

Vending machine model
Maxima/Karina

Manual for Use and Maintenance

Publication MD06426C

May 2011



Maxima/Karina

MD06426C Rev.0 del 01/12/2013

WE CONGRATULATE YOU FOR CHOOSING A PROJECT VENDING MACHINE. THIS PRODUCT HAS BEEN DESIGNED BY SKILLED TECHNICIANS AND MANUFACTURED ACCORDING TO THE HIGH QUALITY STANDARDS BY WHICH ALL THE PROJECT VENDING PRODUCTS HAVE ALWAYS DISTINGUISHED THEMSELVES.

THIS MANUAL WILL HELP YOU TO BECOME MORE FAMILIAR WITH YOUR MACHINE. WE SUGGEST THAT YOU READ THROUGH IT VERY CAREFULLY AND FOLLOW THE INSTRUCTIONS PROVIDED.

THIS DOCUMENT INCLUDES CONFIDENTIAL INFORMATION BELONGING TO PROJECT VENDING THE CONTENT OF THIS DOCUMENT CANNOT BE DIVULGED TO ANY THIRD PARTIES NOR COPIED OUT OR DUPLICATED, IN ANY FORM, COMPLETELY OR PARTLY, WITHOUT PREVIOUS APPROVAL IN WRITING BY PROJECT VENDING.

USE, DUPLICATION OR DIVULGATION OF THE TECHNICAL INFORMATION HEREIN CAN BE PROTECTED BY PROJECT VENDING. THROUGH THE LAW.

EDITOR/MANUFACTURER:

PROJECT VENDING, VIA RISORGIMENTO, 20 - 31047 PONTE DI PIAVE (TV) - ITALY

TEL 0422 895107 – INFO@PROJECTVENDING.IT - WWW. PROJECTVENDING.COM

DOCUMENT CHECKING TABLE		
Rev.	reason	Date
00	First release	01/12/2013
01		
02		
03		
04		
05		
Signature		



Contents

Section 1. Use and Maintenance	6
1_ GENERAL	6
1_1 INTRODUCTION	6
1_2 SAFETY STANDARDS	6
1_3 DISMANTLEMENT	7
1_4 HANDLING AND STORAGE	7
2_ DESCRIPTION OF THE MACHINE	8
2_1 EXTERNAL VIEW	8
2_2 INTERNAL PARTS	9
2_3 TECHNICAL FEATURES	10
2_4 STANDARD CONFIGURATION OF SPIRAL	SERRORE. IL SEGNA LIBRO NON È DEFINITO.
2_5 PACKING AND FITTINGS	10
3_ CUSTOMER SERVICE	11
3_1 MACHINE IDENTIFICATION	11
3_2 CONTACTS	11
4_ INSTALLATION	12
4_1 UNPACKING	12
4_2 INSTALLATION	12
4_3 CHANGE GIVER MOUNTING	13
4_4 PRODUCTS LOADING	14
4_5 SPACERS AND PRODUCT GUIDES	15
4_6 ELECTRICAL CONNECTION	16
5_ MACHINE OPERATION	16
5_1 GENERAL INFORMATION	16
5_2 QUICK PROGRAMMING	16
6_ MAINTENANCE	18
6_1 REMARKS FOR THE OPERATOR	18
6_2 ELECTRONIC BOARD	19
6_3 CLEANING OF THE MACHINE	20
6_4 REMOVAL OF SHELVES	20
6_5 MODIFICATION OF SHELVES CONFIGURATION	20
6_6 REPLACEMENT OF SPIRALS AND MOTORS	21
6_7 ELECTRICAL COMPARTMENT	22
6_8 ACCESS TO THE COOLING UNIT	23
6_9 TROUBLE SHOOTING	24
Section 2. Programming	27



1_	ACCOUNTING.....	28
1_1	CASHED AMOUNT	29
1_2	CASH SALES	29
1_3	CASHLESS SALES	29
1_4	CHANGE RETURNED	29
1_5	RESIDUAL CREDIT	29
1_6	COLLECTED COINS	29
1_7	COLLECTED BILLS	29
1_8	CASHL. RECHARGE	29
1_9	COINS FM C.G.	29
1_10	COINS C.G. TUBES	29
1_11	ACCOUNTING RESETTING	30
1_12	RELATIONS BETWEEN MONETARY VARIABLES	31
2_	COUNTERS	31
2_1	MAIN COUNTER	31
2_2	COUNTERS	31
2_3	COUNTERS RESETTING	32
2_4	INVENTORY RESETTING	32
3_	PRICES.....	33
3_1	NORMAL PRICES	33
3_2	CASHLESS PRICES	34
3_3	DISCOUNT	34
4_	SETTINGS.....	35
4_1	LANGUAGE	35
4_2	CURRENCY	35
4_3	CLOCK SETTING	35
4_4	CONTRAST	36
4_5	PASSWORD	36
4_6	MACHINE CODE	38
4_7	MAX. CHANGE	38
4_8	CREDIT PERSISTENCY	39
4_9	COUNTERS PASSWORD	39
4_10	GOOD WORKING MESSAGE	40
4_11	OUT OF ORDER MESSAGE	40
4_12	LIGHTING	40
4_13	FORCED VEND	41
4_14	OPTICAL BARRIER	41
5_	PAYMENT SYSTEMS.....	44
5_1	BASIC COIN	44
5_2	COIN MECHANISM	45
5_3	BILL READER	46
5_4	CHANGE GIVER	47
5_5	CASHLESS SYSTEM	48
6_	TEMPERATURES	49



6_1	TEMPERATURE SETTING	49
6_2	SET POINT SETTING	49
7_	COOLING UNIT	50
7_1	RESTORE STD C.U.P.	50
8_	CONFIGURATION.....	52
8_1	SHELVES CONFIGURATION	52
8_2	SPIRALS CONFIGURATION	52
8_3	MINIMUM STOCK	53
8_4	AUXILIARY VENDING MACHINE ENABLING	54
8_5	INVENTORY ENABLING	55
9_	MAINTENANCE.....	56
9_1	DIAGNOSTICS	56
9_2	FAILURE LIST	58
9_3	RESET FAILURE LIST	62
9_4	STD CONFIG.	63
10_	MODEM SETUP.....	64
10_1	OFFICE TELEPHONE NUMBER	64
10_2	MODEM TEST	64
10_3	SMS MAILING FREQUENCY	64
10_4	MODEM ENABLING	64
1_	ATTACHMENT 1 - INTRODUCTION	65
2_	ATTACHMENT 1 - MENU	66



Section 1. Use and Maintenance

1_General

1_1 INTRODUCTION

All the information provided herein is meant to obtain the best machine performance.

This manual includes all the data and instructions for the machine filling and cleaning, as well as the instructions for skilled technicians to carry out more complex operations.



This manual must be kept near the machine. If it gets lost or damaged, in order to receive a new one, the user shall let the manufacturer know the machine identification data as mentioned on the machine label.

In view of Project Vending's policy to improve its products whenever it is possible, Project Vending reserve the right to make any improvement on future production (as well as on the relevant manuals) without any previous notice and with no obligation to up-date the products already on the market.

1_2 SAFETY STANDARDS

The machine has been designed and manufactured according to the following European standards:
EN 60335-2-75 "Particular requirements for commercial dispensing appliances and vending machines".



IMPORTANT

- Before using the machine, the instructions herein must be read very carefully.
- The machine installation and maintenance operations must be performed by skilled operators only.
- The user shall not get into the machine areas whose protections are locked through systems requiring the use of tools to be removed.



- The machine is not suitable for installation outdoors, it must be installed in dry places at temperatures included between 5°C and 40°C and where no water jets for cleaning are used (ex. big kitchens).
- The machine reliability is ensured if just original spares are used.
- In order to ensure a good operation, the machine must be kept clean at all times.

Project Vending refuse all responsibility for any damages, directly or indirectly, to people or objects as a consequence of:

- Improper use of the machine;
- Incorrect installation;
- Incorrect power supply;
- Improper maintenance;
- Non authorized operations or modifications;
- Use of non original spares

In case of any damage, Project Vending is not bound to pay any compensation for damages due to a machine stop either to extend the warranty period.

1_3DISMANTLEMENT

In case of dismantlement, it is advisable to disassemble the machine subdividing its parts according to the kind of materials (plastics, metal, paper, etc.). Dismantlement of all the parts obtained this way must be entrusted to authorized companies.

1_4HANDLING AND STORAGE

The machine transport must be entrusted to skilled personnel, making sure that the machine is not overturned. During transport the machine must be kept in vertical position.

Given the machine weight, best care shall be taken on handling it in order to avoid any accident to the operator in charge of the transport (ex.: sprains, hernia, etc.).

As to storage, it is important not to put one machine on another and to keep the machine always in vertical position, in places at a temperature not lower than 0°C.

