Brisa & Mistral

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1. INTRODUCTION

The machines in the Brisa-Mistral range are designed for the automatic vending, using *spirals*, of snacks and drinks in cartons, cans or plastic bottles.

The range is comprised of 3 types of module:

- Refrigerated module for cans and plastic bottles, with various different models.
- Refrigerated module for snacks and drink cartons, with various different models.
- Payment module, with only one model.

The different modules will be referred to as:

Refrigerated module for cans and plastic bottles as **Module B**.

Refrigerated module for snacks and drink cartons as **Module H**.

Payment module as **Payment module**.

1.1 DEFINITIONS

- **Programming mode**: when the *machine* is ready to have any of its programmable functions programmed.
- **Working mode:** when the *machine* is ready to vend any of its products to a customer.
- **Interior:** the refrigerated area inside the cabinet, in Module H or Module B, where the *Drawers* are located.
- **Free sale**: this can be the whole machine, or any of the product channels, when they will extract a product without having to pay for it; the product is sold free of charge.
- **Simple or multiple vend**: these are the two possible programming settings for the way to vend from the machine:
  - Simple vend: the credit remaining after a vend will be directly returned.
  - Multiple vend: the credit remaining after a vend will be held by the machine and will allow the customer to buy more products. If the customer does not wish to buy more, they simply press the refund button to retrieve the remaining credit.

1.2 MAIN TECHNICAL CHARACTERISTICS

- It is possible to connect one or two modules, Module B and/or Module H, to the same Payment module. It is also possible to connect a Module B and/or a Module H

to a hot drink machine from the TEMPO or CITY range.

- Completely modular construction.
- A wide range of packaged products in different shapes and sizes can be vended.
- The *Product collection hatch* has an automatic locking system that impedes access from the outside of the Module to the products inside the machine and also temperature losses from the *interior*.
- The *Drawers* can be configured to adapt them to the sizes of the products that are for sale. Furthermore, the can be pulled out and tilted down to facilitate the loading of the product.
- Each product extractor *Spiral* has its own motor.
- Large exposition window in the door for the product.
- Anti-vandal keyboard for the selection of the products.
- Anti-vandal door locking system.
- Anti-vandal or normal coin entry system.
- Microprocessor controlled electronics.
- Flexibility in the vend prices of the products:
  - Independent vend prices for each product.
  - The maximum programmable vend price is €9998 with the decimal point in any position.
  - The product selections that have €0 programmed as the price will be vended "FREE SALE".
  - The product selections that have €9998 programmed as the price will not work; the machine interprets this programming as deprogrammed product selections.
  - Pressing button A on the programming handset will extract a product from any selection without introducing any money.
  - The machine can work in "simple vend" or "multiple vend".
  - The machine can be programmed to have all the product selections in free vend.
- The extraction system can be perfectly adapted to the size and shape of the products that they are to vend:
  - Double *spirals* with anticlockwise movement.

- Double channels with 180º half turns.
- A wide range if *Spiral*s with different spacing and diameters.

► Modular Refrigeration group for easy removal.

► The refrigeration group uses Freon refrigerant R-134A without CFC.

► The interior can be divided into two different areas with different temperatures in each with a kit: the superior refrigerated at 12ºC and the inferior a 3ºC. This application is very useful to conserve the products that contain chocolate in optimum conditions.

► Automatic defrosting of the evaporator.

► Double glazing in the door with insulation chamber.

► Accepts various different payment systems:

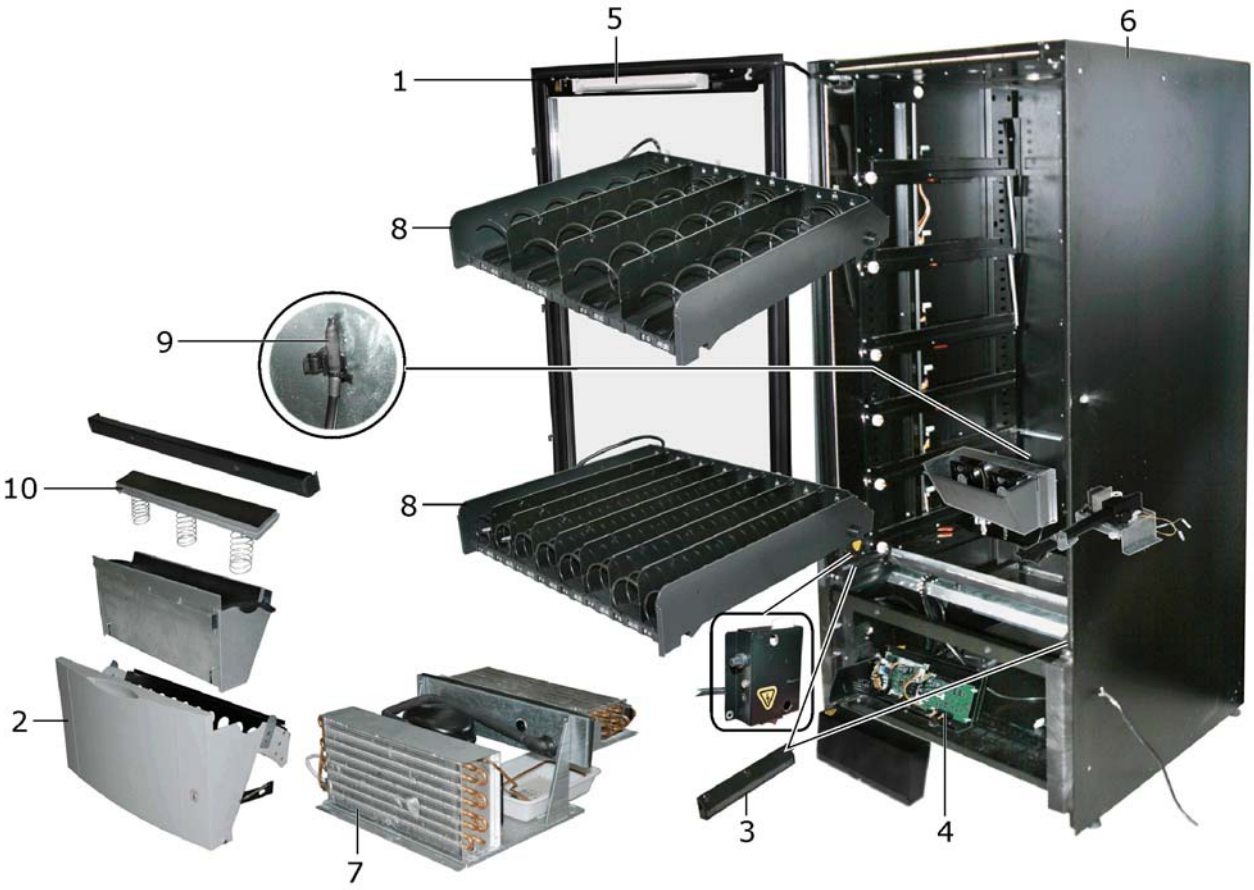
- Coin validator with coin changers that use MDB or EXECUTIVE protocols.
- Note reader with MDB protocol.
- Prepayment card reader with MDB protocol (depending on the combination of the different modules).

► Compatible with a GSM a communication system with communication protocol EVADTS (depending on the combination of the different modules).

► Compatible with printer for printouts on paper.

2. DESCRIPTION OF COMPONENTS

2.1. MODULE H



1. Door

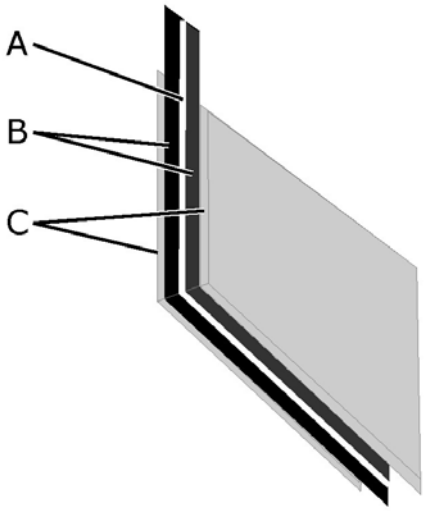
The framework and the structure are manufactured with aluminium. The door to access the delivery hatch manufactured in inflammable ABS plastic.

