

luce zero side snack

Type: SNACK 01



INSTALLATION AND MAINTENANCE MANUAL
Translation of the original instructions

MANA092115 rel. 00 dated 23.12.2021

**preliminary
safety
information**

before using the machine, carefully read this information that helps you behave properly and guarantee a safe use;
the following pages use the symbols listed here below, whose meaning is of attention:



GENERAL:

if the text is highlighted by this symbol, it is recommended to pay special attention to the performance of the procedures described; if not carefully performed on safe conditions, they can be source of general danger;



HIGH VOLTAGE:

if not properly performed, the actions marked by this symbol may expose to accidental contacts with electric voltage;



DANGEROUS TEMPERATURE:

if not properly performed, the actions marked by this symbol may expose to accidental contacts with high-temperature parts;



DANGER OF INFLAMMABILITY

It signals the danger of inflammability due to the presence of inflammable refrigerating fluid R290;



MOVING PARTS:

if not properly carried out, the actions marked by this symbol may expose to accidental contacts with moving members; the same symbols are placed inside the vending machine to indicate the parts on which to act with the utmost caution;



SERVICE KEY IN USE:

the symbol recommends the utmost attention during the actions described; the use of the service key intended to activate all machine functions when the door is open is only reserved to the technical operators who know the operation of the vending machine, who are aware of potential risks and who make sure they are operating on totally safe conditions;

the use of the service key shall be strictly limited to the time necessary to perform the actions requiring the use thereof; users shall be informed of the prohibition on using and approaching the vending machine;



WEIGHT:

the symbol reminds the user to consider the machine weight carefully for handling and placing it definitively.



SUPPORT SURFACE:

it reminds the user to install the machine on a support surface, the max. inclination of which is 2°;

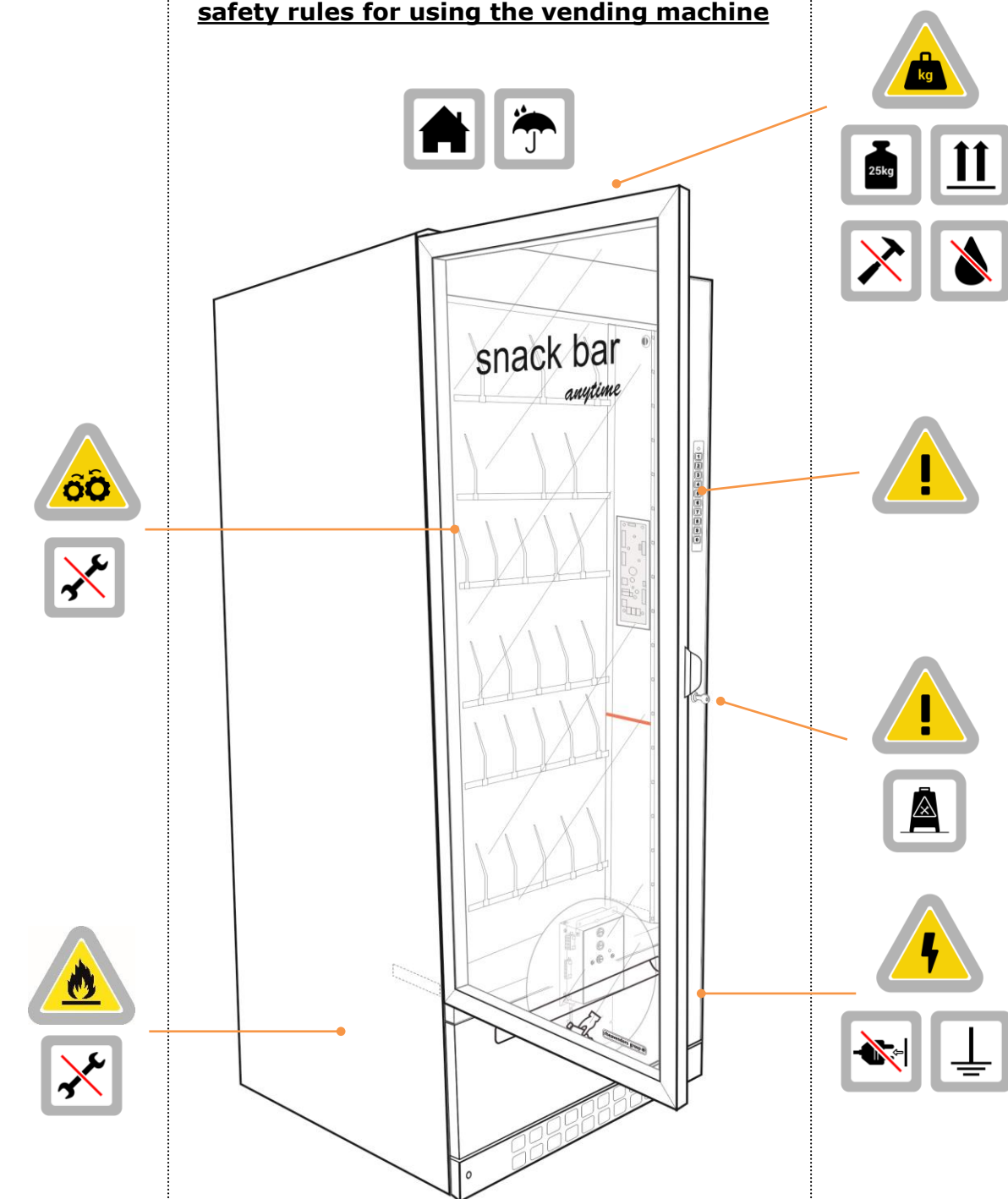
safety rules for using the vending machine

- *** the **luce zero side snack** vending machine is a machine suitable for keeping the temperature of food products only and not for cooling them at a temperature lower than the room temperature; refer to Chapter 04 for the characteristics of the different versions;
- *** the vending machine may be used by children who are at least 8 years old and by people having reduced physical, sensory or mental capacities or not having all necessary experience and knowledge, provided that they are under supervision or after they have received all necessary instructions for using the machine on safe conditions and for understanding the dangers related thereto; children must be supervised and prevented from playing with the vending machine; cleaning and servicing shall not be carried out by children;
- *** the machine shall be installed according to national rules;
- *** pay special attention to the chapters and notes highlighted by the symbols of alert; strictly observe the rules concerning, in particular, the operators' and users' safety;
- *** the vending machine has been designed and manufactured to work in environments where there is no potentially explosive atmosphere; it may only use the refrigerating gas for which it has been designed, i.e. R290;
- *** never install the vending machine in the proximity of any external source of heat / ignition, such as for instance free flames or hot surfaces (gases or hot plates, oven, etc.), electric components (switches, relay, etc.) as well as highly inflammable materials;
- *** it is recommended to arrange powder fire-extinguishers in the proximity of the vending machine by way of pre-caution. To prevent any fire, keep the area free of any piece of plastic, oil, solvent, paper and piece of cloth;
- *** if you should find out presence of smoke, immediately detach the vending machine from the electric network, never try to restore its operation and apply to skilled technicians;
- *** the vending machine with refrigerating gas R290 is supplied with a cooling circuit sealed at the factory; it is strictly forbidden to act on it; the gas inside the plant shall not be disposed of in the environment;
- *** the vending machine contains refrigerating fluid R290; it is important that the place of installation of the machine is well-ventilated;

safety rules for using the vending machine

- *** ensure that the vent outlets on the appliance casing or housing unit are unobstructed in order to allow correct air circulation
- *** do not use mechanical, electric or chemical means other than those recommended by the manufacturer to speed up the defrost process.
- *** do not damage the cooling circuit;
- *** do not use or place electrical devices inside the appliance compartments if they are not of the type expressly authorised by the manufacturer;
- *** for any problem concerning the cooling plant apply to the customer service;
- *** room (during storage and operation):
 - temperature: $5^{\circ}\text{C} \div 32^{\circ}\text{C}$
 - relative humidity: max 65%
- *** the inclination of the vending machine support surface shall not exceed 2° ; refer to chapter 06 for installation details;
- *** the user is not allowed to access the maintaining and servicing area that shall be properly signalled;
- *** never remove protections, never override safety devices and never modify the machine or its components;
- *** tools necessary to act with this vending machine:
 - a pair of scissors for electricians, a Phillips PH2 cross screwdriver for 4/6 mm self-threading screws, a set of wrenches up to 13 mm, a set of Allen wrenches from 2 to 8 mm;
 - it may be of use to procure some expendables, such as disposable paper, single-use gloves, clean cloths;
- *** never wash the machine by using water jets;
- *** for cleaning at regular intervals refer to chapter 12;

safety rules for using the vending machine



the symbol means that it is forbidden to dispose of the equipment as urban waste and compulsory to provide for separate collection in order to prevent any potential effect on the environment and human health; strictly follow the provisions of the European Parliament's 2012/19/EU Directive;

residual risks



a residual risk is understood as a potential danger that can not be eliminated and it persists despite all precautions in use since it is related to the intrinsic features of the product and it also includes non-identifiable risks;

the actions and behaviours listed here below are intended to reduce residual risks and you shall always adopt them when interacting with the machine;



wear clothes that can properly avoid any accident (never wear rings, chains, clothes with laces or excessively long sleeves, ...);



carefully evaluate the treatment of residues from installation (wood, plastics, ...) and utilisation (product powder, bags, ...);



never repair or carry out any technical action if you have not been properly trained;



signal that a technical action is in progress on the machine (barriers against approach, signs, ...), carry it out quickly without leaving the station;



install the machine in a sheltered, illuminated, ventilated and noiseless environment; keep it clean and never place tools or any other object on it; never install it outdoors or, anyway, never expose it to atmospheric agents;



make sure it can be neither reached by water sprays or vapours nor hit by objects that might damage it;



carefully consider the machine weight and stability during the installation and in the final working position;



supply the machine within voltage, temperature as it is detailed on the following pages and provide for an effective earthing;



never detach electric supplies when they are active;

general guarantee conditions

these conditions regulate Rheavendors Industries S.p.A.'s obligations with reference to guarantee and repair; any other term or condition, either verbal or written, is not applicable, including those in the purchaser's purchase orders, if not explicitly accepted and signed by Rheavendors Industries S.p.A.; if the guarantee terms here below should be held not to be valid and/or lawful in the Country where the product is sold, they will not be effective whereas all the other clauses will remain valid and applicable;

- 1st the mechanical and electronic components of the machine are guaranteed for twelve months, starting from the sales date certified by the fiscal receipt;
- 2nd the guarantee shall be understood as the free replacement or repair of any part of the machine that – at the manufacturer's unquestionable discretion – should prove to be originally defective due to manufacturing defects; the cost of sending the manufacturer machines, defective pieces and spare parts will be totally charged to the user's account; the manufacturer reserves the right to use new or reconditioned components for repair; if replaced, original components will be guaranteed for 12 months; the parts replaced under guarantee will become the property of Rheavendors Services S.p.A. (request for "Form PO 19.01/2b" Materials under guarantee – Authorisation to return);
- 3rd in case of irreparable failure or if a failure of the same origin is repeated, the manufacturer may – at its unquestionable discretion – replace the machine with another one, the model of which is either the same or an equivalent one; the guarantee of the new machine will be extended up to the original term of guarantee of the replaced machine;
- 4th all the parts that should prove to be defective due to negligence or carelessness (non-observance of the instructions for the operation of the machine), incorrect installation or maintenance by unauthorised personnel, transport damage or any circumstance – anyway – not due to the manufacturing defects of the machine are not covered by guarantee; the installation and connection with supply plants as well as the maintenance operations mentioned by the installation manual are also excluded from any performance under guarantee; the guarantee will not cover payment systems either; whether installed on the machine or supplied as an accessory, they are subject to their manufacturer's guarantee whereas Rheavendors Industries S.p.A. will just act as a broker; all changes made to the machine and not agreed with the manufacturer in writing will involve the immediate termination of the guarantee period and anyway fall under the Customer's total responsibility;
- 5th the guarantee is excluded in all cases of improper use of the machine;
- 6th Rheavendors Industries S.p.A. will disclaim all responsibility for any damage that may be directly or indirectly caused to people, animals or things as a result of:
improper use of the vending machine; incorrect installation;
improper energy or water supply; serious maintenance deficiency;
actions or changes not explicitly authorised; use of non original spare parts;

in case of failure, Rheavendors Industries S.p.A. is obliged neither to compensate any economic damage due a forced stop of the machine nor to extend the guarantee period;
- 7th if the machine should be transferred to a centre designated by the manufacturer for overhaul or repair, the relative transportation risks and costs will be charged to the user's account; the freight charges of machines, defective pieces and spare parts are always understood as charged to the user's account;

**declaration of
conformity**

Rheavendors Industries S.p.A. declares that this drink vending machine has been designed and manufactured in compliance with the following directives and safety standards:

DIRECTIVES

2014/30/EU, 2014/35/EU, 2006/42/EC, 2011/65/EC, 2012/19/EU, 2015/863(EU)

REGULATIONS

1907/2006/EC, 1935/2004/EC

SAFETY

EN 60335-1:2012 + A11:2014 + A13:2017 + A1:2019 + A2:2019 + A14:2019

EN 60335-2-75:2004 + A1:2005 + A11:2006 + A2:2008 + A12:2010

EN 60335-2-24:2010 + A1:2019 + A2:2019

EMC

EN 55014-1:2017 + A11:2020

EN 55014-2:2015

EN 61000-3-2:2019

EN 61000-3-3:2013 + A1:2019

EMF

EN 62233:2008

manufacturer

Rheavendors Industries S.p.A.
Via Valleggio, 2/bis – 22100 Como (CO) – Italia

factory

Rheavendors Industries S.p.A.
vicolo Cantalupo 135 - 21042 Caronno Pertusella (VA) - Italia

Legal Representative



(Andrea Pozzolini)

marking

conformity



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.m. chapters of the manual are intended to describe a vending machine

luce zero side snack

vending machine in its hardware and software components for a complete and fully-aware use of all machine functions; due to the large variety of available options and the constant technical update of our vending machines, some special device or function might be indicated and described not in the manner you expect; in this case, do not hesitate to contact us;

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fax: +39 02 9655086
e-mail: rheavendors@rheavendors.com

for the references of our partners all over the world visit the site;
www.rheavendors.com



ATTENTION: this label applied next to the serial number label inside the vending machine points out that the instructions supplied by this manual must be carefully read before the installation and operation of the vending machine;



please, print this manual only if necessary; environmental protection is our common interest;

00	23.12.2021	first issue;
rel.	date	description
this document is made available electronically on the www.rheavendors.com site		

01. legend

01.01. abbreviations, acronyms and terminology

some general indications that may be of use to consult this manual, e.g. suffixes and descriptions, are supplied here below:

