulldown" time (from min. 45 to max. 360 minutes) and to modify the password for custom food management.

The customisation of parameters might be the source of danger in terms of food safety.

Those who have set up such parameters will be the sole responsible for any damage the improper customisation of such parameters may cause to people.

After having decided to activate the standard or custom food management, you are required to enter the number of trays with the "food" management (if set to 1, the machine is considered all food).

The sale of "food" products is stopped when:

- The refrigerated box temperature is above the threshold value for over 15 minutes in the normal operation mode.

- The refrigerated box temperature is above the safety value if you power on the machine and if the door is not opened before.

- The temperature setpoint of the refrigerated box is not reached after 45-minute operation after the door has been closed; at the expiry of this time, the dispensing cycle of food products is locked.

No control is carried out any longer if the function is deactivated and you can set the refrigerated box temperature between 8°C and 20°C on all trays.

TEMPERATURE RECORD

The inner temperature is stored every 10 minutes. Use this function to read date, time and recorded temperature.

HEATING ELEMENT ENABLE

To enable/disable (ON/OFF) the operation of the anti-condensate heating element in the compartment of the slide-in shelf.

Set to OFF by default

DB MANAGEMENT

This group of functions is intended to manage the basic data of the machine operation.

INITIALISATION

This function shall be used in case of a memory data error or if the software is replaced.

All statistic data are reset except for the general electronic counter.

When the display is set to the "Initialisation" function, you can

- initialise the machine by restoring all default data.
- initialise the machine by using the data saved during previous customisation;
- save the data modified on the machine in external memories

Press the Enter key **↵** to display the request for confirmation "Do you confirm?". If you press the Enter key **↵** once again, you will be required to enter some parameters, i.e.

- **Country**: understood as the type of configuration
- **Language**: for the messages that will appear on the display

SAVE DB CUSTOM

To save the current configuration of the machine on an external memory. This function is of use if you customise (e.g. the parameters of selections) with respect to factory settings.

RESTORE DB CUSTOM

To restore the machine configuration you have customised and saved before by means of the "Save DB custom" function.

To restore factory settings, initialise the machine.

DISPLAY

This group of functions controls all display parameters.

LANGUAGE

Use this function to select the language you wish to use to display the messages among those made available by the software.

USER DISPLAY

To enable and select the type of information you wish to display during the normal operation mode.

The information you can display is supplied here below:

- Refrigerated box temperature
- Time-table
- Refrigerated box temperature of the "slave" machine

SETTING UP THE PROMOTIONAL MESSAGE

The promotional message can have max. 4 lines (20 characters per line). It can be composed by using the keys **↑** and **↓** to scroll all available characters.

If you press the Enter key **↵**, the first character you can modify will flash on and off.

Press the key **↵** to store the message.

PROMOTIONAL IMAGE

To enable/disable the promotional image on the display in the normal operation mode:

- **ON**: the message "Select a product" and the promotional image are alternated every 3 seconds in the normal operation mode
- **OFF**: only the message "Select a product" is displayed in the normal operation mode

LCD CONTRAST REGULATION

Use this function to regulate the display contrast from min. 5% to max. 99% (default).

SCREEN SAVER TIME

Use this function to set up the screen saver activation after a programmable shutdown time of the machine (from 0 to 200 minutes).

It is set up to 10 minutes by default.

If the value is set to 0, the screen saver is deactivated

CURRENCY SYMBOL

Use the function to enable the display of the currency symbol (€, \$ or £) during the credit display.

MENU MANAGEMENT

PASSWORD

It is a 5-digit numeric code you are required to enter to access menu functions.

The password is disabled by default (00000)

SPIRALS AND SELECTIONS

From this group you can set up the parameters of selections.

MACHINE CONFIGURATION

To recognise and store the number and positions of the trays and selection motors.

VIRTUAL SELECTIONS

To define a pair of selections that can be sold at a price different from the sum of the two selections.

5 virtual selections can be programmed (80 to 84).

VIRTUAL PRICE RETURN

Use this function if you do not wish to cash the price of the second selection if the second dispensing cycle of a virtual selection should fail (only if MDB payment systems or validators are in use). For the other payment systems, you can establish whether to return the whole amount or not.

TWO-MOTOR SELECTION

To dispense long products, you can use two motors for one single selection.

Use this function to combine the operation of two motors by specifying the selection number and the second motor.

The first motor number will be the selection number whereas the selection number of the associated motor will remain disabled.

Important!

After a failure to the motors of these selections, follow the procedure intended to configure the "Spirals/Selections" menu of the machine

ROTATION SELECTIONS

Use this function to create 6 groups of several spirals that are activated by rotation by means of the same selection number to increase the autonomy of the same product and to make dispensing uniform.

The spirals grouped in a single selection must be adjacent.

All the selections belonging to the same group must have the same price

To manage the safety devices on the selections properly, it is recommended to mount the device intended to detect the dispensing cycle on the machine.

PRODUCT CODE

Use this function to assign every single spiral a 4-digit identification code to process statistics.

MAXIMUM NUMBER OF PRODUCTS

The function is intended to set up the maximum number of products belonging to a selection.

Press key **↑** and **↓** to scroll selections and press key **↵** to confirm the selection where to act.

Use the numeric keys to enter the value.

Press key **←** to store the setup.

MINIMUM PRODUCT LEVEL

The function is intended to set up the minimum number of products belonging to a selection. After having reached it, the operator is prompted to reload the selection.

Press key **↑** and **↓** to scroll selections and press key **↵** to confirm the selection where to act.

Use the numeric keys to enter the value.

Press key **←** to store the setup.

CAM ALIGNMENT

To re-position the spirals that have performed an "extra" rotation to dispense the product.

EXECUTE NOW

Press the Enter key **↵** to align spirals immediately (motor rotation)

EXECUTE AT THE START-UP

To activate the request for spiral alignment (motor rotation) at the next power-on of the machine.

At the next power-on of the machine: the display shows the message requiring the user to press the "programming" key necessary to access the function for cam alignment for 10 seconds.

Press key **↵** to activate the alignment or key **←** to cancel.

If the "programming" key is not pressed within 10 seconds, the machine will switch to the normal operation mode without any cam alignment.

PHOTOCELL PARAMETERS

The machine can be fitted (as a standard or as an option according to the models) with a device intended to detect the passage of dispensed products by means of photocells.

If this device is mounted, you can check the following:

- Error before the dispensing cycle; when the beam of the photocells is not read at the start of the dispensing cycle
- Error after the dispensing cycle; when the motor fails during the dispensing cycle
- No product error; when the device fails to detect the product passage during the dispensing cycle

In these cases, you can programme the machine to:

- Set an "extra" rotation time for each spiral to facilitate the product release
- Return the paid amount or not;
- Lock any further selection on the spiral in question.

DISPENSING COMPARTMENT LOCK PARAMETERS

The dispensing compartment can be fitted (as a standard or as an option) with a device intended to lock the compartment.

This function is used to decide whether to leave the compartment:

- Always free
- To release it upon dispensing

The door is only released for a well-defined time interval (programmable from 1 to 10 minutes) in the "release upon dispensing" mode as soon as you request for a product.

However, you can enable the function intended to set the machine out of service for a well-defined time interval programmable between 1 and 10 minutes, if the door stays open.

The machine is set out of service if the lock device is always closed during a dispensing cycle.

ENERGY SAVING

Use this function to power off the heating of the boilers and/or the lights of the external illumination in order to save electric energy whenever the machine is not used. 2 power off time bands can be programmed on a weekly basis. The days of the week are identified by a progressive number (1=Monday, 2=Tuesday etc.).

The same range can not include the days of different weeks.

If you should set up overlapping time bands by mistake, the machine will remain on for the shorter period.

If you wish to set up the Service interruption bands to power on the machine from 7.00 a.m. to 10.00 p.m. on the days of the week and power it off on Saturdays and on Sundays, please set up the bands by means of the corresponding menu, as it is shown by the following table.

Day		1	2	3	4	5	6	7
Band 1	start	00.00	00.00	00.00	00.00	00.00	00.00	00.00
	end	07.00	07.00	07.00	07.00	07.00	23.59	23.59
Band 2	start	22.00	22.00	22.00	22.00	22.00	00.00	00.00
	end	23.59	23.59	23.59	23.59	23.59	00.00	00.00

When the "Energy saving" time band has tripped, the illumination of the glassfront will remain active and the display show the "Out of service" message.

V.M. LED OUT OF SERVICE

Use this function to define whether to turn on or off the glassfront lighting when the machine is out of service or to leave lighting always on.

PROGRAMMING THE V.M. CODE

Use this function to change the "machine code". The "machine code" is an 8-digit numeric code identifying the machine (default 00000000)

PROGRAMMING THE OPERATOR CODE

Use this function to change the 6-digit numeric code identifying groups of machines (default 00000000).

INSTALLATION DATE

Use this function to store the current system date as the installation date.

The date is printed at the time of rolling out statistics.

MASTER/SLAVE

The control system of the machine is arranged for bank connection with other automatic vending machines by using special kits.

This will enable the operator to use one single payment system for several machines.

Even if you can use the machine in the master and slave function, it is recommended to use the snack machine as a master to make use of the central keyboard and to open the doors more easily.

The master/slave function is not enabled by default.

To enable it, define the "master" machine and the "slave" machine in the software of the "master" machine and in the software of the "slave" machine.

The payment system of the slave machine shall always be defined as a "validator".

In case of power failure between bank-connected machines, all machines will display the "communication failure" message.

SET UP

Use this function to define whether the machine is a "Master", i.e. controlling the second machine, or a "Slave", i.e. controlled by the other machine.

SLAVE PRICE HOLDING

Enable this function if the machine is configured as a "slave" and an executive payment system is set up on the master in the "price holding" mode.