To open the door there is a groove in the framework.

Glass

It has an insulation chamber and is made up of 2 pieces of tempered glass of 4 mm glass. With an exterior temperature of 32º C and a relative humidity of 65%, the Interior can maintain its temperature at 3º C without any condensation.

A. Insulation chamber
B. Aluminium separation
C. Double-glazed flat glass



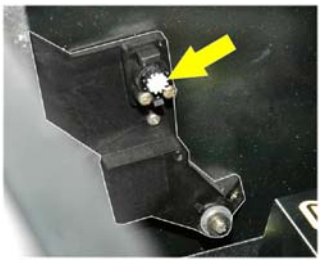
Brisa & Mistral glass

2. Product delivery hatch

The Product delivery hatch is situated in the part lower part of the door of the machine.

Flap brake

A smooth opening and closing is achieved with the help of this element.



Flap lock on the Product delivery hatch

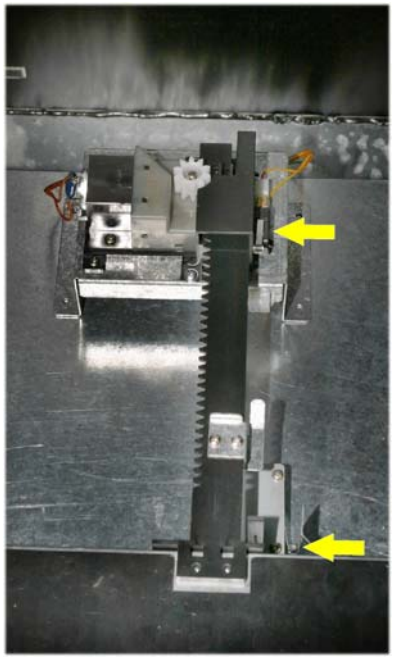
When the machine is at rest this element remains locked to avoid thermal losses from the interior of the machine as well as access to the products from the exterior of the machine.

Control Micro-switches

There are two, one is next to the motor and the other is next to the flap. They establish the maximum movement limits of the flap.

The micro-switch that is next to the door is connected to the ORANGE and YELLOW wires on the terminal and is normally closed.

The micro-switch that is next to the flap is connected to the BLUE and GREEN wires on the terminal and is normally closed.



Motor

This moves the flap in its opening and closing movements.

Its principle technical characteristics are:

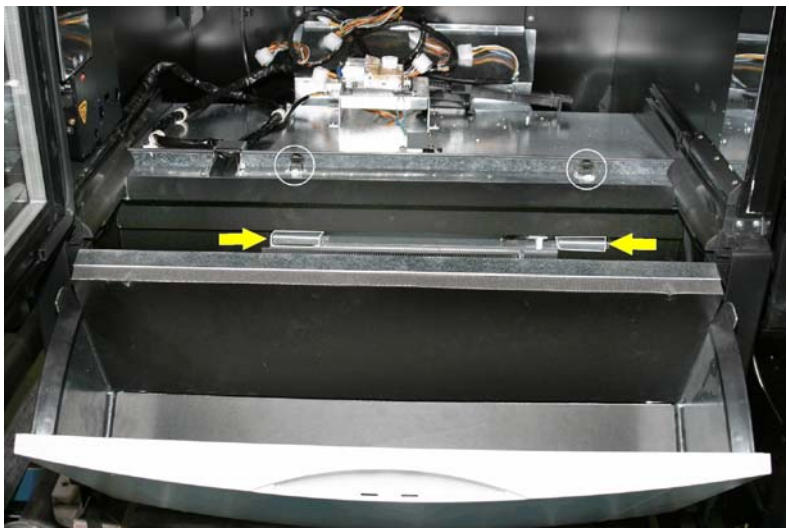
Voltage	28 Vac.
Current	150 mA
Movement	Both directions

Micro-switch for the presence of the delivery box

This switch activates when delivery box is fitted correctly in its place. If the switch is not activated, that is, if the delivery box is not fitted correctly, the machine will not work.

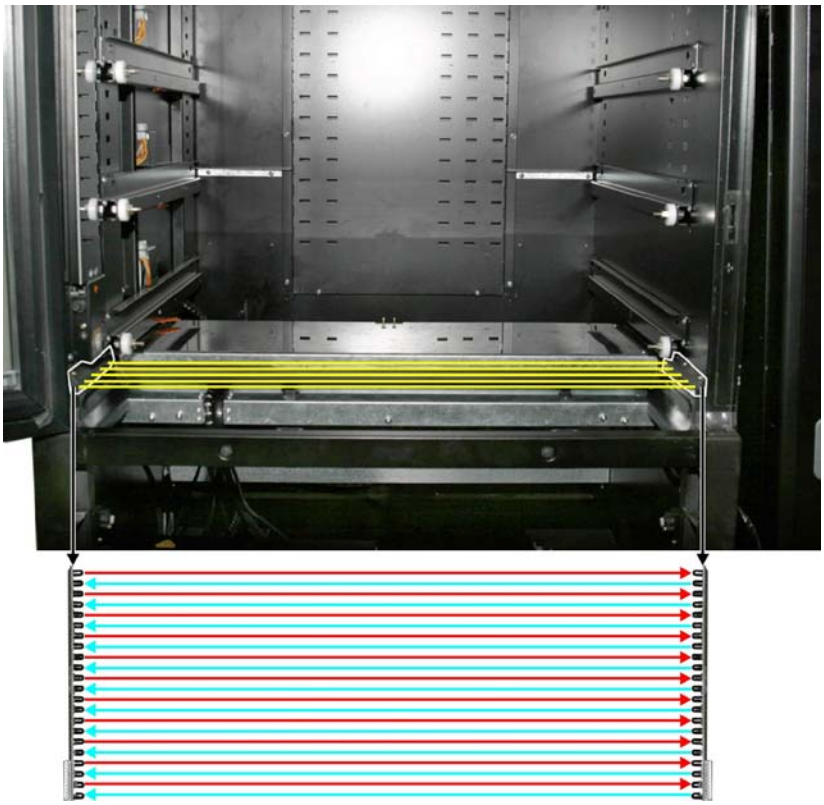
Locking system of the Product delivery hatch

When the machine is in the process of vending a product, the door of the delivery hatch remains locked until the gate returns to its closed position. These are the two elements that the lock and open the gate.



3. "IDETECT" System

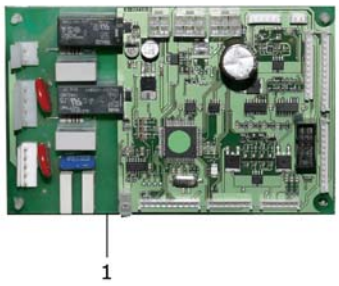
It is comprised of 11 photo-emitters and 11 photo-receptors placed on the left hand side of the *Interior* and on the right hand side of the entry to the *Product delivery hatch*. The function of this system is to detect the exit of the products that the Customers buy. If the product, for any reason, does not leave the *spiral*, the *Idetec* system does not detect it and the machine does not charge the Customer and they can get a refund or buy another product.

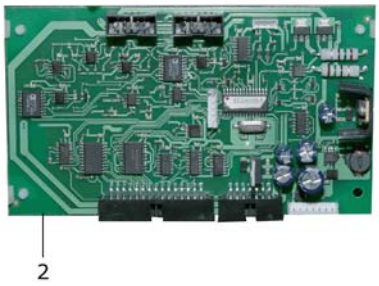


In the Modules B the first 8 leds of the Idetec system are covered by the *gate*. therefore, only 14 pairs of photocells are operative in these modules

4. Electronic circuit boards

1. PRI
2. EXT





5. Illumination

The machine has a fluorescent lamp installed in the door to illuminate the products better. It is of 36W.

6. Cabinet

Manufactured with sheet metal F-111 with a thickness of 0.8 mm, galvanized and painted. The structure is injected with polyurethane to improve the insulation and give it more consistency.

It has two separate compartments:

- The *Interior* where all the product drawers that contain the products are.
- The part where the Refrigeration *group* is housed.