2_Description of the machine

2_1 EXTERNAL VIEW

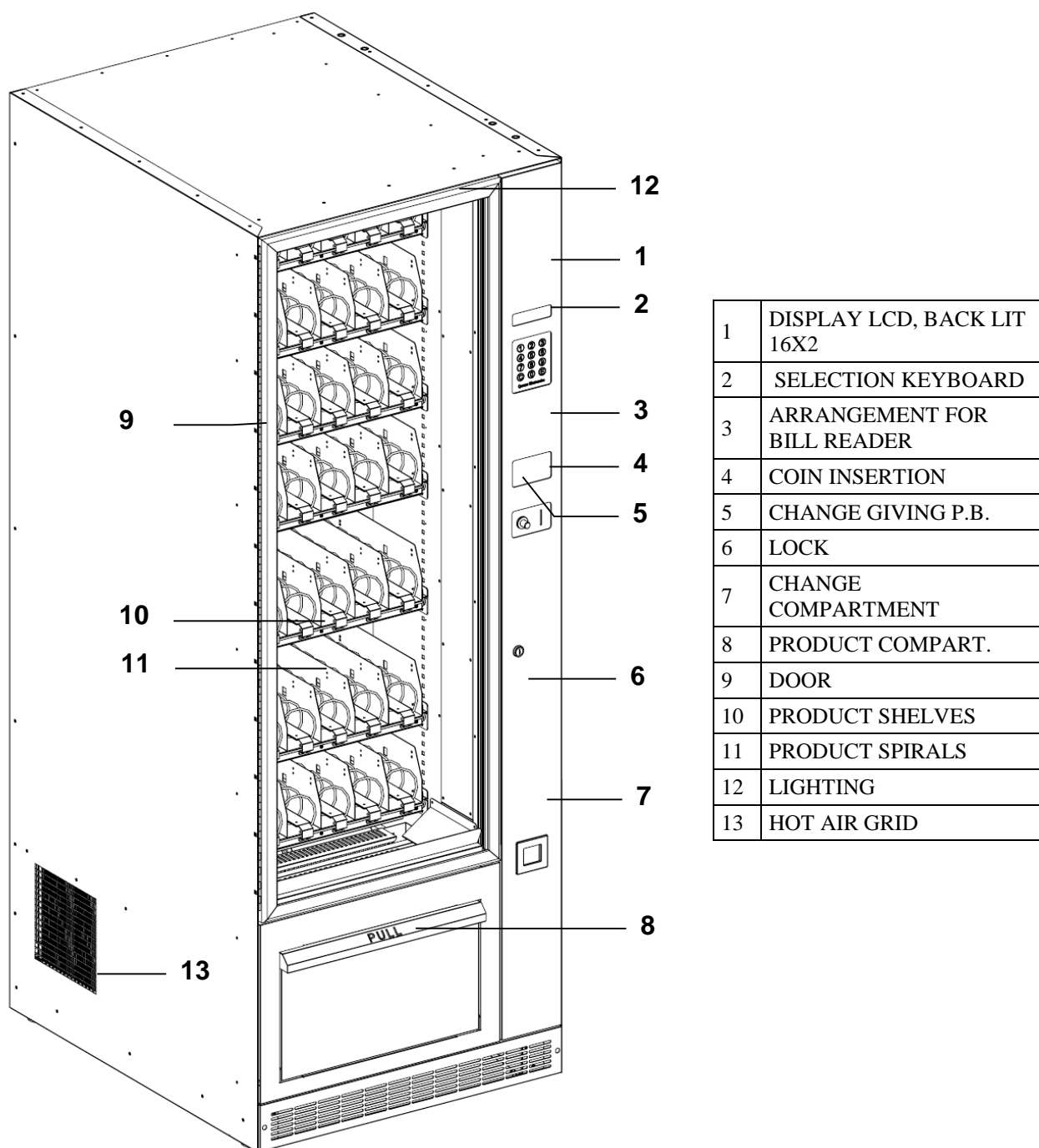


Figure 2.1

2_2INTERNAL PARTS

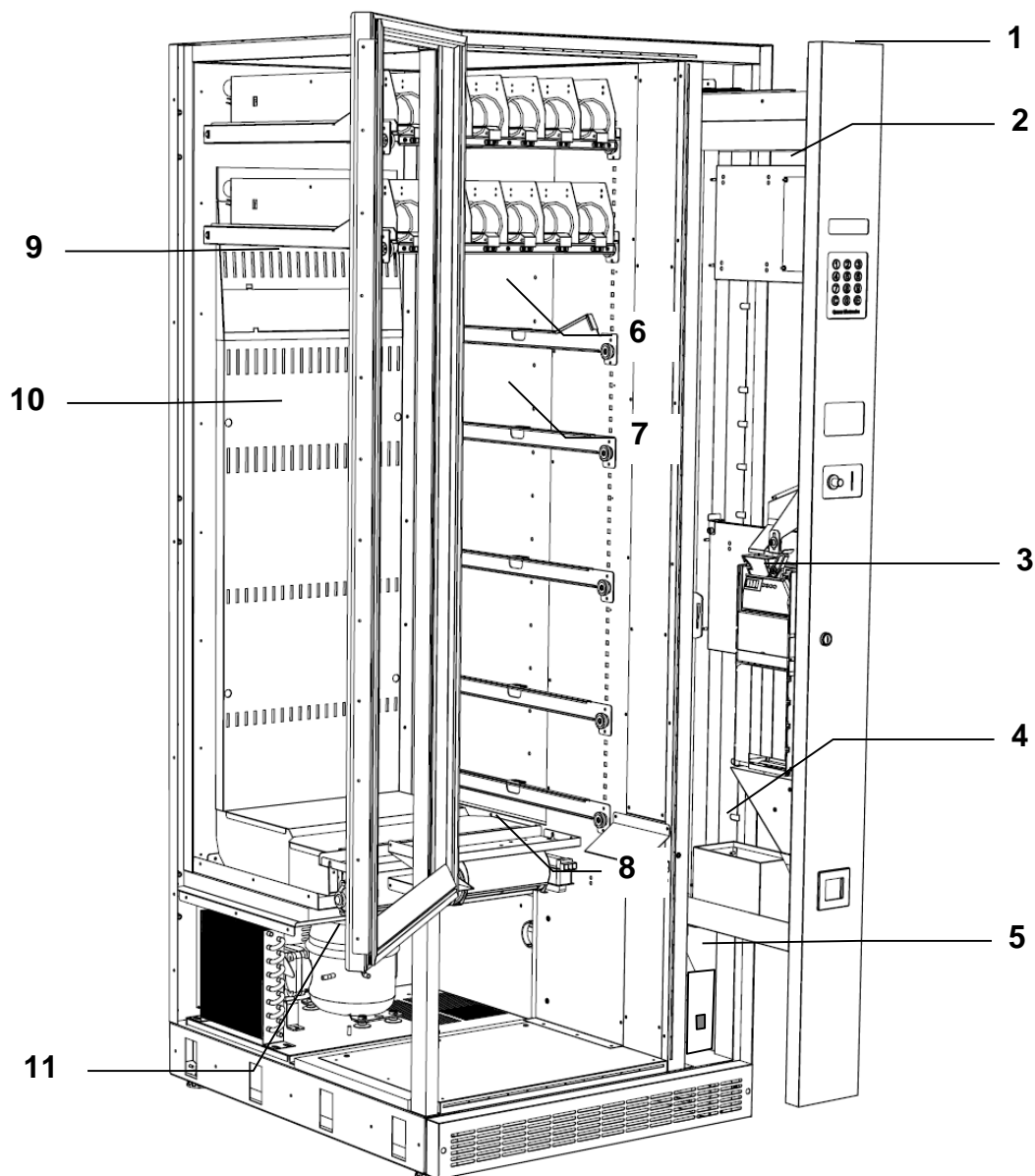


Figure 2.2

1	TECHNICAL COMPARTMENT	7	GUIDE FOR SHELF PULLING OUT (FIXED)
2	ELECTRONIC BOARD	8	INTERNAL AIR RECIRCULATION FAN
3	CHANGE GIVER	9	REMOVABLE PLATE FOR CLOSING OF SLITS
4	COIN BOX	10	SLITS FOR COOLED AIR OUTLET
5	ELECTRICAL COMPARTMENT / MAIN SWITCH	11	COOLING UNIT
6	GUIDE FOR SHELF PULLING OUT (RECLINING)		



Maxima/Karina

MD06426C Rev.0 del 01/12/2013

2_3 TECHNICAL FEATURES

- TRADE NAME MAXIMA, code Q606343DA
- DIMENSIONS HEIGHT 191 cm WIDTH 70 cm DEPTH 87 cm
- WEIGHT 230 Kg
- SUPPLY VOLTAGE 230V-110V (by request)
- POWER FREQUENCY 50/60 Hz
- RATED POWER 400 W
- COOLER R134 0.15Kg
- NOISE < 71 dB

- TRADE NAME KARINA, code Q608207DA
- DIMENSIONS HEIGHT 135 cm WIDTH 70 cm DEPTH 87 cm
- WEIGHT 130 Kg
- SUPPLY VOLTAGE 230V-110V (by request)
- POWER FREQUENCY 50/60 Hz
- RATED POWER 400 W
- COOLER R134 0.15Kg
- NOISE < 71 dB

2_4 PACKING AND FITTINGS

The machine, that is delivered packed by protection carton elements and wrapped by a transparent film, is supplied complete with:

- ◆ Installation, use and maintenance manual;
- ◆ 1 Key for opening and closing of the main door;
- ◆ 1 Kit for fastening to wall;
- ◆ 2 Spiral guide kits;
- ◆ 4 Kits for dispensing of thin products;
- ◆ 1 Kit of labels with numbering of selections/prices



3_Customer service

3_1 MACHINE IDENTIFICATION

In case of technical problems, it is essential to advise the basic machine data (model, code and serial number) shown on the label (see figure) inside the machine (on the panel supporting the electronic board).



3_2 CONTACTS

The Project Vending service team is at customers' disposal to provide any information.

Project Vending.

via Risorgimento, 20 - 31047 Ponte di Piave (TV) – Italia

Tel. 0422 1835678 Fax 0422 857780 E-mail info@Project Vendingelectronics.it

4_Installation

4_1 UNPACKING

- ◆ Remove the machine wrapping film;
- ◆ Remove the carton protection elements and check the machine status;



The packing materials must not be left unattended within people's reach, mainly children's, as such materials could be dangerous.

- ◆ From the product delivery compartment collect the small envelope including the key;
- ◆ Open the door and take the fittings placed in the product delivery compartment.

4_2 INSTALLATION

The machine must be installed indoors in a dry place, sheltered from direct exposure to sun, where no water jets for cleaning are used (ex.: big kitchens). The machine must be placed on a level surface suitable to support its weight.

For proper operation of the cooling unit, the side grill (Figure 2.1 /13) must be kept completely free (at least 40 cm. from wall).



WARNING! An incorrect ventilation may be prejudicial to good working of the cooling unit.

4_3CHANGE GIVER MOUNTING

In order to mount the change giver it is necessary to get into the machine technical compartment (Figure 2.2 /1). To this purpose the following operations shall be carried out:

- Switch off the machine and open the technical compartment;
- Hook the change giver having its 3 rear holes fitted together with the 3 supports placed on the fixing plate (Figure 4.1 /1);
- Connect the change giver wiring with the adapter wiring coming from the board (Figure 4.1 /2);
- Adjust the position of the change giving lever unscrewing the proper screw (Figure 4.1 /4)
- Fix the change giver using the proper bracket (Figure 4.1 /3);
- If an MDB unit is used, set SW6 on the electronic board with switches 1,2,3,4 on ON and 5,6 on OFF, as shown in Figure 6.1 (standard setting). If an EXECUTIVE unit is used, set SW6 with switches 1,2,3,4 on OFF and 5,6 on ON.
- Switch on the machine;
- Enable the change giver on the programming menu as mentioned in Chapter 5_2 (for further details please refer to Section “Programming”).

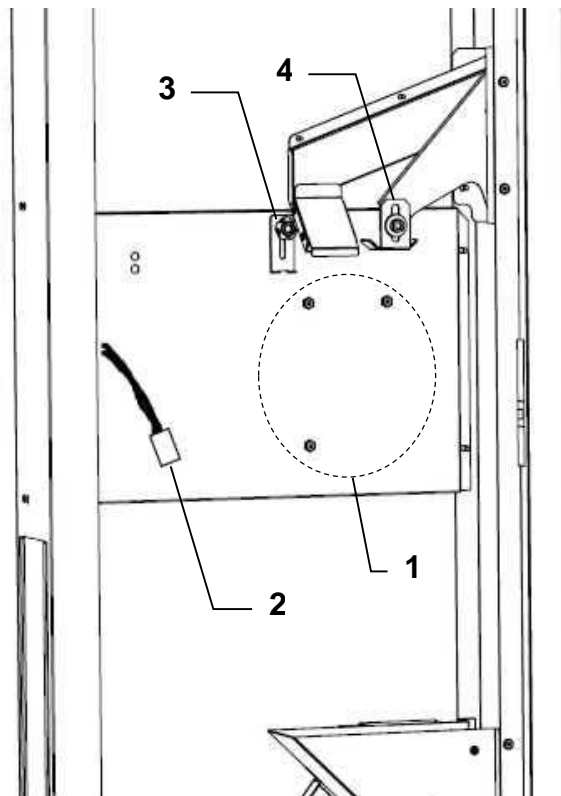


Figure 4.1

4_4PRODUCTS LOADING



IMPORTANT: The operation of product loading in the spirals must be performed machine OFF in order to avoid that the cooling system continues working uselessly while the door is open.

- In order to draw out a shelf it is necessary at first to lift it. Then pull the shelf outwards having it sliding to the end of the track (Figure 4.3). The shelf will stop in a stable position, suitable for products loading. The three upper shelves will stop in a slanting position in order to make products loading easier (Figure 4.2).
- Place the products from outside inwards making sure that all the spaces are filled with products. Load the most breakable products on the lower shelves so that they cannot be damaged on falling down.
- The bottles must be placed upside down, with the cap on the shelf base.
- The products must be easily placed on the spirals. Too large products shall not be loaded because they could get stuck during dispensing. Spirals suitable to the size of the products to dispense must be used.
- In order to ensure a correct dispensing of some products, it may be necessary to shift the end of the spiral. In order to do that, the spiral must be pulled until its fork gets out of the housing, and then it shall be rotated to the required position.
- Reinstall the shelf making sure that it is well fixed on its seat.

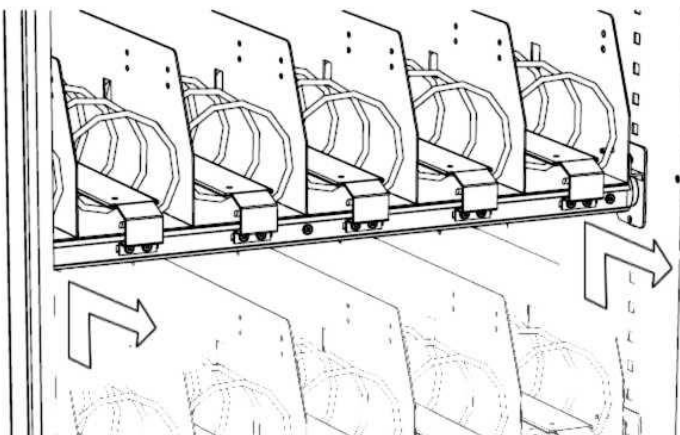


Figure 4.3

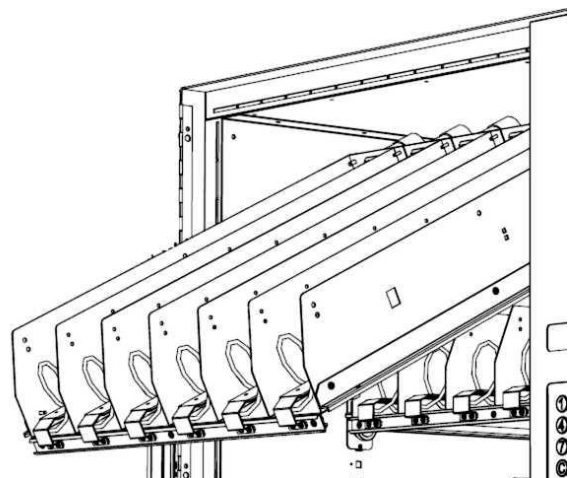


Figure 4.2

- If product dimensions make loading difficult, it is possible to use proper spacers and product guides, as mentioned hereinafter.