A = vending machine without cooling unit;
R = vending machine with "standard" cooling unit;
P = vending machine with "super" cooling unit, food area at 2° C and stratified cold distribution;
L = vending machine with "super L" cooling unit and uniform cold distribution;

food area = area at low temperature; max. height 70 cm from the bottom;

FTCA = optical sensors to check the product presence in the dispensing compartment;

OFF = error messages of the vending machine;

VIVILIGHT® = high-efficiency led lighting system;

FLEXSPIR® = fastening system of the dividers to make the spaces modulable millimetrically;

02. introduction

02.01. copyright information

©Rheavendors Industries S.p.A.; all rights reserved;
this document contains some confidential information that is Rheavendors Industries S.p.A.'s exclusive property; the content of this document can neither be disclosed to third parties, nor copied or duplicated, in any form, either totally or partially, without Rheavendors Industries S.p.A.'s prior consent in writing; the utilisation, duplication or disclosure of the technical information supplied by this document may be protected by Rheavendors Industries S.p.A. according to the Law; this manual is intended for the owner of the vending machine; it is an integral part of the machine and it must be kept along with the machine;
the information supplied by this manual is intended to obtain the best performance level from the vending machine within the Manufacturer's range; Rheavendors Industries S.p.A. reserves the right to improve the future production without any prior notice and without any obligation to update the products on the market; the manufacturer disclaims all responsibility for any incorrect information due to misprints;

02.02. contacts

Rheavendors Services S.p.A. is ready to supply support and information on this vending machine;

telephone: +39 02 966551
fax: +39 02 9655086
e-mail: rheavendors@rheavendors.com

for the references of our partners all over the world visit the site;
www.rheavendors.com

02.03. serial number label

for a quick and univocal identification of the vending machine and for the best support please supply the data on the serial number label;

code: D12345A67890 (example)
s/n: 1234 56 7890

silver serial number labels are applied at the back of the machine and inside the sliding door of the machine;



03. technical data

03.01. dimensions	height: width: depth: depth with open door:	1830 mm. 670 mm. 850 mm. 1450 mm.
03.02. weight	vending machine without cooling unit; vending machine with cooling unit:	200 kg. 220 kg.
03.03. power supply	- 230 V ac , 50/60 Hz; single phase and earth; - cable of type: H05VV-F 3G1,5; conforme aux normes CENELEC EN 60335-1;	A: 260 W R: 450 W
 values and indications for the standard machine anyway refer to the data supplied by the serial number label		
03.04. pression sonore	A weighted sound pressure level:	less than 70 dB (A)
03.05. keyboard	capacitive keyboard ;	49 expandable selections up to 56;
03.06. protection degree	installation in covered and protected places only that can not be reached by rain and water jets;	IP 24;
03.07. electric safety	installation in covered and protected places only that can not be reached by rain and water jets;	6.3 A delayed;
03.08. product motors	maximum 7 for each drawer; according to the machine configuration;	24 V dc;
03.09. vend drawer	height-adjustable;	from 5 to 7 drawers; (8th optional)
03.10. inner temperature	with 32° C max. outer temperature: - version A: - version R (stratified): - version P (stratified): - version L (uniform):	room temperature; 10° C min.; 2° C min. in FOOD area; 3° C ± 2° C
03.11. lighting	pair of led bars, on one side of the glass door;	
03.12. FTCA sensor	a pairs of sensors, on the dispensing flap (FTCA);	
03.13. cooling unit safety	in "FOOD versions" a software device for "cooling unit safety" can signal and inhibit sales if the inner temperature has exceeded a limit considered not compatible with product preservation for a programmable time interval;	
03.14. anti-condensate heating element	in the vending machines version "P" and "L", it prevents the condensate build-up in the area beneath the glass door;	
03.15. miscellaneous	it is possible to program the machine parameters by means of a flash key or selection keyboard;	

03.16. notes

the tolerances of the environmental and electric parameters that ensure a good and regular operation of the **luce zero side snack** machine are:

tension électrique nominale:

±10%

milieu (de stockage et pendant le fonctionnement) :

- température:
- humidité relative:

5° C ÷ 32° C
maximum 65%



the power supply cable supplied with the vending machine shall be altered in no way; if either lost or damaged, only authorised and qualified personnel may be replace it with the original component only;

Rheavendors Services S.p.A. is ready to supply support and information;

make sure that the power supply installation can supply the indicated power suitable for the machine (see 03.03.); an efficient earth connection is not only required by the law for the protection of users and operators, but it can also provide for proper power supply;

03.17. accessories

to complete and supplement the vending machines of the **luce zero side snack**, range, Rheavendors Industries S.p.A. has a series of accessories built for these machines, such as cooling units, special lighting systems, vend sensors, connection with machines for dispensing espresso and instant drinks, ...;

04. configurations



attention

- the **luce zero side snack** vending machine is a machine suitable for keeping the temperature of food products only and not for cooling them at a temperature lower than the room temperature;
- the same vending machine is not allowed to sell toxic products (e.g. detergents) and food products, explosive or fire-risk materials;

04.01. versions

the **luce zero side snack** vending machines are identified by the DLZV7 abbreviation, which is the acronym of luce zero snack vending machine, followed by the number of drawers and a suffix described here below

vers. ENVIRONNEMENT
DLZV7A

vending machine at room temperature, no refrigeration, suitable for dispensing products not requiring to be cooled down;

version **SNACK**
DLZV7R

vending machine at a min. temperature of 10° C, suitable for dispensing pre-packed food products (drinks, snacks);

version **FOOD**
DLZV7P

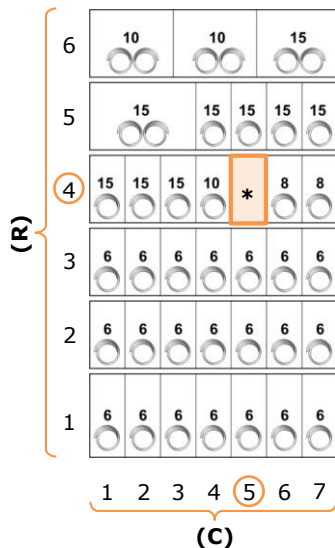
vending machine at a min. temperature of 2° C, suitable for dispensing perishable food products;

version **FOOD**
DLZV7L

vending machine at a uniform temperature of 3° C with a ±2° C tolerance, suitable for dispensing perishable food products;

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04.02. storage capacity



* = selection 4-5

H60300043

luce zero side snack can be configured and customised according to needs, with a maximum capacity of 1120 products, 7 spirals per drawer, up to 8 height-adjustable shelves;

a possible configuration including 307 products distributed among six drawers is supplied here below; the numbers represent the products included in every single spiral;

an example of selection is "R-C", where "R" (line) shows the drawer number (from the bottom) and "C" (column) shows the position on the drawer;

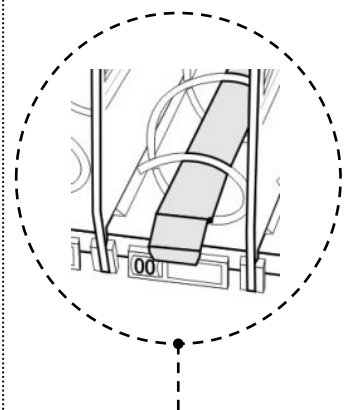
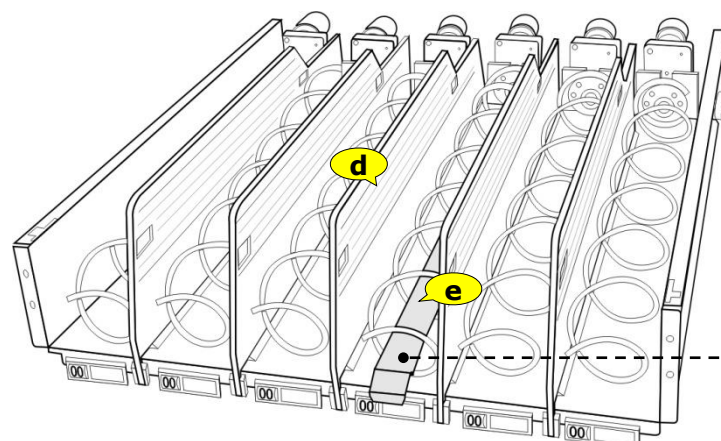
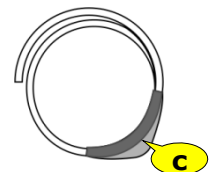
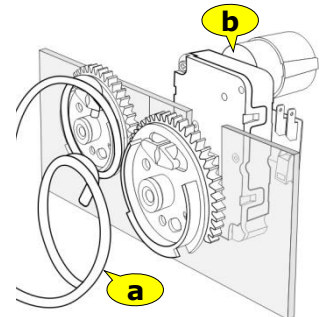
- the dispensing spirals (a) are made available as right-hand and left-hand spirals;
- two spirals - having the same pitch, developing one opposite to each other, driven by one single motor (b) - may be used to dispense large-size products;

prod. number	spiral pitch	code right spiral	code left spiral
20	24	H61311024-VNA	H61312024-VNA
15	32	H61311032-VNA	H61312032-VNA
10	45	H61311045-VNA	H61312045-VNA
8	60	H61311060-VNA	H61312060-VNA
6	79	H61311079-VNA	H61312079-VNA
5	94	H61311091NA	H61312091NA
4	117	H61311117NA	H61312117NA

- a product ejector (c) may be added at the end of the spiral to facilitate the dispensing cycle of special packages, e.g. chewing gums and very small packages;

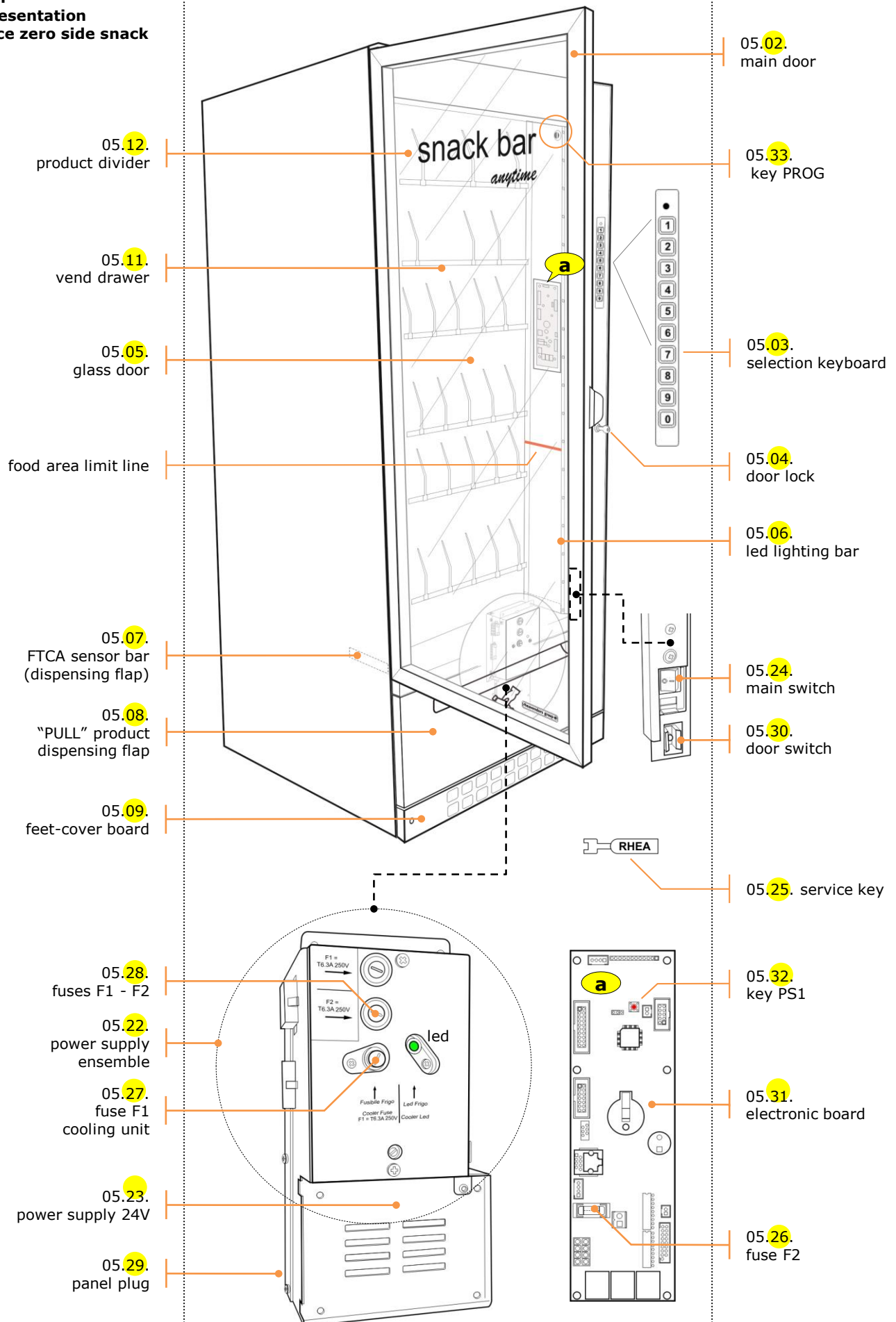
different product dividers are made available at Rheavendors to meet all vend needs; the position and the characteristics of product dividers (d) can be adapted to the packages to the products to be dispensed;