7. Refrigeration groups

Two different *refrigeration groups* are used in the following models of machines:

Group F. 1	Group F. 2
Mistral H41	Brisa H70
Mistral B41	Brisa H85
Brisa H41	Brisa B70
Brisa B41	Brisa H85
	Mistral H70
	Mistral B70
	Mistral H85
	Mistral B85

The principle technical characteristics are:

	Group F. 2	Group F. 1
Make of the compressor	Electrolux	Electrolux
Model	GP12TB	GL80TB
Power	3/8 C.V.	1/5 C.V.
Refrigerant	R-134a	R-134a
Capacity	12 c.c.	7,57 c.c.
Charge of the refrigerant	310 gr.	185 gr.
Power supply of the ventilator of the compensator	230 Vac	230 Vac
Air flow of the ventilator of the evaporator	78 m^3/hour	

The temperature of the *interior* can be varied in the corresponding programming function, number 468. 3º C and over can be programmed.

8. Product Drawers

The *Drawers* can be configured to adapt them to the size and shape of the products that are sold. They accept 10, 8 or 4 *Spirals* depending on the model of machine; they are divided up by adjustable separators.

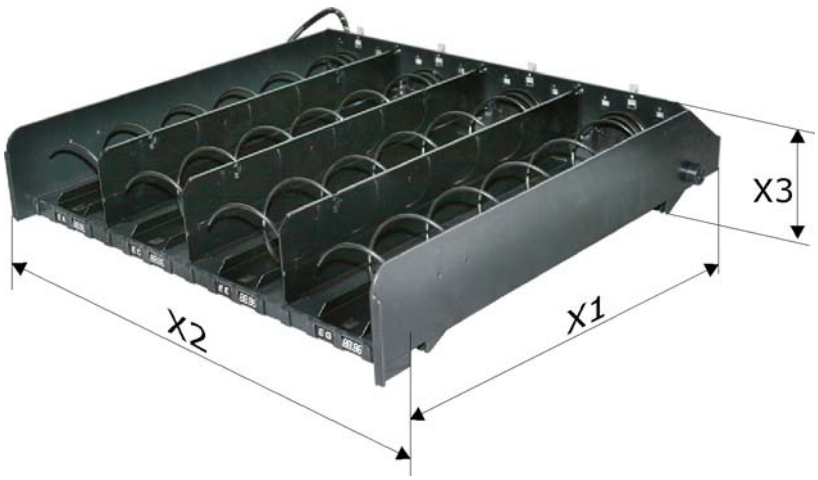
Depending on the models, the maximum number of *Drawers* that can be installed are:

Mistral B	7 *Drawers*
Mistral H	8 *Drawers*
Brisa B	6 *Drawers*
Brisa H	7 *Drawers*

The minimum separation between *Drawers*, in the I*nterior* is 52 mm

The measurements, in millimetres, of the *Drawers* are:

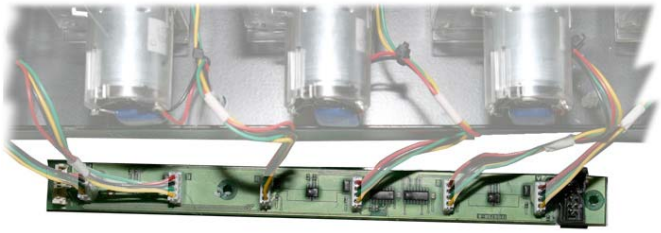
	Modules H		
	H85	**H70**	**H41**
X1	590	590	590
X2	720	575	285
X3	90	90	90

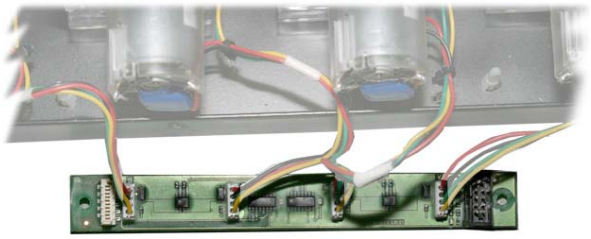


The separators of the *Spiral*s can be moved to adapt to different models of *Spiral*. The displacement is in steps of 72.5 mm

Circuit boards of the drawers

The extractor motors are connected to these circuit boards. There are 2 types of circuit board depending on the number of motors installed in the *Drawer*:





Width 41	1 *Drawer* circuit board (4 motors)
Width 70	2 *Drawer* circuit boards (4 motors)
Width 85	1 *Drawer* circuit board (4 motors)+ 1 *Drawer* circuit board (6 motors)

The transistors that govern the extractor motors and the corresponding "displacement register" circuits that activate the transistor are located in these circuit boards.

Product extractor motor

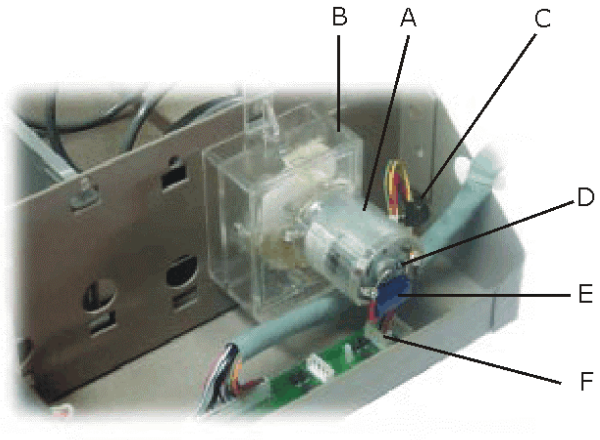
Its function is move the *Spiral* that contains the products. Its principle technical characteristics are:

Voltage	12 to 15 Vdc
Current	500 mA
Movement	clockwise
r.p.m.	57

The speed the spiral spins is always constant independent of size and weight of the product that the *Spiral* moves.

Its principle elements are:

A. Motor
B. Reducer
C. Micro switch
D. Diode
E. Condenser
F. Cable



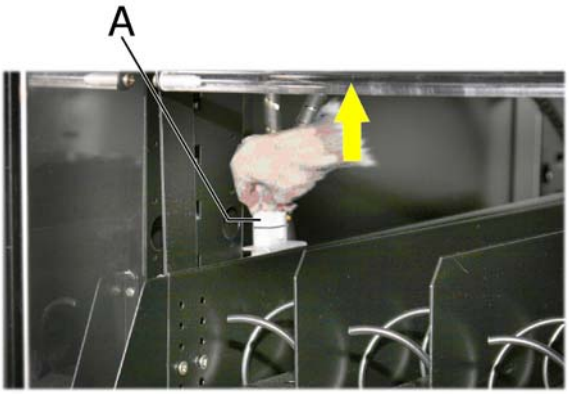
The motors have a micro switch that is activated twice by the double notch. Each activation of the micro switch corresponds to 180º.

The vertical space between the *Drawers*, inside the cabinet, can be widened or narrowed in steps of 30 mm

To regulate the vertical space between *Drawers*, proceed in the following way:

1. Disconnect the connection cable (A), on the drawer.
2. Remove the drawer by lifting slightly.
3. Remove screws (B) that hold the guide (c).
4. Place the guide in the new position and replace the screws.
5. Repeat the operation with the other guide on the opposite side.

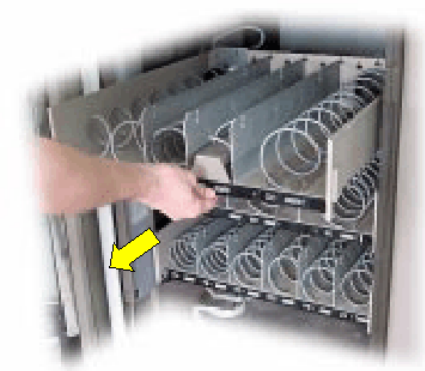
6. Replace the drawer and re connect it.