COMBINED SELECTIONS

Use the function to combine two selections (one of the "Master" machine and one of the "Slave" machine).

TYPE OF MELODIA

If 2 or more than two vending machines are bank-connected, use this function to define the Master/Slave hierarchical order among the vending machines of the same type by assigning each of them a label (Melodia2; Melodia3; etc.)

RESET MELODIA SL

Use this function to reset all settings relative to the master/slave function on the "Slave" machine.

MONITOR

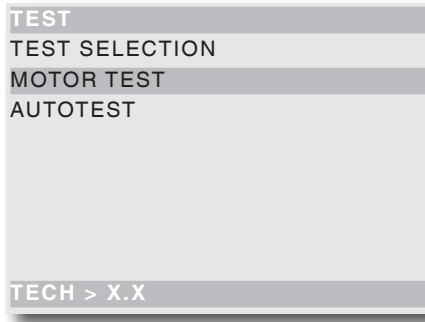
Use this function to scroll all information about the "Slave" machine, if connected.

After having set the display to this function, power on the slave machine to display the following slave information in sequence:

- software release
- type of slave (XX, OXX, 9XX)
- presence of photocells intended to detect the dispensing cycle
- number of trays and drawers
- presence of the device intended to lock the opening of the dispensing compartment
- temperature detected by the internal probe.

TEST

This group of functions is intended to test the main components of the machine.



TEST SELECTION

Use this function to simulate the normal distribution of products without inserting the corresponding amount. To check the rotation of the motors, select the selection number.

MOTOR TEST

This function is intended to operate all motors of the trays.

AUTOTEST



A function is implemented in the software to check the correct operation of the machine devices half-automatically.

Some tests occur automatically whereas others require the manual operation of the component under test.

Press button  to test the next device.

The devices under test are listed here below:



- **Keyboard:** the display shows the key you have to press. If the key can operate properly, you will be required to check the next key.
- **Temperature:** to display the refrigerated box temperature value measured by the probe.
If the display shows “-11.0”, it means that the probe is faulty or that there is an interruption in the electric connection of the probe.
If the display shows “41.0”, it means that the probe has short-circuited.
- **Buzzer:** a series of sounds is produced to check the acoustic signaller.
- **Display:** to turn on all display points to check the operation visually.
- **LED lighting:** to turn on all lighting LED's of the glassfront. Never look at the sources of light directly during the test.

- **Compressor:** press key  to activate the compressor and the impeller; press key  to deactivate the compressor and the impeller.

- **Selections:** to activate all selections in a sequence.

- **Coin mechanisms:** to check the correct communication with the coin mechanism and which validator lines are set up as active.

- **Photocells:** to check the device intended to detect the product passage. It is intended to detect the interruption of the light beam.


- **Compartment lock:** press key  to lock the compartment and press key  to unlock it.

TEMPERATURE TEST

This group of functions that may be of use after having acted on the cooling unit is intended to check the operation of the cooling unit and the internal temperature probe.

START TEST

It is intended to start the temperature test. The operator is required to enter an identification code (that may be even zero) and the refrigerated box temperature is detected and stored every 30 seconds for a 20-min. normal operation.



Press key  to display the test progress and the number of acquisitions made.

The machine is available for the other functions during the temperature test.

PRINT TEMPERATURE

Connect a serial printer with the following communication parameters: baud rate 9600, 8 data bits, no parity, 1 stop bit, with the RS232 serial connector inside the door to print the temperatures measured during the test.

To print the stored data, act as follows:

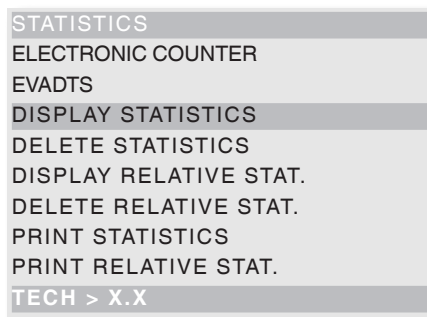
- Press key  to display the request for confirmation, i.e. the message “Do you confirm?”
- Connect the printer before confirming
- Press key  to start printing.

STOP TEST

Use the function to stop acquiring the temperature in the refrigerated box.

STATISTICS

The operation data of the machine are stored in total and relative counters that can be reset without losing total data.



ELECTRONIC COUNTER

An electronic counter is intended to store all the dispensing cycles you have performed since you last reset it in an aggregated manner.

DISPLAY THE ELECTRONIC COUNTER

Use this function to display the total number of dispensing cycles sold since the last reset of statistics.

RESET THE ELECTRONIC COUNTER

You can reset the electronic counter.

DISPLAY THE ELECTRONIC COUNTER AT THE START-UP

Function used to enable or disable the display of the total number of dispensing cycles that have been sold since you last reset the statistics, while you are powering on the machine.

EVA-DTS

The codes used to identify the machine and recognise the data transfer terminal are established by the EVADTS (European Vending Association Data Transfer System) communication protocol.

To access the settings (such as communication speed, type of transmission, ...), choose the communication protocol you wish to use with the data acquisition device. Use the scrolling keys **↑** and **↓** to scroll the communication protocols.

COMMUNICATION PROTOCOL

DDCMP ENHANCED

with the following configurable parameters:

- **Pass code:** it is a four-digit numeric code (from 0 to 65535) that shall be the same as the one of the data transfer terminal for identification.
Default setup 0000
- **Security code:** it is a numeric code (from 0 to 65535) for mutual recognition between machine and EVA DTS transfer.
Default setup 0000
- **End-of-transmission:** if enabled, it can recognise the end-of-transmission signal sent to the last package and interrupt data transmission.

DEX/UCS

No configurable parameter is expected for this protocol:

DATA TRANSMISSION

The function is intended to select which communication interface shall be used for data transmission. The following interfaces are made available:

- "RS232" and "IrDA": for communication with serial or infrared data acquisition devices.
- "ALWAYS EVA DTS" for communication with data acquisition and transmission devices (telemetry).

TYPE

The function will enable the operator to choose how to manage the communication speed with data acquisition devices:

- "ENHANCED": the communication speed is automatically adjusted to the maximum speed the slowest device can support.
- "FIXED": the communication speed is fixed and it uses the communication speed set up by means of the "baudrate" function.

BAUDRATE (TRANSMISSION SPEED)

To choose the communication speed of transmission (only if "EVA DTS type" is set up to "fixed").
Setup by default 2400bps.

CONNECTION

If you activate this function, the machine will be waiting for connection with a device in order to acquire EVADTS data.

REFILL ENABLE

Only for models with a data transmission system.



The function is intended to enable the request to enter the “refill code” at the end of the power-on cycle of the machine.

The “refill code” is a 4-digit code (1234 by default) used to reset the counters managing the “ending product” pre-alarms to be sent by means of the data transmission system.

DELETE STATISTICS


Statistics can be reset either globally (all types of data) or selectively, i.e. by:

- selections
- discounts-overprices
- failures
- coin mechanism data

Press the Enter key  to display the request for confirmation “Do you confirm?”  flashing on and off.

Press the Enter key to display the “Execution” message for some seconds and to reset statistics.

DISPLAY RELATIVE STATISTICS



Press the Enter key  to display the data you have stored in sequence, i.e.:

- 1 - counter by single selection;
- 2 - counter by band;
- 3 - failure counter;
- 4 - coin mechanism data.

DELETE RELATIVE STATISTICS

Statistics can be reset either globally (all types of data) or selectively, i.e. by:

- selections
- failures
- coin mechanism data

Press the Enter key  to display the request for confirmation “Do you confirm?”  flashing on and off.


Press the Enter key to display the “Execution” message for some seconds and to reset statistics.

PRINT STATISTICS

Connect an RS232 serial printer having 9600 baud rate, 8 data bits, no parity, 1 stop bit with the serial connector on the slide-in compartment to print the statistics stored by:

- 1 - counter by single selection;
 - 2 - counter by band;
 - 3 - failure counter;
 - 4 - coin mechanism data.
- or to print all statistics

PRINT RELATIVE STATISTICS

Press the Enter key  to print all the data you have stored in sequence, i.e.:

- 1 - counter by single selection;
- 2 - counter by band;
- 3 - failure counter;
- 4 - coin mechanism data.

BDV protocol audit

The coin mechanism data are intended to supply the following information in real currency:

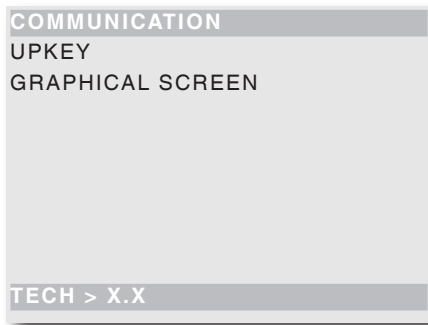
- Aud. 1 Money in the tubes
money currently available in the change tubes
- Aud. 2 Money to the tubes
Money conveyed to the change tubes
- Aud. 3 Money to the coin box
Money conveyed to the coin box
- Aud. 4 Change returned
Total amount of the money that has been returned.
- Aud. 5 Money dispensed
Total amount of the money that has been manually dispensed
- Aud. 6 Surplus
Surplus money. Amounts paid by the customer in excess and not returned (in case no money is available for change)
- Aud. 7 Total sales
Total sales value.
- Aud. 8 Exact change
Sales value on the "Insert exact amount" condition.
- Aud. 9 Mixed dispensing
Total dispensing value paid in a different way, e.g. also other types of payment (C.P.C., coin).
- Aud. 10 Manual load
Money inserted into the coin mechanism by means of the manual loading function.