4_5 SPACERS AND PRODUCT GUIDES

Proper spacers can be used for dispensing small size products, mounted as shown in Figure 4.4. The product shall be placed on the right of the spacer. Adjust the space available for the product moving the spacer accordingly and carry out some dispensing tests.

In order to make the path of cans or tetrapack boxes easier, product guides as shown in Figure 4.5 can be used.

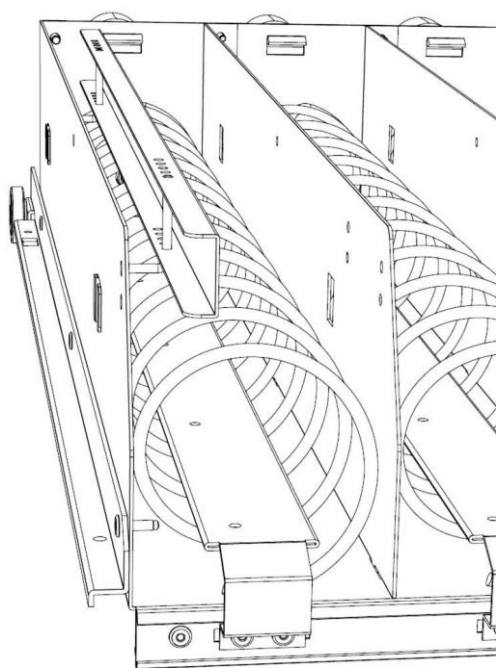


Figure 4.4

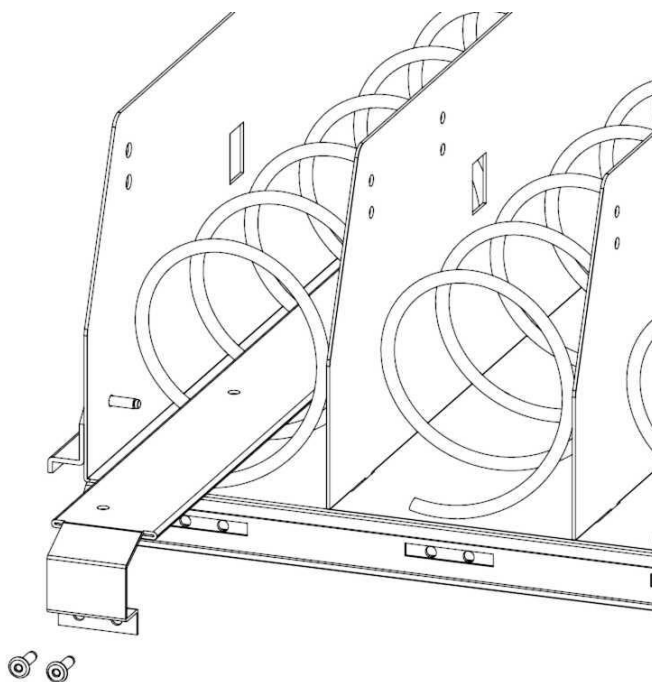


Figure 4.5



4_6ELECTRICAL CONNECTION

Check that the ground system of the electric circuit to be used for machine connection is efficient and in compliance with both domestic and European electrical safety standards.

Make sure that the mains voltage is corresponding to the one marked of the machine label (placed inside the machine as mentioned in para. 3_1) and that the socket capacity is suitable to the machine input. Connect the power supply and switch on the machine turning to position 1 the main switch placed on the front of the electrical compartment (Figure 2.2 /5), in the lower part of the technical compartment (Figure 2.2 /1)



Any kind of socket not compatible with the machine plug must be replaced. No adapter has to be used.

5_Machine operation

5_1 GENERAL INFORMATION

Dispensing of products is very simple and takes place according to the following procedure:

- 1) Choose the product to buy;
- 2) Type in on the keyboard the corresponding number to check the price of the product;
- 3) Put the amount in the machine to buy the product;
- 4) Choose the product typing in the number corresponding to the chosen product;
- 5) Collect product and change from the proper doors (Figure 2.1 /7 /8).

5_2QUICK PROGRAMMING

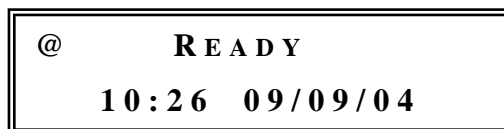
In order to start the machine, the main programming operations to perform after installation (Chapter 4_Installation) are specified hereinafter. For further information please refer to Section “Programming”.

On switching on, the machine carries out a diagnostic cycle to check presence of motors and payment systems enabling. At the end of checks the machine will show the following message:





In case of any trouble, the display will show the symbol @, as shown here below:



For further information concerning the kind of trouble, please refer to Section “Programming” “9_2 Failure List”.

In order to have access to the operation parameters it is necessary to get into the “programming mode” through the push-button located on the electronic board in the technical compartment (Figure 2.2 /2).

On access to the programming mode the display will show:



In order to get into the programming menus, press the key “6”.

The function of the keys used is the following:

Key ①:	Page forward	-allows to scroll forward the menu of functions
	Increase value	-increases the current parameter by one unit
Key ②:	Page backward	-allows to scroll backward the menu of functions
	Diminish value	-diminishes the current parameter by one unit
Key ⑥:	Enter / Save	-allows to get into a sub-menu and/or to confirm the modification made
Key ⑦:	Esc	-allows to get out of a previously selected menu without making any modification
Key ⑧:	Reset parameter	-allows to reset the current parameter

Enabling of change giver

Make sure that the switches SW6 on the electronic board are set correctly for the payment system installed, as specified in para. 4_3. Once in programming mode, select the menu “5_Payment systems” and then “5_4 Change giver”. Select through the keys “1”, “2” the option MDB or EXECUTIVE according to the payment system installed. Confirm through the key “6” and get out of the programming mode by pressing the key “7”.



Programming of prices

In programming mode get into the menu “3_Prices” and then the menu “Price sel.11”. Set the price of selection no.11 through the keys “1”, “2” and save through the key “6”. Carry out the same operations for the prices of the other selections and get out of the programming mode by pressing the key “7” (for further information please refer to section “Programming”).

Filling of change giver

In programming mode get into the menu “1_Accounting” and then the menu “1_10 Coins C.G. Tubes”. The total amount present in the change giver will be displayed. Insert the coins through the proper slot. (Figure 2.1 /4). For every coin inserted, the amount of coins of that kind present in the change giver will be displayed (for further information please refer to section “Programming”).

6_Maintenance

6_1REMARKS FOR THE OPERATOR

The vending machine purchased by you is safe if the instructions for filling and routine cleaning herein are complied with.

Any operation on parts under voltage must be carried out by skilled operators, aware of the possible risks that this may involve.

6_ELECTRONIC BOARD

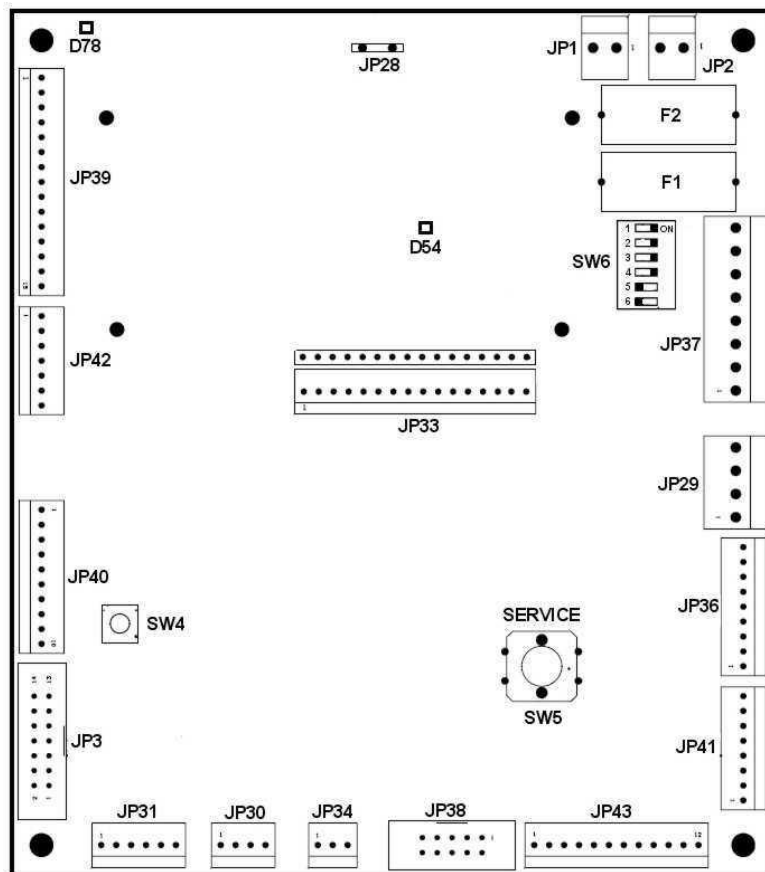


Figure 6.1

JP1	POWER SUPPLY 24VAC	JP40	I/O OPTICAL BARRIER
JP2	POWER SUPPLY 24VAC	JP41	VARIOUS OUTPUTS
JP3	IRDA	JP42	I/O PROD. COLLECTION COMPART. BLOCK
JP28	GROUND WIRE	JP43	AUX. I/O
JP29	TEMPERATURE SENSORS	F1	FUSE 24VAC EXECUTIVE (2A T)
JP30	I2C BUS	F2	FUSE POWER SUPPLY. 24VAC (2A T)
JP31	RS232 – BOARD PROGRAMMING	SW4	RESET PUSH-BUTTON
JP34	EXTERNAL SERVICE	SW5	SERVICE PUSH-BUTTON
JP36	KEYBOARD	SW6	SWITCH CONFIGURATION MDB/EXECUTIVE
JP37	CONN. MDB/EXECUTIVE	D78	LED POWER ON +24V
JP38	COIN VALIDATOR	D54	LED POWER ON +5V

6_3CLEANING OF THE MACHINE

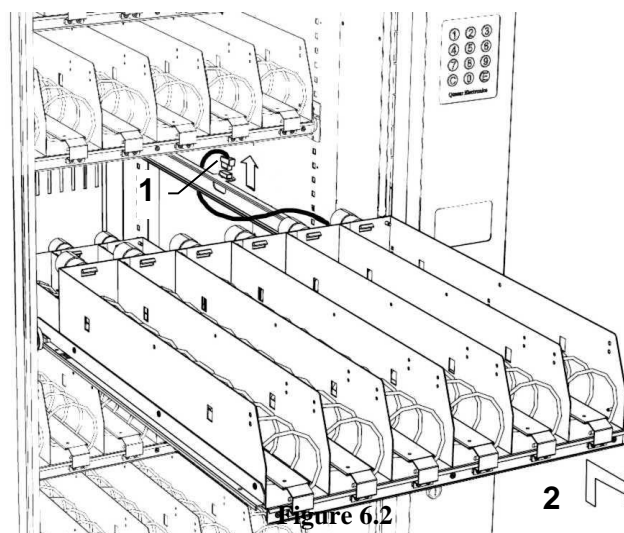
The machine must be cleaned by a soft cloth moist with lukewarm water and soap or a light detergent. It is advisable to clean the plexiglas parts through a suede or cellulose cloth to avoid scratches. No abrasive detergents, such as acetone, benzene or similar shall be used in order to avoid any damages on the machine surface.

Check that the side grid is always clean from any dirty matters (Figure 2.1 /13).

6_4REMOVAL OF SHELVES

In order to remove a shelf, the following procedure shall be followed:

- remove the shelf in position of products loading;
- disconnect the electrical connector of the shelf (Figure 6.2 /1);
- lift the shelf in order to remove it completely from its track (Figure 6.2 /2).



6_5MODIFICATION OF SHELVES CONFIGURATION

The number or position of shelves in the machine (up to a maximum of 8) can be varied moving the tracks. To this purpose the following operations shall be performed:

- Remove all the shelves;
- Unscrew, remove the tracks and fix them to the required position. If necessary, remove or add additional tracks;
- In order to add an eighth shelf, an additional connector is available on the lower part of the machine, next to the last shelf.

6_6 REPLACEMENT OF SPIRALS AND MOTORS

In order to replace a spiral, perform the following operations:

- Rotate the spiral until the rear end is in the position of Figure 6.4.
- Remove the spiral pulling it upwards.