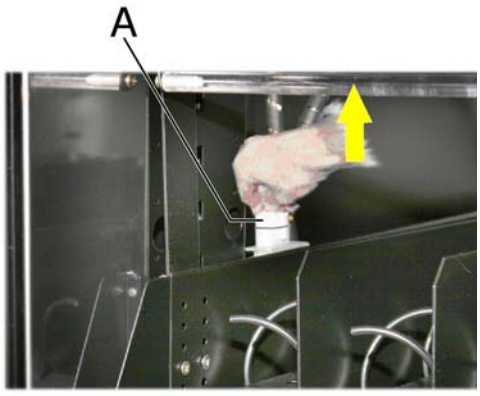
Removing the drawer

The process of removing the *Drawer* is the following:

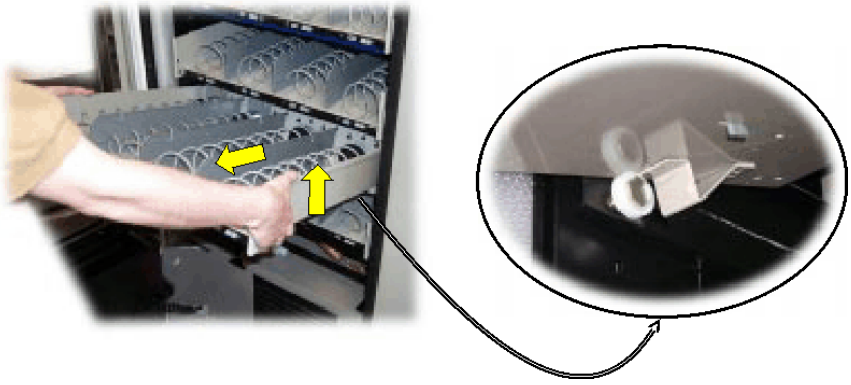
1. Switch off the machine.
2. Remove the *Drawer*. It should be lifted slightly and pulled outwards; it will be tilted downwards at approximately 45º.
3. Remove the connection cable.
4. Lift it with both hands to free it from the catches and remove it from the machine.



Step 2



Step 3

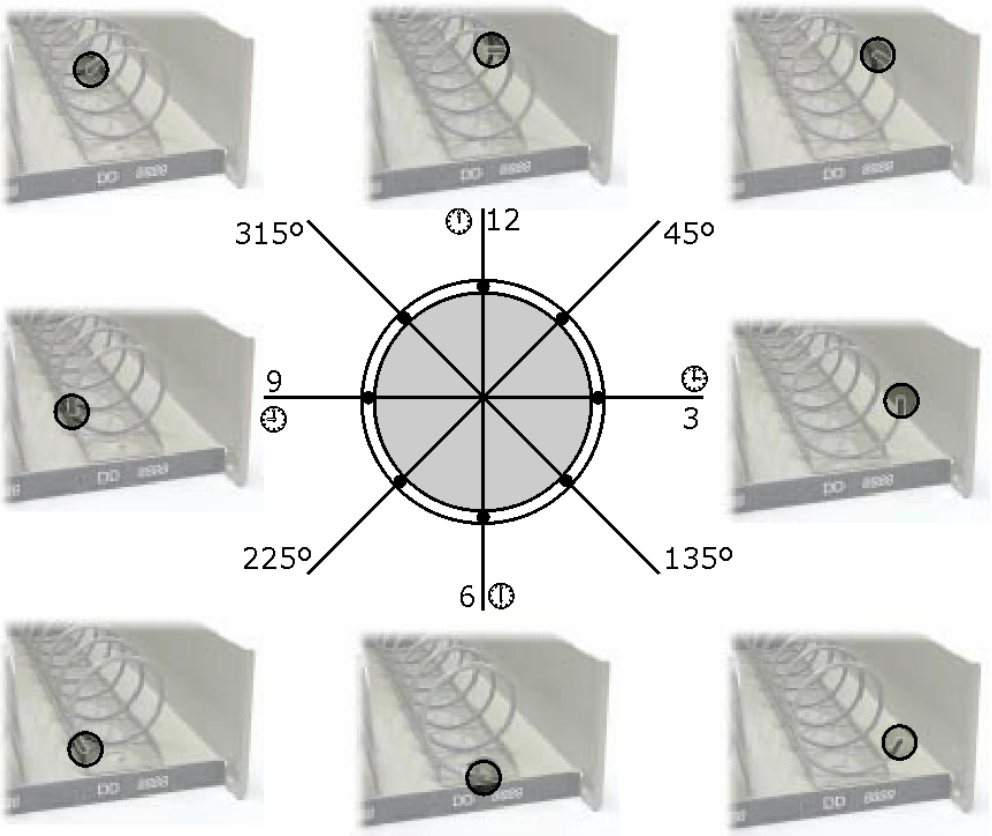


Step 4

Spirals

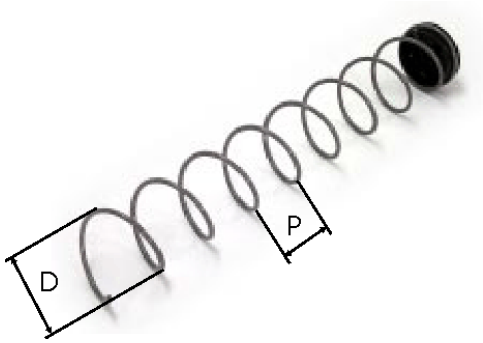
They are made of 4 mm steel and this is where the products are placed. Each *Spiral* is moved by its corresponding motor.

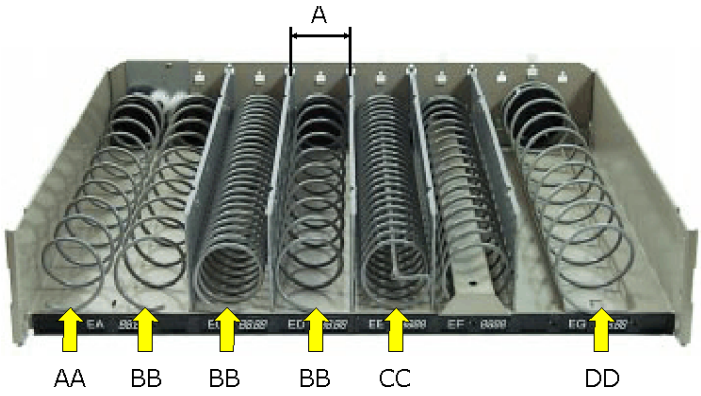
The different models of *Spiral*s that are installed in the *Drawer* go in a certain position. To define these positions, the hands of the clock are used.



The different types of *Spiral*s that can be used in the MISTRAL-BRISA range are:

	Name	(D) Diameter	(P) Space	(A) Width of channel	Capacity (products)	Position
Module H	65-20	65	20	72,5	22	6:00h
	65-25	65	25	72,5	19	
	65-30	65	30	72,5	15	
	65-35	65	35	72,5	13	
	65-40	65	40	72,5	11	
	65-50	65	50	72,5	8	
	65-60	65	60	72,5	7	
	65-77	65	77	70	6	
	65-85	65	85	72,5	5	
	65-20C	65C	20	145	22	One at 4:00h and the other at 8:00h
	65-25C	65C	25	145	19	
	65-30C	65C	30	145	15	
	65-35C	65C	35	145	13	
	65-40C	65C	40	145	11	
	65-50C	65C	50	145	8	
	65-60C	65C	60	145	7	
	65-85C	65C	85	145	5	
	65-20D	65D	20	72,5	44	7:00h
	65-30D	65D	30	72,5	30	
	78-35	78	35	145	13	8:00h
	78-45	78	45	145	10	
	78-55	78	55	145	8	
	78-65	78	65	145	7	
	78-85	78	85	145	5	
	65-68	65	68	70	8	





Spiral Ø 65

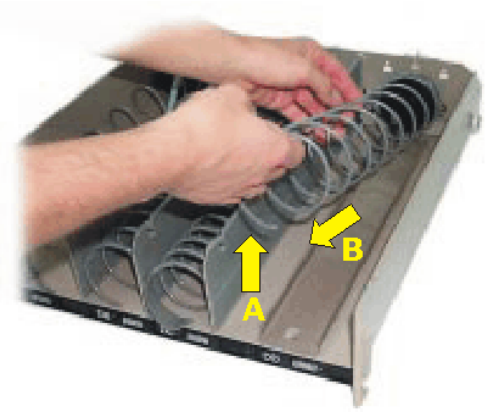
Spiral Ø 65

Spiral - double Ø 65

Spiral - normal Ø 78

Changing Spirals

To change a *Spiral*, lift it slightly (A) (approx. 45º with respect to the horizontal of the drawer), and pull it outwards (B). To replace it, repeat the process but the reverse: place the *Spiral* at 45º to the horizontal of the drawer, introduce the *Spiral* into the axel of the reducer and push slightly until you hear a small "click".