MDB protocol audit

- Aud. 1 Money in the tubes
money currently available in the change tubes
- Aud. 2 Money to the tubes
Money conveyed to the change tubes
- Aud. 3 Money to the coin box
Money conveyed to the coin box
- Aud. 4 Change returned
Total amount of the money that has been returned.
- Aud. 5 Surplus
Surplus money. Amounts paid by the customer in excess and not returned (in case no money is available for change)
- Aud. 6 Unloading of tubes
Value of the coins dispensed by means of the "Manage tubes" function
- Aud. 7 Loading of tubes
Value of the coins cashed by means of the manual loading function.
- Aud. 8 Cash sales
Value of the total sales made cash (coins + bills)
- Aud. 9 Bills cashed
Value of the bills that have been cashed
- Aud.10 Charge key
Value of the money that has been recharged on the key
- Aud.11 Key sale
Value of the money that has been cashed through key-dispensing.
- Aud.12 Money dispensed manually
Value of the coins that have been manually dispensed through the dispensing buttons on the coin mechanism.

COMMUNICATION

This menu is intended to group the communication functions of the device.



UP-KEY

SETUP MANAGEMENT

UPKEY -> VENDING MACHINE

After having inserted the Up key into the plug on the C.P.U. board, this function is used to select the setup file from the list on the display. Press the Enter key to load the setup file you have selected on the machine.

VENDING MACHINE ->UPKEY

After having inserted the Up key into the plug on the C.P.U. board, this function is used to save on the Up key a setup file with the same configuration currently available on the machine.

Please specify the name you wish to assign to the file (e.g.: MELOD000.STP)

DELETE

Use this function to delete one or more than one setup file on the up key you have inserted

DELETE ALL

Use this function to delete all the setup files on the up key you have inserted.

UPKEY STATISTICS MANAGEMENT

VENDING MACHINE ->UPKEY

Confirm this function after having inserted the Up key into the plug on the C.P.U. board to save on the up key the statistics file with all the statistical data currently available on the vending machine. Please specify the name you wish to assign to the file (e.g.: MELOD000.EVA).

DELETE

Use this function to delete one or more than one statistics file on the up key you have inserted.

DELETE ALL

Use this function to delete all the statistics files on the up key you have inserted.

V.M. SELECTION

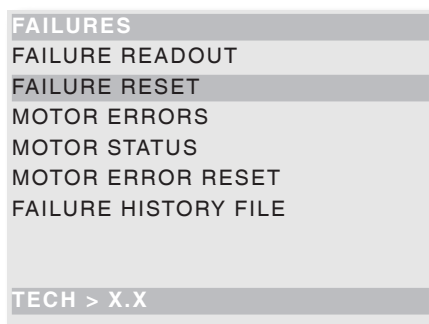
To univocally identify the devices acting as "slave" (they send data to the "master" machine through modem). Number 0 identifies the "master" machine.

FAILURES

The machine is equipped with several sensors intended to control the various functional units.

As soon as a malfunction is found out, the type of failure is displayed and the machine (or part of it) is set out of order.

The failures are stored in special counters.



FAILURE READOUT

Function used to display the current failures.

Press the Enter key **↵** to display the current failures.

If there is no failure at the moment, the "Failure end" message will appear on the display by pressing key **↵**.

Possible failures are listed here below:

- **Compressor:** The machine stops if the compressor is working for over twenty-four consecutive hours.
- **Coin mechanism:** The machine stops if it should receive an over 2-sec. pulse on a validator line or if the communication with the coin mechanism is not longer than 30 (Executive protocol) or 75 (BDV protocol) seconds.
- **RAM data:** One or more than one area of the RAM memory contain altered data that have been corrected by default values.

- **Probe:** The machine stops after 5 minutes if the probe is found out to be electrically interrupted (the display shows -11°C).

The machine stops after 1 hour if a probe short-circuit is found out (the display shows +41°C).

- **Motor error:** The machine displays all faulty motors. Faulty motors are displayed every 1 second.

Note: If you power on the machine again, any faulty motor is found out as not available.

- **Dispensing compartment lock:**

- If the function "compartment release upon dispensing" is enabled, the fault is signalled if the closing device is not released and locked within a well-defined time interval after the selection once again.

- If the function "out of service if open" is enabled, the failure to lock the closing device is displayed to lock the operation of the machine.

- If the function "out of service if open" is disabled, the failure to lock the closing device is displayed.

FAILURE RESET

Function used to reset all current failures, if any.

MOTOR ERRORS

Use this function to display faulty motors for about 1 second.

All faulty motors are scrolled automatically.

Note: If you power on the machine again, any motor that may have jammed is found out as not available.

STATE OF MOTORS

Use this function to learn the failure that last occurred on every single spiral even if the machine configuration provides for an empty position.

A motor can be in one of the following states:

- motor running;
- motor not available; when the motor is not detected as soon as you power on the machine.
- motor disconnected; when a motor is detected as soon as you power on, but not during the dispensing cycle
- motor locked; when the positioning switch is not operated within the "time out" time.
- empty spiral; when the dispensed product is not detected when the dispensing control device is mounted (photocells).

MOTOR ERROR RESET

Function used to reset all current failures, if any.

HISTORY FILE OF FAILURES

To display the last 16 failures from the latest to the earliest by pressing the scrolling keys **↑** and **↓**; it also displays date and time of action and whether the failure is still active or not (ON / OFF), similarly to the data supplied by the EVADTS audit data.

FAILURE HISTORY FILE RESET

Confirm the function to reset all the failures in the list "Failure history file".

Chapter 3 MAINTENANCE

The maintenance operations described by this chapter shall be performed when the machine is live. This means that they shall be carried out by the personnel specialised, trained on the use of the machine and informed about the specific risks that this condition involves. To power on the machine when the door is open, just insert the key into the main switch.

If you power on the machine when the glassfront is open, the lighting is turned on: never stare at any source of light.

Only the parts protected by covers and signalled by the plate “power off before removing the cover” remain live inside the machine.

Before removing these covers, detach the machine from the mains.

The intactness of the machine and its compliance with the rules of the relative installations shall be checked by skilled personnel at least once a year.

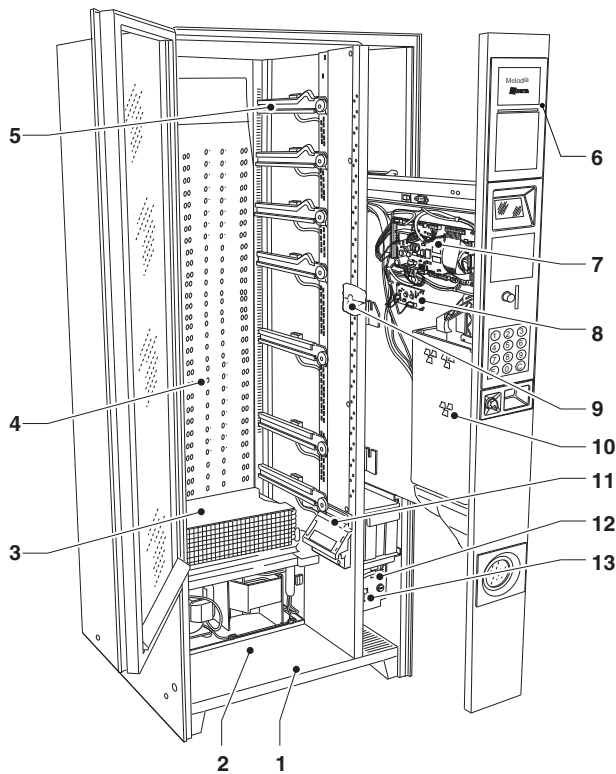


Fig. 25

- 1- Cabinet base
- 2- Dispensing compartment seat
- 3- Bottom of the refrigerated box
- 4- Cold air distribution grid
- 5- Tray guides
- 6- Slide-in user interface shelf
- 7- CPU board
- 8- LED power supply board
- 9- Food microswitch
- 10- Coin mechanism seat
- 11- Photocell
- 12- Electric panel
- 13- Main switch

CONFIGURATION OF TRAYS

PRODUCT SPACER

The spacers must be used to load thin products. Mount them in such a way that they can contain the product - without blocking it - towards the right side of the compartment so that it stays upright. Insert the longest part of the bracket into the hole on the compartment wall.

Couple the shortest part of the bracket with the spacer in one of the 5 notches. Adjustment notches enable the spacer to protrude more or less from the compartment. The maximum projection from the compartment may be useful for some types of products.

The spacer remains mobile. Push it forwards or backwards to adjust it to the type of product to be dispensed. However, leave at least 3 mm between the spacer and the product.

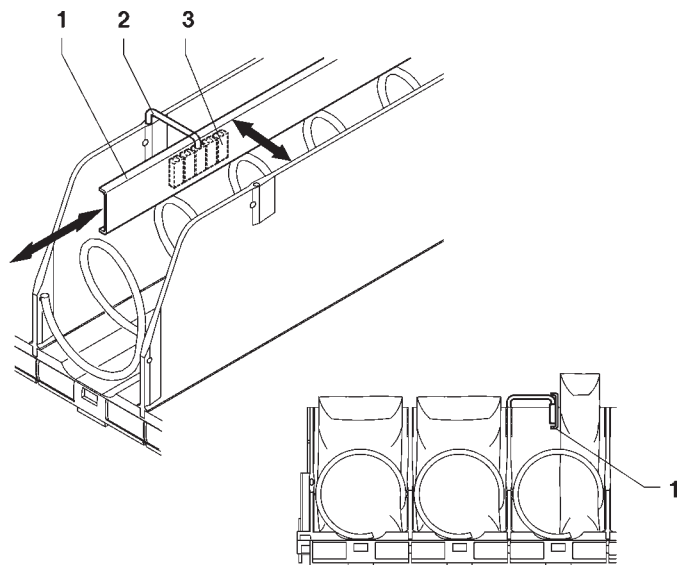


Fig. 26

- 1- Product spacer
- 2- Brackets
- 3- Adjustment notches

PRODUCT EJECTOR

Right and left ejectors must be used for products packed in bags, such as potato crisps or alike. As they are hooked at the end of the spiral, they will push the product further outside. If necessary, push them along the spiral wire to find out the position most suitable for the product to be dispensed.

