



### User and maintenance manual

Superstack

SVE 100 - SVE 189 - SVE 217 - SVE 254





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#### 1 GENERAL INFORMATION

### 1.1 Purpose of Manual

The manual contains the correct procedures for loading, usage, regular and extra-ordinary maintenance and installation of vending machines. This manual is a very important part of the vendor and therefore must be kept intact and available for the whole productive life of the vendor.

# **!** KEEP INSIDE THE MACHINE

### 1.2 Interested people

This manual is for the persons in charge of loading, cleaning and ordinary maintenance of the machine. (*Loading Operator*), the final user (*User*) and the people involved in *installing*, setting, extraordinary maintenance of the vendor (*Installer/Maintenance Technician*). The persons in charge must know the instructions and comply with the procedure of the manual.



# Technicians allowed to operate one this vending machines

- Operator (person who only loads the machine with products to be sold)
  - The operator can only load products to be sold in the vending machine.
  - Doing this operation the operator should never move the protective lower carter as indicated on the related safety icon-label on the protection.

### Maintenance Engineer / Skilled technician

 In order to perform all the operations requiring to dismount the protective lower carte, it is necessary to contact only SandenVendo technicians or only authorized (by SandenVendo) skilled and prepared technicians due to the potential electrical and mechanical risks.

This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have



been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

### 1.3 Responsibility

The responsibility of the <u>manufacturer</u> is limited to the correct usage of the vendor

"SandenVendo Europe S.p.A" declines any responsibility for possible damages caused to people and/or things as a result of:

- Incorrect installation.
- Usage of unoriginal spare parts.
- Unforeseen modifications/authorized by manufacturer.
- Improper use of vendor
- Connection to inadeguate supply system and not in conformity with the regulations in force



#### 1.4 Manufacturer

"SandenVendo Europe S.p.A." claims more than 50 years of experience in the manufacturing of Vending machines, and it is the technical know-how acquired, after years of researches and close contact with the production and commercialisation at global level that represents the best warranty SandenVendo Europe S.p.A. can offer

#### 1.5 Service Centres

"SandenVendo Europe S.p.A." is represented by a solid and prepared Sales network not only in Italy but also in Europe (see cover page).

### 1.6 Warranty

The warranty of the vending machine components, starting from the date shown on the delivery note, is 24 months for the cooling unit. The warranty covers exclusively replaced parts, with labour excluded.



# The warranty does not include, damages to the vendor caused by:

- Transport and/or handling
- Operator errors
- Lack of maintenance contemplated for in this Manual
- Failures and/or breakages not caused by the malfunction of the vending machine

### 1.7 General safety warnings

- Carefully read the manual before starting or loading the vendor
- Protect the vendor against weather conditions
- Do not remove the protection cover unless you are a maintenance technician
- Do not change the setting of the electronic board before reading this manual
- Do not place the vendor under direct sunlight
- Do not sell products with the door open
- Refer to routine maintenance chapter for cleaning the vendor
- Disconnect the power cable before doing assistance or freeing a jammed product
- Use a special protection system



- The vendor must be installed in a way that the electric plug is accessible after installation
- If the power cable is damaged, it should be substituted by the manufacturer or by his aftersales technicians or however by an equally qualified person, in order to avoid any risks
- The vendor should not be installed in an area where water jets are used
- The vendor should not be installed outdoor
- To preventy hazards due to machine instability, secure the machine according to the instructions
- In case of failure and/or poor operation, please contact exclusively the qualified personnel of our service centres
- Use only spare parts authorised by the manufacturer
- Should this manual be lost or damages, you may ask for a copu from the manufacturer, enclose the serial number of your vending machine with youur request





# CAUTION: FAILURE TO ABIDE BY THE INSTRUCTIONS CONTAINED IN THIS MANUAL MAY INVOLVE DAMAGES TO THE VENDOR AND/OR PERSONNEL

The pictures and illustrations in this document are only indicative. **SandenVendo Europe S.p.A.** recalls that the technical and performance of products can change without notice.

"SandenVendo Europe S.p.A." reserves the right of making changes on their vending machines without any advice; moreover they declare that the vendors listed in this manual are in conformity with the following directives: 2006/42/EC (EC markings).

"SandenVendo Europe S.p.A." assumes no liability for the correctness of the contents or damages caused by using this manual.

"SandenVendo Europe S.p.A." reserves the right to make changes to this manual without prior notice.