In order to replace a motor, perform the following operations:

- Remove the shelf from the machine (ref. para. 6_4 REMOVAL OF SHELVES of shelves);
- Remove the spiral from the motor to be replaced;
- Through a screwdriver lever on the fixing point of the motor (Figure 6.3).
- Install the new motor following these instructions in the opposite sequence;

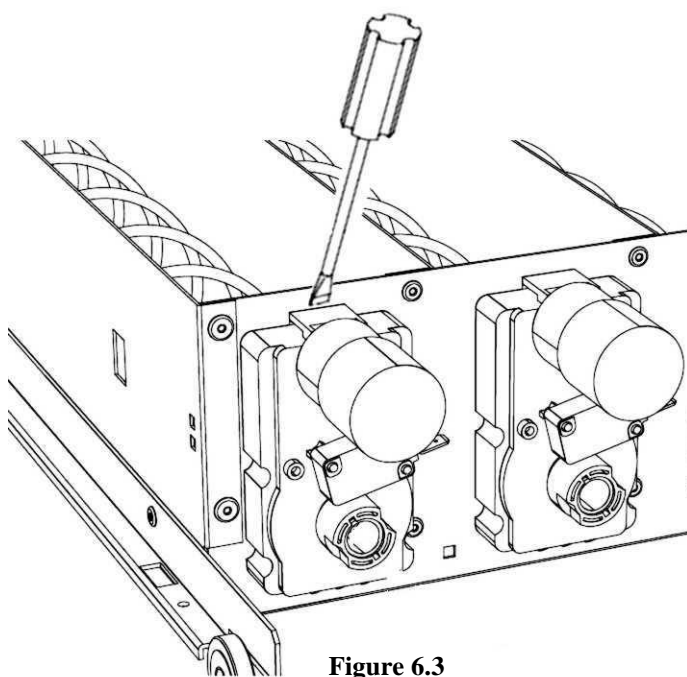
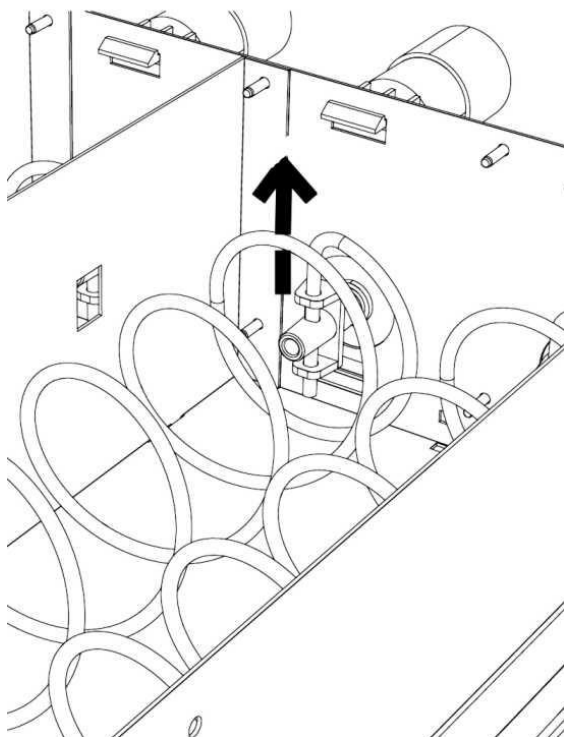


Figure 6.3

6_7ELECTRICAL COMPARTMENT

The electrical compartment includes the power supply equipment and the drivers for the high voltage working components. This compartment is located in the lower part of the technical compartment (Figure 2.2 /5). The main switch and the fuses (Figure 6.5) are placed on the front. The fuse values are the following:

F1 (main) = 10 A Temp	F2 (main) = 10 A Temp
F3 (trans. input) = 0.5 A Temp	F4 (compressor) = 6.3 A Temp

In case of trouble, the electrical compartment can be removed for replacement. To do this, it is necessary to remove completely the technical compartment taking off the locking pin (Figure 6.6 /1) and remove the electrical compartment lengthwise (Figure 6.6 /2).

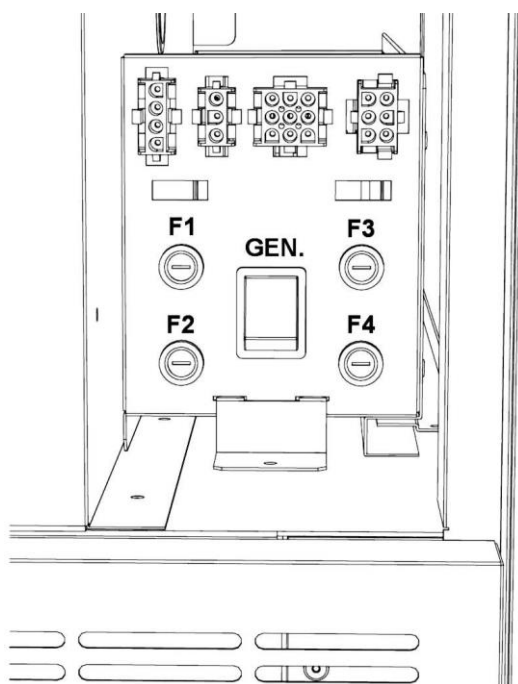


Figure 6.5



Figure 6.6

6_8ACCESS TO THE COOLING UNIT

In order to get into the cooling unit, perform the following operations:

- remove the product delivery compartment (Figure 6.7 /1) unscrewing the 5 screws on the angles;
- remove the first bottom shelf (Figure 6.7 /2);
- remove the fan unit (Figure 6.7 /3);
- remove the compressor closing panel (Figure 6.7 /4);

At this point the cooling unit is visible and, should it be replaced, in order to remove it, the screws which fix it to the machine base must be unscrewed.

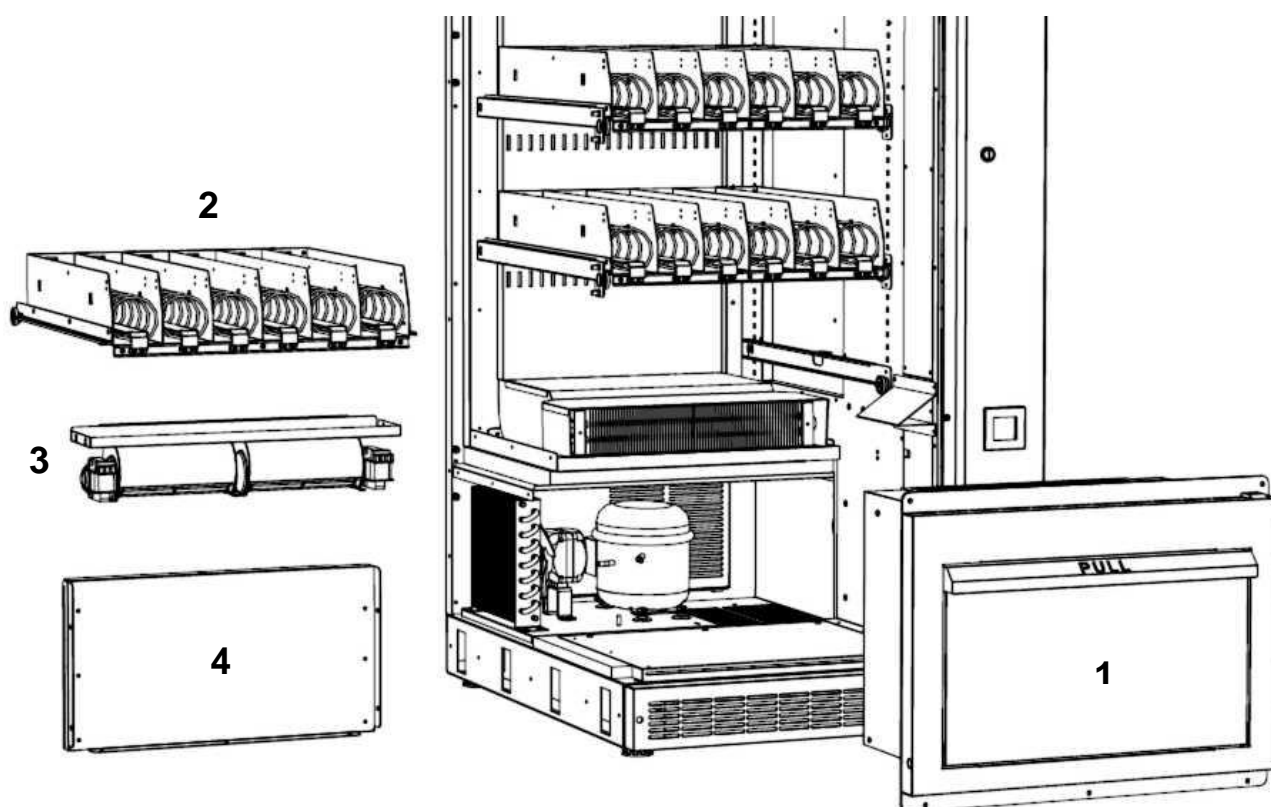


Figure 6.7



6_9TROUBLE SHOOTING

PROBLEM	POSSIBLE CAUSE	REMEDY
The machine cannot be started	Power supply lack	Check connection of the power supply plug and presence of voltage
	Main switch not operated	Check the main switch is on position 1
	Trip of F1, F2 high voltage protection fuses	Replace the fuse by one exactly alike
The inside lighting and the fans are working but the machine display is not lit up	Trip of protection fuses on the electronic board (all the power supply LEDs on electronic board are off)	Replace the fuse by one exactly alike
The cooling unit is not working	Trip of the fuse for F4 compressor	Replace the fuse by one exactly alike
	Cooling unit disabled	Enable cooling unit (ref. Para.7, CPS parameter)
The cooling unit does not generate cold air	Hot air side grid obstructed	Make sure that there is enough space between side grid and wall. Clean the grid from any dirty matters
The machine cannot accept any coin	The payment system is not enabled	Enable the payment system in the programming menu. Payment system→Change giver
	Coin jammed in the payment system	Remove the coin



PROBLEM	POSSIBLE CAUSE	REMEDY
	An error has occurred on the change giver	Note on the failure list the change giver error code occurred. Look it up in the chapter Maintenance →Diagnostics→ →Change giver error codes in the programming manual
The display does not show the credit acquired	Wrong programming configuration	Check currency programming and values of the payment system lines
The machine does not dispense the selected products	Inadequate credit	Compare the product selling price with the credit acquired
	The keyboard selection key is broken	Check and, if necessary, replace by one exactly alike
	Jamming on product falling	Check the product falling compartment for any jamming
	The Inventory function is used and the product is sold out	Restore the Inventory function in the programming menu
	The selection is not enabled (the display shows “not available”)	Make sure that the motor is enabled in the programming menu “Configuration of shelves”
	The selection has been disabled due to a trouble on a motor (the display shows “not available”)	Check on the failure list if there has been a problem on that motor. Fix the issue (look it up in the programming menu) and reset the list of troubles.
	Lack of power supply on motors (LED +24V on electronic board off)	Apply to the service center



Maxima/Karina

MD06426C Rev.0 del 01/12/2013

PROBLEM	POSSIBLE CAUSE	REMEDY
The machine dispenses a product without the relevant amount of money	The product price is set to zero	Set the selling price
The machine dispenses more than one product	Break on motor microswitch (Er12 in the list of troubles)	Replace the motor of the shelf involved and reset the failure list (look it up in the programming manual)
	Electronic problem (Er 13/14 in the list of troubles)	Apply to the service center
The machine is out of order	Cooling unit not working for too many hours, on all selections products sold out or not available, or electronic problem	Look it up in the Chapter Maintenance→Diagnostics→ →Machine out of order in the programing manual



Section 2. Programming

INTRODUCTION

The vending machine "Maxima" is provided with a software allowing to view and set clearly and easily a wide range of parameters and functions. The programming operations are performed using the display and the keyboard usually used for product selection. In the programming mode the function of keys gets a different meaning and the display allows to view the parameters to be modified. Some machine commands can be protected by a password to prevent non-authorized operators from having access to it.

PROGRAMMING MODE

In order to have access to the operation parameters get into "programming mode" through the Service push-button on the electronic board in the technical compartment.

To get back to normal operation it is enough to press the key "7", or after 5 minutes without pressing any push-button the machine will get out of the programming mode automatically.

On getting into the programming mode the display will show:



In order to get into the programming menus, press the key "6".



In order to make its use easier, this manual is made up so that the number of chapters corresponds to the number of menus in the programming mode. The complete structure of the programming menu is shown on the "Attachment 1" at the end of this manual.

1_Accounting

This menu collects the data relating to cashed amounts, subdivided into various sub-menus according to the different types of sales and coins used.

Once in the programming mode, the machine display is ready to get into the “accounting” sub-menus by pressing the key “6”.