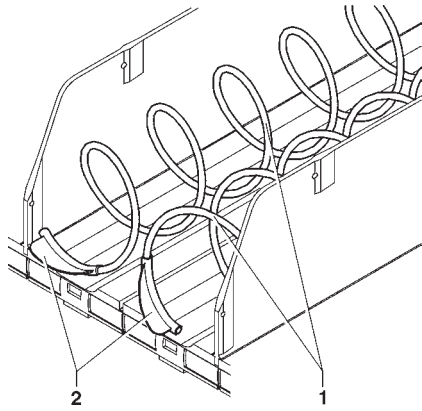


Fig. 27

- 1- Spirals
- 2- Ejectors

PRODUCT DIVIDER

To dispense sticks of candies or alike, you can double the 75 mm compartment capacity by using a spiral complete with a divider.

The spiral rotation shall be set to 180° instead of 360°. You can also insert a divider into already-existing spirals.

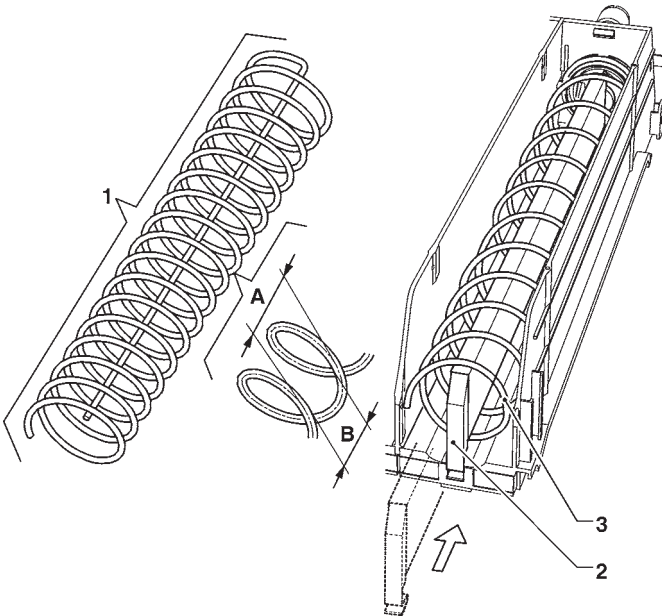


Fig. 28

- 1- Spiral with 180° rotation
- 2- Divider for 180° rotation
- 3- Spiral
- 4- Spiral pitch
- 5- Max. product size

PRODUCT RAISED SUPPORT

It is recommended to use a product raised support to dispense cans or 0.2L tetrapacks. The product raised support shall be mounted, as it is shown by the figure. Most bottles can be dispensed without any product raised support by loading the bottles up side down so that the cap slides in the compartment channel

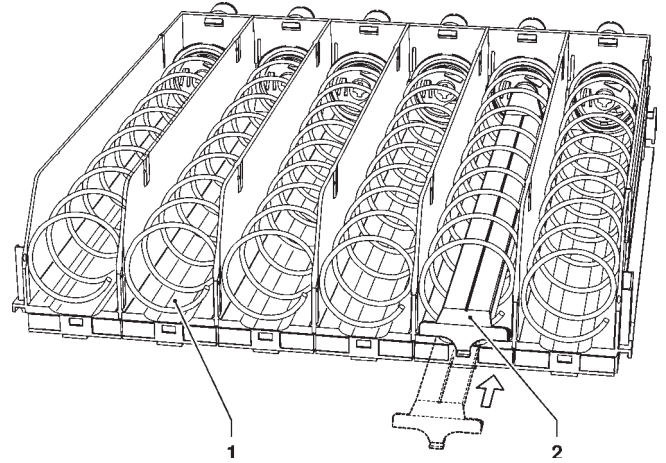


Fig. 29

- 1- Compartment channel
- 2- Product raised support

CONFIGURATION OF TRAYS

The configuration of the spirals on each tray can be changed.

To shift from two single compartments to a double compartment, act as follows:

- Remove the tray to be modified.
- Remove the wall separating the two single compartments by pushing it towards the back and by lifting it later on.
- Detach the spirals and the relative flanges from the two motors.
- Disconnect the left motor from the wiring and remove it from the tray. In its place, fit the bush and pin bush.
- First, mount the right-hand and left-hand spirals with the same pitch onto the new flanges (the right one and the left one are the same), fitted with a transmission gear wheel. Then, couple the right-hand one with the motor still on the tray and the left-hand one with the bushes you have mounted before. The two gear wheels must mesh.
- Remove the price and tray labels no longer used and, if necessary, update the price labels still in use.
- Set the sales price you wish for the new selections.
- Test the modified selections to be sure they are properly working.

Please Note: The selection numbers are formed by two digits; the first digit refers to the tray number, counting from the top (1-7), the second digit refers to the spiral number, counting from the left (0-10).

The selection number to which the motor is connected will therefore be formed by the tray number plus the wire code number.

HEAT SEPARATORS

The heat separators (limiting the machine food area) are fastened beneath the trays by using fastening screws. If you wish to convert the machine to the distribution of snack products only, remove the heat separator (see fig. 29):

- extract the trays where you have fastened the heat separators and remove all fastening screws.
- remove heat separators.
- disable the "food management" from the technician menu

You can increase or decrease the trays suitable for dispensing "food" products by moving heat separators.

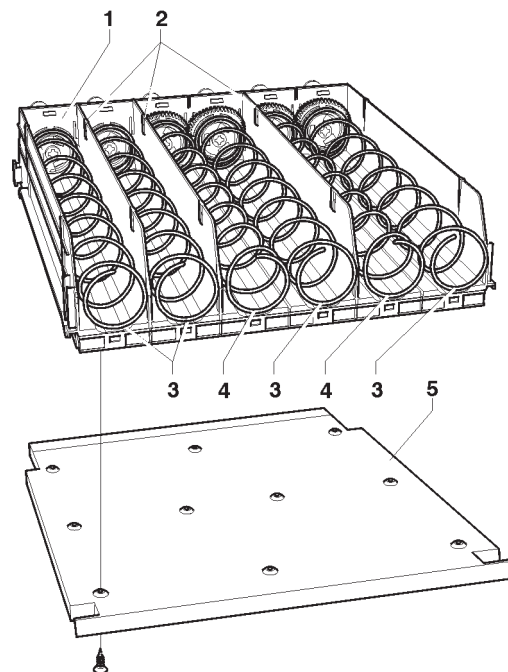


Fig. 30

- 1- Tray
- 2- Mobile walls
- 3- Right spiral
- 4- Left spiral
- 5- Heat separator



REPLACING SPIRALS

To replace the spirals, act as follows:

- Extract the tray in question.
- Rotate the spiral in the direction opposite to the ejection rotation while holding the plastic support flange still to separate the two parts.
- Fit the new spiral unit by acting in the opposite direction: Make sure that the spiral is positioned correctly.

The spirals can be positioned with 22.5 degree steps by pulling them towards the front and rotating them in the direction of ejection.

The products can be dispensed without any problem when the spiral end is at the bottom and in the middle. If the pitch and sense of spirals is known, the table here below and of fig. 29 will help you calculate the maximum size and the number of dispensable products.

	Spiral pitch (mm)	Product size (mm)	Products per spiral
	80	76	6
	64	60	7
	54	50	8
	46	42	9
	40	36	10
	34	30	11
	30	26	13
24	20	15	
	24 (180°)	20	19+19

The machine is supplied with a table indicating the optimum setting for the various product types.

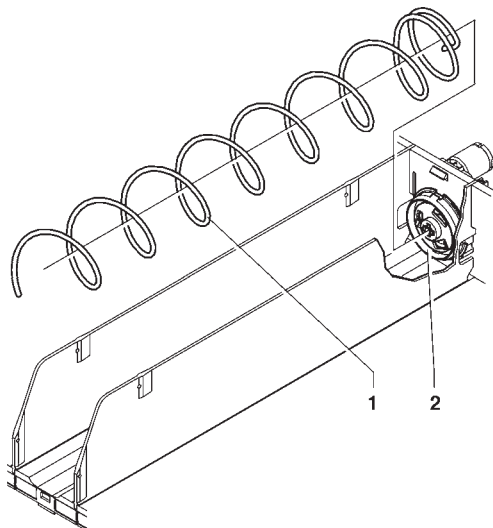


Fig. 31

- 1- Spiral
- 2- Plastic flange

BOTTLE TRAYS

The trays for bottles can be adapted according to the type of bottles to be dispensed.

You can:

- Replace the spirals with a pitch suitable for the product to be dispensed (see the paragraph "replace spirals")
- Change the position of the retaining spring according to the bottle height so that the bottle cap is placed above the retaining spring.

However, test every single compartment to be sure it is working properly.

Particularly irregular or insubstantial products might fail to be dispensed automatically.