#### 1.8 Symbols

In the manual and/or on the machine, hazardous areas are shown with signs, plates, symbols and icons that indicate danger or an obligation in each case.

Here are the symbols used in the manual and on the vending machine:

SYMBOL	MEANING	COMMENT
1	Compulsory	Compulsory for all personnel involved
	Compulsory	Compulsory for all personnel involved to wear protective gloves during maintenance of the vending machine
	Compulsory	Compulsory for all personnel involved to protective clothing during maintenance.
i	Additional information	Additional information is given.
	Manual	Before carrying out this operation, refer to the Instruction Manual.
P	Maintenance operations	In case of special operations and/or anomalies, a particular mechanical adjustment and/or electrical setting may be required.
	Warning	Indicates a warning, failure to comply may involve damage to the vending machine.
*	Danger	MOVING PARTS, Extreme care must be taken whilst operating the vend mechanism.
*	Danger	Risk of electric shock, disconnect power before handling electric cables.
<u> </u>	Danger	Indicates information regarding personnel safety and machine integrity.
MANCOLO SE	Danger/prohibition	Indicates the danger of electric shocks and mechanical risks.  Never remove this safety guard.  Only SandenVendo Europe technicians or qualified personnel can open this safety guard.
	Recycling	Recycling this product goes toward reducing the need of new materials and the accumulation of waste.
X	Disposal	Dispose in conformity with recycling procedures.



#### **2 MACHINE PARTICULARS**

#### 2.1 Technical particulars

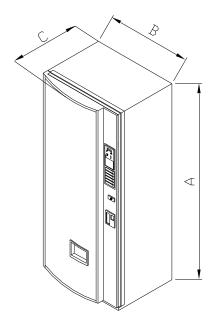


FIG. 2.1 - DIMENSIONS

Dimensions	100	189	217	254
Height (A)	1425 mm	1830mm	1830 mm	1830 mm
Width (C)	705 mm	705 mm	853 mm	1010 mm
Depth (B)	745 mm	745 mm	745 mm	745 mm
Weight	186 Kg	235 Kg	264 Kg	294 Kg
Electrical particular	S			
Nominal voltage		230/24	10 Vac	
Nominal frequency		50	Hz	
Installed power	450 W	600 W	450 W	450 W
Cooling system				
Compressor	5,67 cm <sup>3</sup>	8,85 cm <sup>3</sup>	8,85 cm³	8,85 cm³
Expansion		Direct with	h capillary	
Cooling system	Forced circulation by means of one fan	Forced circulation by means of one fan	Forced circulation by means of one fan	Forced circulation by means of two fans
Refrigerant type		R1:	34A	
Refrigerant charge	0,200 Kg	0,220 Kg	0,220 Kg	0,220 Kg
Adjustable temperature range	0°C ÷ 15 °C			
Climate class	10°C / 32°C - 65% RH			
Noise level	< 70 dB < 70 dB			) dB
Electronic control	MDB MDB			OB
Payment system protocol	MDB / E	xecutive	MDB / E	xecutive



#### 2.2 Description of components

- 1 Cabinet
- 2 Door
- 3 Luminous Advertising Panel
- 4 Coins Insert
- 5 Selections Push Buttons
- 6 Door Lock
- 7 Coin Return Cup
- 8 Delivery Eyelet

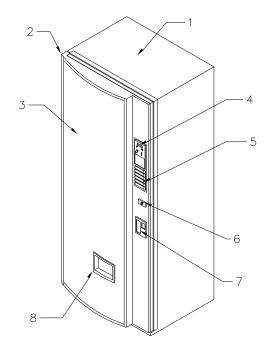


Fig. 2.2

- 1 Control Box
- 2 Coin Chute
- 3 Coin Mechanism Support
- 4 Ballast Box
- 5 Light Switch
- 6 Coin Box
- 7 Crown Box
- 8 Neon
- 9 Starter
- 10 Transformer Box
- 11 Micro Switch
- 12 Main Switch
- 13 Inner Door
- 14 Cooling System
- 15 Protective Back Grille
- 16 Chute
- 17 Vending Mechanism Area
- 18 Product Columns