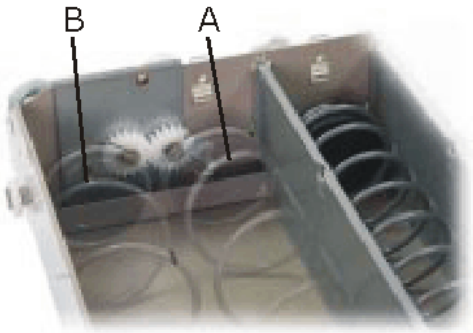


Opposite Spirals

They are especially indicated to extract large products or that need to be vertical.

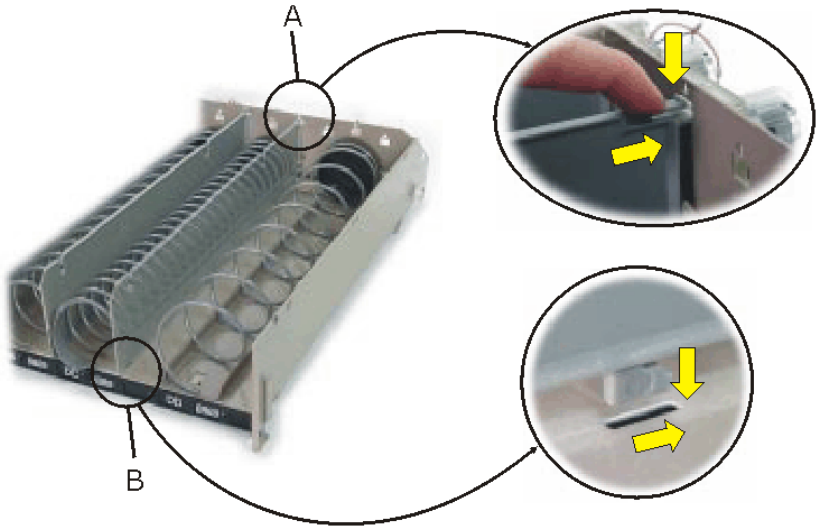
The motor spins the normal *Spiral* normal clockwise, and this is connected to the other by two gears that spin the other *Spiral* anticlockwise.

To fit these *Spiral*s correctly, first fit *Spiral* (A) and then (B). The cogs on the *Spiral* must lock in with the cogs on the gear.



Separators

Because of the characteristics of the product or because a change of *Spiral* is required, it may be necessary to widen or narrow the channel width. This is achieved by moving the corresponding separator.



Loading tests

Loading tests on the *Spiral* motors loaded with products give the following maximums:

	Snack	Cans / bottles
Spiral Ø78	2 Kg.	5 kg.
Spiral Ø65	1.5 Kg.	4 kg.
Spiral – double	1.5 kg.	
Spiral – opposite and normal	2 Kg.	

The difference in weights for cans and bottles is because they are placed on the accessories that reduce the friction of the product with the *Drawer*

Loading the products

Correct loading of the products in the *Spiral*s is the best guarantee for better operation of the machine.

Several recommendations:

- Use the model of *Spiral* that best adapts to the dimensions, weight and package of each product
- Make sure the edge of the bag or box is not trapped beneath the *Spiral*s.
- Place heavier products in the lower *Drawers*
- Respect the recommended limits of the products in the different models of *Spiral*s

- Do not load more than two drawers at the same time as it can affect the stability of the machine
- Products that contain chocolate should be conserved at temperatures no lower than 13º C.

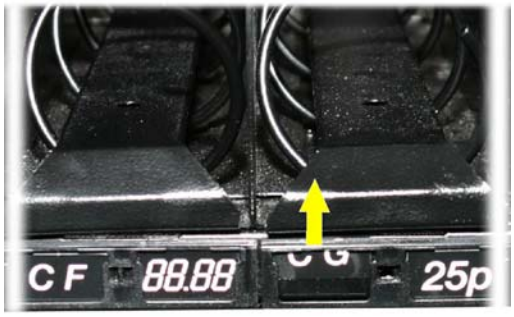
Identification and placement of the product and price labels

All the *Drawers*, on the front, have a place for the product and price labels.

Each selection is identified by a label below each *Spiral* with a combination of two letters; the first letter identifies the position of the *Drawer*: A, B, C, D, E, F, the first at the top of the machine is A, the following one down is B and so on until F. The second letter identifies the position of the *Spiral* in the *Drawer* starting from the left.

On the right of the two letters that identify the product there is a numeric label to indicate the price of the product. Use an indelible black marker pen to set the price.

In the drawers of the Modules B the label is removed sideways, and in the Modules H, upwards.

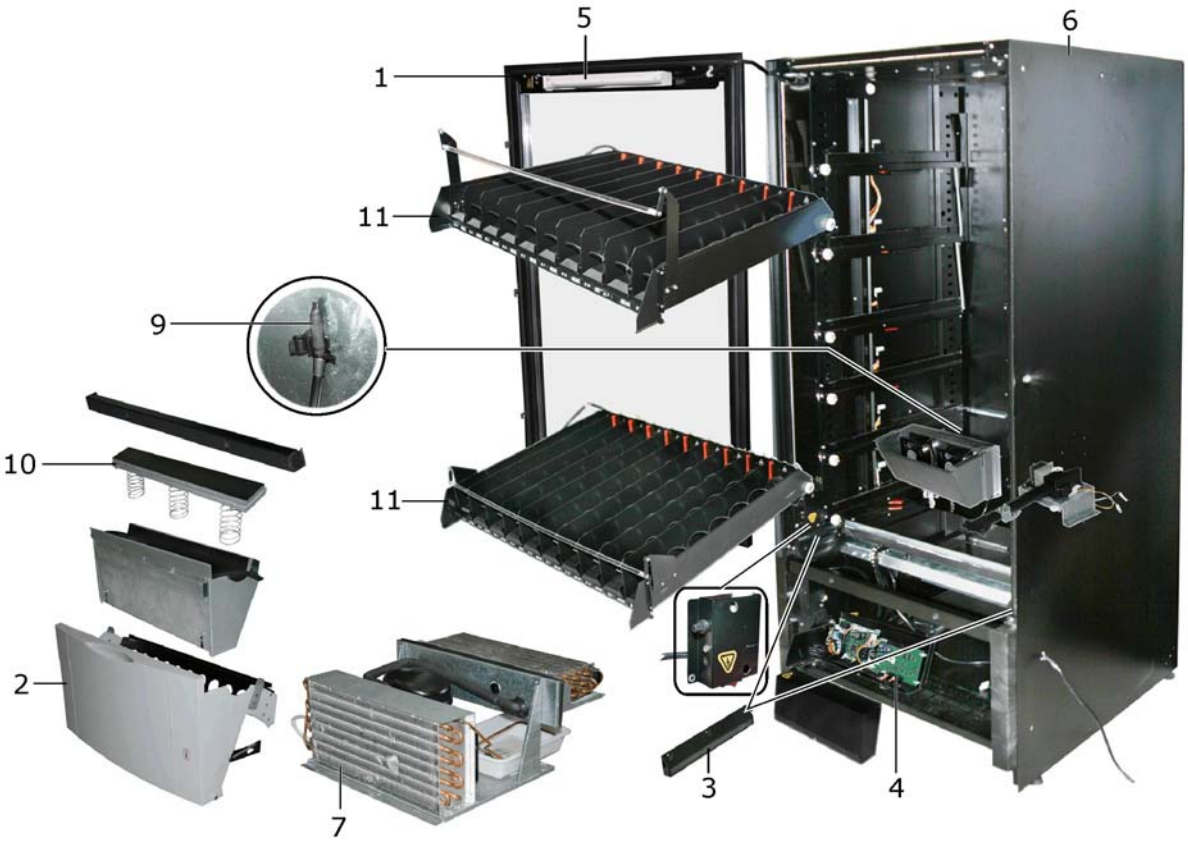


9. Temperature probe

The NTC resistor next to the evaporator captures the temperature inside the cabinet. The refrigeration group starts and stops depending on the readings of this sensor.