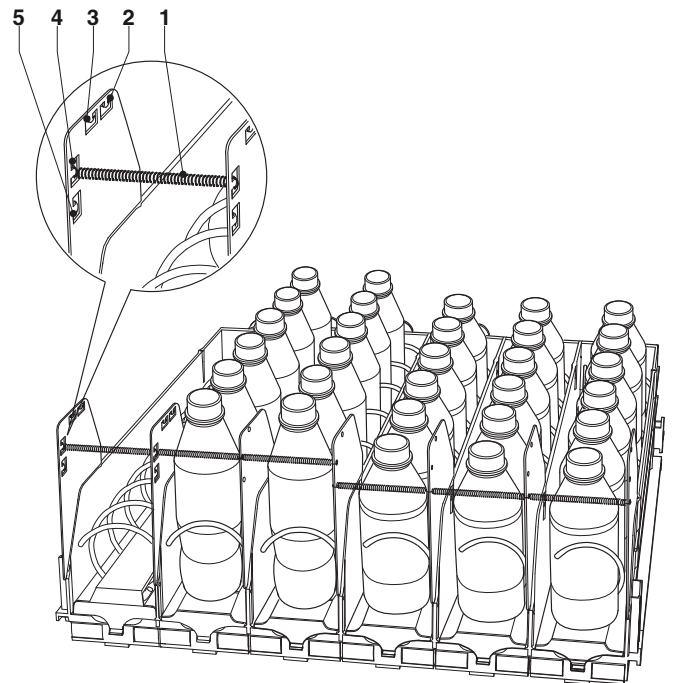


Fig. 32

- 1- Retaining spring
- 2- Holes for 0.50cl slim bottles
- 3- Holes for 0.50cl bottles
- 4- Holes for 0.33cl bottles
- 5- Holes for 0.25 or 0.33cl slim cans

REMOVING TRAYS

To replace the tray, act as follows:

- pull the tray as far as the limit stop;
- detach the electrical connector from the tray;
- lift the tray to unlock the retaining chute.
- act in the reverse order to assemble another tray.

RECLINING TRAY

Trays can be reclined downwards; if you wish to keep trays horizontally, just lock the tray lever by means of a screw by using the corresponding holes.

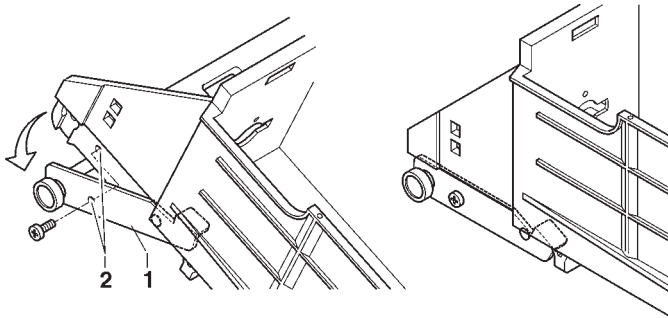


Fig. 33

- 1- Lever
- 2- Lever locking holes

CHANGING THE NUMBER OF TRAYS

The vending machines are supplied with 5 or 6 trays. However, you can change the number of trays by acting as follows:

- Detach the machine plug from the power mains.
- Remove all trays from the V.M..
- Move the tray guides as required; make sure that the guide is first inserted into the coupling slots and then secured by means of 2 screws by using the most appropriate fastening holes.
- Remove the pair of guides not used.
- Reassemble the trays by making sure that the connectors are inserted properly.
- Secure the removed wiring to prevent it from hampering the movement of the other trays and the relative wiring.
- Reprogramme the machine by using the "machine configuration" function from the "V.M. Configuration" technician menu.

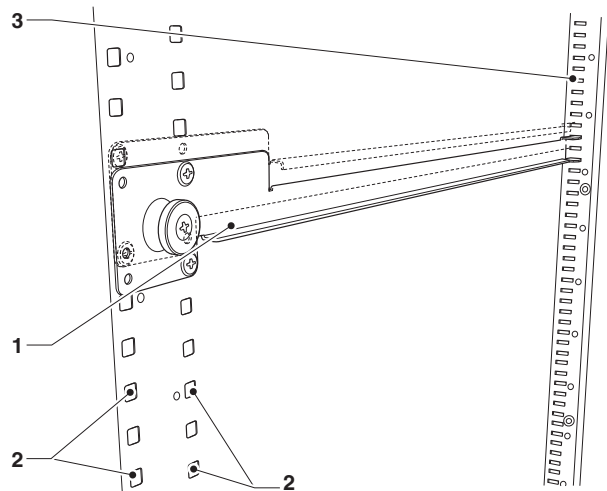


Fig. 34

- 1- Tray guide
- 2- Guide fastening holes
- 3- Coupling slots

STRATIFICATION OF THE REFRIGERATED BOX TEMPERATURE

Cold air is dispensed from the grid at the back of the refrigerated box (behind the trays).

The machine is supplied with (large and small) shutters intended to close the grid by varying the stratification degree of the refrigerated box temperature.

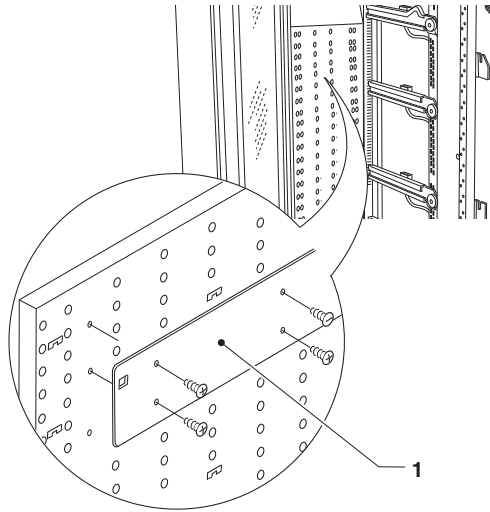


Fig. 35

1- Shutter

UNIFORM TEMPERATURE

If you wish to have a uniform temperature in the refrigerated box, the air distribution grid shall be completely free (never mount shutters).

STRATIFIED TEMPERATURE

The machine can have up to 3 zones at various temperatures in its maximum configuration.

The shutters shall be consecutively arranged on the grid intended to dispense cool air.

The stratification level varies according to the number and position of the shutters.

The table shows the configurations that have been experimentally established by the manufacturer:

3-zone configuration		2-zone configuration	
8-16°C	closed grid	8-16°C	closed grid
0-4°C	open grid		
5-8°C	closed grid	0-4°C	open grid

CLEANING THE VENTILATION GRIDS OF THE COOLING SYSTEM.

Clean the ventilation grids of the cooling system at least every 30 days by using a vacuum-cleaner and a brush. Detach the machine from the supply mains and act as follows:

- Open the slide-in shelf of payment systems.
- Remove the feet cover (unscrew the fastening screw)
- Clean the feet cover
- Use a brush to clean the aspiration grid beneath the electric panel.
- Re-assemble everything in the reverse order.

Attention !!!

To clean the grids NEVER direct any water jet against the machine.

If not correct, ventilation may compromise the good operation of the cooling unit.

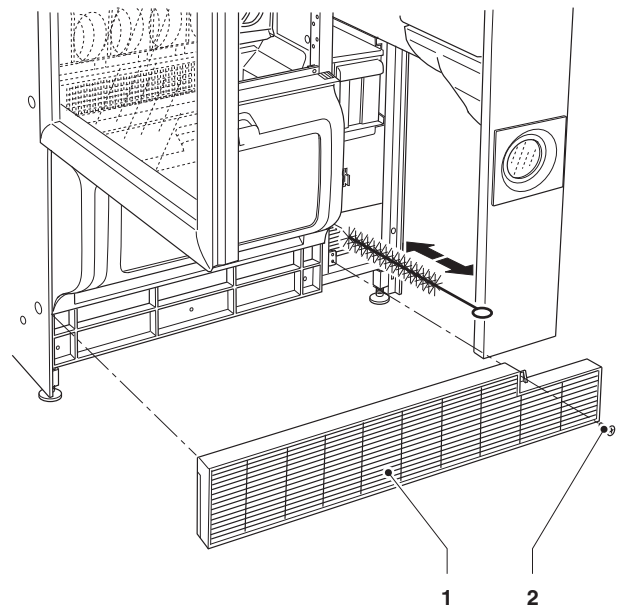


Fig. 36

1- Feet cover

2- Feet cover fastening screw

BOARD FUNCTIONS AND LIGHT SIGNALS

CPU BOARD

The CPU board is arranged on the slide-in shelf of payment systems and it can manage all components of the machine.

The LEDs on the board can supply the following information during the operation:

- the green LED (26) is flashing on and off during the normal operation of the C.P.U. board;
- the yellow LED (28) will turn on when 5 Vdc is applied;
- the red LED (27) will turn on if the software is reset for any reason whatsoever.

SOFTWARE UPDATE

The machine is equipped with Flash EPROM's that can be electrically rewritten.

Use a proper program and system (personal Computer, Up Keys or alike) to rewrite the machine management software without replacing the EPROM's.

Attention!!!

It is recommended to disconnect the connectors of motors (J1) and of the compartment lock (J2) from the C.P.U. board while downloading the software.