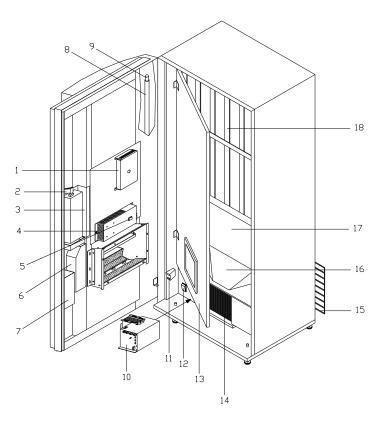


Fig. 2.3



#### 2.3 Coin introduction – selection panel

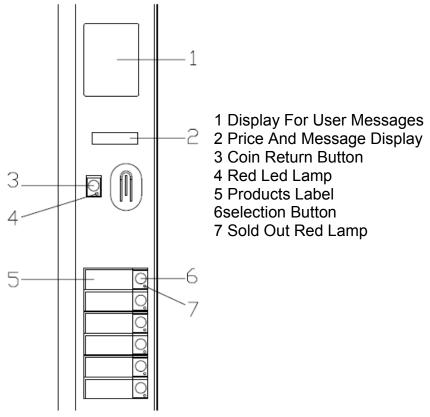
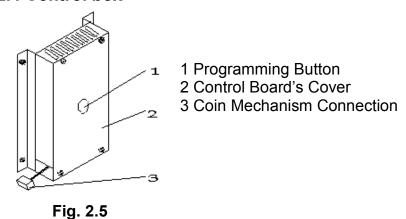


Fig. 2.4

#### 2.4 Control box

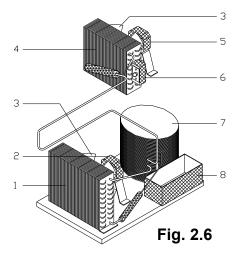


The control board coordinates the link with the coinage and drives the vending motors, constantly monitoring the situation of the mechanisms and selections micro switch. For further details refer to the programming manual.



#### 2.5 Cooling system

- 1 Condenser
- 2 Condenser Fan Motor
- 3 Fans
- 4 Evaporator
- 5 Evaporator Fan Motor
- 6 Thermostat
- 7 Compressor
- 8 Condenser Pan



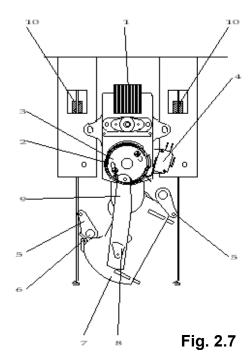
The cooling system stats working when the machine is connected to the electrical supply. The compressor stops when it reaches the temperature set on the thermostat. It automatically re-starts when the temperature lowers of 2 or 3 degrees.



Caution: when you open the frontal door the cooling system doesn't stop

#### 2.6 Vending mechanism

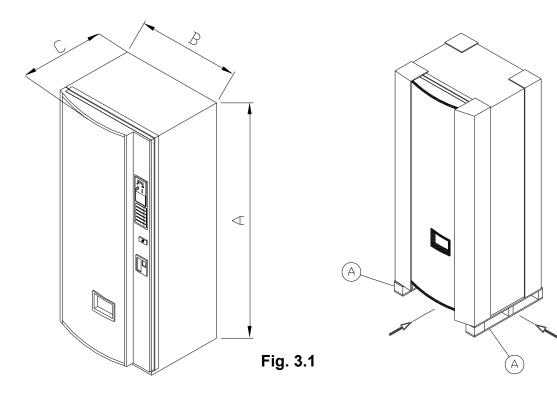
- 1 Motor
- 2 Motor Cam
- 3 Cam Cover
- 4 Motor Carrier Switch
- 5 Lowering Shelves
- 6 Roller Bearing
- 7 Bail
- 8 Eccentric Bearing
- 9 Link Assembly
- 10 Shims





#### 3 INSTALLATION

#### 3.1 Transport and positioning



MODEL	A (mm)	B (mm)	C (mm)	GROSS WEIGHT (Kg)	NET WEIGHT (Kg)
100	1425	705	745	186	181
189	1830	705	745	235	230
217	1830	853	745	264	259
254	1830	1010	745	294	289



To transport and handle the vending machine carefully follow the instructions below.

- Use a trans pallet/lift truck with minimum carrying capacity of 400 Kg, the wooden bases (A) allow for gripping of the 4 sides of the vending machine (fig. 3.1)
- Should you not wish to install the machine immediately, position the vending machine vertically and in a dry and protected room.
- **CAUTION**: it is absolutely forbidden to transport and/or position the vending machine horizontally.
- In the event that the machine is <u>mistakenly laid horizontally</u>, re-position in the working position (vertically) and <u>wait at least 12 hours</u> before starting it, otherwise you may cause damages and anomalies to the cooling system
- Position the vending machine in the installation area, work carefully, avoid manouvres that may suddenly jolt and crash the machine.
- Remove all packaging from the vending machine, extract the power cable from the rear protective grille and carefully move it to its final position.