2.2. MODULE B

Here the elements that are specific to the Modules B are described.



10. Shock absorber in the Product Collection Hatch

This cushions the fall of the products that fall from the drawers.

11. Product Drawers

The *Drawers* can be configured to adapt them to the size and shape of the products that are to be sold. They accept a maximum of 10, 8 or 4 *Spirals*, depending on the model of the machine, that are divided by adjustable separators.

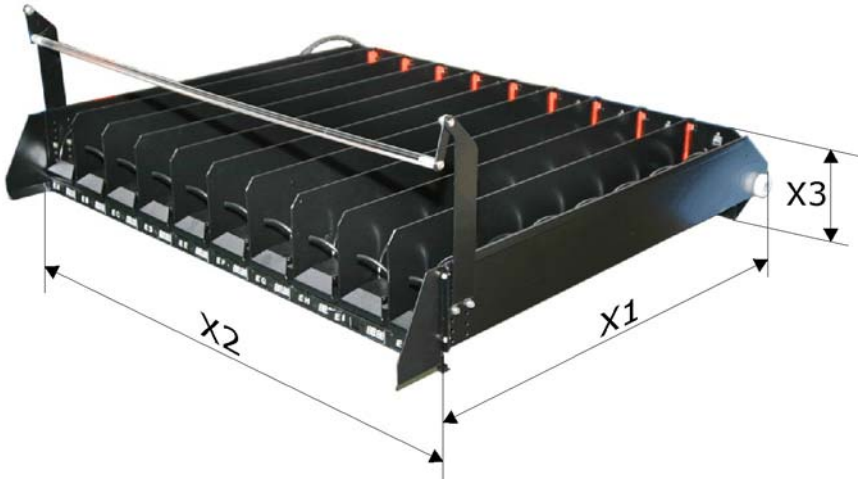
The maximum number of *Drawers* that can be installed are:

Mistral B range	7 *Drawers*
Brisa B range	6 *Drawers*

The minimum separation between *Drawers* is 52 mm

The measurements, in millimetres, are:

	Modules B		
	B85	**B70**	**B41**
X1	640	640	640
X2	720	575	285
X3	90	90	90



The separators of the *Spiral*s can be adapted to the different models of *Spiral*. The displacement is in steps of 72.5 mm.

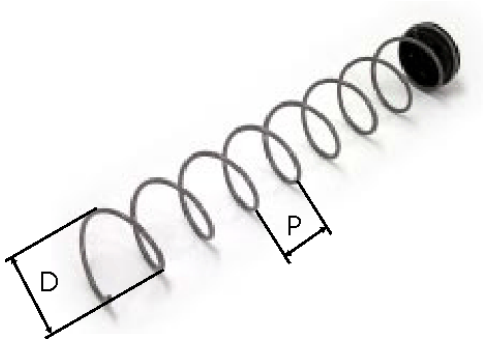
The vertical space between the *Drawers* can be increased or decreased in steps of 30 mm

Springs of the two upper drawers

Spirals

The two types of *Spiral*s that are used in the drink modules are the following:

	Name	(D) Diameter	(P) Space	(A) Width of channel	Capacity (products)	Position
CANS	65-77	65	77	70	7	12:00 h
	65-68	65	68	70	8	



2.3. PAYMENT MODULE

The different payment systems are located in this module. It is joined to the Modules B or H using four screws.

The principle elements are:

15. Power Supply

Switch	Bipolar illuminated
Transformer	Toroidal
Power	96 w
Primary	230 Vac
Secondary	24 Vdc
Maximum intensity of the secondary	4 Amps
Fuse 230 Vac	10 A for the refrigeration module 5 A for the control module
Fuse 24 Vdc	6 A

16. Payment systems

Integrated systems in the machine for the acceptance and control of the different payment methods by which the user pays for the products; changers, note readers, card readers, etc.

17. Display

The display is an LCD with illumination. It shows a maximum of 16 characters per line and has two lines.

The messages that it can show are: time, date, temperature inside the machine, publicity message, credit, errors, and the programming functions.

18. Keyboard

It is comprised of twelve buttons made of stainless steel. Using two buttons, or three depending on the number of modules, the user of the machine selects the product that they wish to buy.

The keyboard is anti-vandal and liquid proof.

19. Refund tray

20. Refund module

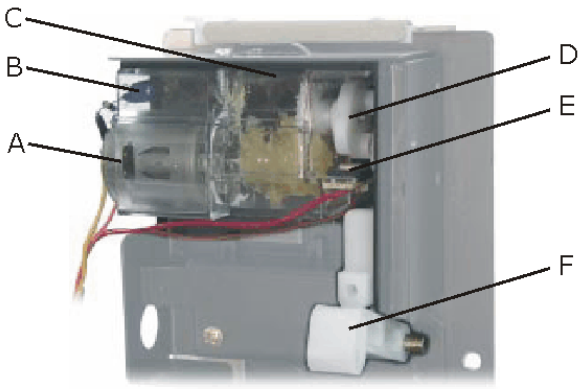
It is used to activate the refund on the coin validators. It has a dual purpose:

1. It eliminates possible coin jams.

2. When it opens the validator door, a recuperation code is generated, to refund the credit or the remaining credit after a vend if programmed in "multiple sale".

The motor runs on 12 Vdc.

A. Motor
B. Diode
C. Reducer
D. Lever
E. Micro switch
F. Opening lever



21. Programming handset

The programming module buttons can be used in two different ways:

- Simple press: press for less than 3 seconds.
- Long press: press for more than 3 seconds.

When the machine is in *working mode*, the function of the buttons is as follows:

	Simple press	Long press
Button A	A "free vend"	Enter the programming menu
Button B		Show the temperature on the display
Button C	Enter basic programming menu	Directly execute a function
Button D		Programme the functions in the basic menu

Before entering the menu, it shows the incidents. On leaving the menu, it will try to reset the errors. After one minute in programming mode and without pressing any button, the machine will automatically return to working mode.

Numeric edition

The buttons work in the following way:

	PRESS
Button A	Increase the digit (if it is 9 it goes to 0)
Button B	Decrease the digit (if it is 0 it goes to 9)
Button C	Edit the previous digit (if it is the first digit, it will exit and be validated)
Button D	Edit the next digit (if it is the last digit, it will exit and be validated)

Alphanumeric edition

The buttons work in the following way:

	PRESS	
Button A	Go to the next character in the table	
Button B	Go to the previous character in the table	
Button C	Erase the character and edit the previous	
	SIMPLE PRESS	LONG PRESS
Button D	Validate the character and edit the following	Not validate the character and exit edition

Edition of negative numbers

The buttons work in the following way:

	PRESS
Button A	Increase the digit (if it is 9 it goes to 0) (if it is the negative sign, it changes)
Button B	Decrease the digit (if it is 0 it goes to 9) (if it is the negative sign, it changes)
Button C	Edit the previous digit (if it is the negative sign, it will exit and be validated)
Button D	Edit the next digit (if it is the last digit, it will exit and be validated)

List of options

The buttons work in the following way:

	PRESS
Button A	Goes to the following option in the list (if the last, it goes to the first)
Button B	Goes to the previous option in the list (if the first, it goes to the last)
Button C	Go up to the next menu level
Button D	Go down to the next menu level

3. INSTALLATION AND STARTING UP

3.1. UNPACKING

Proceed with the unpacking of the machine at the installation site. Dispose of the packaging material following the legal norms in force.

3.2. INSTALLATION AND STARTING UP

► Location of the machine

Make sure that the electrical installation, socket and switch, have adequate requirements for the power consumption machine and a good earth.

Place the *machine* in the final location and level it with the adjustable feet. For better adherence to the floor, use the rubber disks supplied on the front feet.

► Ventilation

The machine, at the back, has two pegs to assure the correct distance from the wall to the machine. These will guarantee that the air that refrigerates the condenser has adequate circulation.