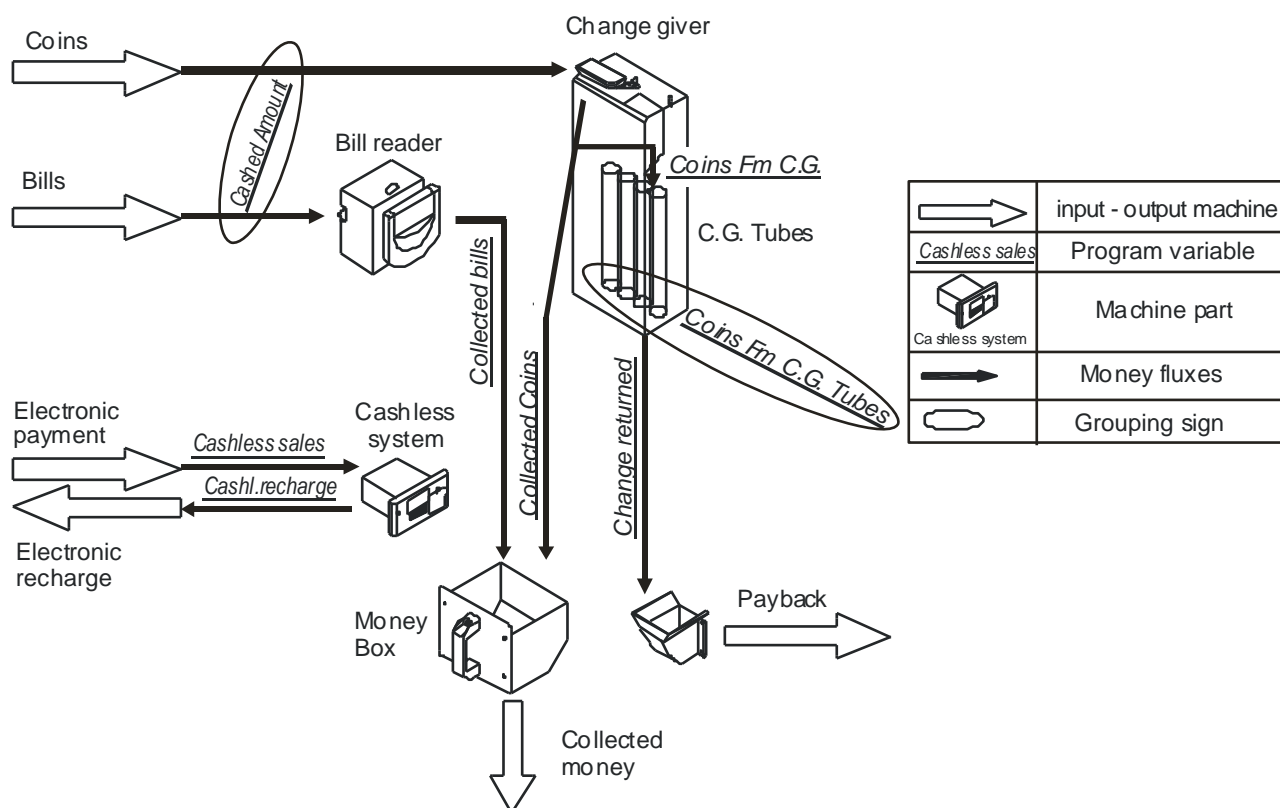


To go from a menu into another press the key “1” to move forward and “2” to move back. To get into the main menu again, press the key “7”.

In order to move through the machine menus, press “1” or “2” to move forward or move back.

In order to get out of programming, press further the key “7”.

The following figure shows the money flows in the machine as well as the programming variables, briefly described hereinafter.





1_1 CASHED AMOUNT

It is the total amount of the money put in the machine (bill reader, coin selector or change giver).

1_2 CASH SALES

It is the total amount of money from cash sales.

1_3 CASHLESS SALES

It is the total amount of sales from cashless systems (rechargeable chip card).

1_4 CHANGE RETURNED

It is the total amount of change given back by the change giver.

1_5 RESIDUAL CREDIT

It is the amount of residual credit not used by the user within the limit time, therefore remaining in the machine.

1_6 COLLECTED COINS

It is the value of coins present in the machine cash box.

1_7 COLLECTED BILLS

It is the amount of bills present in the machine cash box.

1_8 CASHL. RECHARGE

It is the total amount of money put in the machine to refill the cashless device.

1_9 COINS FM C.G.

It is the total amount of coins put in the change giver tubes after accounting resetting.

1_10 COINS C.G. TUBES

It is the total amount present in the change giver tubes. It cannot be reset.

Inside this menu it is also possible to refill the change giver tubes without affecting the collected amounts. In order to refill the change giver tubes, get into this menu and put the required coins in. On



each coin insertion the display will show the relevant value, the corresponding tube number and the amount of money in that tube, on a window like the following one:

COINS C.G. TUBES	
01 - (010)	1.20

Through the keys “1” e “2” it is also possibile to view any time the money presents in every single tube. The numbers in this window show that in tube 01 there are 0.10 euro coins for a total of 1.20 euro.

1_11 ACCOUNTING RESETTING

This command resets all the parameters of the menu “ACCOUNTING” except for the parameter “Coins of change giver tubes” that is reset when the change giver is completely emptied.

By pressing the key “6” the following window will appear:

ACCOUNTING RESET	
1 = YES	2 = NO

By pressing the key “1” all the data relating to accounting will be cancelled irreversibly. By pressing the key “2” you will get again into the menu “ACCOUNTING RESET” without making any modification.

This command can be protected by a password disabling the use by non authorized operators. When leaving the Project Vending workshops, the machine has no password, which can be set by the user later on, as mentioned in Section “SETTINGS”

In order to modify a parameter protected by a password, please refer to menu “PASSWORD” (4_5).



1_12 RELATIONS BETWEEN MONETARY VARIABLES

In order to exemplify the relations among the cash flows monitored by the system, please note the following two examples:

Value of money getting into the machine

- *After resetting the accounting values and emptying the cash box, the money collected by the machine, i.e. the actual money increase present in the machine is given by the relation:*

☞ **Total gain = “CASHED AMOUNT” – “CHANGE RETURNED”**

- *The money presents in the machine cash box ready for collection after last resetting is given by the relation:*

☞ **Money in the cash box = “COLLECTED COINS” + “COLLECTED BILLS”**

2_Counters

This menu collects all the information relating to quantity of products sold by the different machine selections.

2_1 MAIN COUNTER

This sub-menu records the total number of products dispensed by the machine, without any distinction of shelf or selection.

It can be reset only if the machine is restored to the standard configuration through the command “STD Config.” (9_4)

2_2 COUNTERS

This sub-menu records the total number of products dispensed by every single selection enabled.

By further pressing the key “6” the total number of products dispensed by selection 11 can be viewed, as for example on the window here below:



C O U N T E R	S . 1 1
T O T	8 P C S

By pressing the keys “7” or “6” it is possible to view the previous message window, from which it is possible to move to the other selections by pressing the keys “1” or “2”.

By further pressing the key “7” you get on the main window:

0 2 > 0 2
C O U N T E R S

2_3COUNTERS RESETTING

This function resets all the partial counters of the machine selections. The procedure is the same as the menu “*ACCOUNTING RESETTING*” (1_11).

Anyway the parameter “*GENERAL ACCOUNTING*” is not reset.

As already mentioned regarding accounting resetting, this command can be protected by a password.

2_4INVENTORY RESETTING

The “Inventory” function is activated by setting the number of products present on each spiral, as described in para. 8_2 “Spirals configuration” and enabling the Inventory in the menu 8_5.

The “Inventory resetting” function is used to restart the machine after refilling. The procedure is the same as the menu “*ACCOUNTING RESETTING*” (1_11).



The inventory can be reset quickly without getting into the programming mode. To this purpose, in the normal operation mode, it is enough to keep the “Service’ push-button pressed for 3 seconds until hearing 3 bips in succession.



3_Prices

This menu allows to set selection prices for any kind of sales: both cash and cashless. The prices in section “*normal prices*” are automatically included also in the section “*cashless prices*”. Anyway, users with a cashless device may take advantage of some discount in the section “*DISCOUNT*” where a discount percentage can be set on all the cashless prices. In order to set the price of a selection, i.e. the no.11, independently, that is to say without considering the one made up by combination of sections *PRICES*” and “*DISCOUNT*”, this can be done directly in the section “*CASHLESS PRICES*” (3_2)

3_1NORMAL PRICES

This option allows to set the prices of all the machine selections. By pressing the key “6” the display will show:

PRICE SEL. 11

On pressing further, the key “6” the display will show the price set for the current selection, as shown here below:

PRICE SEL. 11
EURO 1.50

At this point, the price of selection “11” can be easily set using the keys “1” and “2” to increase or diminish the price by one unit at a time. Once the required value has been reached, press the key “6” to confirm the choice.

The machine will show for some moments the following message:

PRICE SEL. 11
PLEASE WAIT

Then the following will reappear:

PRICE SEL. 11

At this point, through the keys “1” and “2”, it is possible to go to a subsequent selection or get back to a previous one. By keeping the keys “1” or “2” continuously pressed, the selection number will be scrolled. The set price is automatically updated also in the section “*Cashless prices*”.



3_2CASHLESS PRICES

Cashless prices can be set for a machine provided with a cashless device. Price setting for this kind of payment can be performed in three different ways:

- Automatically, if cashless prices are the same as the normal ones.
- Selection by selection, in the same way as described on section “*NORMAL PRICES*” if they are different.
- Also, it is possible to get a reduced price obtained by combination of the parameter “*cashless prices*” and the parameter “*discount*”.

Setting of such prices doesn't affect the price if cash money is used.

3_3DISCOUNT

Setting of a discount on cashless prices can be made from this sub-menu.

It is made by rounding off a figure to the closest one with reference to what is set in the sub-menu “BASIC COIN”. As an example please refer to the parameter here below:

◦ <i>BASIC COIN</i>	<i>Euro 0.05</i>
◦ <i>PRICE of selection 11</i>	<i>Euro 0.25</i>
◦ <i>DISCOUNT</i>	<i>10</i>
◦ <i>Reduced price calculated</i>	<i>Euro 0.225</i>
◦ <i>CASHLESS PRICE of selection 11</i>	<i>Euro 0.20</i>

By pressing the key “6” the display will show:



Set the discount percentage through the keys “1” and “2”. Once the desired value has been reached, confirm through the key “6”. Press the key “7” to get out without saving and get back to the main menu.



4_Settings

In this section the main machine parameters can be set, mainly regarding the password in order to limit access to modification of important parameters, such as “ACCOUNTING” and “COUNTERS”.

4_1LANGUAGE

The available languages are: Italian, English, German, French, Spanish and Norwegian.

Selection of key “6” allows to get into the sub-menu to choose the languages and move into it using the keys “1” or “2” to scroll the available languages. Save the chosen language through the key “6”.

4_2CURRENCY

This parameter allows to add to a figure showing the prices or the credit an abbreviation identifying the currency used (ex. Euro = Euro; Ster. = Pound).

The programmable currencies are: Euro, Pound, Crowns and cash as not specified currency. The procedure is the same as described in previous paragraph.

4_3CLOCK SETTING

This section allows to save date and time.

By pressing the key “6” the display will show:

04 > 03 > 01
S E T M I N U T E S

Through the keys “1” and “2” it is possible to move and select the chosen parameter through the key “6”.



The parameters and values to set are the following:

- *Set minutes* 0-59
- *Set time* 0-23
- *Set day* 1-31
- *Set month* 0-12
- *Set year* 1-99

Set the value through the keys “1” and “2” and save through the key “6”.

4_4CONTRAST

The display contrast can be adjusted to a value between 1 and 100 (max. contrast). In order to get into the menu press “6” and then, adjusting the value through the keys “1” and “2”, select through the key “6”.

4_5PASSWORD

The machine leaves the manufacturer’s workshops with no password. It is not possible to choose the parameters to “protect”, once a password has been set, it becomes necessary to modify all the parameters marked with (PSW) in Attachment 1.

The procedure to set or modify a password is described hereinafter.

By pressing the key “6” the menu for password setting is reached, which will show:

D I G I T P S W
--

Go on assigning a number included between 0 and 9 to each one of the six figures shown through the keys used for the selections. Once the four figures have been set, press “6” and confirm by pressing “1”. In order to get out of this function without saving the modifications press “2”.

If a password has already been set the display will show:

P A S S W O R D
--



Set the password. If the code is correct, the machine will give out a triple acoustic signal, allowing to set a new code with the same procedure as for setting of a new password. Once the 4 figures have been set, confirm by pressing “1”. In order to get out without saving the modifications press “2”.