#### 3.2 Installation environment characteristics



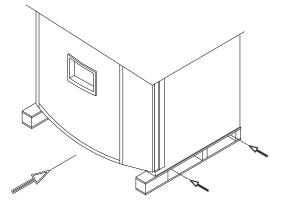
CAUTION: THE APPLIANCE IN UNSUITABLE FOR INSTALLATION OUTSIDE



CAUTION: DO NOT USE WATER JETS TO CLEAN THE VENDING MACHINE, IT IS UNSUITABLE TO INSTALL IT IN ENVIRONMENTS WHERE WATER JETS ARE USED

#### **Environments conditions for installing the vending machine**

- The vending machine models described in this document must be installed in environment/area where the temperature does not exceed 32 °C or fall below 10 °C. failing this the electrical parts (compressor) may be subject to overheating or may work not properly.
- Air circulation is crucial for cooling system: check that there is at least a 10 cm gap between the rear of the vending machine and any obstacle (ex. a wall).
- Make sure that the capacity load of the surface on which the vending machine is positioned is adequate to support the weight declared by the manufacturer.



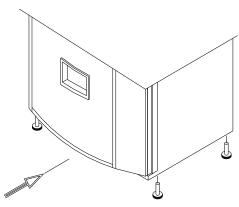


FIG. 3.2

#### 3.3 Removing the wooden bases

To remove the wooden bases, work as follows:

- With a trans pallet, lift the vending machine from the floor (holding it from the front)
- With a size 10 adjustable spanner (we recommend using a ratchet wrench) unscrew the screws that fasten the wooden bases to the machine; 2 screws for the right hand base and 2 screws for the left hand base
- Fit the 4 feet onto the base of the machine
- Rest the machine on the floor

#### 3.4 Levelling

In order for the vending machine to run perfectly, position it on a perfectly level surface. Any irregularities in the floor can be compensate adjusting the screw-on feet on the vending machine in order to obtain a perfect level and guarantee stability.



THE VENDING MACHINE WILL OPERATE PERFECTLY WHEN POSITIONED ON A HORIZONTAL SURFACE

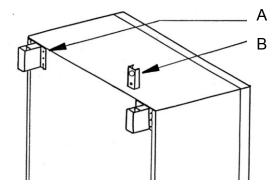


#### 3.5 Stability

The stability of SandenVendo vending machines against overturning is guaranteed whether the vending machine is empty or full and / or with the door open.

The overturning of the vending machine without external influence is impossible. However, to protect the machine against vandalism, such as attempts to tilt the vending machine, we recommend to attach one of the following optional kits:

#### 1) Wall fixing kit part number 135078/2



Components provided:

2 x Welded rear bracket A P/N 130461/1 2 x Bracket B P/N 386460 2 x Plugs with screw P/N 391598 12 x Screw P/N 390139

#### 2) Ground anchor kit P/N

Fixing to the floor with leveling screw (A)

P/N: 139218 composed by:

4 x Floor mounting bracket

16 x Metal spacer

12 x Screw

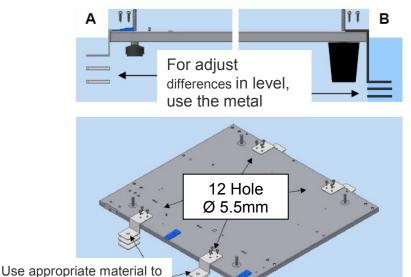
P/N:402852 P/N:402854

P/N:V800876

Fixing to the floor with feet (B) P/N: 139218/1 composed by:

4 x Floor mounting bracket P/N 408028

16 x Metal spacer P/N 407994



After making 12 holes Ø5mm tighten the 4 brackets provided on the cabinet base keeping an appropriate distance from each other.



secure fixing the Vending machine to the floor.

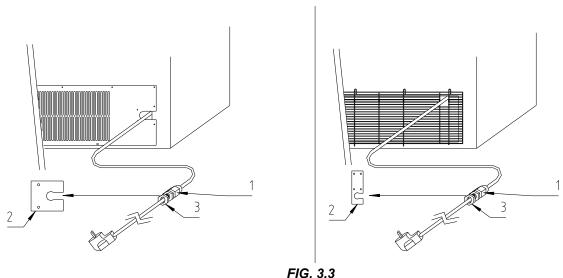
> SandenVendo does not assume responsibility for any damage caused by the lack of consulting this instructions. All the operations must be done by authorized personnel.