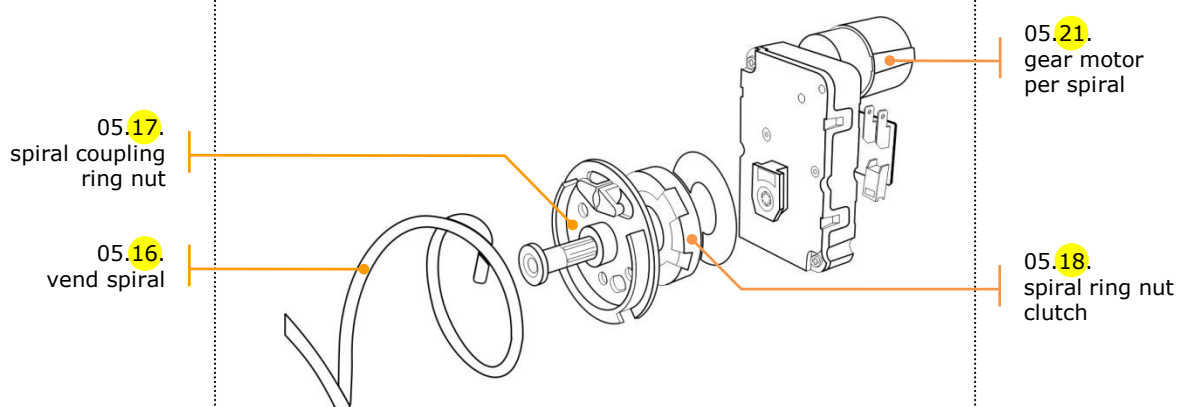
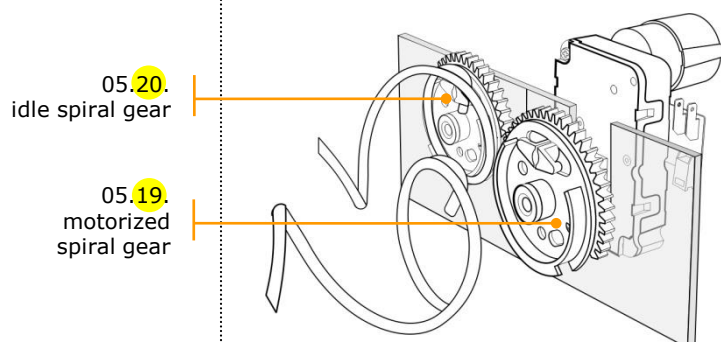
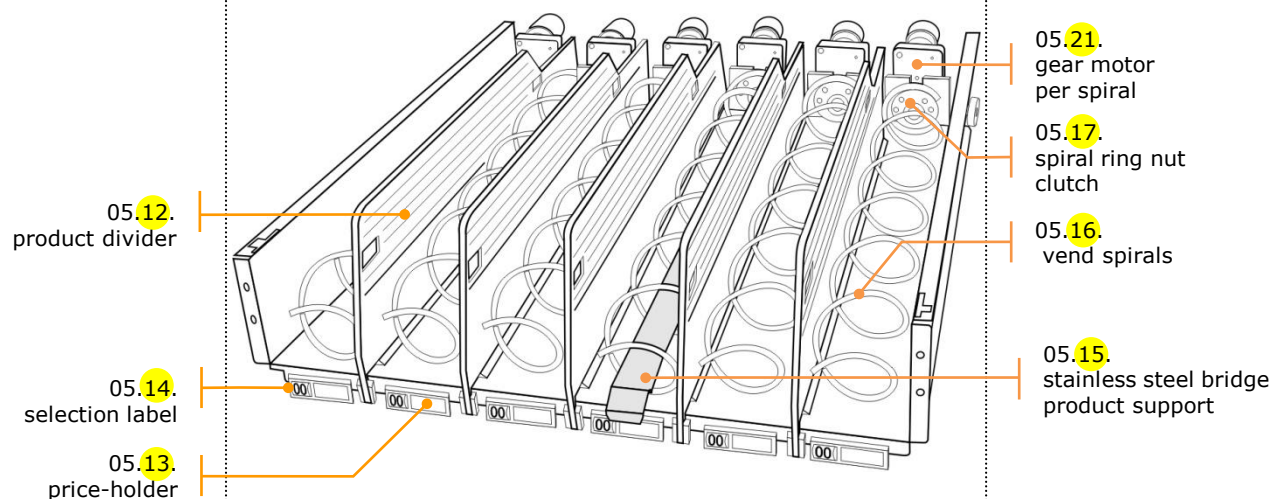
a longitudinal support (e) can be installed between the bottom of the drawer and the spiral to help products slide when they can be hardly dispensed;



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05. presentation luce zero side snack





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05.01. general information

the Rhea **luce zero side snack** vending machine is explicitly designed for easy operation; no specific competence is required for dispensing drinks or snacks; you just have to enter the credit and to push a key on the selection keyboard;

the function consists in dispensing food and non-food products at proper temperature; the vending machine is properly operated in a closed room, on normal environmental conditions and at a temperature between 5 and 32 ° C, relative humidity below 65%;



use specific products for vending machines only;

05.02. main door

the Rhea **luce zero side snack** has an insulating glass main door protected by a safety switch deactivating voltage at 230 Vac;

05.03. selection keyboard

the selection keyboard is intended to select products and to set up the vending machine functions in programming mode (see chapter .09);

05.04. door lock

the key lock is intended to close the sliding panel and to lock the glass door; the key mapping is numbered for identification;

05.05. glass door

the glass door is equipped with a product glassfront made of a thick insulating glass to keep the inner temperature for preserving products (version with cooling unit) and it is surrounded by a magnetic gasket to avoid any thermal dispersion; to open or close it, use the door lock; a red line inside the vending machines is intended to identify the "food" area beneath which food products can be arranged;

05.06. led lighting bars

aux côtés de la porte vitrée, deux barres de leds éclairent l'intérieur du distributeur;

05.07. FTCA sensor bars

the FTCA sensor bars control the passage of the product that has been selected towards the dispensing compartment (vend successfully occurred); if the infrared led barrier is not interrupted, it means that a product is sold out or that it has jammed (vend failed);

05.08. pull" product dispensing flap

the dispensing flap, generally closed by means of internal clamping levers, is of a "pull" type (it must be pulled to take products) and it is unlocked only when the product is dispensed;

05.09. feet-cover board

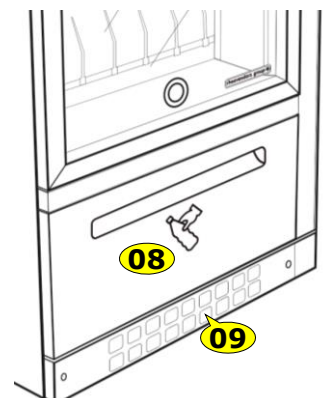
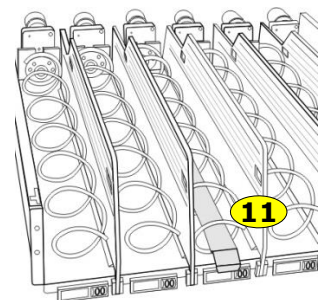
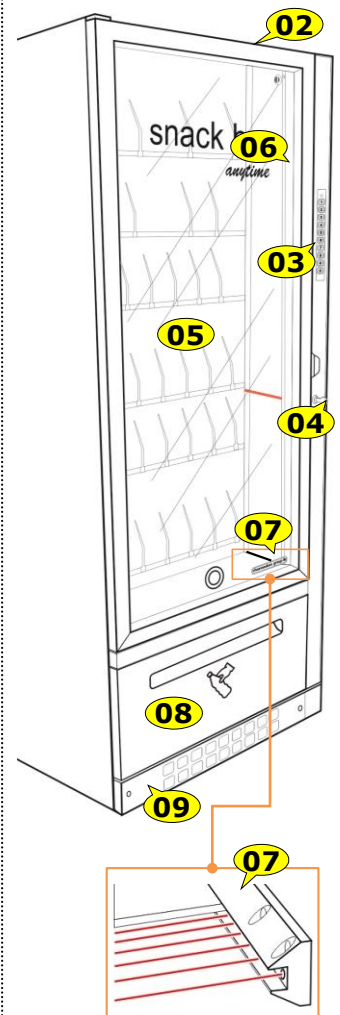
the feet-cover board is secured to the base by means of magnetic hooks; it can be further secured by means of two self-threading screws;

05.10. -

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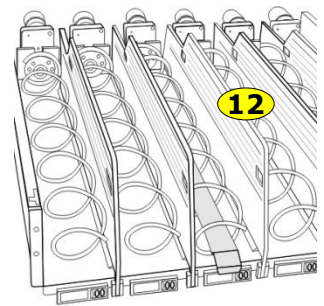
05.11. vend drawer

the vend drawer is the structure to which motors, product vend spirals and dividers are secured; the vending machine has a maximum capacity of eight height-adjustable vend drawers sliding on wheels inside the guides secured to the vending machine structure;



05.12. product divider

the product dividers intended to separate the products between spirals are arranged inside the vend drawer; they can be put in the position most suitable for the product to be dispensed;

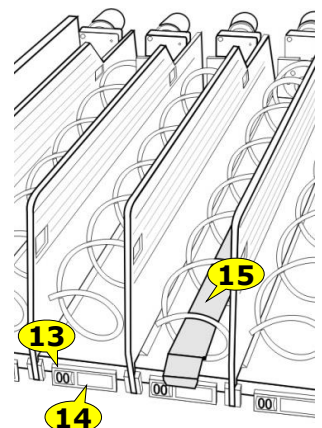


05.13. price-holder

the price-holders in the FLEXSPIR® version are snap-inserted into the rack support beneath the front side of the drawer; they indicate the position of the product in the vending machine, displayed in the smaller box, whereas the price of the selection is displayed in the larger box; a kit including the price-holders and a plastic-coated sheet with available positions and one with prices is arranged inside the vending machine;

05.14. selection label

the price-holder tab shows a compartment for the product selection labels that indicate the selection number to be pressed on the keyboard for dispensing;

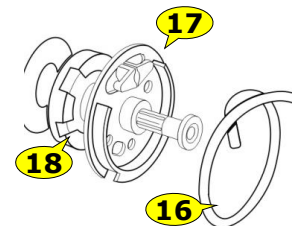


05.15. product support

the product support bridge is snap-inserted into the price-holder guide and secured by the spiral coupling ring nut by means of a pin;

05.16. vend spiral

the vend spiral is intended to distribute products; the product is rotated and conveyed forwards until it falls into the the dispensing compartment; spirals are equipped with a snap fastening system hooking with the ring nut integral with the motor;

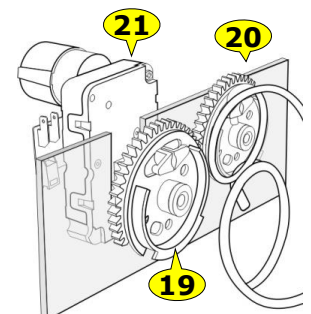


05.17. spiral coupling ring nut

the coupling ring nut is intended to convey the radial movement of the gear motor to the spiral, it is complete with a snap fastening system hooking with the vend spiral;

05.18. spiral ring nut clutch

the friction ring nut is placed between the spiral coupling and the gear motor, it is intended to rotate the spiral radially into the position you wish (the rotation may only occur clockwise, having the drawer in the front);



05.19. motive mixer gear

available for each type of spiral, it is intended to convey the movement to the free wheel nearby (see 05.21.), thus allowing a motor to move two spirals (a right one and a left one) at the same time;

05.20. motorless mixer gear

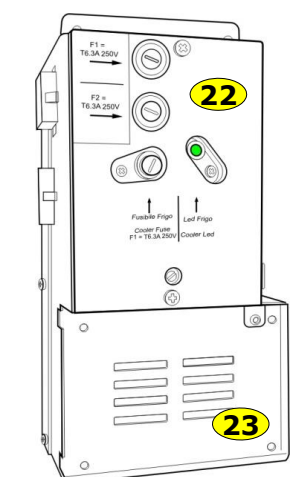
it is moved by the motive mixer gear; a spiral, the development of which is opposite to the one of the motive mixer gear, must be mounted on the motorless mixer gear;

05.21. gear motor per spiral

the gear motor is intended to operate the vend spiral distributing the product; it is supplied at 24V dc and controlled by the CPU board

05.22. power supply ensemble

this ensemble contains the main fuses and the switching power supply unit at the back of the metal box;



05.23. power supply unit

a power supply unit for low-voltage components (circuits and electronic boards) is installed at the back of the unit;

05.24. main switch

a main switch intended to power on and off the vending machine is arranged on the front side of the power supply ensemble;

05.25. service key

the service key is hung up on the power supply ensemble, in the proximity of the safety switch; its use is reserved to the properly trained technical personnel only;

to activate the safety switch, insert and rotate the service key by 90° ;

attention

the vending machine is supplied and operating in all its parts;

to deactivate the safety switch, rotate the service key by 90° and extract it;

attention

some parts remain live any way

05.26. fuse F2 electronics

fuse F2, on the front upper side of the power supply ensemble, is intended to protect the low-voltage circuit; fuses must be replaced by specialised technical personnel only;

05.27. fuse cooling unit

on the front upper side of the power supply ensemble, is installed on the mains supply to protect the cooling unit; fuses must be replaced by specialised technical personnel only;

05.28. fuses F1-F2 main 230 Vac

fuses F1 and F2, on the horizontal surface of the power supply ensemble, are installed on the mains supply to protect the main circuit; fuses must be replaced by specialised technical personnel only;

05.29. panel plug

the vending machine is supplied by a three-pole panel plug;

05.30. door switch

a door switch on the front side of the power supply ensemble is intended to power off the machine when the sliding panel of the vending machine or the door are open;

05.31. electronic board

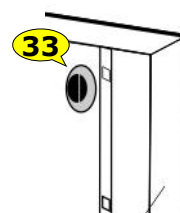
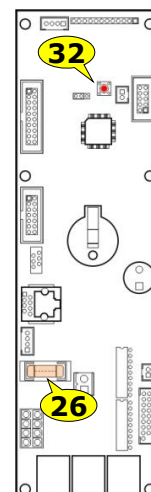
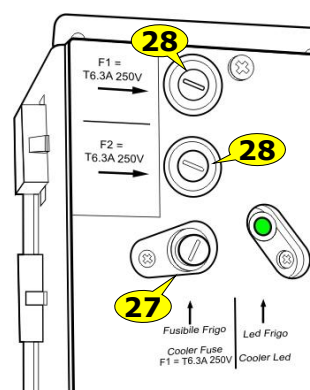
the CPU electronic boards, display and interface are accommodated inside the sliding panel at the height of the selection keyboard; they manage all logic functions, product selections, payment systems (see 05.35.);

05.32. key PS1

key "PS1" (red), on the CPU board, is intended to cancel the out-of-order messages displayed after a malfunction of motors;