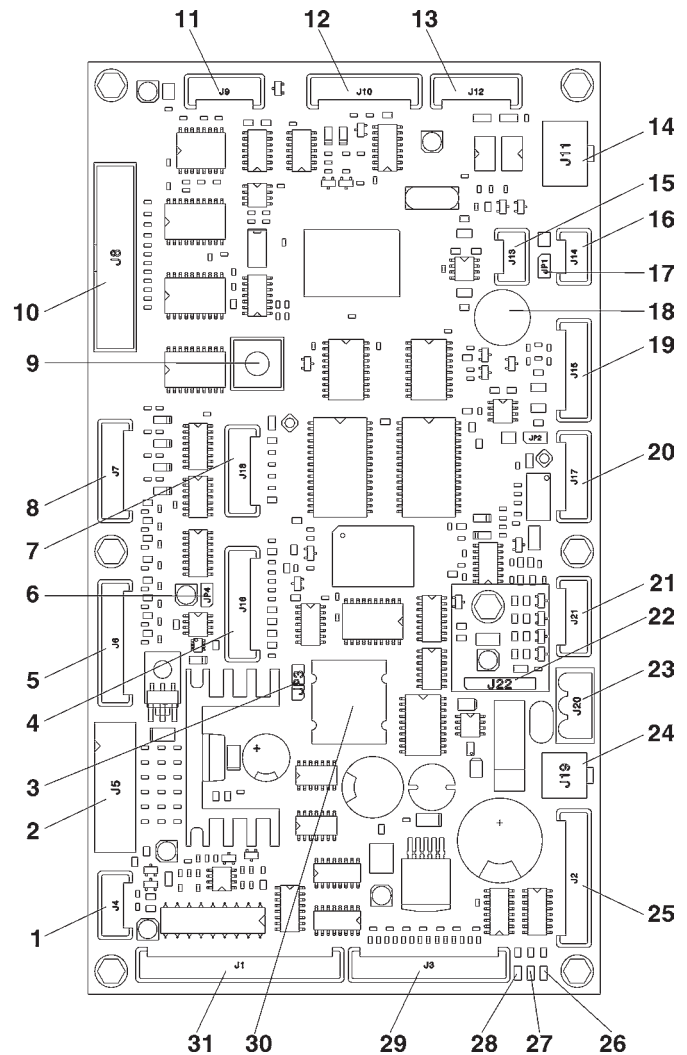


Fig. 37

- 1- Temperature probe (J4)
- 2- Validators (J5)
- 3- Battery jumper (pin 2 and 3)
- 4- not used (J16)
- 5- Direct selection keyboard (if J6 available)
- 6- Input watchdog jumper (closed)
- 7- Up-key (J18)
- 8- Numeric selection keyboard (J7)
- 9- Programming button
- 10- Display (J8)
- 11- Numeric keyboard supply (J9)
- 12- Serial RS232 (J10)
- 13- Payments EXE/BDV (J12)
- 14- Payments MDB (J11)
- 15- CAN-BUS connector (J13)
- 16- CAN-BUS connector (J14)
- 17- CAN-BUS jumper (closed)
- 18- Buzzer
- 19- Photocells (if J15 available)
- 20- Not used (J17)
- 21- Not used (J21)
- 22- RAM data expansion (optional J22)
- 23- 24Vac power supply (J20)
- 24- To the current regulator board (J19)
- 25- Compartment lock (J2)
- 26- DL3 "RUN" green LED
- 27- DL2 "RESET" red LED
- 28- DL1 "+5V" yellow LED
- 29- To the external programming button and relay (J3)
- 30- Battery
- 31- Tray motors (J1)

SOFTWARE UPDATE

The machine is equipped with Flash EPROM's that can be electrically rewritten.

Use a proper program and system (personal Computer, Up Keys or alike) to rewrite the machine management software without replacing the EPROM's.

Attention !!!

It is recommended to disconnect the motor connectors while updating the software.

CURRENT REGULATOR BOARD

This board supplies the LED's intended to light the glassfront for constant brightness.

The board is arranged in the slide-in shelf of payment systems.

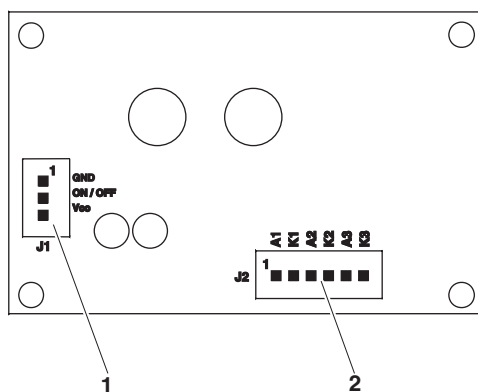


Fig. 38

- 1- To the CPU board
- 2- To the lighting LED's

ELECTRIC PANEL

The electric panel is accommodated in the compartment of payment systems. The door switch can be directly accessed. Remove the metal protection, to access the connectors on the front panel of the electric panel.

Remove the electric panel to access the relay intended to activate the cooling unit, the transformer, the line fuse and the protection fuses of the transformer.

Before replacing any fuse, please detach the power supply cable from the mains.

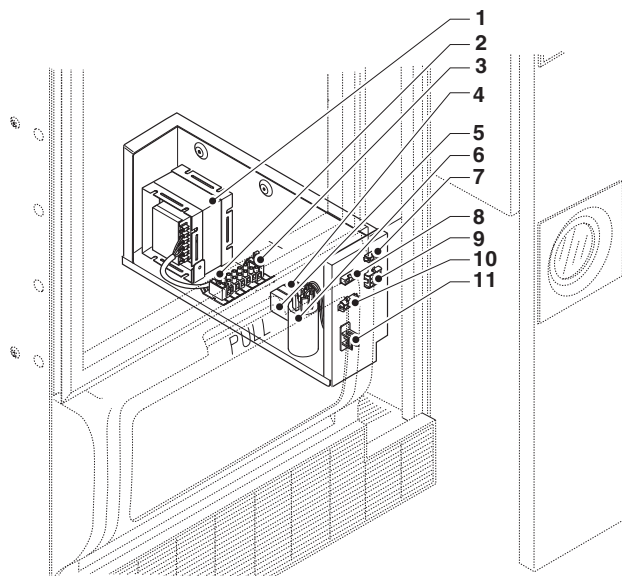


Fig. 39

- 1- 230V / 24V transformer
- 2- Primary and secondary transformer fuses
- 3- Line fuse
- 4- ON/OFF relay of the cooling unit
- 5- ON/OFF relay of the anti-condensate heating element of the slide-in compartment
- 6- Anti-jam filter
- 7- 24V~ connector for anti-condensate heating element
- 8- 220V~ connector for glassfront anti-condensate heating element
- 9- 24V CPU power supply connector
- 10- Cooling unit connector
- 11- Door switch

ACCESS TO THE COOLING UNIT

If you have to access the cooling unit from the machine for any reason whatsoever, please act as follows:

- Remove the last drawer from the machine temporarily.
- Remove the vandal-proof grid from the dispensing compartment.
- Remove the feet cover; loosen the screw and release it.
- Remove the screws intended to fasten the product dispensing compartment and extract it.
- Detach the wiring from the cooling unit of the connector on the right.
- Loosen the screws intended to fasten the cooling unit, extract the cooling unit from the machine.
- To re-assemble the unit, act in the reverse order.

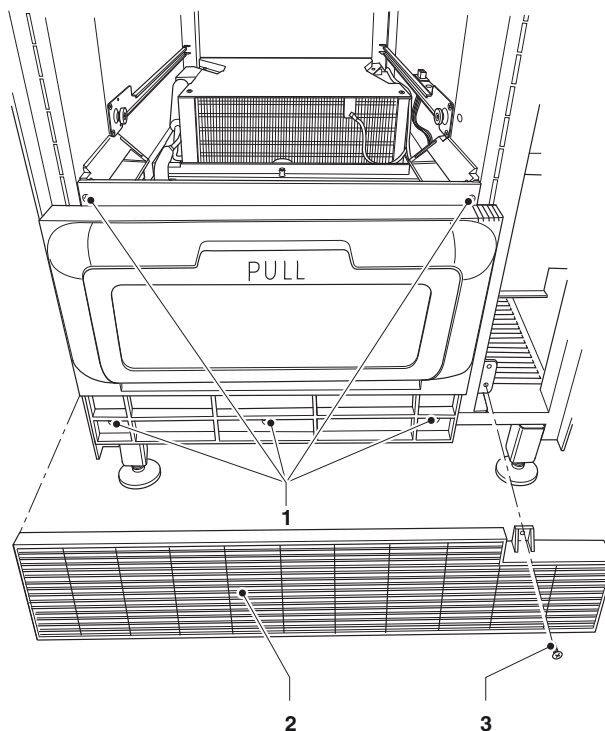


Fig. 40

- 1- Dispensing compartment fastening screws
- 2- Feet cover
- 3- Feet cover fastening screw