#### 3.6Connection to the power mains

#### SERVICE CORD INSTALLATION

CASE "A" CASE "B"
(WITH METAL GRILLE) (WITH PLASTIC GRILLE)





### CAUTION: BEFORE DOING THE ELECTRICAL CONNECTION MAKE THE FOLLOWING CHECKS



**Make sure** that the particulars of the power mains (tension and frequency) are the same as those indicated on the machine's rating plate: this vending machine must be connected to a 230 V , 50 Hz power mains, each voltage below 207 V or over 253 V can causes failure.

**Make sure** that the supply outlet is grounded and that, after making the connection, the entire appliance is ground connected.

**Make sure** that the appliance is positioned so that the plug connecting it to the power mains can be easily accessed after installation.

**Make sure** that the neutral wire is blue; otherwise, you must invert the poles.



CAUTION: should you find any anomalies with the supply cable or should it be damaged, it must be replaced. For the safety of personnel and to prevent all risks of damages to the machine never replace the supply cable, contact the manufacturer or the technical assistance service.



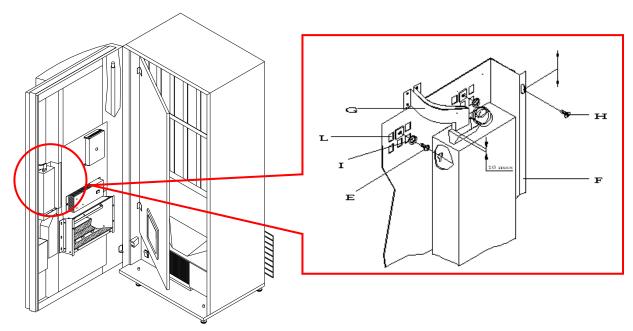
**CAUTION: NEVER USE EXTENSION LEADS** 

You may now connect the machine to the power mains, the neon advertising panel and all the signal lamps of the empty columns should light up and the cooling system should start.



#### 3.7 Installing the coin mechanism

Hook the coin mechanism on 3 screws suitably placed (E) on the door (F) (fig. 3.4). Check that the coin mechanism has the coin entrance in line with the exit of the curved channel (G) and that the distance between the two parts is around 10 mm maximum. The mentioned distance is simply adjustable by loosening the 3 fastening screws (H) on the door and therefore moving it upwards or downwards. After doing this operation remember to tighten the screws again.



**FIG 3.4** 

It is possible to change the coinage position in the two direction of the horizontal plane to adapt the products of some manufacturers that do not follow exactly the international standards. To do this, apply the 3 supporting screws in the holes (**L**) and move from right to left.

It is also possible to move the coin mechanism up and down installing spacers (washers) (I) between the coinage door and the bottom of the coinage box.

Once the setting is done remove the selector and tighten the 3 supporting screws (**E**). (These operations are not necessary if you use a coinage mechanism suggested by SandenVendo).

Actuate the coin return button ( $\mathbf{M}$ ) and check that the mechanism works properly: make sure that the selector opens as much as possible. If this doesn't happen, you will have to adjust again the height of the coinage door.

Connect the coin mechanism to the connector, which is above the control box.

THE COIN BOXES WITH EXECUTIVE PROTOCOL HAVE 2 CONNECTORS, A POWER SUPPLY CONNECTOR THAT COMES DIRECTLY FROM THE TRANSFORMER BOX, AND A COMMUNICATION CONNECTOR FROM THE MAIN BOARD.



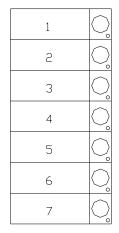
#### 3.8 Control settings

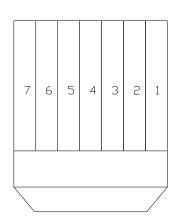
All the machine's control and operation settings can be set through the programming routine of the electronic board.

The programming routine of the electronic board is described in the <u>PROGRAMMING MANUAL</u> supplied with the vending machine.

### REFER TO THE PROGRAMMING MANUAL

#### 3.9 Price setting



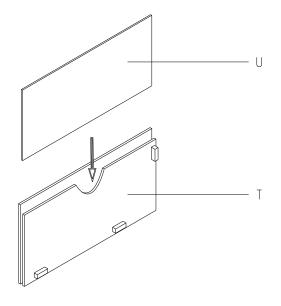


For setting price refer to the programming manual of the control board. This vending machine allows you to use different prices for each single selection and to make any kind of pairing between column and selection button.