05.33. key PROG

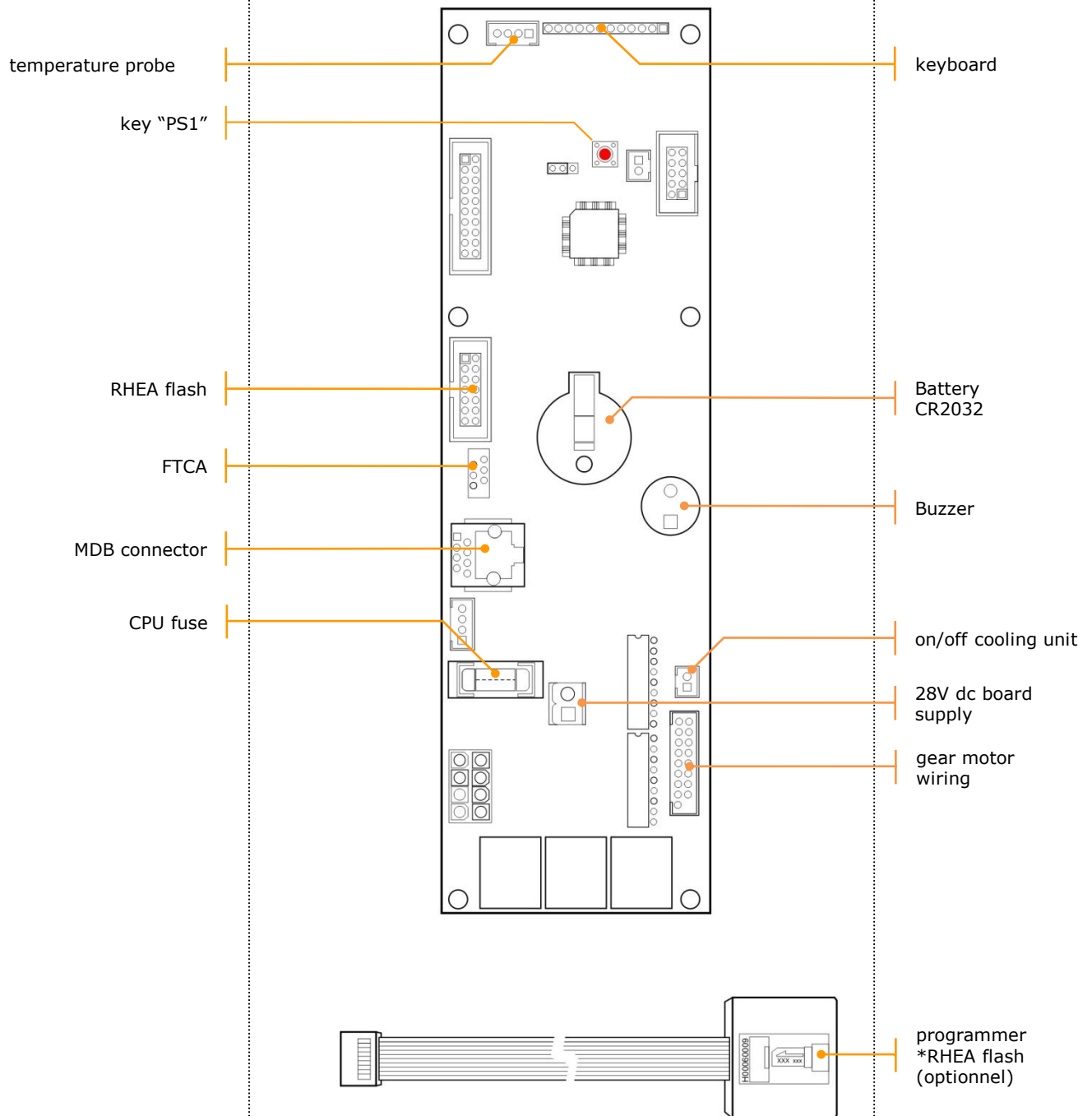
key "PROG" (red), on the CPU board, is intended to give access to the programming mode; it must be used along with the service key (see 05.25.) since the safety switch (see 05.30.) is intended to power off the vending machine when the door is open



05.34. electronics

the CPU board, placed inside the sliding door, is intended to govern the machine operation;

on the electronic board there are the ports for the keyboard, PS1 key, flash key, cooling unit, motors and the link with the master vending machine;



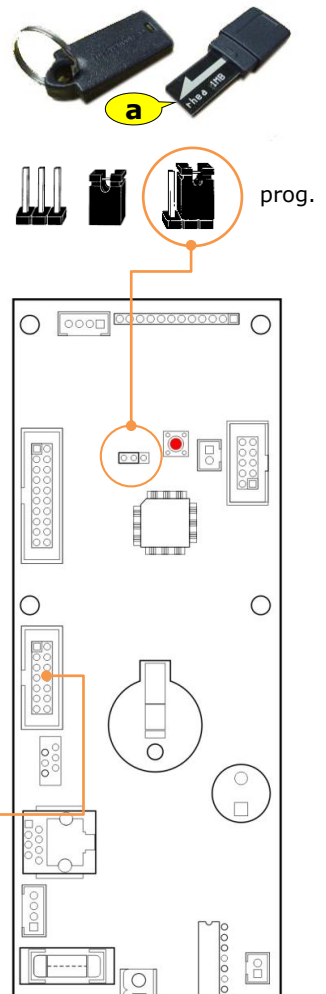
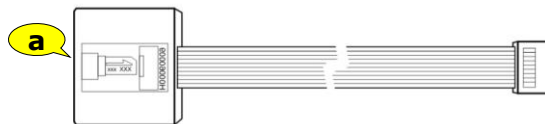
05.35. software



a flash key is intended to update the firmware installed in the vending machine boards;

if it is necessary to update one of the a.m. software programmes in the machine, the flash key from which the programme is installed must be physically inserted into the corresponding board; to transfer these software programmes, follow the steps here below:

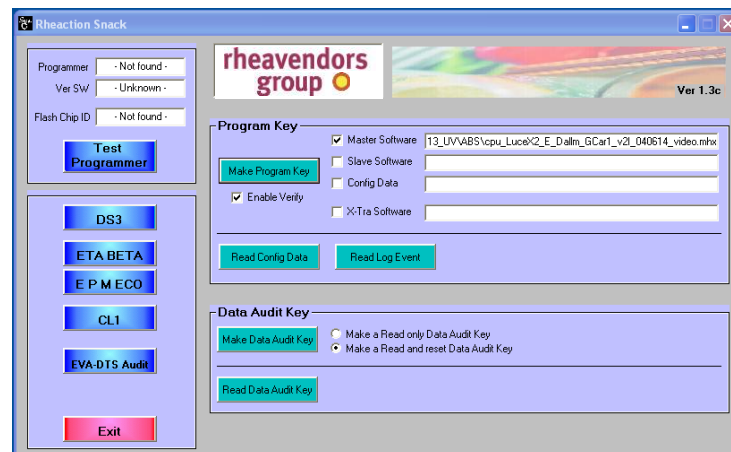
- power off the machine;
- open the sliding door;
- move the jumper on the CPU board (see 05.35.a) to the programming position (two pins on the right);
- insert the flash key into the connector of the board involved;
- power on the machine with the service key;
- two leds of the board will blink and turn off after programming;
- power off the machine, remove the flash key, put the jumper back into its position (two pins on the left);



05.36. Rheasnack

a system, referred to as Rheasnack, is intended to complete and supplement the programming cycle that can be executed in the machine; it consists of a software and hardware, installable in a p.c., that can store, change and write the configuration data of the Rhea machines;

Rheavendors Industries S.p.A. is ready to supply support and information on the Rheasnack system (see 02.02.);



06. preliminary actions

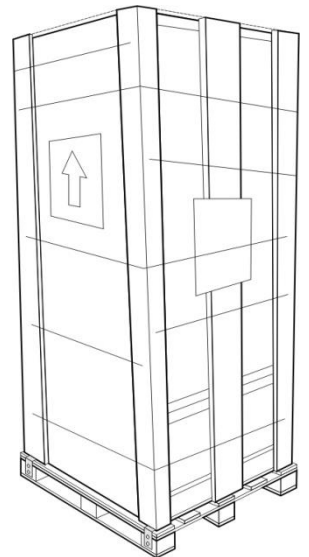
06.01. handling



the vending machine may be transported, handled and positioned by skilled and trained personnel only; never overturn the machine while transporting it and never forget to observe the orientation arrows on the package;

attention

handle the machine with special caution for accident-prevention; considering the vending machine weight and overall dimensions, it is recommended to use a truck at a slow speed rate;



06.02. unpacking



- put the packed vending machine close to its working position;
- cut the film intended to wrap the machine for protection along one of the protection angles;
- to remove the pallet, lift the vending machine by means of a proper truck (minimum useful capacity 350 kg and min. 25 cm lifted from the ground) and remove the metal squares that lock the vending machine feet by unscrewing the fastening screws;
- place the vending machine carefully on the ground;

attention

leave the package materials out of the reach of unauthorised personnel, in particular of children, since they are a potential source of danger; the disposal of package components may be carried out by specialised companies only;

06.03. positioning



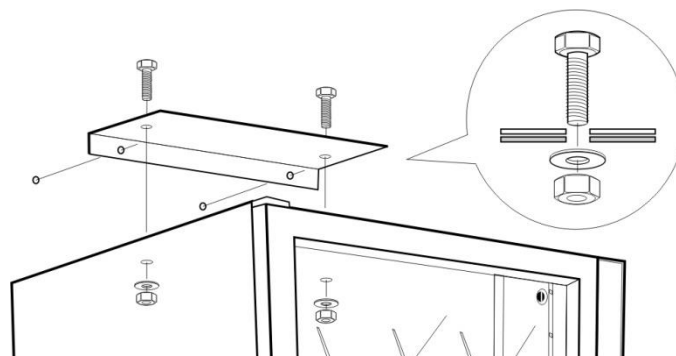
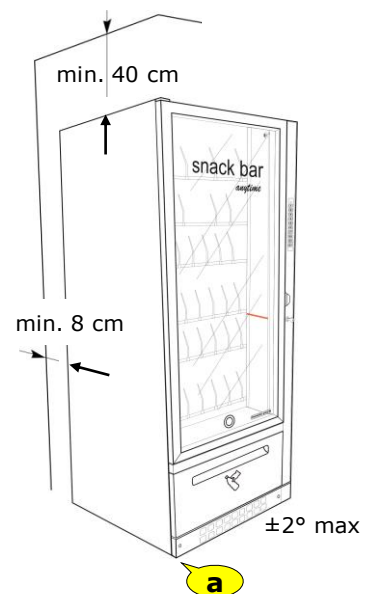
the vending machine must be placed in a sheltered room, in observance of the minimum distance from the walls; make sure that the floor can support the weight of the vending machine and that the vending machine can not be reached by direct sun rays;

adjust the feet of the vending machine so that the cabinet is tilted by max. $\pm 2^\circ$;

after the machine has reached its final working position, cut the clamp securing the door key to the power supply cable at the back of the vending machine, insert the key into the key lock (see 05.05.), rotate it, pull the sliding door and open the glass door;

remove the envelope containing the documents, the labels and the package including the feet-cover board (a); secure it by means of magnetic hooks (two self-threading screws are also made available);

a wall fastening kit is made available upon request;



07.

connections

07.01. electrics



observe the rules on connections with the mains, in particular for earthing, and connect the machine permanently; never use reductions, adaptors, multiple sockets or extensions; only use the cable for connection with the mains, supplied with the vending machine;

it is recommended to install a differential current device operating below 30 mA, detaching the machine from the mains and promptly tripping in case of improper electrical input since it is intended to considerably reduce the risks from any short-circuit;

attention

make sure beforehand that the power supply installation can supply the power required by the machine (see 03.03) and check the compliance with the rules in force;

strictly refer to the data supplied by the serial number label (see 02.03);
for a correct and safe configuration of the power supply installation, refer to the Internet address:

[http://eur-lex.europa.eu/
directive 2014/35/CE of 26/02/2014](http://eur-lex.europa.eu/directive/2014/35/CE)

08.

first power-on

08.01. activity

after unpacking the vending machine, placing it firmly at the work station as well as providing for energy connection, carry out some actions for its functionality;

connect the supply plug; the vending machine runs a diagnostic cycle at the start-up;

when the inner temperature is suitable for preserving products (time varying according to the outer temperature), start loading;

08.02. product loading

wash your hands carefully with water and soap before handling the machine and its products;

- open the glass door;
- extract one drawer as far as the limit stop;
- insert the products into the spirals by starting from the bottom;
- reclose the drawer;
- after loading all products, reclose the glass door;

the vending machine will run the power on cycle and, after some seconds, it will be ready for use in free mode;

attention

these actions must be carried out by personnel properly qualified, skilled and trained by the machine operator, in compliance with the instructions supplied by the producer of the products to be dispensed and according to the laws in force;

the operator of the vending machine must make sure that the loaded products are perfectly suitable for human consumption and that the a.m. operations are carried out by personnel properly trained and charged by the operator;

refer to the content of the Internet address:

[http://ec.europa.eu/food/food/biosafety/
hygienelegislation/index_en.htm](http://ec.europa.eu/food/food/biosafety/hygienelegislation/index_en.htm)

strictly follow the instructions the producer of the products to be dispensed may supply with reference to the pull date of each product and the temperature for preservation purposes;

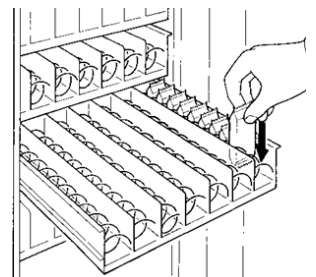


Rheavendors group

Credit 000.00
insert the credit...

Rheavendors group

Wed 04/02 3:00 pm.
type the selection



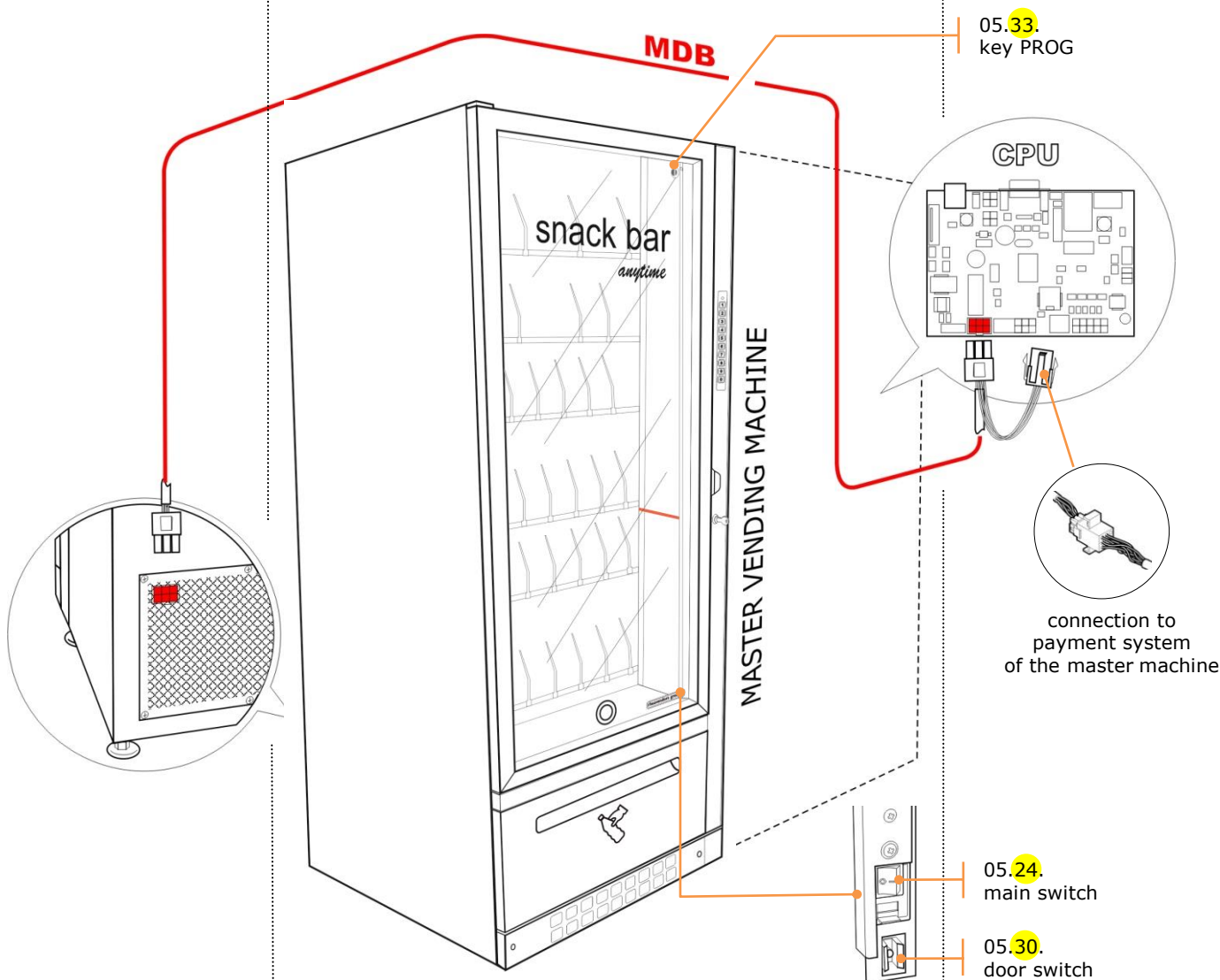
08.03. connection to the master machine

to connect the luce zero side snack vending machine to the master machine, an MDB connector for the data exchange is located on the back of the dispenser;

when the cable is connected as shown in the figure, the master machine automatically recognize the new additional element, and when the PROG key is pressed (see 05.33) the programming menu appears on the display of the master machine;

attention

luce zero side snack dispensers are designed and sold specifically to function only if connected to a vending machine (VMC-Master); independent operation of the slave dispenser it's not provided;