If no protection through password is to be used, this function can be disabled by saving the code 1111, equivalent to absent password.



Record and keep the password in a safe place. Its loss would be prejudicial to the use of the functions for which it is required!

We are describing hereinafter the procedure to reset the parameters protected by a password, as an example the command “*Accounting resetting*” of the menu “ACCOUNTING”.

If the key “6” is pressed from the sub-menu “*Accounting resetting*” the display will show:

ACCOUNT. RESETTNG
.....

Password setting is covered by an asterisk.

If a wrong password is set, the display will show:

ACCOUNT. RESETTNG
WRONG PSW !!!

In this case press any key to get back to the previous menu. If the password is correct, the machine will give out a triple acoustic signal and will show:

ACCOUNT.RESETTNG
1 = YES 2 = NO

If the key “1” is pressed, the data relating to accounting will be cancelled irreversibly. To get back to the menu “*Accounting resetting*” without any modification press the key “2”.



4_6MACHINE CODE

A 16-character code identifies the machine. Machine users can set their own code. If a password is set, the code can be modified only by users in possession of a password. In order to set or modify the code, get into the menu through the key “6”.

A window with the set code and a cursor below the selected character will appear:

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
—

Through the keys “1” and “2” put the cursor on the character to be modified and then, through the keys “3” and “4”, select the desired value. Confirm the modifications through the key “6”. In order to get out without saving the modifications press “7”.

4_7MAX. CHANGE

If a change giver is used, the max. change value to be given back after a sale must be specified. In order to set such value, select, in the programming mode, the parameter “Max. change” through the keys “1” and “2” and press “6”.

The display will show:

M A X . C H A N G E	
E U R	2 . 5 0

Through the keys “1” or “2” increase or decrease the value until reaching the desired amount. To reset the value, press the key “8”. To confirm the choice and get back to the previous menu press “6”. In order to get out without modifying the current setting press “7”.



4_8CREDIT PERSISTENCY

Through this function the residual credit persistency time can be set. It is the time for which any residual credit after a dispensing is available for other selections. Values between 1 and 300 seconds can be set.



If a max. time of 300s is set, the credit persistency will be unlimited.

In programming mode select the parameter “*Credit persistency*” using the keys “1” and “2” and press “6”.

The display will show:

C R E D I T P E R S I S T E N C Y	
S E C .	3 0 0

Increase or decrease the value through the keys “1” and “2” until reaching the required time. If the key “8” is pressed, the parameter is reset. Press “6” to save the modifications. Press “7” to get back to the initial menu without saving.

4_9COUNTERS PASSWORD

In this menu it is possible to set a password that, if typed in in normal operation mode, allows to view the counters of every single selection without opening the machine to get into the programming mode. To program the password get into the menu “4_9 Counter Psw” through the key “6”. The display will show:

T Y P E I N P A S S W O R D			
1	1	1	1

Go on assigning a number included between 0 and 9 to each one of the four figures viewed through the keys used for the selections. Once the four figures have been set, press “6” and confirm by pressing “1”. To get out of the function without saving modifications press “2”.

In order to disable this function, it is enough to save the code 1111, equivalent to “*password counters*” absent.



4_10 GOOD WORKING MESSAGE

In normal operation mode the display will show on the upper part a scrolling message that can be personalized. In order to set or modify the message get into the menu **Errore. L'origine riferimento non è stata trovata.** through the key “6”. A window with the set message and a cursor below the

M E S S A G E —

selected character will appear:

Through the keys “1” and “2” put the cursor on the character to be modified and then through keys “3” and “4” select the required value. Confirm the modifications through the key “6”. In order to get out without saving modifications press “7”.

4_11 OUT OF ORDER MESSAGE

If the machine is out of order (9_2) the display will show on the lower part “Out of order” and on the upper one a scrolling message that can be personalized. In order to set or modify the message get into the menu 4_11 through the key “6”.

The display will show the set message and a cursor below the selected character:

M E S S A G E —

Through the keys “1” and “2” put the cursor on the character to be modified and then through the keys “3” and “4” select the desired value. Confirm the modifications through the key “6”. In order to get out without saving the modifications press “7”.

4_12 LIGHTING

It is possible to enable or disable the inside lighting and set the machine operation time Get into the menu “4_12 Lighting” through the key “6”. The display will show:

0 4 > 1 2 > 1
E N A B L E L I G H T I N G



Press again the key “6” to get into the sub-menu “Enable lighting”. Through the keys “1” and “2” choose among the options “ON” (light always on), OFF (light always off), TMP (light switching on /machine operation time programmable). Confirm through the key “6”.

If the TMP option has been chosen, the switching on and switching off time must be programmed. To this purpose select the sub-menu “Time ON”. The display will show:

04 > 12 > 2 TIME ON
--

Press “6” to get in. The display will show:

TIME ON 12:00

Set the switching on time by increasing or decreasing the value viewed by the keys “1” or “2” and save through the key “6”. The same procedure shall be performed to set the switching off time getting into the sub-menu “Time OFF”.

4_13 FORCED VEND

If an MDB change giver is used as a payment system (menu 5_4), users may have a credit back after putting in the money or they are bound to make a further selection. In order to modify this option, select the current menu 4_13, getting it through the key “6”. The display will show:

FORCED VEND DISABLED

Enable or disable this function through the keys “1” and “2”. Confirm through the key “6”.

4_14 OPTICAL BARRIER

The optical barrier is a sensor able to detect product dropping into the proper compartment. On the following menus it is possible to start the optical barrier and select the working mode.



4_14_1 Barrier starting

Select the menu 4_14_1 through the keys “1” or “2”. The display will show:

0 4 > 1 4 > 0 1
B A R R I E R S T A R T I N G

Press the key “6” to get into the menu. By the keys “1” or “2” it is possible to choose among the following options:

- Deactivated. Optical barrier deactivated. Product dropping is not detected;
- Activated 1. If the barrier detects that the product has not dropped, the selected spiral will make a further 1/8 rev. in order to get the product dropped. The residual credit will be lost.
- Activated 2. If the barrier detects that the product has not dropped, the credit inside remains available for a further selection.
- Activated 3. If the barrier detects that the product has not dropped, the selected spiral will make a further 1/8 rev. in order to get the product dropped. If not yet dropped, the credit inside remains available for a further selection.

In order to confirm the choice, press the key “6”.



If the product has not dropped, the selection is deactivated and the problem is included in the Failure List with error code 21. In order to activate the selection again, the Failure List must be cancelled.



If the optical barrier is not working, the selection is deactivated and the failure is included in the Failure List with error code 22. In order to activate the selection again, the Failure List must be cancelled.

4_14_2 Optical barriers out of order

In case of failure on the optical barrier, on this menu it is possible to decide if the machine can continue working (without detecting product dropping) or get the machine out of order.

0 4 > 1 4 > 0 2
B A R R . O U T O F O R D E R

Select the menu 4_14_2 through the keys “1” or “2”. The display will show:



Press the key “6” to get into the menu. Through the keys “1” or “2” it is possible to choose between the options:

- Deactivated. In case of failure on the optical barrier, the machine continues working;
- Activated. In case of failure on the optical barrier, the machine gets out of order.

Confirm the choice through the key “6”.



If the machine gets out of order as a consequence of a failure on the optical barrier, the failure will be included in the Failure List with the error code 22. In order to activate the machine again, after removing the cause of the failure, the Failure List must be cancelled.



5_Payment systems

In this section it is possible to set the main parameters relating to configuration of payment systems and to the basic monetary unit for all the selection prices.

5_1 BASIC COIN

The basic coin is the minimum monetary unit to be operated by the system, therefore it fixes the value of the payment system lines.

The basic coin definition is obtained by setting the scaling factor and the decimal places, as described hereinafter: Example (Euro currency):

- *Scaling factor 5 decimal places 0.00 Basic coin 0.05 €*
- *Scaling factor 1 decimal places 0.0 Basic coin 0.1 €*
- *Scaling factor 1 decimal places 0 Basic coin 1 €*

5_1_1 Scaling factor

In order to set the multiplicative factor press “6”, the display will show:

0 5 > 0 1 > 0 1
S C A L I N G F A C T O R

By pressing further “6” the display will show:

S C A L I N G F A C T O R
1

Through the keys “1” and “2” set the required multiplicative factor and then confirm through the key “6”; the key “8” resets the parameter.

5_1_2 Decimal places

As above mentioned, the decimal places value can be set similarly on the three following values:

- *Dec. places 0 basic coin defined as entire units of the currency used*
- *Dec. places 0.0 basic coin defined as tenths of the currency used*
- *Dec. places 0.00 basic coin defined as hundredths of the currency used*



5_2 COIN MECHANISM

The machine can be provided with a binary or parallel output coin mechanism.



Usually the coin mechanism parameters are programmed by the manufacturer, therefore no modification on this menu is required.

In order to interface correctly a parallel or binary output coin mechanism with the vending machine, it is necessary to program all the relevant lines, L1÷L6 or L1÷L8 respectively with the relevant value. The non used lines shall be set to “0”.

The example here below is relating to a parallel coin mechanism in Euro, 0.05 basic coin, with the following coins: 0.05, 0.10, 0.20, 0.50, 1 and 2 €.

In the menu “5_2 Coin mechanism” select the menu “Type” using the keys “1” and “2” and press “6”.

The display will show:

T Y P E
N O N E

Using the keys “1” and “2” select “Parallel” and press “6” .

Select the menu “Coin mechanism lines” using the keys “1” and “2” and press “6” .

The display will show:

L I N E N O . 1

Select the number of line to be set through the keys “1” and “2” and press “6” .

The display will show:

L I N E N O . 1
E U R O 0 . 0 0

Through the keys “1” and “2” increase/decrease until reaching the value “0.05” and press 6. Follow the same procedure for the line 2, 3, 4, 5, 6 and so on in the sequence 0.05, 0.10, 0.20, 0.50, 1 and 2 €.



5_3BILL READER

The machine can be provided with standard MDB bill readers. In the standard arrangement VTI (Vector, Matrix) bill readers are used.



If the bill reader has been mounted by the manufacturer, its parameters are already set correctly, therefore no modification is to be made in this menu.

Before mounting an MDB bill reader, make sure that the SW6 microswitches on the board are set in the following way: 1=ON, 2=ON, 3=ON, 4=ON, 5=OFF, 6=OFF.

In order to enable the bill reader (if it is not already installed as a standard), in the menu “5_3 Bill reader” select the menu “5_3_1 Type” using the keys “1” and “2” and press “6” .

The display will show:

T Y P E
N O N E

Using the keys “1” and “2” select “MDB” and press “6” to confirm. Press “7” to get back to the previous menu.

In order to enable/disable the single bills select the menu “5_3_2 Lines” using the keys “1” and “2” and press “6” .

The display will show:

E U R O	5 . 0 0
----------------	----------------

Through the keys “1” or “2” select the required bill and press “6”.

As an example, the display will show:

E U R O	5 . 0 0
E N A B L E D	

Enable or disable the bill through the keys “1” or “2” and press “6”.



5_4CHANGE GIVER

Various change giver systems can be mounted on the machine (Executive, MBD or none). In a standard arrangement an MDB protocol change giver is used (ex. MEI, COINCO, FAGE, SANDEN, NRI, AZKOYEN).



If the change giver has been mounted by the manufacturer, its parameters are already set correctly, therefore no modification is to be made in this menu.

Before mounting a change giver, make sure that the SW6 microswitches on the board are set in the following way:

-MDB Change giver 1=ON, 2=ON, 3=ON, 4=ON, 5=OFF, 6=OFF.

-Executive change giver 1=OFF, 2=OFF, 3=OFF, 4=OFF, 5=ON, 6=ON

In order to enable the change giver, in the menu “5_4 Change giver system” select the menu “5_4_1 Type” using the keys “1” and “2” and press “6” .

The display will show:

T Y P E
N O N E

Using the keys “1” and “2” select “MDB” and press “6” to confirm. Press “7” to get back to the previous menu.

In order to enable/disable the single coins select the menu “5_4_2 Lines” using the keys “1” and “2” and press “6” .

As an example, the display will show:

E U R O	0 . 0 5
----------------	----------------

Through the keys “1”or “2” select the required bill and press “6”.

As an example, the display will show:

E U R O	0 . 0 5
E N A B L E D	

Enable or disable the coin through the keys “1” or “2” and press “6”.



If an MDB coin system is used, when the change present in the pipes (1_10) is not enough to give back a change equivalent to, or lower than, the max. change as set (4_7), the display will show on its lower part “No Change”. Regarding EXECUTIVE coin systems, please refer to the relevant manual. It is also possible to fix what coins are to be accepted when the display shows the message “No Change”. To this purpose, get into the menu “5_4_3 Set no change” and, following the same procedure as on the menu “Lines”, enable or disable the required coins.