Fig. 3.5

# SANDENVENDO ALWAYS SUPPLIES VENDING MACHINE WITH ALL THE SELECTION SET ON SAME PRICE AND WITH COLUMNS PAIRED AS FOLLOWS

#### 3.10 Label installation



Unscrew the screw from the coin mechanism door, open it and install the label (**U**) from the top of each window (**T**) inserting them between the two plastic parts. Remember that the first part remember that the first button on the top actuates the first column on the right and so on up to the last button on the bottom that actuates the last column on the left.

Close the coin mechanism door.

Fig. 3.6



#### **4 ACCESS TO THE INTERNAL PART**

You can only access to the internal part of the machine (maintenance area) using the special key provided with the vending machine (rif. Fig. 4.1).

Access to the **service area** is only possible using the specially provided tool. Hereunder is a list of the **service areas** of Vending Machine:

- Vending motors (product delivery area)
- Neon lamps, reactors (lighting area)
- Evaporator
- Compressor and transformer box

#### Access to vending motors and product delivery area

You can only access the motors of the vending mechanism (product delivery area) by opening the internal door.





FIG. 4.1



#### **5 USING THE VENDING MACHINE**

#### 5.1 Warnings

- CAUTION: NEVER LOAD THE VENDING MACHINE WITH PRODUCTS DIFFERENT FROM THOSE RECOMMENDED BY THE MANUFACTURER (REFER TO CHAPTER: PROPER USE).
- **CAUTION:** NEVER LOAD THE VENDING MACHINE WITH PRODUCT FORMATS DIFFERENT FROM THOSE RECOMMENDED BY THE MANUFACTURER.

The vending machine **Mod. 100 - 189 - 217 – 254**, described in this document can deliver the products by means of a vending mechanism called SUPER STACK.

#### 5.1.1 Proper use

"Super Stack" columns can vend all cylindrical products included in the following measures:

ф МІМ [ММ]	ф МАХ [ММ]	L. MIN [MM]	L. MAX [MM]
52	68	92	306

Some examples here below:

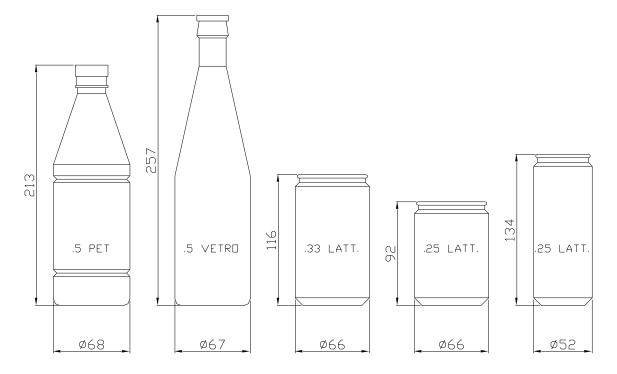


FIG. 5.1 - PRODUCT FORMATS

Sandenvendo reserves the right to approve the vend of all products which are not perfectly cylindrical only after testing them

Moreover sandenvendo is not responsible for uses and applications of the vender, which are not explained in this manual.



#### 5.1.2 Charging

This mechanism can vend some packages stacked in double depth (**2D** column) (ref. Fig 5.7) and other in single depth (**1D** column) (ref. Fig 5.2)

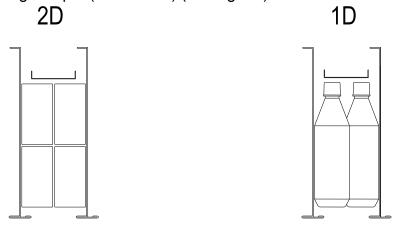


FIG.5.2 - EXAMPLE OF CHARGING

#### 5.1.3 Conversion from 1D to 2D and from 2D to 1D

If conversions are necessary, refer to the instructions below:

- 1) Remove the mechanism cover
- 2) Power the vending machine
- 3) Enter the board-programming mode (refer to the programming manual), using "Test" function, start the motor of the column to be converted. This will cause the rotation of the cam, which will be rotated until the link assembly (**C**) connected to the cam (**D**) will be in its lower position showing the two mounting screws (**E**) the cam cover (rif. Fig. 5.3).