09. programming



access the programming mode

quit the programming mode

the vending machine is programmed by using parameters considered as a standard for the specific configuration required; if it should be necessary to modify these parameters, a summary table at the end of the chapter (see 09.02.) may help to trace back all the items composing the programming cycle;

to access the programming mode, press the main switch (see 05.24.), open the machine door and use the service key in the safety switch (05.30.);

attention

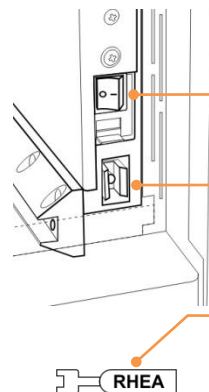
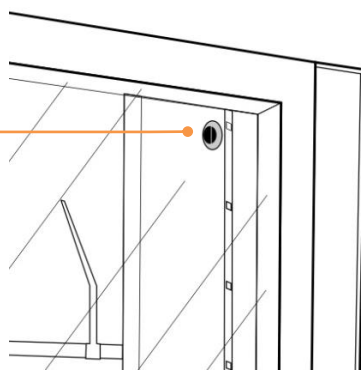
in this operation mode, the vending machine is supplied and operating to all effects; act with the utmost caution;

never reclose the vending machine to avoid causing any damage to the safety switch, never carry out any operation other than those described;

press key "PROG" of the service keyboard for min. 3 seconds (see 05.33.);

after programming, press key "PROG" to restore the usual operation of the vending machine and store any change you may have made;

05.33.
key PROG



05.24.
main switch

05.30.
door switch

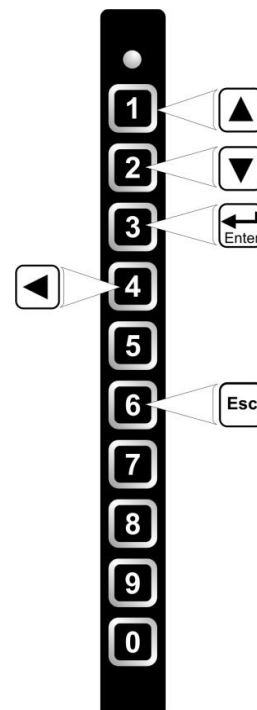
05.25.
service key

09.01. "PROG"

press key "PROG", press "1" of the selection keyboard; the keyboard buttons acquire the following functions from now on:

key "1"	to scroll topics forwards to scroll the variables of topics forwards
key "2"	to scroll topics backwards to scroll the variables of topics backwards
key "3"	to confirm and move back to the previous item
key "4"	to move the cursor one digit to the left
key "6"	to go back to the menu without modifying

note: the programming steps listed here below may be not in the exact sequence or they may slightly differ from the machine content; however, general principles remain applicable;



09.01.a. general parameters	it contains the general parameters intended to customise the vending machine software, such as date and time, menu language;
09.01.b. price management	it establishes the prices of the products in the vending machine by associating the price with the dispensing drawer and spiral;
09.01.c. cooling unit parameters	if the cooling unit is arranged in the vending machine, it enables the user to regulate the operation times and temperatures and to detect the readouts of the internal temperature control probes;
09.01.d. EVA_DTS parameters	it determines the parameters of the DTS standard data transfer format required by the operators of automatic vending machines;
09.01.e. audit data	audit of the product quantities that have been dispensed;
09.01.f. diagnostics	it displays and manages any out-of-order message, it checks the motors and tests the anti theft sliding panel as well as the FTCA sensors;

09.01.a. general parameters

to select the parameter to be programmed

select the menu you wish by pressing key "1" or "2"; the indications relative to the various menus will appear in a sequence on the second line of the display;

when the item relative to the menu you wish appears, press key "3" to confirm;

the name of the parameter will appear on the first line of the display, the value currently set up on the second one;

select the menu parameter by pressing key "1" or "2", the items relative to the various menu parameters will appear in a sequence on the first line of the display until the first parameter is displayed again; when the indication relative to the parameter you wish appears, press key "3" to confirm;

to modify the parameter to be programmed

if "***>" followed by the current value appears on the second line, set up the value you wish by means of the keyboard; press key "1" to increase or "2" to decrease the current value;

press key "3" to confirm and move back to the previous item or press key "6" to quit without modifying the previous value;

press key "4" to reset the proposed number; in some cases press it to move by one digit on the left until you reach the first one on the right;

after typing all digits, press key "3" to confirm and move back to the previous item or press key "6" to quit without modifying the previous value;

quit the programming mode

press key "6" to go back to the menu selection;

note: if you press no key for 120 seconds, you will automatically quit the programming mode;

Main Menu
General Parameters

	it contains the general parameters intended to customise the vending machine software, such as date and time, menu language;	
	it sets up the language of the menu items appearing on the display;	Language English
	it sets up the current date and time;	dddd/mm/yy hh:mm -----
	it activates the display of the current time when the vending machine is waiting for a vend;	Time Disp. Enable -----
	it enables the automatic switch from the solar time to the summer time;	Daylight SavTime -----
	it displays the operation mode of the cooling unit; the following operations modes can be programmed by re-initialising the board:	Refrigerator Config. -----
Food & Snack	it enables the safety temperature management for the food area;	
Drink & Snack	it disables the safety temperature management for the food area;	
OFF	it disables the cooling unit operation;	
vend successfully made	the luce zero side snack vending machines can be equipped with an infrared system on both sides of the dispensing tray to detect the actual product passage;	FTCA parameters ->->->
vend failed	the FTCA barriers check the actual product passage whenever a vend is made; if no passage is detected, the vending machine still keeps the credit and, if the "Enable + 3 step" mode is active, it rotates the spiral by abt. 1/4 of a turn by repeating the operation for 3 consecutive times; if these attempts fail too (or if the 3 step function is not active), the vending machine still stores the credit and enables the user to make a new selection; select this function to set up the following parameters of the FTCA function; it activates the operation of the vend sensors that check the product passage; values that can be set up: "0) Disabled" FTCA deactivated; "1) Enable NoStep" FTCA activated; "2) Enable+3 Step" FTCA activated; if no vend is made, it enables the user to make further selections, up to 3, without losing the credit;	Activation FTCA ----
		FTCA Sensors 0) Disabled
		FTCA Sensors 1) Enable NoStep
		FTCA Sensors 2) Enable +3Step
		FTCA max.3 Select. -----
	attention	
	if this parameter is enabled, the motor is put out of order after the third unsuccessful attempt and the credit is scaled down;	
	it sets up the decimal point position on the display; used to specify prices with hundredths, value 1 corresponds to 1 decimal (0000.0); settable values: from "0" to "3";	Decimal Point -----
	it displays the 'code mode' internal software parameter;	Code mode -----
	displays the MDB address assigned to the slave distributor by the master machine	adresse slave MDB -----



it displays the software releases installed; press key "1" and "2" to scroll and display the releases of the various software programmes

it reinitialises the CPU board of the vending machine, e.g. after replacing the old one with a new one not yet programmed;

- type "12345" and press key "3" to confirm; the board will delete some programming parameters that have been stored and it will automatically switch into the "self-learning" mode;
- select "Reinit. Def. Param."; the display shows:
- after selecting the language you wish, press key "3" to confirm;
- press key "3" if you do not wish to combine motors in one single selection;
- select "Twin motors: ON" press key "1" to set up pairs of motors you wish to rotate at the same time in one single selection;
- select the motors you wish to couple and press key "3";
- after setting up all the motors you wish to couple, press key "6" to continue self-learning;

(FTCA) XXX = ON if the sensors intended to detect the product fall-down are installed;

(FTCA) XXX = OFF if the sensors intended to detect the product fall-down are not installed;

press key "3" to confirm;

after a short time, the display will show:

if the value is "0", no cooling unit probe is connected; press key "3" to display:

the operation of the cooling unit is deactivated in the "OFF" mode; if you press key "3", the self-learning procedure will stop and the vending machine will go back to the programming menu;

no further mode can be selected;

if the value is "1", one single cooling unit probe is connected; press key "3" to display:

you can confirm the "Drink & Snack" mode or select the "OFF" mode; the operation of the cooling unit is activated in the "Drink & Snack" mode without the safety temperature management of the food area; if you press key "3", the self-learning procedure will stop and the vending machine will go back to the programming menu;

if the value is "2", two cooling unit probes are connected; press key "3" to display:

you can confirm the modes:
"OFF" - "Drink & Snack" - "FOOD & Snack"

select the "FOOD & Snack" mode to activate the safety temperature management of the food area; press key "3" to display:

the safety temperature value is displayed and it can be modified; press key "3" to confirm;

Software Version

Default P. Reset
->->->

Password
21613

Settings Default
Parameters

Self-learning
Language: _____

Self-learning
conn. motors: _____

Self-learning
Twin motors: _____

Self-learning
FTCA Sensors: _____

Self-learning
Connected probes

Cooling unit operat.
OFF

Cooling unit operat.
Drink & Snack

Cooling unit operat.
FOOD & Snack

Safety Temperat.*>
7.0° C

overtemperature
control

DLZV7P/L models only

to preserve the products, the vending machine makes sure that the inner temperature is not exceeding a well-defined threshold, referred to as "safety temperature", for a time longer than the overtemperature time;

the overtemperature control function is managed by means of 3 parameters:

- (a) safety temperature;
- (b) overtemperature time (set up);
- (c) replenishment time;

the overtemperature is controlled only if the cooling unit is operating in the Food & Snack mode by setting parameter (a) Safety temperature at a value lower than 40°C;

during the normal operation of the vending machine, if the inner temperature exceeds the "safety temperature" (a) for a period longer than the "overtemperature time" (b), error "ERR L09" will put the drawers of the vending machine "food area" out of order;

the period of time in which the vending machine is off is always considered above the "safety temperature" (a);

if the vending machine is powered off and on (e.g. after replenishment), the "overtemperature time" (b) is extended by a value equal to the one set up in the "Replenishment time" parameter (c);

whenever the machine is powered on, if the inner temperature exceeds the "safety temperature" (a), but the conditions necessary to cause error "ERR L09" have not been fulfilled (see above), the following message will appear on the display for abt. 15 sec.:

XXX = lacking minutes;
YY,Y = inner temperature;
ZZ,Z = safety temperature;

the number of lacking minutes (XXX) shall be understood as the number of minutes, within which the inner temperature (YY,Y) must go below the safety one (ZZ,Z) to avoid causing error "ERR L09";

if error "ERR L09" is caused, as soon as you access the programming mode, you will be asked whether you wish to reset the error and to restore operation;

press key 1 to reset the error;
press key 2 not to reset the error;

attention

the values of these three parameters must be set up in compliance with the applicable rules in force for the preservation of sold products;

for their set up see the programming parameters;

please note: to avoid any false out-of-order signal after a prolonged intervention by the operator, initialise the counters through the "temperature reset" function ;

Overtemp **XXX** min
YY.Y --> **ZZ.Z** °C

ERR L09 reset
(1):YES (2):NO

Programming
Temperature Reset

Programming
Reset



if the display should show an incorrect message during the probe self-learning phase, carry out the operations described here below with reference to the "OFF L01 and OFF L02" message;

the display shows:

self-learning of the 'Code mode' internal software parameter, press key "3" to confirm;

after confirming the last parameter, the self-learning procedure ends and the vending machine goes back to the programming menu;

re-initialisation enables the user to keep all the other settings (e.g. "product prices", "price associations", ...) active so that there is no need to re-programme them again;

Code mode
*> 0000

attention

if it is necessary to reset the electronic board completely and to delete all programming parameters, re-initialise as described above by entering value:

21613

Reinit. Def. Param.
->->->

Password
00000

the protected parameters are "password"-protected basic parameters of the vending machine set up by default; it is not recommended to modify them if it is not suggested by the customer care service;

Protectd Parameter
->->->

if improperly modified, these parameters might compromise the correct operation of the vending machine;

Password
00000

in case of a prolonged intervention by the operator, if the vending machine remains off or if the overtemperature condition should persist for a time interval close to the one set up, it may happen that the vending machine is unable to decrease the temperature below the setup threshold within the residual time left, at the end of the intervention, after the operator is no longer on site;

to avoid any false out-of-order signal after a prolonged intervention by the operator, reset the overtemperature counters;

important: this function must be used in compliance with the applicable rules in force for the preservation of sold products;

Main Menu
Reset Temperature

Reset



09.01.b. price management

the **luce zero side snack** vending machines can manage 44 price lines (i.e. 44 different prices) from L01 to L44 that will be combined with every single vend selection made available;