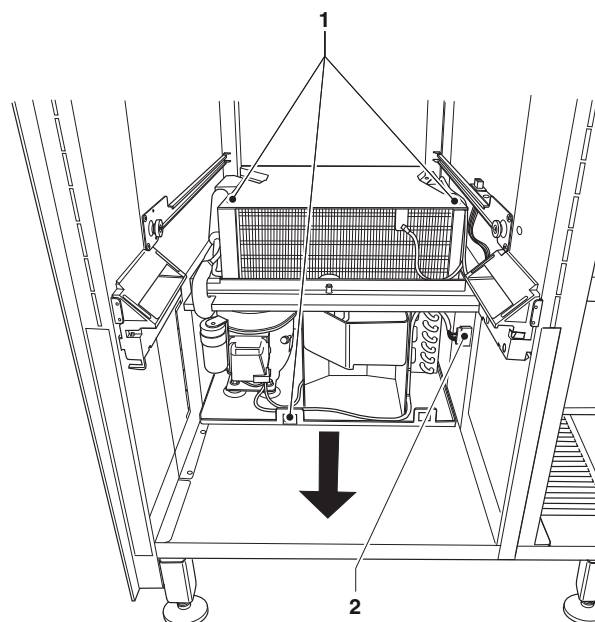
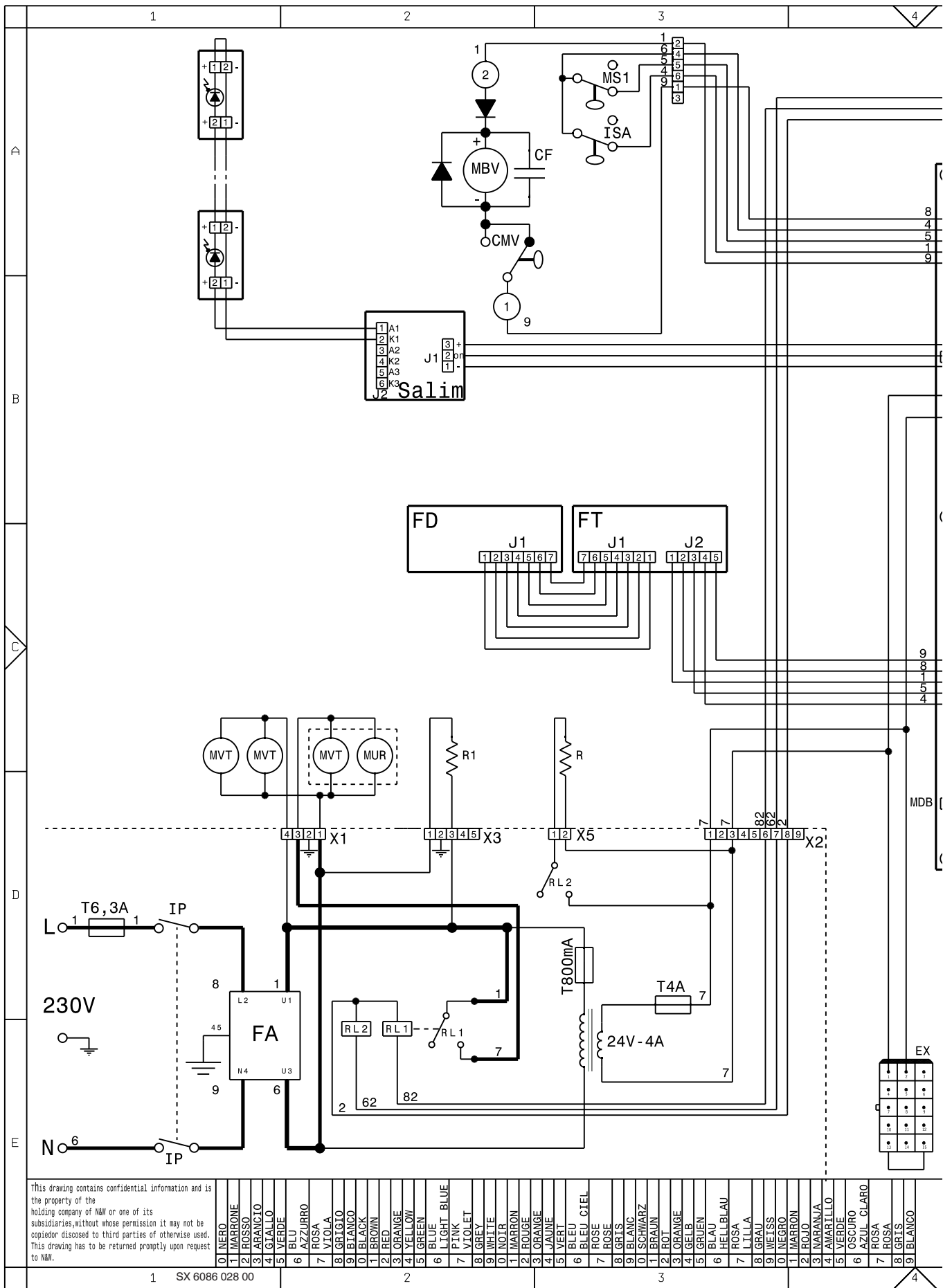


Fig. 41

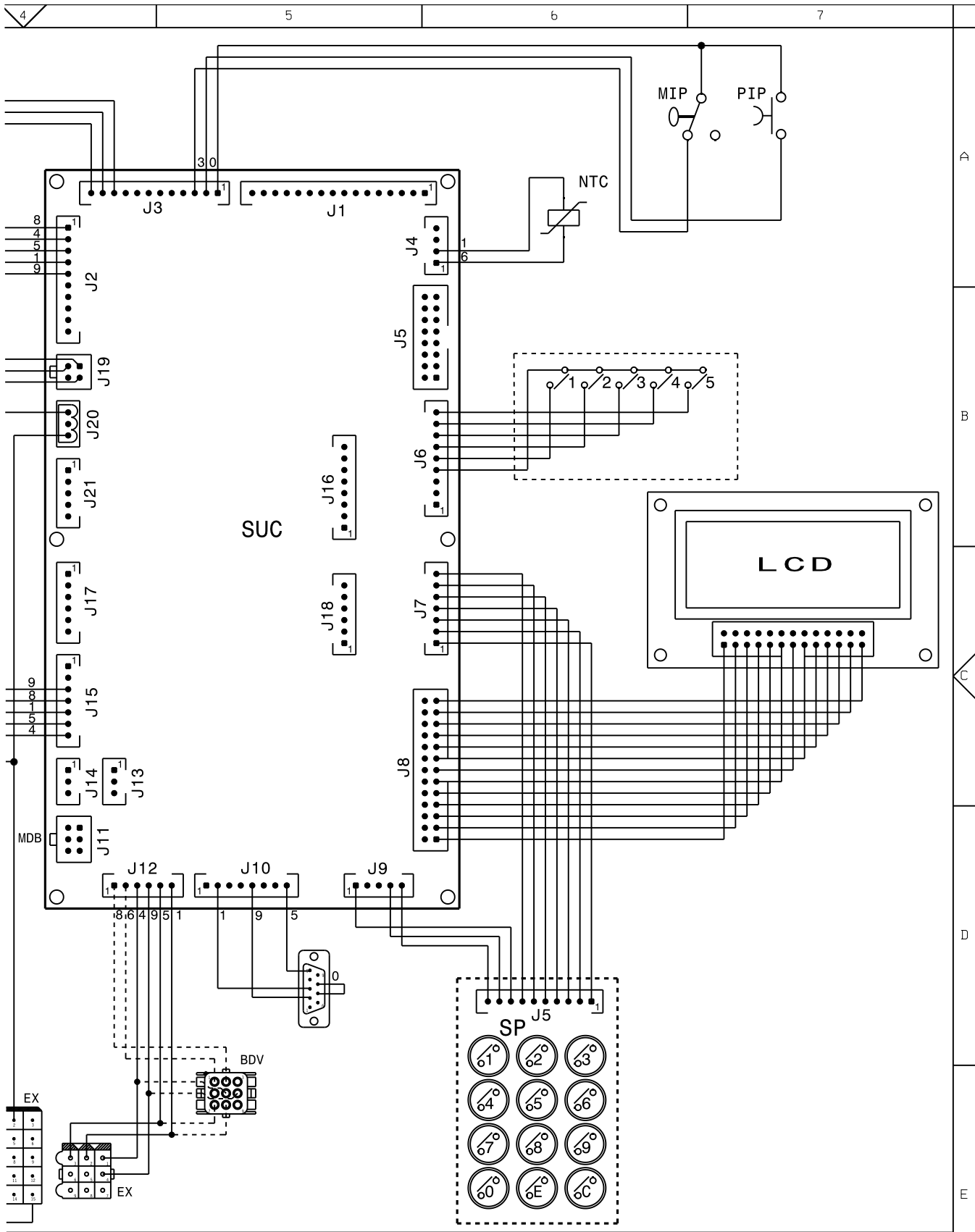
- 1- Cooling unit fastening screws
- 2- Cooling unit connector