☞ **For proper visualization of credit it is essential to set the scaling factor (5_1_1) to the same value as the one set on the change giver.**

☞ **In order to fill the change giver tubes, please refer to menu 1_10 “Coins C.G. tubes”.**

5_4_4 C.G. TOKEN

If the MDB coin system is programmed to accept a token, in this menu it is possible to set a token value. To modify such value select the menu “5_4_4 C.G.Token”; press “6” to get into the menu and increase or decrease the value through the keys “1” or “2”. Save through the key “6”. As for any other coin, it is possible to enable or disable acceptance in menu “5_4_2 Lines” and, in case of “No Change”, in menu “5_4_3 Set no change”.

5_4_5 COIN CHANGER FUNCTION

Enabling this function, the MDB change giver will give the change back, the smaller value coins first.

5_5 CASHLESS SYSTEM

A cashless system can be mounted on the machine (Coges, Elkey, OTR, FAGE).

Before mounting a change giver, make sure that the SW6 microswitches on the board are set in the following way:

-MDB System 1=ON, 2=ON, 3=ON, 4=ON, 5=OFF, 6=OFF.

-Executive system 1=OFF, 2=OFF, 3=OFF, 4=OFF, 5=ON, 6=ON

In order to enable the system, get into the menu “5_5 Cashless system”, select “None”, “MDB” or “Executive” using the keys “1” “2” and press “6” to confirm. For further information get in touch with the service center.



6_Temperatures

In this section it is possible to set the temperature to be kept by the cooling system in the lower part of the machine.



The machine temperature can be checked any time by pressing the key “1” four times in succession, in normal operation mode.

6_1 TEMPERATURE SETTING

The cooling unit operation is regulated by temperature setting. The cooling unit starts operating when the temperature is higher than the programmed value, added to the offset (parameter “*OFS*” set in menu “7_COOLING UNIT”).

In order to modify the set temperature, select the menu 6_1 and press “6”.

The display will show:

0 6 > 0 1 > 0 1	
OFF	18 ° C

The value regulation is obtained using the keys “1” and “2”, then confirm through the key “6”. The temperatures can be adjusted in the interval set by the parameters TLH, THH, TLL, THL, present in menu “7_COOLING UNIT”.

As an option, the temperature can be visualized during normal operation instead of the clock. To this purpose, by pressing the key “3” the display will show ON and the temperature will be visualized. .

In order to get out of the programming mode press the key “7”.

0 6 > 0 1 > 0 1	
ON	12 ° C

6_2 SET POINT SETTING

Parameter to be used by Project Vending only.



7_Cooling unit

In this menu section the standard parameters of cooling unit are shown, as set by the manufacturer.



Programming of such parameters has been set by the manufacturer in order to optimize the cooling unit performance for most of applications. Before modifying such parameters, please apply to a service center.

The parameters that can be set in this section are summarized in the list hereinafter, which shows also the limit values for the parameters and the standard values. The parameters are saved through the key “6”. The key “8” resets a parameter value. The keys “1” and “2” allow to move into the menu and modify the parameter values.

7_1RESTORE STD C.U.P.

The standard parameters of cooling unit can be restored through the command “*RESTORE STD CUP*” in the menu “*Cooling unit*”.

The following page shows a table with the available parameters and, on the right-hand side, the standard values according to the machine model.



Maxima/Karina

MD06426C Rev.0 del 01/12/2013

Item	Function	Limits	Value
Ddt	Defrosting time	0 ÷ 99 minutes	15
DPt	Time interval between two subsequent defrostings	0 ÷ 99 hours	6
AdI	First operation time. Time allowed, on first starting, to reach the required temperature range.	0 ÷ 99 hours	12
Ald	Second operation time. Time allowed, after first operation, to reach the required temperature range.	0 ÷ 99 hours	12
OFS	Max. temp. variance from set value before the cooling unit / fan start operating.	0 ÷ 5 °C	3
HIA	Max. temp. allowed in the lower machine compartment.	0 ÷ 35 °C	35
AdH	Max. persistency time allowed at max. temp. (HIA).	0 ÷ 9 hours Increases by 0.5	9
TLH	To be used by Project Vending only	0 ÷ 30 °C	10
THH	To be used by Project Vending only	0 ÷ 30 °C	25
TLL	Min. temp. value to program on lower sensor	0 ÷ 30 °C	6
THL	Max. temp. value to program on lower sensor	0 ÷ 30 °C	18
CPS	Power supply to cooling unit	ON ÷ OFF	ON
ISH	To be used by Project Vending only	0 ÷ 30 °C Increases by 0.25 °C	0
ISL	To be used by Project Vending only	0 ÷ 30 °C Increases by 0.25 °C	1.5



8_Configuration

The vending machine “MAXIMA” can be provided with up to 8 shelves to be enabled or disabled individually. If the machine is provided with product presence sensors, these sensors can be enabled or disabled. On every shelf the inventory function can be implemented to disable the selection when there are no more products. If the machine is also equipped with a GSM system, the “Minimum Stock” function can be implemented to inform the user through SMS that the products are below a given number that can be programmed.

8_1 SHELVES CONFIGURATION

The machine is delivered in the configuration as requested, therefore no modification is to be made in this section, except for the cases when it is required to change the said configuration.

By selecting the menu 8_1 and pressing the key “6” the display will show:

08 > 01
SHELVES CONFIG.

By pressing further the key “6” the following sub-menu will appear:

SELECTION N. 11

Choose the desired shelf through the keys “1” or “2”. Then press “6” to enter.

Through the keys “1” or “2” it is possible to choose among the options:

- Activated 1S. 1-Spiral selection activated;
- Activated 2S. 2-Spiral selection activated;
- Deactivated. The selection is deactivated

To confirm press “6”. In order to get out without saving the modifications, press “7” .

It is to be noted that if a shelf is disabled, when pressing the relevant key the display will show “not available”.

8_2 SPIRALS CONFIGURATION

The function of this sub-menu is providing to the machine the information regarding quantity of products on each spiral after filling, if the Inventory function is used.



After a spiral has dispensed a number of products as the set one, if a further dispensing is requested the display will show the following message:

SOLD OUT

In the standard configuration this function is not implemented (menu 8_5 “Inventory enabling”) and the value of all the spirals is set to “0”.

In order to program a number of products per spiral, get into the menu 8_2 “Spirals configuration” and press the key “6”. The display will show:

INVENT SEL. N.	11
-----------------------	-----------

Through the keys “1” and “2” select the spirals where a number of products is to be set. By pressing the key “6” the set figure will appear:


INVENT SEL. N.	11
	0

Through the keys “1” and “2” such parameter can be modified, then to confirm press “6”. As an example, if capacity is set to “10”, dispensing will stop on the tenth product on selection 1, and then the display will show “Sold out”.

If all the products are sold out, the display will show “Out of order” disabling the payment systems (9_2). In order to restore the operation, the machine must be refilled and the command “*inventory resetting*” (2_4) shall be used.

For special requirements, a value lower than max. spiral capacity can be set.



 If the “*inventory*” function is used, on every machine refilling the command “*inventory resetting*” (menu 2_4) must be used to inform the machine of the refilling. The selections where the inventory function is used must be refilled completely.

8_3 MINIMUM STOCK

If the machine is provided with a GSM modem and the function of data downloading to a PC is used, it is possible to be advised when the number of products of a given shelf goes below a given value, programmable in this menu. When the programmed figure is reached, the modem will transmit to the



PC the inventory status right at that moment (number of products, minimum stock and max. capacity). In order to program the min. stock value on a given shelf, get into the menu “8_3 Minimum stock” and press the key “6”.

Through the keys “1” and “2” choose the selection to be programmed. By pressing the key “6” the parameter actually set will appear:

SEL. N. 1
0

Through the keys “1” and “2” the parameter can be modified. Then confirm through the key “6”.



For a good system operation it is essential to use the “inventory” function (menu 8_2)

8_4AUXILIARY VENDING MACHINE ENABLING

Through the selections 91 and 92 the vending machine MAXIMA can credit some money to an auxiliary vending machine (d.aux) connected through the proper interfacing cable D.AUX. It is possible to set two different prices on selections 91 and 92. After putting the money in the machine and choosing the selection 91 or 92, the money corresponding to the selection price is transferred to the auxiliary vending machine to select a given product.

In order to configure the two vending machines, perform the following operations:

1. Connect the D.AUX interfacing cable between the two machines. The 9 pole connector must be connected to the 9 pole plug placed behind the machine MAXIMA; the flat cable is to be connected with the connector of the 12 V coin mechanism of the auxiliary vending machine coin mechanism.
2. **Configuration of MAXIMA**
 - Get into programming mode through the SERVICE push-button. Get into menu “8_Configuration” and then menu “8_4 VM Aux config.”. Select “Enabled”. Confirm through key “6”.



- Get into menu “3_ Prices” and set prices of selections 91 and 92 to the two values used on the auxiliary vending machine (if the aux. vending machine dispenses products at one price only, set both prices 91 and 92 to that value).
3. **Configuration of auxiliary vending machine** (get into the programming menu of the aux. machine only).
- Program the value of lines 1 and 2 of aux. machine coin mechanism at the price of selections 91 and 92 respectively.
 - Program the prices of aux. machine products to the same values as selections 91 or 92 as may be required.

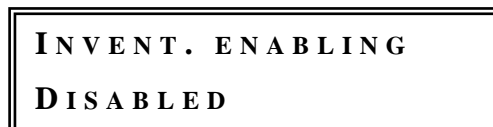
8_5INVENTORY ENABLING

In this menu it is possible to enable or disable the inventory function. This function allows to count the number of products dispensed from each spiral in order to give a signal of “sold out” product when all the products have been dispensed from the spiral. In order to use the inventory function, it is necessary to:

1. Enable the inventory in menu 8_5.
2. Set the number of products per spiral in menu 8_2 “Spirals config.”.
3. Reset the inventory in menu 2_4 “Inventory resetting” every time the machine is refilled in order to inform the system that a refilling has been performed and therefore it is possible to dispense further products.

In order to enable/disable the inventory, get into the menu 8_5 through the key “6”.

The display will show:



To enable or disable the function use the keys “1” and “2”. Confirm the choice through the key “6”. For further details please refer to menus 2_4 “Inventory resetting” and 8_2 “Spirals config.”.



If the “*inventory*” function is used, on every refilling it is necessary to use the command “*inventory resetting*” (menu 2_4) to inform the machine of the refilling.



9_Maintenance

The machine is provided with a trouble shooting menu able to give quick information on status of motors, payment systems and keyboard.

9_1 DIAGNOSTICS

Line Test

Parameter to be used by Project Vending only.

Coin mech. Test

It allows to test proper interfacing between the electronic board and the coin mechanism. This test can only be performed on a coin mechanism, not in presence of a change giver.

The display will show:

COIN MECH. TEST

Press the key “6” to confirm. On putting the different coins in the machine, the display will show the corresponding coin mechanism line. In order to get out and get back to the previous menu press “7”.

Output test

It allows to test all the electronic board outputs.

Parameter to be used by Project Vending only.

Keyboard test

It allows to test proper operation of the keyboard. Press the key “6” to confirm. Check on the display that the pressed keys are the right ones. In order to get back to the previous menu wait for a few seconds from last typing in.

Temperature test

Parameter to be used by Project Vending only.



Motor test rep.

It allows to test proper operation of all the machine motors. In order to get into this test press “6”. In case of any malfunction, the test will stop on the defective motor and the kind of trouble will be visualized.

Motor test sng.

It allows to test proper operation of a single motor that could get stopped or stalled. In order to get into this test press “6”. Through the keys “1” and “2” select the number of the selection to be tested. Confirm through the key “6”. If a malfunction is noticed, the kind of trouble will be visualized.

Test SGN various

It allows to test all the electronic board inputs.
Parameter to be used by Project Vending only.

RND test

It allows to test MDB communication with a change giver and check proper operation. In order to get into this test press “6”. If proper communication between vending machine and coin mechanism is noticed, a few moments later the display will show “Test MDB” as well as the amount of coins in the tubes. On putting some coins in, the relevant value and channel will be shown. In case of any trouble, such trouble will be shown instead of “Test MDB”.

BILL test

It allows to test MDB communication with the bill reader and check proper operation. In order to get into this test press “6”. If proper communication between vending machine and bill reader is noticed, a few moments later the display will show “Test OK”

Watch test

It shows the time as set in the machine.

Upload config.