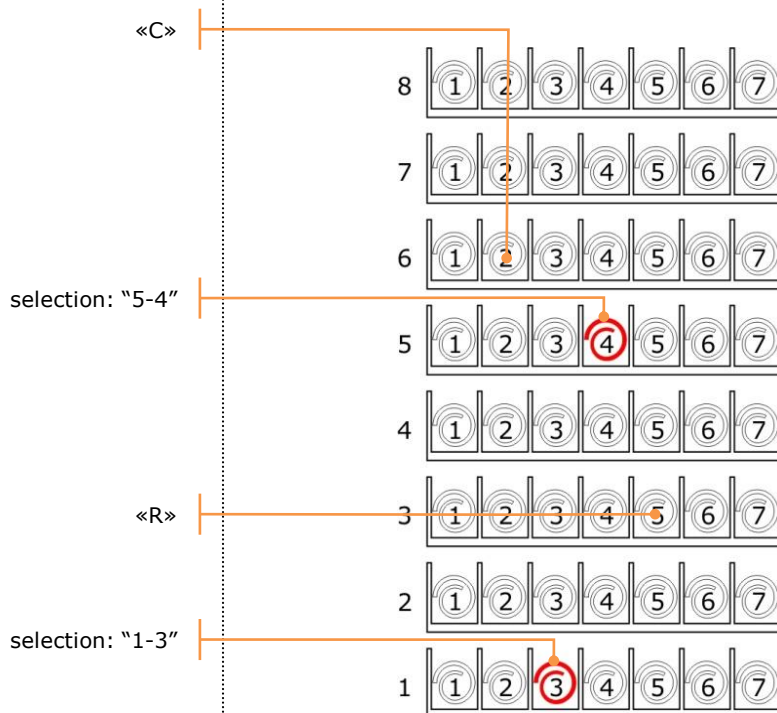
the 44 prices lines of range 'A' can be set up as follows:

press key "1" and "2" to scroll the price lines made available (xx from 01 to 44);

press key "3" to select value "VVVVV" of the price line to be modified; enter the new value, confirm the price by pressing key "3" again;

remarque: if the value you have entered is no exact multiple of parameter "Min. coin value" (see later on), it will be automatically rounded off; press key "3" to confirm the new value again;

where "R" (line) shows the drawer number (from the bottom) and "C" (column) shows the position on the drawer;



press key 1 and 2 to scroll all the selections made available; press key 3 to confirm the current selection;

press the direct selection button to be associated or press 1 or 2 to choose it; if you choose "L01", the selection is no longer associated with any direct selection button; press key 3 to confirm the change;

repeat the same procedure for all the selections to be associated;

Main Menu
Prices

Product Prices-A
->->->

Price-A N.: L01
002,00

Drawer : **R-C**
XX VVVVV

En.Price Disp.
Current value

09.01.c. cooling unit parameters

visible only if the cool unit operation is other than "OFF"

it reads the inner temperature of the vending machine;

it set up the inner temperature of the vending machine; this parameter is intended to set up the inner temperature of the vending machine when the Night mode function is active;

the function intended to raise the cooling unit temperature in the Night mode period is deactivated if the parameter is set to '0' or to a value lower than the one set as a standard inner temperature ('Probe.Temp. 1 Set' in the "Cooling unit parameters" menu); this parameter can be programmed even through the "Energy Saving" menu in "General parameters";

visible only if the 2nd cooling unit probe is available;
it reads the working temperature inside the cooling unit evaporator; it sets up the safety temperature for the vend of food products; to deactivate the function, set it to $\geq 40^{\circ}\text{C}$;

it sets up the time beyond which the inner temperature shall not exceed the safety one; for a description see paragraph Overtemperature control and the description of the error message "ERR L09"; the time added to the overtemperature time whenever the machine is replenished (the vending machine is powered on); for a description see paragraph Overtemperature control;

it reads the number of cooling unit control probes that have been connected;

(**) = visible in "Food & Snack" cool unit operation mode only

Probe 1 Measure
00,0 °C

Probe 1 Temp. Set
00,0 °C

Security Temper.
0,0 °C

OverTemp. Timing
00000 Min (**)

Recharging Time
00000 Min (**)

Refrig. Config.
00002

09.01.d. EVA_DTS parameters

it resets the "Security" and "Passcode" codes according to the DDCMP protocol (EVA-DTS) to prevent any one from accessing and downloading the data concerning the vending machine collections by means of an IRDA palmtop computer; these protection codes enable the user to download data only if those set on the palmtop computer are the same as those previously acquired by the vending machine;

if the two codes are not the same, the message "error DDCMP 9071" will appear;

in this case, reset the codes acquired by the vending machine (Passcode Reset) by entering the password; now, the vending machine has no protection code, but it will acquire a new one as soon as it is connected with a palmtop computer, the code of which is set to a value other than 0;

Passcode Reset
->->->

DDCmP error
9071

Password
00000

09.01.e . audit data

it displays a minimum list of vend figures; if an MDB system is installed, the vending machine gathers more detailed data, in the EVA-DTS format;

it reads the total number of vends of the vending machine since it was last reset;

it reads the total amount the vending machine has collected since it was last reset;

it reads the total number of vends for every single selection of the vending machine (absolute and partial since it was last reset);

it reads the total number of vends for every single price line of products (absolute and partial since it was last reset);

it reads the grand total number of vends of the vending machine;

it reads the grand total amount collected by the vending machine;

it resets the subtotals counted by the vending machine;

Part.Num.of sales
00000000

Part.Val.of sales
000000.00

Num.Sales.Motor
->->->

Num.Sales Line
->->->

Tot.Sale Number
00000000

Tot.Sales Value
000000.00

Audit Reset
->->->

Audit Reset
(1):YES :NO

09.01.f. diagnostics



in the "diagnostics" menu', the exit TimeOut is disabled; is possible to exit the programming mode only manually;

select this item to find out which motors have caused an out-of-order condition;

out-of-order messages are listed in this menu;

if no motor is out of order, the following message will appear:

if any motor is out of order, press key "1" and "2" to scroll the list of motors; press key "3" to operate the current motor; in case of further malfunction, the following message will appear:

where "xxxxxx" represents the error that has been found out;

for the list of failures and the relative solutions see chapter "Problems and relative solutions" under item "motor failure messages".

it is important to keep in mind that this menu is also intended to list any out-of-order messages that are automatically reset (R) by powering the vending machine on and off (see chapter "motor failure messages" just above); the out-of-order message remains until it is reset as specified here below;

press key "4" to cancel the out-of-order condition of the current motor; the display will show:

press key "6" to quit the sub-menu;

note: press key PS2 on the CPU board for abt. three seconds to cancel all out-of-order conditions of the motors without accessing the programming mode;

select this item to test every single motor by running a vend cycle;

press key "1" and "2" to scroll all the motors detected at the time of self-learning;

press key 3 shortly to operate the current motor and the following message will appear in case of a malfunction:

where "xxxxxx" represents the error that has been found out;

hold key "3" down for abt. one second to start the general test cycle; during this cycle, the vending machine will run a vend cycle in a sequence for each gear motor detected by self-learning, starting from the current motor to the last motor of the vending machine; in case of a failure on one of the motors, the test will be interrupted and the error message will appear;

hold one key down till the end of the vend cycle of the current motor to interrupt the general test cycle;

press key "6" to quit the sub-menu;

Main Menu
Diagnostics

Motors OutofOrder
->->->

Motor : 0-0
Out of Order

Check OK
Motors Conn.: 00

error
xxxxxx

Motor: 1-1
P0 T0

Motor: 0-0

error
xxxxxx

select this item for a quick check of the motor condition;

this function is not intended to modify the vending machine configuration detected during the self-learning phase, but just to compare the current state of motors with the self-learning one last made;

[where 0-0 scrolls the motors in a sequence]

if an error is found out during this check, the check stops and the following message appears:

where "xxxxxx" represents the error that has been found out;

from these error conditions press key "3" to continue the check sequence or press key "6" to stop it;

one of the following messages will appear at the end of the check sequence:

a deviation or difference has been found out between the current configuration and the one detected during the last self-learning phase (00 specifies the number of motors that have been identified);

no deviation or difference has been found out between the current configuration and the one detected during the self-learning phase (00 specifies the number of motors that have been identified);

in case of "Check OK", the original configuration of the vending machine is fully restored and the out-of-order messages are reset;

note: whenever a check is made, motors rotate by just a few degrees; if the check is repeated more than once, the motors might cease to be aligned; it is therefore recommended to realign them by carrying out a manual motor test;

select this item to have motors repeat self-learning; this is allowed only if a password is set up in the "protected parameters" menu

Check motors
->->->

Motor : 0-0

error
xxxxxx

Check Not OK
motors Conn.: 00

Check OK
motors Conn.: 00

Motor self-learning
->->->

Self-learning
Motors Conn.: 00

vend sensor test (FTCA)
product dispensing flap

you can test the circuit of the vend sensors (FTCA) of the product dispensing flap (see 05.11.);

access the programming menu by following the instructions supplied by chapter 09 programming;

press key "2" on the keyboard and scroll the menu items to display item "programming diagnostics";

press key "3" on the keyboard and scroll the menu items to display item "test FTCA dispense", select this item to test the circuit of the vend sensors (FTCA);

press key "3" to display the information on the status of the FTCA system:

"left" indicates the light intensity degree detected by the left sensor;

"noise" indicates the noise level detected by sensors;

"right" indicates the light intensity degree detected by the right sensor;

possible values are listed here below:

OK+ the level is good;
OK the level is quite good;
OK - the level is minimum, but enough;
ERR the level is not enough;

if one of the parameters should prove to be "ERR", the FTCA infrared system will be put out of order and an "OFF L10..." message will appear (see the OFF table for details);

press key "3" to display:

press key "3" to carry out a test dispensing cycle on selection "mot: yy";

whenever an object goes past the sensors, a "beep" will be produced for each product that has been dispensed and a different value will appear in the "Sens" field of the display; this means that the FTCA system can properly work; the higher the number (Sens), the easier for the FTCA infrared system to detect the product that has been dispensed;

press key "1" and "2" to change the selection of the "mot: yy" parameter;

press key "6" to quit the sub-menu;

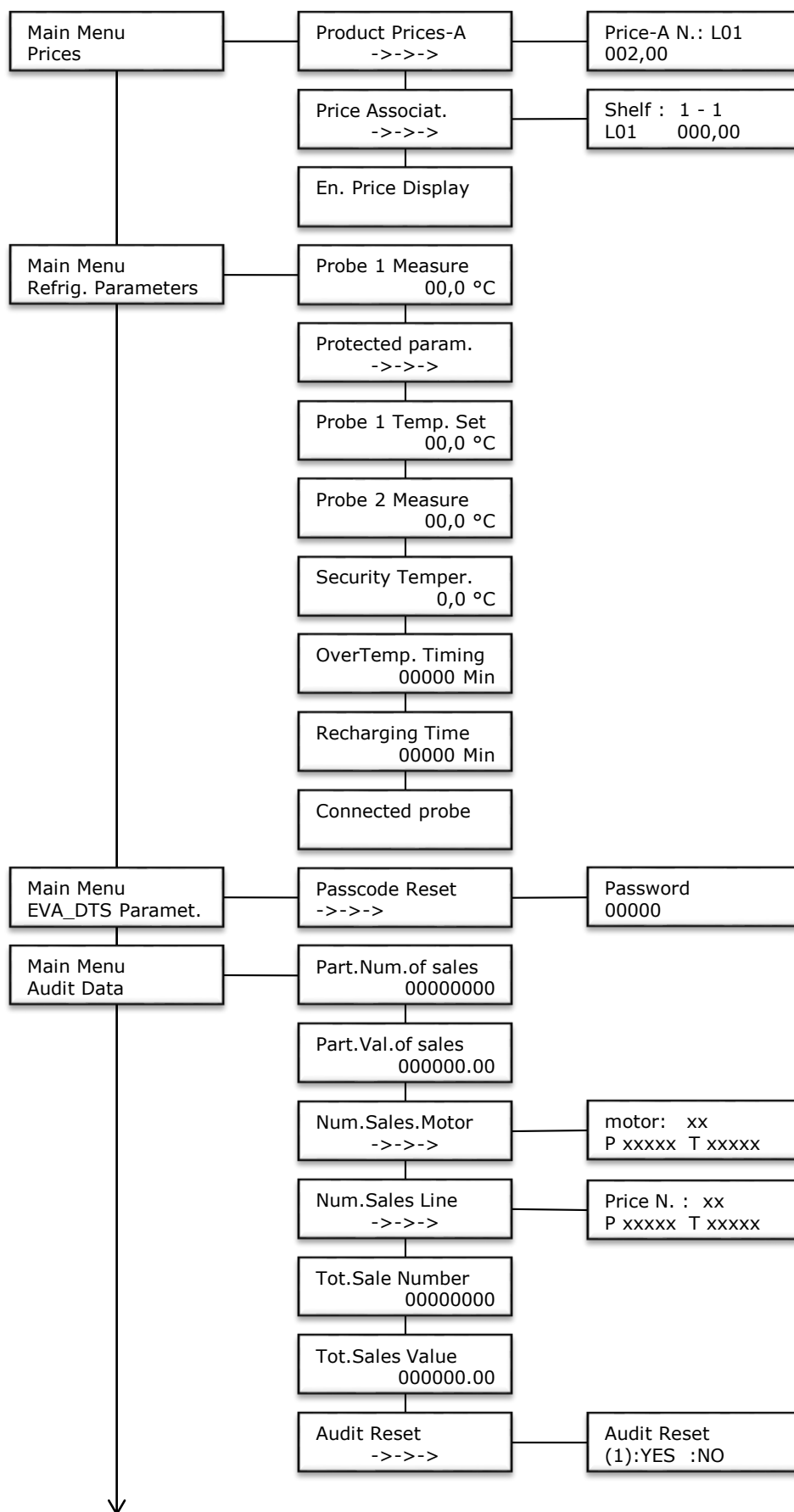
Main Menu
Diagnostics

Test FTCA Sensors
->->->

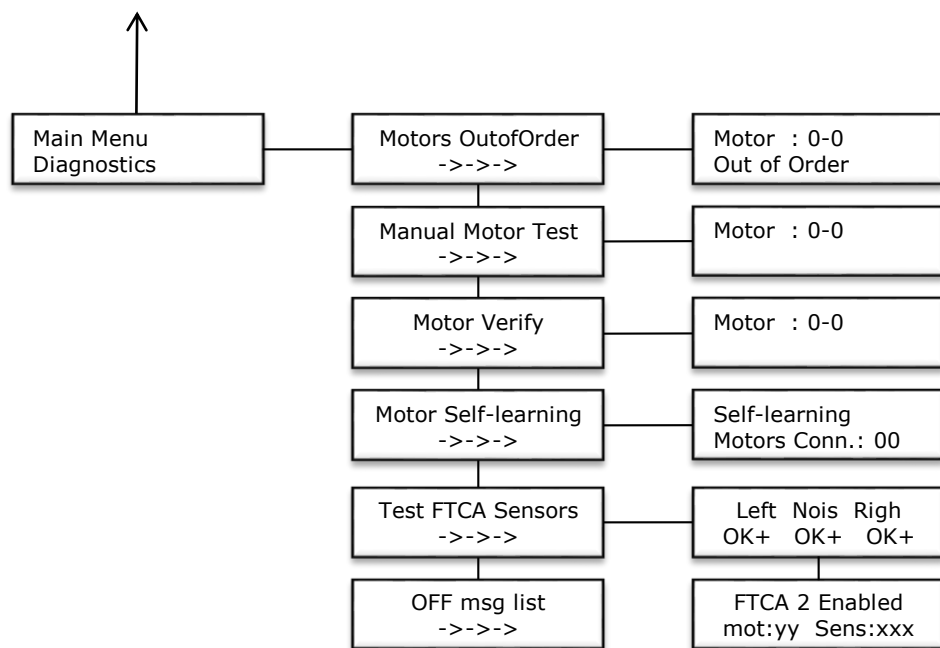
Left Nois Righ
OK+ OK+ OK+

FTCA 2 Enabled
mot:1-1 Sens:000

09.02. programming scheme



09.02. programming scheme



10. Parameters

10.01 limits the minimum and maximum values that can be assigned to programmable variables are listed in the table;