WIRING DIAGRAMS

NAVIGATION

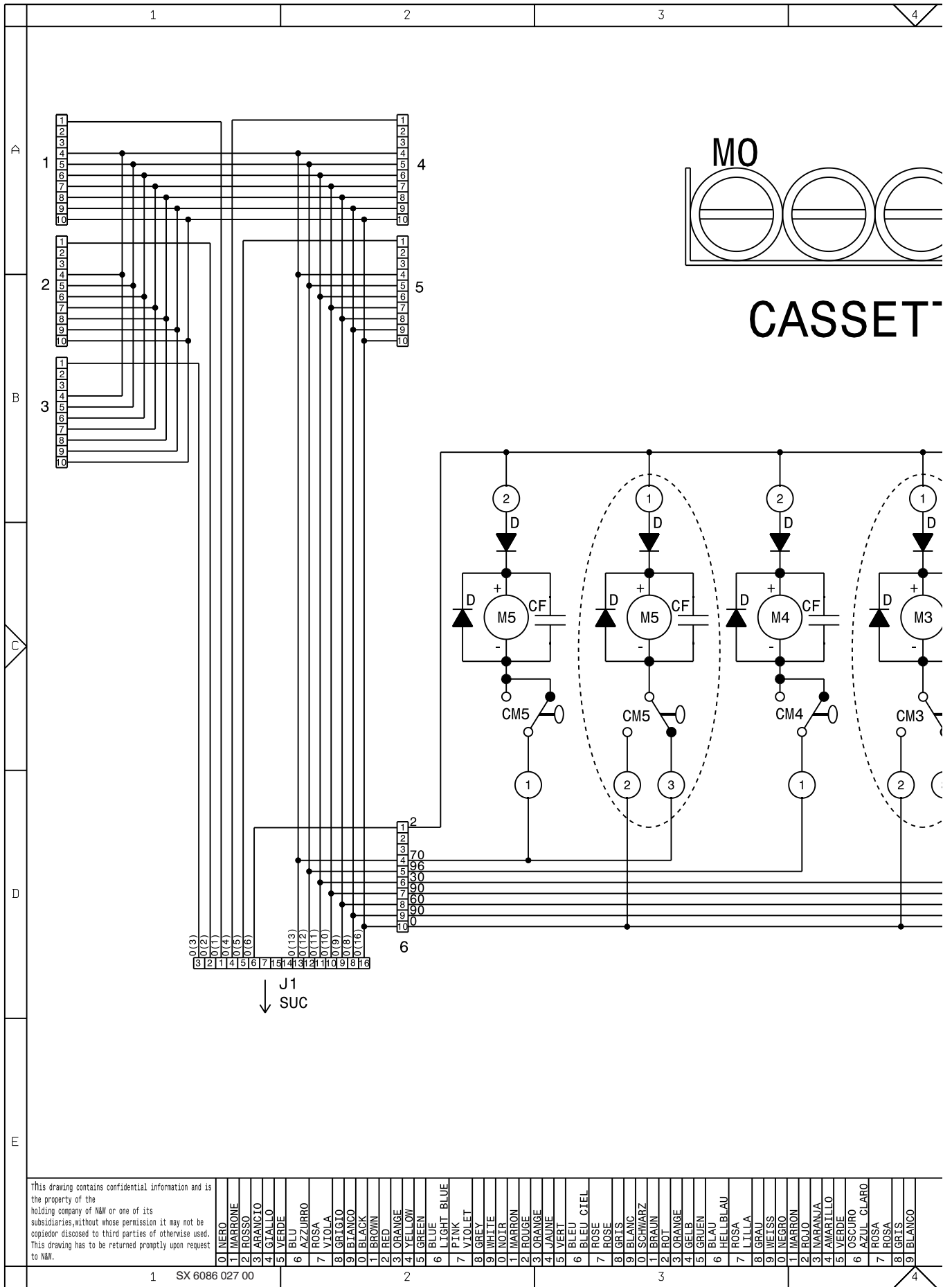


BDV	BDV COIN MECH CONNECTOR	IP	DOOR SWITCH
CF	FILTER CONDENSER	ISA	OPEN SLIDER SWITCH
CMV	COMPARTMENT LOCK MOTOR CAM	LCD	LIQUID CRYSTAL DISPLAY
EX	EXECUTIVE COIN MECH CONNECTORS	MBV	DISPENSING COMPARTMENT LOCK MOTOR
FA	RADIO INTERFERENCE SUPPRESSOR	MDB	MDB COIN MECH CONNECTOR
FD	PHOTODIODE	MIP	DOOR MICROSWITCH
FT	PHOTOTRANSISTOR	MS1	SLIDER MOTOR MICROSWITCH



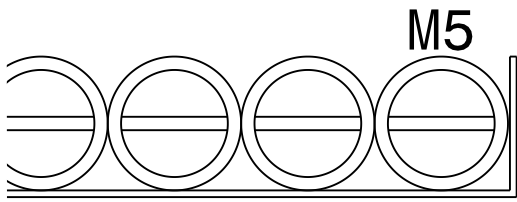
N&W GLOBAL VENDING S.p.A. Valbrembo - Italia	MODEL Melodia <i>Top</i>	DEFINITION SCHEMA ELETTRICO - WIRING DIAGRAM	DATE 10/02/2011	SHEET 1 / 1	PREPARED RIPAMONT	CHECKED CAPOBIANCO
			LEGENDA -	PART NUMBER 608602800		VERSION

- | | | | |
|-------|--------------------|-------|--------------------------|
| MUR | COMPRESSOR | RS232 | SERIAL PORT |
| MVT | MOTOR-DRIVEN FAN | SALIM | POWER SUPPLY UNIT BOARD |
| NTC | TEMPERATURE PROBE | SP | BUTTON BOARD |
| PIP | PROGRAMMING BUTTON | SUC | C.P.U. BOARD |
| R | HEATING ELEMENT | TR | TRANSFORMER |
| R1... | RELAIS | TX... | DELAYED FUSE (X=CURRENT) |

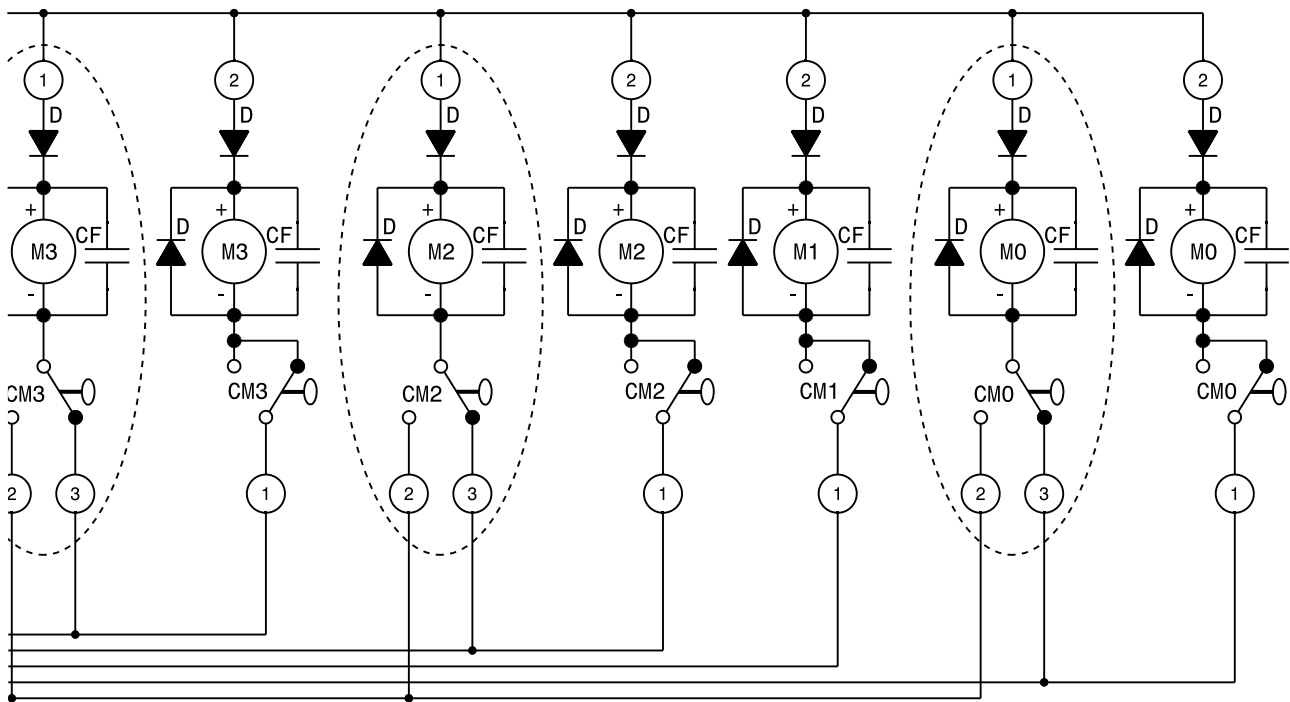


CF FILTER CONDENSER

CM0-9 VENDING MOTOR CAM



TTI / TRAYS



N&W GLOBAL VENDING S.p.A. Valbrembo - Italia	MODEL	DEFINITION	DATE	SHEET	PREPARED	CHECKED
	Melodia	SCHEMA ELETTRICO - WIRING DIAGRAM VASSOI TRAYS	25/05/2010	1 / 1	RIPAMONT	CAPOBIANCO
			LEGENDA	PART NUMBER	VERSION	
			-	608602700		

4	5	6	7
D	DIODE	M0-9	VENDING MOTORS

PROGRAMMING KEY SUMMARY

The machine can work in 3 different operation states:

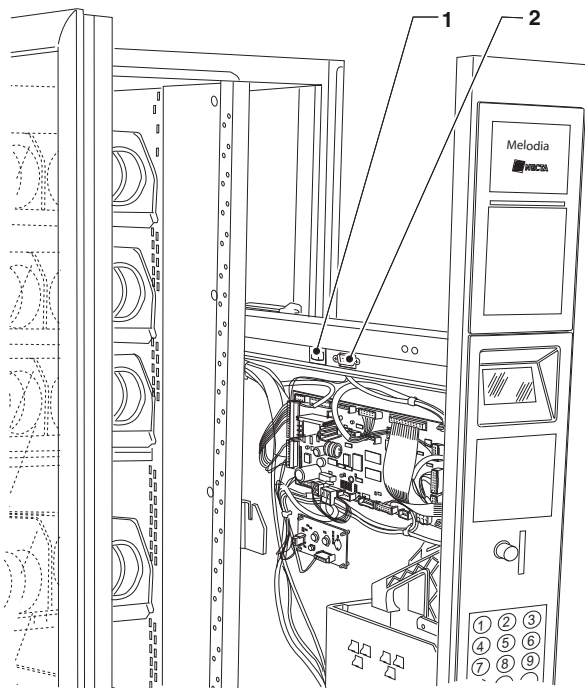
- Normal operation mode
- Filler menu
- Technician menu

To be able to access the programming menus:

- Power on the machine when the door is open by acting on the door switch.
- Press the programming button on the slide-in shelf of the user interface.

The machine displays the "Filler menu".

Press key ← to move to the "Technician menu" and viceversa.



1- Programming button
2- RS232 serial connector

NAVIGATION MODE

To move inside the programming menus, use the keys shown by the figure:



SCROLL ↑ AND ↓

8 and 9 to move from one item to the other one of the programming menus on the same level and to change the enable status (ON/OFF) or the numeric value of the functions.

CONFIRM ←

E to confirm a data item you have just entered / modified and access the immediately lower function.

CANCEL ←

C to go back to the upper level of the function or to quit a field intended to change a data item / value.

ENTER ALPHANUMERIC VALUES

When the management software requires the operator to enter alphanumeric characters, keys assume the following functions:

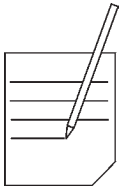
- ← to modify / enter the first character, to confirm it and to enter the next character.
- ↑ and ↓ to scroll all available values.

ENTER A PASSWORD

Passwords are 5-digit numeric codes.

When the management software requires the operator to enter a password, the keyboard will assume the corresponding numeric values.

Four horizontal lines for writing.



Twenty horizontal lines for writing.

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