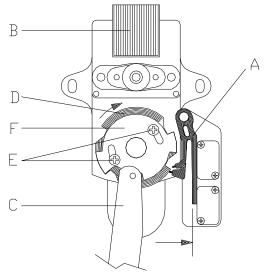
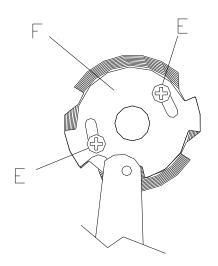
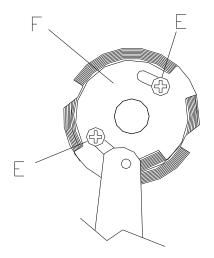


FIG.5.3 - VEND MOTOR

- 4) Disconnect power to the vending machine
- 5) Loosing the two mounting screws (E) of the cam cover (F) and turn it as much as possible counter clockwise to convert from **2D** to **1D** (ref. Fig 5.4) or clockwise to convert from **1D** to **2D** tighten screws again.

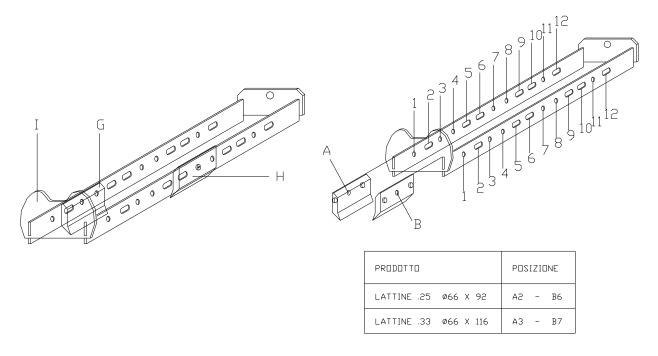






**FIG.5.4 - CAM** 

- 6) Remove the delivery chute to get better access to the lower area of vend mechanism
- 7) Remove the plastic wedge (**G**) that is installed on the lower bail rod (**I**) if you have to convert from **2D** to **1D**. Install the wedge in the proper hole if you have to convert from **1D** to **2D** (rif. Fig. 5.5).



**FIG.5.5 - CAM** 

- 8) Power again the vending machine and start the motor once or twice to run the crank to its highest position. In this case the bail has rotated approximately 180 degrees and you have access now to the opposite rod
- 9) Disconnect power to the vending machine.
- 10)Remove or install the plastic wedge (**H**) on the second bail rod accordingly to the conversion you want to make (rif. Fig. 5.5).
- 11)Install the mechanism cover



#### 5.1.4 Loading

The machine is equipped with a number of both metal (1 mm) and plastic (4 mm - 2 mm) shims ( $\mathbf{S}$ ), which will allow you to set the stack for the most common packages. Installation of them is based on average diameter of products.

Once you have determined the mix of shims to be installed, hang them to the partition ( $\mathbf{L}$ ), sliding one lobe into the slot ( $\mathbf{M}$ ) which is on the vend mechanism front plate ( $\mathbf{N}$ ) and then engaging the second lobe into the spring support ( $\mathbf{O}$ ) which is screwed closed to back end of the partition ( $\mathbf{L}$ ) (rif. Fig. 5.6).

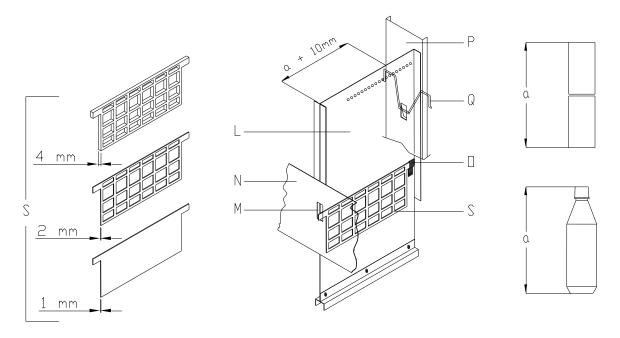


FIG.5.6

Thicker shims must always be installed first.

For those products whose diameter is far from the range, which the vender can vend with standard shims supplied with, you need to install special kits. Installation instructions are attached to any kit supplied by the factory.

Measure the length of a row of product, add 10 mm and move back spacers (**P**) to the back to get desired distance between backs pacer and partition front flange, then load first product on the lowering shelf which is in "up" position.

Place the product on the shelf (**R**) as far forward as possible and, if the column is adjusted for **2D** place the second of the row directly behind it. At this time there must not be any product on the bail (**I**) (rif. Fig. 5.7).