► Electrical installation

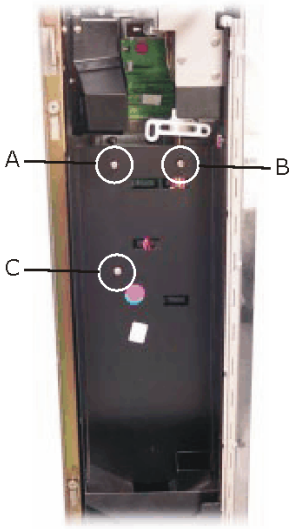
The following conditions are required of the electrical installation:

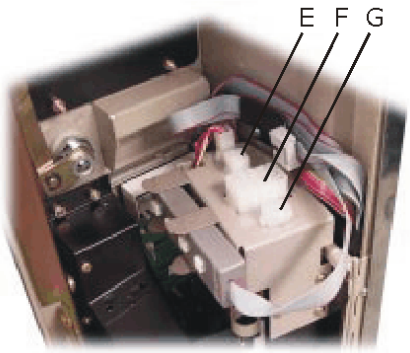
- The socket has an earth and has a thermo-magnetic protection fuse.
- The power rating of the socket is adequate for the electrical characteristics of the machine.

► Installation of a changer

Follow these steps to install an executive or MDB changer.

- Switch off the machine.
- Place the changer over the 3 screws **(A)**, **(B)** and **(C)**.
- Connect the changer to the 3 connectors as indicated the photo **(D)**, **(E)** and **(F)**.





D. 6-way connector (MDB/ICP)

E. 15-way connector (Executive)

F. 9-way connector (Executive)

3.3. ERROR MESSAGES SHOWN ON THE DISPLAY

The description of the incident, the corresponding message that the display shows and the codes that in each case will be transmitted when using VTM or EVADTS communication protocols are:

Notes:

►: The machine is "out of order"
nn: number of the element that is faulty

	Description		Message on the Display	VTM	EVADTS
	Fault in a CHANGER, type of fault 1 MDB: Sensor in tube defective	nn	ERROR CHANGER	08	EAN1
	Fault in a CHANGER, type of fault 2 MDB: Jam in tube	nn	ERROR CHANGER	09	EAN2
	Fault in a CHANGER, type of fault 3	nn	ERROR CHANGER	0A	EAN3
	Fault in a CHANGER, type of fault 4	nn	ERROR CHANGER	0B	EAN4
	Fault in a CHANGER, type of fault 5	nn	ERROR CHANGER	0C	EAN5
	Fault in the validator			0D	EAL
	MDB: Validator disconnected	00	ERROR VALIDATOR		
	MDB: Error of checksum ROM	01	ERROR VALIDATOR		
	MDB: Jam of coins	02	ERROR VALIDATOR		
	VALID: Error in signal of coins	03	ERROR VALIDATOR		
►	**Fault in the module of recuperation**		**ERROR RECUPERATION**	0E	EAB
	Fault communication with the changer			11	EAR
	MDB: Reply incorrect of the changer	02	ERROR CHANGER		
	MDB: Reply incorrect of the note reader	03	ERROR CHANGER		
	MDB: Reply incorrect of the card reader	04	ERROR CHANGER		
	MDB: Reply incorrect of the slave	05	ERROR CHANGER		
	MDB: Err. Product out of date (slave)	81	ERROR CHANGER		
	MDB: Err. Product sensor (slave)	82	ERROR CHANGER		
	MDB: Err. Keyboard in the slave	83	ERROR CHANGER		
	Fault button recuperation		**ERROR KEYBOARD**	12	EGK
	Fault keyboard selection			13	EGK
	Number of button	nn	ERROR KEYBOARD		
	Fault cup extractor	EB	ERROR CUP		
	Fault Infusion	EC	ERROR INFUSION		
	Fault keyboard selection, no keyboard		**ERROR KEYBOARD**	14	EGK
	Fault in the card reader			15	
	MDB: Error in the circuit board	00	ERROR CARD READER.		
	MDB: Circuit board not valid	01	ERROR CARD READER		
	MDB: Tamper Error (Fraud?)	02	ERROR CARD READER		

Description		Message on Display	VTM	EVADTS
MDB: Error defined by the manufacturer	03	ERROR CARD READER		
MDB: Error in communications	04	ERROR CARD READER		
MDB: Repair reader	05	ERROR CARD READER		
MDB: Not assigned	06	ERROR CARD READER		
MDB: Error defined by the manufacturer	07	ERROR CARD READER		
MDB: Error of the lector	08	ERROR CARD READER		
MDB: Error in communications	09	ERROR CARD READER		
MDB: Jam circuit board	0A	ERROR CARD READER		
MDB: Error defined by the manufacturer	0B	ERROR CARD READER		
MDB: Error refunding credit	0C	ERROR CARD READER		
Fault in the note reader				
MDB: Motor defective	00	ERROR NOTE READER		
MDB: Sensor defective	01	ERROR NOTE READER		
MDB: Error checksum ROM	02	ERROR NOTE READER		
MDB: Jam	03	ERROR NOTE READER		
MDB: Store / Stacker not present	04	ERROR NOTE READER		
MDB: Lector deactivated	05	ERROR NOTE READER		
▶ **Out of order because prices deprogrammed**		**PRICE NOT PROGRAMMED**	17	EAK
▶ **Out of order for all coins inhibited**		**COINS INHIBIT.**	18	EAC
Fault in extraction grid, type of ERROR 1			19	ELZ1
Fault in extraction grid, type of ERROR 2			1A	ELZ2
Fault in extraction grid, type of ERROR 3			1B	ELZ3
Fault detector product (fault type 1)		**FAULT IDETECT**	1C	
Fault in temperature			1D	EJJ
Fault in product out of date			1E	EJH
Fault detector product (fault type 2)		**FAULT IDETECT**	1F	
Switch on of the machine			20	OEZN
Switch off of the machine			21	OEZF
Activation of infra red reception			22	OEZI
Communication AZKOYEN protocol			23	OEZA
Communication EVADTS protocol			25	OEZE
Communication VTM under SMS			26	OEZS
▶ **Reset configuration**		**Machine NOT CFG[F401]**	30	ECZC
Reset program. Channels ,prices, etc			31	ECZP
Reset program. Messages			32	ECZM
Reset of accounting			33	ECZO
▶ **Error in EEPROM**		**ERROR EEPROM 'Module'**	37	ECO
Power low		**VOLTAGE LOW**	38	ECA
Total memory erase order			39	ECN

	Description		Message on Display	VTM	EVADTS
	Error clock			EA	ECL
	Error temperature probe		**FAULT SENSOR TEMPER**	EB	EJK
	Temperature probe open	01	OPEN SENSOR TEMP. AB		
	Temperature probe short circuited	02	OPEN SENSOR TEMP. CC		
	Error in system of door close		**DELIVERY DOOR OPEN**	3D	EGC
	Gate closed	01	DELIVERY DOOR C		
	Gate open	02	DELIVERY DOOR A		
	Gate undefined position, both micros closed	03	DEL. DOOR P.D. MC		
	Gate undefined position, both micros closed	04	DEL. DOOR P.D. MA		
	Detected manipulation of collection hatch	05	DEL. DOOR MANIP.		
	Product collection hatch open			41	EGC
	Received module software by EVADTS			50	
	Received module software by MDB			51	
▶	**Fault in system heater**		**ERROR CALDERA**	60	EDK
▶	Error in the temperature probe	01	ERROR PROBE TEMP.		
▶	Error in the heating element	02	ERROR HEATING ELEMENT		
▶	**Fault in water entry**		**ERR. WATER LEVEL**	61	EFL
▶	Volume meter faulty	02	ERR: NO WATER		
▶	Error in the water level (no water)	03	NO MAINS WATER		
	Fault arm: not in out position			62	EBI1
▶	**Fault arm: not reached position**		**ERROR ARM**	63	EBI2
▶	Arm not reached cup position	01	ERROR ARM P. CUP		
▶	Arm not reached liquid position	02	ERROR ARM P. LIQ.		
▶	Arm not reached sugar position	03	ERROR ARM P. SUGAR		
▶	Arm not reached stirrer position	04	ERROR ARM P. STIR.		
▶	**Fault arm 3 faults without reset**			64	EBI3
	Fault system extractor of cups		**ERROR SYS. COPS**	65	EBM
▶	Error in the mfc of the cup hopper	01	ERROR CUP HOPPER		
	Cup hopper empty after 5 turns	02	NO CUPS		
▶	Error in the mfc of the extractor of cups	04	ERROR EXTRAC. CUPS		
▶	Cup arm turning	05	ARM HOP. TURNING		
▶	Cup extractor turning	06	CUP EXTR. H. TURNING		
▶	Cup hopper turning	07	HOPPER V. TURNING		
	Fault system extractor of stirrers		**ERROR STIRRERS**	66	EDF
	Stirrer arm turning	01	ARM STIR. TURNING		
	Fault in the espresso infusion group		**ERROR GRP. ESPRESSO**	67	EE
	Error in the mfc of the doser	01	ERROR DOS.		
	Error in the positioner of the group	02	ERR. POS. GROUP		