Parameter to be used by Project Vending only.



Download config.

Parameter to be used by Project Vending only.

Barrier test.

It allows to test the proper operation of the optical barrier.

9_2FAILURE LIST

When a trouble is noticed by the machine during normal operation, the symbol @ will appear on the left-hand lower part of the display and the trouble is recorded in the failure list. Such list records the last 15 troubles occurred during machine operation after last resetting. The troubles are listed in chronological order, marked by a list number and an error code along with a short description of the trouble occurred. As an example, please note a trouble occurred on motor 10, stalled at 10:15 am of August 8, failure code 02: .

10:15 08/08	ER 02
01) MOTOR	F. 10

The list hereinafter shows possible errors recorded in the failure list.

Error codes

Code	CAUSE	CONSEQUENCE	POSSIBLE SOLUTION
Er 11	Motore stalled or shortcircuited	The relevant selection doesn't work. The machine continues working regularly, but on a second request of the same selection, the display shows "Not available"	Replace the damaged motor or remove the cause of the trouble. Reset the failure list to remove the signal of this trouble.



Maxima/Karina

MD06426C Rev.0 del 01/12/2013

Code	CAUSE	CONSEQUENCE	POSSIBLE SOLUTION
Er 12	The motor rotates more than once, thus causing microswitch break	The relevant selection doesn't work. The machine continues working regularly, but on a second request of the same selection the display shows "Not available"	Replace the damaged motor. Reset the failure list to remove the signal of this trouble.
Er 13	The motor turns continuously due to a problem on wiring or on the electronic board.	The payment systems and the selections don't work. The display shows "Out of order". The cooling unit continues working regularly.	Apply to the service center.
Er 2	The motor doesn't work.	Deactivation of the selection out of order. The machine continues working regularly.	Replace the motor out of order. Cancel the failure list to remove the error signal.
Er 21	The product hasn't dropped into the product delivery compartment.	On a second choice of the same selection, the display shows "Not available".	The spiral is empty. Refill the machine. Cancel the failure list in order to activate the selection again.
Er 22	The optical barrier doesn't work.	If the option "Optical Barrier out of order" is activated, the machine gets out of order, otherwise everything continues working regularly without detecting product dropping. .	Apply to the service centre.



Maxima/Karina

MD06426C Rev.0 del 01/12/2013

Code	CAUSE	CONSEQUENCE	POSSIBLE SOLUTION
Er 3	After switching on, the machine hasn't reached the set temperature in the allowed time (AdI).	Everything continues working regularly but the alarm occurred is signalled.	Check proper closing of machine door and product delivery door. Check ambient temperature. Increase the set temperature value.
Er 4	During operation the temperature hasn't reached the set value in the allowed time (AId)	Everything continues working regularly but the alarm occurred is signalled.	Increase the set temperature value. Check presence of any ice on evaporator. If necessary, perform defrosting.
Er 5	The machine temperature has remained at max. value (HIA) for max. time allowed (AdH)	Machine stop. The display shows "Out of order". Warning: some products could get deteriorated.	Check proper working of cooling unit. If necessary perform defrosting. Reset the failure list to remove the signal of this trouble.
Er 61 Er 62	Problems on sensors. Er 61: sensor shortcircuited Er 62 sensor open	The cooling unit continues cooling in a fixed cycle for a good preservation of the stored products.	Apply to the service center
Er 7	Communication problems with the MDB cashless reader	The payment system doesn't work.	Check connections with payment system. Switch off and restart the machine. Apply to the service centre.
Er 8	Communication problems with the MDB bill reader	The payment system doesn't work.	Check connections with payment system. Switch off and restart the machine. Apply to service centre.
Er 9	Communication problems with MDB change giver.	The payment system doesn't work.	Check connections with payment system. Switch off and restart the machine. Apply to service centre.



Error codes of MDB change giver*

Type	Code	CAUSE
MDB 1	Er 90	Defective Tube Sensor
	Er 91	Tube Jam
	Er 92	Rom checksum error
	Er 93	Coin jam
MDB 2	Er 94	General changer error
	Er 95	Discriminator module error
	Er 96	Accept gate module error
	Er 97	Separator module error
	Er 98	Dispenser module error
	Er 99	Coin Cassette/ tube module error

*For further information on change giver errors and their possible solution please refer to the relevant manual.

Error codes of MDB bill reader*

Code	CAUSE
Er 80	Defective motor
Er 81	Sensor error
Er 82	Rom checksum error
Er 83	Bill jam
Er 84	Cash Box out of position
Er 85	Cash Box full

*For further information on bill reader errors and their possible solution, please refer to the relevant manual.



Machine out of order

In out of order status the machine stops completely. The payment systems are disabled, no selection is working. The machine display shows “Out of order” and a scrolling message that can be personalized in menu 4_11.

The machine can get out of order for the following reasons (some of them already described in previous menus):

Error	CAUSE
Er 13	Motor turning continuously due to an electric or electronic problem
Er 2, Er 12, Er 21 on all the selections	All the motors are out of order (Er 2, Er 12) or there are no more products (Er 21).
Er 22	The optical barrier doesn't work.
Er 5	The machine temperature (Temp. low) remained at max. value (HIA) for the max. time allowed (AdH)
All the products sold out	The inventory function is used (8_2) and the machine hasn't been refilled after all the products have been sold out (2_4).
Memory Corrupted	Apply to the service centre

Once the cause of trouble has been removed, in order to restore proper machine operation the failure list must be reset, as described in the chapter hereinafter.

9_3RESET FAILURE LIST

This command resets the failure list and allows to restore proper dispensing operation and proper cooling unit operation in case any problem has affected their good working order. Of course, it is necessary at first to fix the problem.

Get into the menu through the key “6” and then press “1” to confirm resetting or “2” to delete.

**9_4STD CONFIG.**

This command allows to set some machine parameters to the ones as set by the manufacturer, as shown in the following list:

DESCRIPTION	STD. VALUES
Price setting	0
Total counter of dispensed products	0
Partial counters of dispensed products	0
Configuration of shelves	Please refer to menu Errore. L'origine riferimento non è stata trovata. in Section “Use and Maintenance”
Language setting	Italian
Currency setting	Euro
Max. change setting	2.50 €
Credit persistency setting	300 sec
Contrast regulation	70
Setting of payment systems	6-coin Validator
Multiplicative factor setting	5
Decimal point setting	0.00
Cooling unit setting	Enabled
Set temperature	8 °C



10_Modem setup

Through a proper GSM in the machine "Maxima" and a central communication unit to connect with a PC, some information on the machine operation can be received at a distance. It is possible to download to a PC data relating the collected money, counters, prices, temperatures, compressor unit, inventory, and to receive information of errors occurred on the machine.

10_1 OFFICE TELEPHONE NUMBER

In this menu the telephone number of the central unit SIM card is to be typed in.

In order to type in/modify the code get into the menu through the key "6". A window with the set number and a cursor below the selected figure (ex.: 393331234567) will appear:

3	9	3	3	3	1	2	3	4	5	6	7	-	-	-	-
-															

Through the keys "1" and "2" put the cursor on the figure to modify and then, through the keys "3" and "4", select the required value.

Type in the number with the country code with no zero (ex. 39 for Italy). At the end of the number type in some hyphens ("-") to fill the line.

Confirm the modifications through the key "6". In order to get out without saving modifications press "7".

10_2 MODEM TEST

This test shows power and quality of the signal received by the modem.

10_3 SMS MAILING FREQUENCY

It is possible to set modem mailing frequency to transmit the machine inventory (number of products, minimum stock and max. capacity). Select frequency through the keys "1" and "2" and confirm through the key "6". Such frequency, in terms of days, starts on mailing confirmation. The SMS message is transmitted after 4:00 am of the set date.

10_4 MODEM ENABLING

The modem can be enabled or disabled through the keys "1" or "2". Confirm through key "6".



ALLEGATO I

Menu of the vending machine model

“Maxima”

1_Attachment 1 - Introduction

The following page shows the machine menu structure. The relevant numbering is also kept in the programming manual.

The cascade structure gives a quick survey of quantity and type of the available options and parameters as well as of their arrangement.

There are 10 main menus, each one having a variable number of sub-menus, structured in further options.



Please note that the machine is delivered already programmed for the requested configuration. Therefore, it is advisable not to get into “CONFIGURATION”, “PAYMENT SYSTEMS” or “COOLING UNIT” menu. On the contrary, it is necessary to set values in section “PRICES”.

The commands marked in the list by (PSW) can be protected by a password, therefore they are not available to non-authorized operators.



2_Attachment 1 - Menu

- 1_ ACCOUNTING
 - 1_1 CASHED AMOUNT
 - 1_2 CASH SALES
 - 1_3 CASHLESS SALES
 - 1_4 CHANGE RETURNED
 - 1_5 RESIDUAL CREDIT
 - 1_6 COLLECTED COINS
 - 1_7 COLLECTED BILLS
 - 1_8 CASH RECHARGE
 - 1_9 COINS FM C.G.
 - 1_10 COINS C.G. TUBES
 - 1_11 ACCOUNTING RESET (PSW)
- 2_ COUNTERS
 - 2_1 MAIN COUNTER
 - 2_2 COUNTERS
 - 2_3 COUNTERS RESET (PSW)
 - 2_4 INVENTORY RESET
- 3_ PRICES
 - 3_1 NORMAL PRICES
 - 3_2 CASHLESS PRICES
 - 3_3 DISCOUNT
- 4_ SETTINGS
 - 4_1 LANGUAGE
 - 4_2 CURRENCY
 - 4_3 CLOCK SETTING
 - 4_4 CONTRAST
 - 4_5 PASSWORD (PSW)
 - 4_6 MACHINE CODE (PSW)
 - 4_7 MAX. CHANGE
 - 4_8 CREDIT PERSISTENCY
 - 4_9 COUNTERS PSW
 - 4_10 GOOD WORKING MSG
 - 4_11 OUT OF ORDER MSG
 - 4_12 LIGHTING
 - 4_13 FORCED VEND
 - 4_14 OPTIACAL BARRIER
- 5_ PAYMENT SYSTEMS
 - 5_1 BASIC COIN
 - 5_1_1 SCALING FACTOR
 - 5_1_2 DECIMAL PLACES
 - 5_2 COIN MECHANISM
 - 5_2_1 TYPE
 - 5_2_2 LINES
 - 5_3 BILL READER
 - 5_3_1 TYPE
 - 5_3_2 LINES
 - 5_4 CHANGE GIVER
 - 5_4_1 TYPE
 - 5_4_2 LINES
 - 5_4_3 SET NO CHANGE
 - 5_4_4 C.G. TOKEN
 - 5_4_5 COIN CHANGE
 - 5_5 CASHLESS SYSTEM
- 6_ TEMPERATURE
 - 6_1 TEMPERATURE SETTING
 - 6_2 SET POINT SETTING (NOT AVAILABLE)
- 7_ COOLING UNIT (IN SUCCESSION)
 - DDT DPT ADI ALD OFS HIA ADH TLH THH
 - TLL THL CPS ISH ISL RESTORE STD CU
- 8_ CONFIGURATION
 - 8_1 SHELVES CONFIGURATION
 - SELECTION N.11
 - SELECTION N. 87
 - 8_2 SPIRALS CONFIGURATION
 - INVENTORY SEL. 11
 - INVENTORY SEL. 87
 - 8_3 MINIMUM STOCK
 - SEL. 11
 - SEL. 87
 - 8_4 VM AUX ENABLING
 - 8_5 INVENTORY ENABLING
- 9_ MAINTENANCE
 - 9_1 DIAGNOSTICS
 - 9_1_1 TEST LINE (NOT AVAILABLE)
 - 9_1_2 COIN MECH TEST
 - 9_1_3 OUTPUT TEST
 - 9_1_4 KEYBOARD TEST
 - 9_1_5 TEMPERATURE TEST
 - 9_1_6 MOTOR TEST REP
 - 9_1_7 MOTOR TEST SNG
 - 9_1_8 TEST SGN VAR.
 - 9_1_9 RND TEST
 - 9_1_10 BILL TEST
 - 9_1_11 WATCH TEST
 - 9_2 FAILURE LIST
 - 9_3 RESET FAILURE LIST
 - 9_4 STD. CONFIG. (PSW)
 - 9_5 INFO
- 10_ SETUP MODEM
 - 10_1 OFFICE TEL. NUMBER
 - 10_2 TEST MODEM
 - 10_3 SMS MAILING FREQUENCY
 - 10_4 MODEM ENABLING



Maxima/Karina

MD06426C Rev.0 del 01/12/2013



Maxima/Karina

MD06426C Rev.0 del 01/12/2013