General Parameters	Meaning	Min-Max (Default)
Language	Language of messages	-----
LCD contrast	Display contrast regulation	0 ÷ 100 (40)
Operation mode	Operation mode	-----
En.DateTimeDisp.	Clock enable	Enabled - Disabled
SaveMode Delay	Activation delay in SaveMode	0 ÷ 120 minutes
Light in SaveMode	Light intensity in SaveMode	0 ÷ 100%
NightMode Time	NightMode Activation Time	19:00÷7.00
NightMode Light	Light intensity in NightMode	0 ÷ 100%
NightMode Temp.	Temp.Setup in NightMode	0 ÷ 50 °C
Cool unit operation	Cool unit operation	Aut.
FTCA Enable	Vend sensor enable	0)Disabled, 1)Enable Nostep, 2)Enable +3step
FTCA Max 3 Selec	FTCA maximum 3 selections	Enabled - Disabled
Decimal point	Decimal point position	0 ÷ 3 (2)
Reinit. def. param.	Board re-initialisation	Password Request
Protected param.	Protected parameters	Password Request

Temp. Reset	Meaning	Min-Max (Default)
-----	Reinitialise overtemperature times	

Price management	Meaning	Min-Max (Default)
Price-A N.:xx	Value of the 44 range 'A' prices that can be associated	0 ÷ 635.35 (2.00)
Enable Price-B	Enable price range 'B'	Enabled - Disabled
Price-B N.:xx	Value of the 44 range 'B' prices that can be associated	0 ÷ 635.35 (2.00)
En. Dir. Sel.	Direct selections enable	0)OFF Disable, 1)ON Manualreset, 2)ON Auto Reset
Drawer : R-C	Direct selections association	S1,S2,S3
Drawer : R-C	Price associated with drawer (Line) R, (column) C	0 ÷ 44 (1)
En.Price Disp.	Vend price display	Enabled - Disabled

Executive parameter	Meaning	Min-Max (Default)
Min. coin value	Coin scaling factor	0 ÷ 1000 (000.01)

MDB parameters	Meaning	Min-Max (Default)
Maximum credit	Maximum accepted credit	0 ÷ 635.35
Min.Tubes Led MR	Min. coins to turn on "no change" pilot lamp	5
Min Change Tubes	Min. coins to give change	2
Compulsory vend	Compulsory change	Enabled - Disabled
Man tube discharge	Manual discharge of coin tubes	Enabled - Disabled
MDB vend mode	Vend mode in MDB	0)Single no Chang, 1)Single+Change , 2)Multi
Cashless N.1	Cashless n.1 price association	Prices-A , Prices-B
Cashless N.2	Cashless n.2 price association	Prices-A , Prices-B

RFID parameters	Meaning	Min-Max (Default)
RFID Price range	RFID price association	Prices-A , Prices-B

Cool unit parameters	Meaning	Min-Max (Default)
Probe 1 temp. setup	Internal temperature regulation	0 ÷ 50 °C (40)
NightMode Temp.	NightMode temperature setup	0 ÷ 50 °C (0)
Safety Temperature	Safety temperature	0 ÷ 45 °C
Overtemperature time	Overtemperature time	0 ÷ 1440 min. (30)
Replenishment time	Replenishment time	0 ÷ 1000 min. (120)

EVA DTS parameters	Meaning	Min-Max (Default)
Reset passcode	Reset Security and Passcode	Password Request

Audit data	Meaning	Min-Max (Default)
Audit reset	Audit data reset	Password Request

Diagnostics	Meaning	Min-Max (Default)
Motor self-learning	Motor config. self-learning	Password Request

11. solution of problems

11.01. table list of errors

some events occurring during the operation of a machine may partially or totally compromise operativity:

note: not all malfunctions are signalled by an error message since they are caused by electric checks that are not present in the whole automatic vending machine; these errors can be automatically reset by the vending machine or they can NOT be reset, thus putting the selection out of order;



attention

while carrying out the operations necessary to restore the machine functions, act with the utmost care and strictly observe the safety rules for operators and users, supplied by chapter 1 and 2;

the first column shows "OFF____" and the relative error number on the display of the machine; any variant is specified by detail letters; the device or the function of the machine that has caused the error is described later on;

note: **strictly observe the features of the vending machine** described by this document since the general table is intended to list all the existing errors without considering the model and version of the vending machine;

SUMMARY TABLE FOR THE ERRORS ON snack MACHINES

OFF 1	Probe Readout Error 1	Mess. on display	Detail
- a	Disconnected probe	Defective probe1	Disconnected
- b	Shortcircuited probe		Short-Circuit
OFF 2	Probe Readout Error 2	Mess. on display	Detail
- a	Disconnected probe	Defective probe2	Disconnected
- b	Shortcircuited probe		Short-Circuit
OFF 3	Basket Rotation Lock Error		
OFF 4	No Executive communication error		
OFF 10	FTCA error	Mess. on display	Detail
- a	disconnected FTCA bars	FTCA sensors OFF	Chk cable, Chang
- b	wrong wiring		
- c	parasitic Capacity Test Error		
- e	Left bar error		Check LeftSensor
- f	Right bar error		Check RightSens.
- g	Glared bars		High light Sens.
- h	Darkened bars		Low light Sensor
- i	presence of condensate on bars		TooLight w.close

OFF 11	Lifting Basket FTCA Error		Mess. on display	Detail
-	a	disconnected FTCA bars	FTCA sensors OFF	Chk cable, Chang
-	b	wrong wiring		
-	c	parasitic Capacity Test Error		
-	e	Left bar error		Check LeftSensor
-	f	Right bar error		Check RightSens.
-	g	Glared bars		High light Sens.
-	h	Darkened bars		Low light Sensor
-	i	presence of condensate on bars		TooLight w.close
OFF 12	Push Lock Error		Mess. on display	Detail
-	a	Shortcircuited Push Lock Magnets	Flap [push]	EMagnet Fault
-	b	Disconnected Push Lock Magnets		EMagn. Disconn.
-	c	Absorption detected for 1 lock magnet only		EMagnet Error
-	d	Closing control micro always open		Push Open
-	e	Push closed but not locked		Push Unlocked
-	f	Micro magnets free with active magnet		EMagnet Jammed
OFF 17	Lifting Lock Error		Mess. on display	Detail
-	a	Shortcircuited Lifting Motor	Lifting Motor	Lift.Mot.Fault
-	b	Disconnected Lifting Motor		Lift.Mot.Discon
-	c	Zero Position not Acquired		Home Not Initial
-	d	Encoder not detected		
-	e	Timeout Lifting Motor position not reached		Lift.Mot.TimeOut
-	f	Dispensing Flap Interlock Open		Disp.Flap.Open
-	g	Anti-theft Interlock Open		BasketTheft Open
-	h	Locked Motor		Lift.Mot.Lock
-	l	locked push lock levers		Levers not down
-	m	The Lifting Motor has not reached the dispensing position		Lift.Posit.Err
-	p	Drawer Position Unknown, position learning required		Shelf Pos.Unknown
-	r	Attempt at Push opening during the Lock cycle		Reopening drawer
OFF 18	Dispensing Flap Lock Error		Mess. on display	Detail
-	a	Shortcircuited Motor	Dispensing Flap	Faulty Flap.Mot.
-	b	Disconnected Motor		Flap.Mot.Discon
-	d	Faulty Dispensing Flap opening detected		Disp.Flap.Open
-	e	Motor timeout, cam position not reached		Flap.Mot.TimeOut
-	f	Dispensing flap closing timeout over 60"		Disp.Flap.Open
-	h	Locked motor		Flap.Mot.Locked
-	i	Dispensing product presence detected over 60"		Flap.Photocell
OFF 19	Lifting Basket Lock Error		Mess. on display	Detail
-	a	Shortcircuited motor	Lifting Basket	Faulty Basket.Mot.
-	b	Disconnected motor		Basket.Mot.Discon
-	e	Motor timeout, cam position not reached		Basket.Mot.TimeOut
-	h	Locked motor		Basket.Mot.Locked
OFF 20	CPU Board Error		Mess. on display	Detail
-	a	CPU2 communication error	CL1 CPU Error	Restart - Change
-	b	E2Prom writing error		
-	f	Corrupted Flash		Reinstall SoftW.
-	g	Software not compatible		CL1 CPU SW Error
OFF 21	POT Board Error		Mess. on display	Detail
-	a	Communication error	CLP1 POT Error	Chk cable, Chang
-	f	Corrupted Flash		Reinstall SoftW.
-	g	Software not compatible		CLP1 POT SW Err.
OFF 22	K_SENS Board Error (Capacitive keyboard)		Mess. on display	Detail
-	a	Communication error	Keyb-SENS Error	Chk cable, Chang
-	g	K_SENS error		Reinstall SoftW.

OFF 23	LIFTING Board Error	Mess. on display	Detail
- a	Communication error	CLP1 POT Error	Chk cable, Chang
- g	Software not compatible	CLP1 POT SW Err.	Reinstall SoftW.

ERR 9 Cooling unit overtemperature (see below)

<ERR 09>
TimeOut cool unit

ERR 09 reset
(1):SI (2):NO

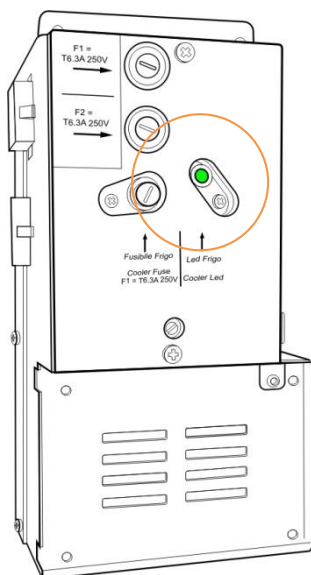
as a consequence, after a shutdown period of the cooling unit, according to the parameters set up, when starting the vending machine, the <ERR L09> error message might appear; to reset it, press key "PROG" by accessing the programming menu, as it is specified by chapter .09 and follow the instructions on the display;

If the error should appear again at the restart, act as follows:



attention

before acting on the cooling unit, set the main switch to "OFF" (a);



- check the state of **fuse F1** that protects the cooling unit against overvoltage;
- make sure that dust and foreign materials are not obstructing the air passage in the cooling unit **(01)**;
- make sure that the cooling blades of the condenser are not obstructed by dirt or foreign bodies; if necessary, clean them **(02)**;
- make sure that the temperature setpoint is not too high or too low **(see chapter 09.)**;
- make sure that the internal air circulation fan **(03)** can properly work;
- make sure that the compressor of the cooling unit can work and that the cooling fan **(04)** can work at regular intervals;
- if the compressor is not set at work when the led on the board signals that it is activated, check and replace the electric start condenser, the clicson or the amperometric relay in the box mounted just before the compressor;

if the compressor is operating, make sure that the evaporator cools down; make sure that the two fastening hooks of the evaporator on the shelf beneath the first drawer are closed and the evaporator well-hooked;

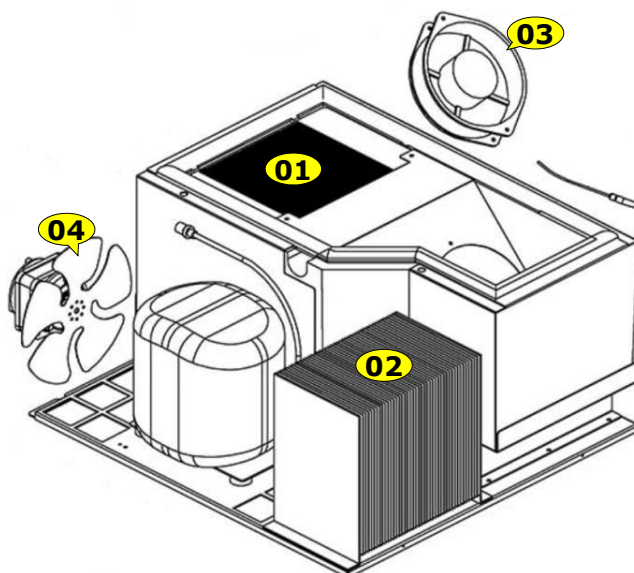


OFF 50 General information

turn vending machine on and off

If the problem persists, contact
customer service

(it is necessary to indicate and
communicate the data of the
registration plate)



	the malfunction messages of some motors are listed here below with the relative explanation, in addition to the possible solutions for the problem; these errors can be automatically reset by the vending machine or they can not be reset, thus putting the selection out of order;	
11.02. a motor is not connected;	check the connections, the motor wiring, the correct operation of the microswitch and the motor; replace one at a time: motor, CPU board, drawer wiring and cabinet;	motor __XX__ Disconnected error NOT automatically reset upon restart
11.03. a motor is short-circuited;	make sure that the motor is intact; make sure that the motor, its connections and the wiring are not wet or short-circuited; replace one at a time: motor, CPU board, drawer wiring and cabinet;	motor __XX__ Short-circuit error NOT automatically reset upon restart
11.04. a motor is locked or it absorbs too much current;	make sure that the vend spiral is properly mounted and check the motor connections (correct supply polarity); make sure that the spiral or the motor are not locked by ill-arranged products or by any other obstacle; replace one at a time: motor and CPU board;	motor __XX__ Locked error automatically reset upon restart
11.05. a spiral motor switch is not properly working;	make sure that the microswitch and the motor are properly working and that the motor is intact; check the motor connections (correct supply polarity); replace one at a time: microswitch, motor and CPU board;	motor __XX__ Time Out error error automatically reset upon restart
11.06. a motor is malfunctioning;	even if the error can be reset and it seems that the motor is working, if this error is repeated, it is recommended to replace the motor; if the error occurs even after the motor has been replaced, check wiring;	motor __XX__ motor switch error error NOT automatically reset upon restart
11.07. motor out of order after three vends without detecting any product fall;	refer to chapter 09.01.a.; make sure that the spiral is properly hooked with the motor and check the operation of the sensors intended to control the FTCA product fall;	motor __XX__ max. 3 sel. error error automatically reset upon restart
11.08. message: "attention found out of order";	if the operation of the selection has been automatically restored, the following message appears as soon as the machine is powered on: this message must be manually deleted in diagnostics to check which motors and problems have been stored and to access the programming mode (see 09.01.i);	FOUND OUT OF ORDER
11.09. message: "selection xx out of temperature";	this error is due to the safety control action of the cooling unit (ERR 09 timeout error of the cooling unit) that has put the drawers of the Food area out of order ; as soon as you access the programming mode, you will be asked whether you wish to reset the error and to restore operation; - key "1" to reset the error and reactivate selections; - key "2" not to reset the error;	SELEC. XX OUT OF TEMPERATURE ERR L09 RESET 1:YES 2:NO
11.10. message: "selection xx not active";	sign of a storage problem concerning the configuration; the selection is not acknowledged to be active by the vending machine; - make sure that the correct selection has been made; - follow the "Check motors" procedure in the diagnostics menu (see chapter 09.01.i) and, then, the self-learning procedure of motors by resetting the electronic board;	SELEC. XX NOT ACTIVE