Description		Message on Display	VTM	EVADTS
No coffee in grinder	03	NO GROUND COFFEE		
No infusion group	04	NO GROUP		
Infusion time too long	05	LONG INF. TIME.		
Retry of position of the group	06	RETRY. POS. GROUP		
Retry of priming water pump in mach with deposit	07	RETRY PUMP PRIME		
▶ **Fault in waste drawer**		**ERROR IN WASTE**	68	EDZ
▶ Waste drawer full	00	WASTE DRAWER FULL		
▶ No waste drawer fitted	01	WASTE DRAWER NOT PRES.		

3.4. CONTROL POINTS

Ventilator of the compressor

Measured on the **Circuit board EXT** at connector JP10.

Pins 3 and 4.

If there is an error, it reads 0 Vac.

If it reads 230 Vac, it is normal.

Ventilator of the evaporator

Measured on the **Circuit board EXT** at connector JP10.

Pins 1 and 2.

If it reads 230 Vac, it is normal.

Micro-switch for the of presence of the waste drawer

Measured on the **Circuit board EXT** at connector JP7.

Pins 5 and 6.

When open, the reading = 5 Vdc.

When closed, the reading = 0 Vdc.

Micro-switch the gate: open position.

Measured on the **Circuit board EXT** at connector JP7.

Pins 3 and 6.

When the micro-switch is open, the reading = 0 Vdc.

When the micro-switch is closed the reading = 5 Vdc.

Micro-switch the gate: closed position.

Measured on the **Circuit board EXT** at connector JP7.

Pins 4 and 6.

When the micro-switch is open the reading = 5 Vdc.

When the micro-switch is closed the reading = 0 Vdc.

Motor of the gate.

Measured on the **Circuit board EXT** at connector JP7.

Pins 1 and 2.

When the micro-switch is open, the reading = 5 Vdc.

If the reading oscillates between 27 and 32 Vdc the system, it is normal.

Reading of the temperature probe.

Measured on the **Circuit board EXT** at connector JP2.

Pins 1 and 2.

Temperature ºC	Resistance Ω	Volts Vdc
-10	27790	3,36
-9	26334	3,30
-8	24939	3,23
-7	23628	3,17
-6	22395	3,11
-5	21235	3,05
-4	20160	2,98
-3	19126	2,92
-2	18152	2,86
-1	17235	2,79
0	16370	2,73
1	15563	2,67
2	14789	2,60
3	14059	2,54
4	13371	2,48
5	12720	2,41
6	12106	2,35
7	11524	2,29
8	10973	2,23
9	10453	2,17
10	9960	2,11
11	9499	2,05
12	9055	2,00
13	8635	1,94
14	8237	1,88
15	7860	1,83
16	7510	1,78
17	7170	1,72
18	6847	1,67
19	6541	1,62
20	6250	1,57
21	5974	1,52
22	5711	1,48
23	5462	1,43
24	5225	1,39
25	5000	1,34

System of illumination.

Measured on the **Circuit board EXT** at connector JP11.

Pins 1 and 2.

If there is an error, it reads 0 Vac.

If it reads 230 Vac, it is normal.

Short circuits in any product extractor motor.

Check on the **Circuit board EXT**.

Circuit U8, will be hot to touch.

Short circuits in any of the gate motors.

Check on the **Circuit board EXT**.

Circuit U4, will be hot to touch.

Product extractor motors.

Activating the programming function 030 will turn on all the product extractor.

Power to the transistors that control the product extractor motors.

To check the voltage of a drawer, measure between pins 9 and 10, if the voltage is correct the reading oscillates between 12 and 15 Vdc.

Power to the circuit boards of the drawers.

Measure between pins circuit 7 and 82 of the connector on the circuit board.

The reading should be = 5 Vdc.

4. WORKING CONDITIONS AND NORMS

TEMPERATURE AND RELATIVE HUMIDITY

Temperature:	from 0º C to 32º C.
Relative humidity:	from 35% to 95%.

INCLINATION

The inclination of the machine should not be any more than two degrees on any axis.

SOUND LEVEL

Less than 70 dB.

ELECTRICAL SPECIFICATIONS:

Voltage:	230 Vac
Voltage variations:	10% lower, 6% above.
Frequency:	50 Hz/s
Maximum power:	500 W

NORMATIVE

The Brisa & Mistral ranges have been designed under European norms as credited by the CE norm on the ID plaque. These norms are:

- EN 60335
- Directive CE of machines DSM 89/392/CEE and all its modifications.
- Directive CE of low voltage DBT 73/23/CEE and all its modifications.
- Directive CE of electromagnetic compatibility EMC 89/339/CEE and all its modifications.
- Directive CE 2002/96/CE and Royal Decree 208/2005 on electrical and electronic apparatus and waste management.

5. CLEANING AND MAINTENANCE

Weekly cleaning programme

- Clean *Waste product drawer*. Use warm water, between 20ºC and 40ºC, and one of the following products: dishwashing liquid, shampoo or a glass cleaner without bio alcohol. Rinse with a 2% solution of vinegar and dry with a soft dry cloth.

  For persistent stains (fat, drinks, etc.), use a solution of water and alcohol (Ethanol 96º at 1% concentration).

- Clean the glass of the door. Use warm water, between 20ºC and 40ºC, and one of the following products: dishwashing liquid, shampoo or a glass cleaner without bio alcohol. Rinse with a 2% solution of vinegar and dry with a soft dry cloth.

  For persistent stains (fat, drinks, etc.), use a solution of water and alcohol (Ethanol 96º at 1% concentration).

Monthly cleaning programme

- Clean the *Drawers*. Use warm water, between 20ºC and 40ºC, and one of the following products: dishwashing liquid, shampoo or a glass cleaner without bio alcohol. Rinse with a 2% solution of vinegar and dry with a soft dry cloth.

Maintain the bottom of the *Drawers* clean to guarantee the correct extraction of the products

Three monthly cleaning programme

- Dust and dirt that floats into the refrigeration system deposits itself on the condenser. The refrigeration group's performance is reduced in proportion to the amount the fins are obstructed.

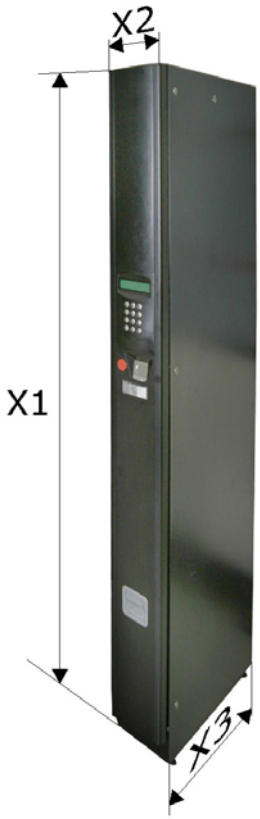
  To clean the condenser, use a vacuum cleaner, a non metallic brush or compressed air.

6. DIMENSIONS

The measurements are in millimetres and the weight in kilograms.

MODEL	X1	X2	X3	WEIGHT
MISTRAL 85	1830	850		
MISTRAL 70		765		
MISTRAL 41		415		
BRISA 85	1620	850		
BRISA 70		765		
BRISA 41		415		
Payment Module				

Module B or H



Payment Module

Brands of the

AZKOYEN

AZKOYEN MEDIOS DE PAGO S.A.

AZKOYEN

HOSTELERÍA

Teidde