11.11. message:
"selection xx out
of order";

problem concerning motor xx (see chapter09.01.i diagnostics);
press key PS2 of the CPU board for min. 3 seconds to delete the
"out of order" condition of motors without accessing the
programming mode (see 05.33);

SELEC. XX
OUT OF ORDER

11.12. some motors are
not detected in
the self-learning
mode

check the wiring and intactness of the motors not identified as well
as the intactness and correct insertion of connectors at the bottom
of the vend drawers as well as the operation of the motor
microswitch and of the motor;
replace one at a time, in order: motor, CPU board, drawer wiring
and cabinet;

11.13. several motors
rotating together

make sure that the "Twin motors" function is not activated;

make sure that the electric connection of a motor (not one among
those rotating at the same time) has not been reversed; make sure
that the wiring of the motors of vend spirals is intact; replace the
motor or the wiring;

12. maintenance

the **luce zero side snack** vending machine requires no special
maintenance procedure to carry out its work; however, general
cleaning operations carried out as carefully and as frequently as
required may help the machine to keep its performance constant
and to prevent failures; the time interval of cleaning operations
shall be adjusted to the working conditions of the vending
machine;

before accessing the machine for each maintenance operation, it is
recommended to inform the users by means of warning signs -
properly positioned - that it is forbidden to use and approach the
vending machine;

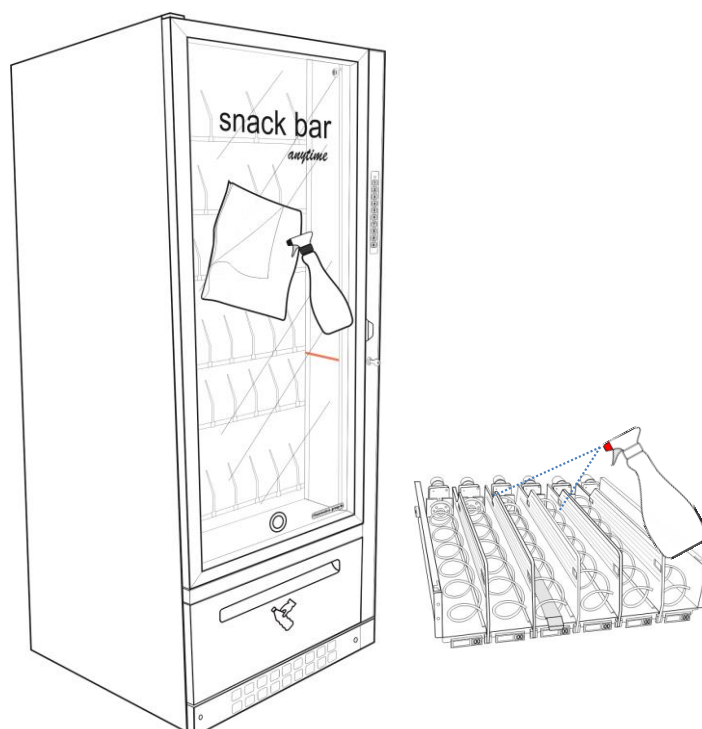


attention

never wash the machine by means of water jets;

**wash your hands carefully with water and soap before
handling the machine and its products;**

use neutral detergents only; never use abrasive pieces of cloth,
steel brushes, aggressive or foamy detergents and other solvents,
boiling water and acid;



12.01. weekly

safety switch control



power off the machine; disconnect the supply cable and carefully make sure that there is no sign of wear; check the stability and efficiency of internal connections of the mains supply carefully;

check the correct operation of the safety switch (see 05.31.) by opening and reclosing; make sure that the vending machine is powered off when the door is opened and that it is powered on again only after complete closure;

attention

during the safety switch control never carry out any operation other than those specified;

open the door and disconnect the machine;

clean the internal and external glassfront by using a detergent and a piece of non-abrasive cloth, dampened with lukewarm water; only if necessary, use a neutral non-foamy detergent;

dust the inner side of vend drawers, dividers and vend spiral by using a piece of clean cloth, from the bottom to the outside and from the top to the bottom, as far as the "pull" product dispensing flap; aspirate the rear and side vent grilled covers of the cooling unit;

12.02. monthly

clean "FTCA" vend sensors

to clean the led barriers of the FTCA system on the dispensing flap (05.09.), open the sliding panel (see 13.03) and antiuse a brush to clean the leds carefully by removing dust or dirt;

12.03. yearly

cooling unit

access the cooling unit, clean the condenser and remove any residue by means of a brush or by aspirating air;

remove all drawers and arrange them in a clean area;

use a piece of cloth, dampened with a neutral detergent inside the vending machine;

- extract the rear panel from the cooling unit (01), clean the internal base completely and sanitise;
- completely remove the dust built up on the fans (02) and the condenser of the cooling unit (03);
- clean and sanitise the tray for the evaporation of condensate liquids;

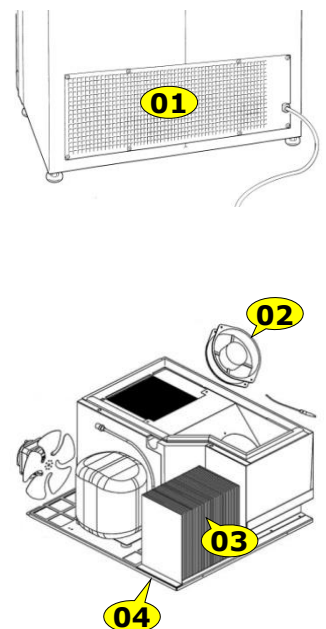
re-assemble the rear panel of the cooling unit;

clean the outer parts and, in particular, the change giver tray and the push-button panel;

re-assemble all drawers after cleaning the inner parts for loading products;

clean the inner side of the "pull" product dispensing compartment (05.09.); restart the VM and reach the inner temperature setpoint;

note: to remove the cooling unit, see technical information n° 215/14



13.

how to do to:

13.01. load the products

to access the vend drawers, open the sliding door (02) by means of the lock (01) and, then, open the glass door (03) hinged on the left side, in front of the operator;

attention

before loading, make sure, with reference to chapter 09 (programming), that no selection is disabled; if necessary, check in order: presence of jammed products, state and cleaning of the vend spiral, the gear motor and the relative wiring;

slightly lift and extract one vend drawer at a time; the first drawers up can be partially tilted during extraction to facilitate the loading cycle;

arrange the products in the corresponding spaces, inserted into the vend spiral; after replenishing a drawer, put it into its seat and make sure that it is properly inserted, push it until it is closed; repeat for all remaining drawers;

"food area" products in P version only

to guarantee their proper preservation, the products, for which the temperature must comply with the rules in force, must be loaded into the drawers of the "food area", limited to the first 70 cm at the bottom of the vending machine;

the vending machine is equipped with a lock device acting on the anti-theft sliding panel and on the dispensing flap when the machine is off;

13.02. assign the vend prices

vend prices are assigned for selections by accessing the programming menu, as it is described by chapter 09. programming;

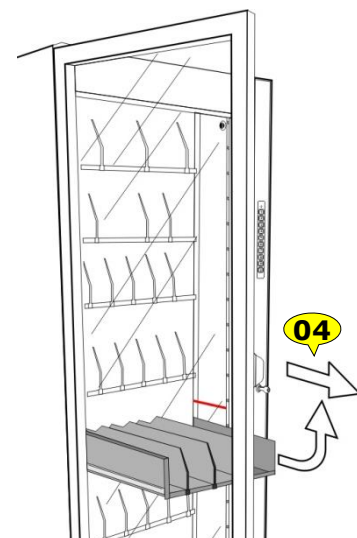
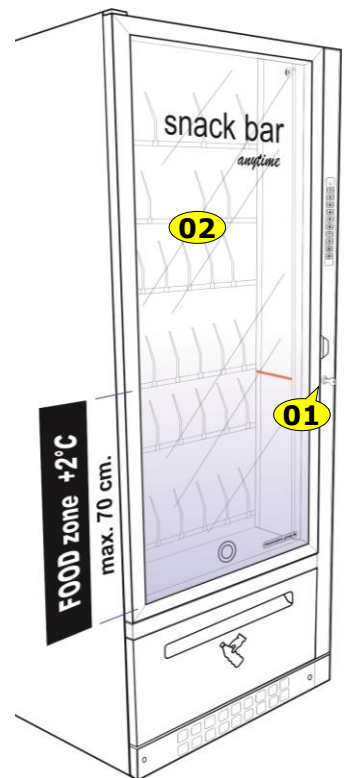
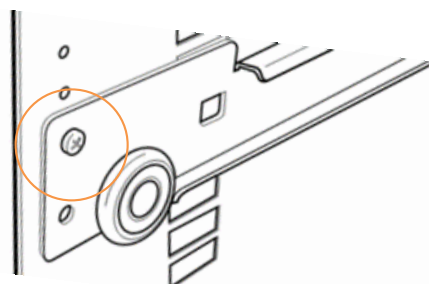
13.03. remove a drawer

to extract the drawer (09), pull it as far as the limit stop and disconnect the molex connector at the bottom on the right inner side; tilt the drawer by abt. 40° upwards and pull it further to release it;

13.04. modify the height between drawers

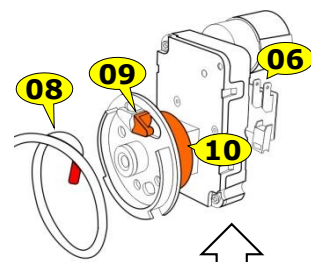
To modify the distance between one drawer and the other one, act as follows:

- remove the drawer completely
- remove the right and left guide of the drawer by unscrewing the fastening screw (02) and by unhooking the guide from the groove (04);
- position the guides into the slots according to the height you wish, hook them on one side first and then secure them by means of screws;



13.05. replace a spiral

extract the drawer completely, detach the two electric connections from the ratio motor **(06)** and extract the spiral/ratio motor unit **(07)** by pulling it upwards; turn the spiral **(08)** clockwise to unhook it from its retainer **(09)** while keeping the friction ring nut firmly in place **(10)**;

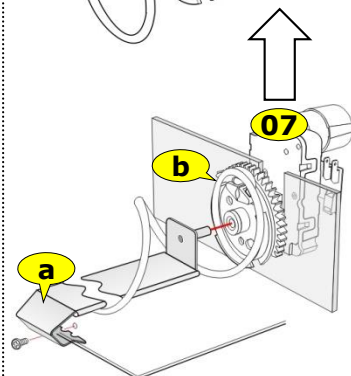


13.06. re-position a spiral

to arrange the spiral according to the radial angle most suitable for the product to be dispensed, **turn the spiral clockwise** to reach the position you wish;

13.07. install a product support bridge

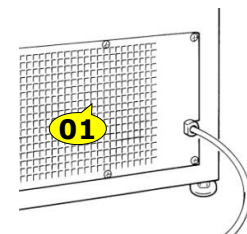
the product support bridge, made of stainless steel, is intended to facilitate the dispensing cycle of the heaviest products that can hardly slide on the surface, even if pushed by the spiral; to remove or insert the support bridge, loosen the screw **(a)** on the front side of the drawer in the same position of the price-holder tabs and, then, insert the pin **(b)** in the central seat of the gear motor ring nut;



attention

before acting on the supply cable, make sure that the supply plug is detached from its socket;

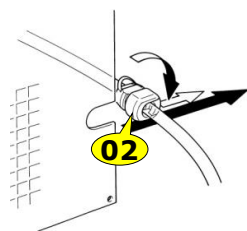
it must be replaced by qualified customer care personnel only and by using the original component only;



13.08. replace the supply cable

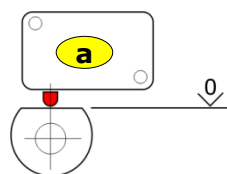
remove the rear grilled cover **(01)**; extract the cable gland **(02)**, open the cable gland and remove the cable; detach the plug **(03)** from the electric box and remove the cable;

to install the new cable, repeat the operations described above in the reverse order;

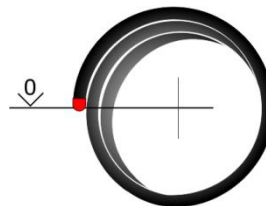


13.09. reset the gear motor manually

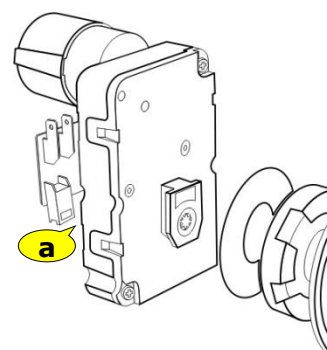
a microswitch operated by a cam is arranged behind the reduction unit, beneath the control board; it is intended to signal the position of the spiral at the limit stop, which must always be arranged on the flat part;



the gear motor shaft
rotate clockwise
(view in front of the
vending machine)
to position itself
on the reset plane



rotate the vend spiral
manually counterclockwise
(view in front of the
vending machine) to put it
in the vend position



position the ejector (optional)

the product ejector may slide on the sales spiral; while keeping the spiral firmly in place, position it properly with respect to the product to be dispensed, it is generally mounted for products that can be hardly dispensed;

considering the variability of the products in use, it is recommended to carry out some ejection tests;