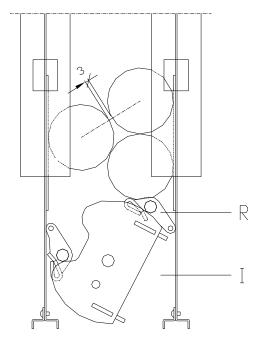


FIG.5.7

Check again, and adjust if necessary the back spacer (**P**), so that between it and the row of products just loaded there is a space of about 10 mm (rif. Fig. 5.7).

Load the second row of products on opposite side of column and third row above the first in the same manner described above.

Check spacing between the largest parts of products in row 2 and row 3 for a desired spacing of 3 mm. Add or remove shims to get desired spacing (rif. Fig. 5.6).

Your vending machine is now completely initialised and ready to be used.

Continue to load column in stagger manner until at least 12 rows of product have been loaded.

Switch on power to the vending machine. Having the coinage already been installed and some products loaded, the display must show a message (and not the writing sold-out), the red lamp above the coin return button must be on (this alerts you on using correct change because pay back system of the coinage does not exist or it is empty) and all the sold out lamps near each selection button must be off.

Assuming that the amount of each selling price is already set on the coinage electronic board, close both to the inner and the outer doors, insert proper amount of coins and make a selection.

Repeat the above procedure for any selection.

During the first series of selections the following should happen:

Each vending mechanism is going to load itself thus you will not have any delivery of product.

From now on, to any selection made should correspond the delivery of one product. Test each vending column until at least 4 products from a 2D column or 2 products from a 1D column have been vended.

Open the door again and complete loading the vending machine in stagger pattern.



#### 5.2 Final check

- 1- Completely load the column
- 2- Make several selection, check the reloading and the delivery of the product

For some product format the column needs spacers or other special kits: in this case contact SandenVendo or the authorized service centres for the correct set up.

If it is necessary you can send you product to the company: the necessary test will be carried out to obtain the exact adjustment.



USUAL PRODUCTS ARE NORMALLY TESTED AT OUR FACTORY. ASK FOR THE SET NUMBER OF THE PRODUCT YOU WISH TO SELL AND REFER TO THIS NUMBER WHEN ORDERING. WE WILL MANUFACTURE THE VENDING MACHINE ACCORDING TO YOUR SPECIFICATIONS

#### 5.3 Control settings

All the machine's control and operation settings can be set through the programming routine of the electronic board.

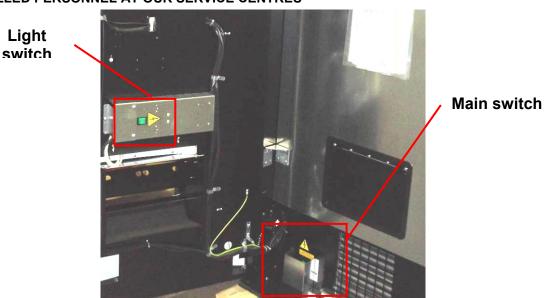
The programming routine of the electronic board is described in the <u>PROGRAMMING MANUAL</u> supplied with the vending machine.

#### REFER TO THE PROGRAMMING MANUAL

#### 5.4 Start up

To start up the vending machine work as follows:

- Make sure the plug is connected with the supply mains;
- Power the vending machine: press the luminous green **MAIN SWITCH** pushbutton (ref. Fig. 5.13) situated on the transformer box inside the machine (lower left hand side);
- Switch on the neon lamps: press the luminous green **LIGHT SWITCH** pushbuttons (ref. fig. 5.13) situated on the inner side of the door:
- Execute the programming routine: refer to the Programming Manual;
- Load the vending machine with the product desired;
- Close the door of the vending machine and wait for the general machine check;
- The vending machine is now ready for use.
- CAUTION: IN CASE OF FAILURE AND/OR POOR MACHINE OPERATION, ONLY CONTACT THE SKILLED PERSONNEL AT OUR SERVICE CENTRES





#### **6 MAINTENANCE**



The following section is a basic guide for the general maintenance and cleaning of the vending machine. Maintenance on the cooling unit may only be performed by trained specialist staff. While working, always wear protective goggles and gloves. Maintenance personnel must be made aware of the potential danger in touching hot metal parts. Even with the power off all the components of the cooling machine may still be very hot, especially touching the evaporator heater may cause burns.

#### **6.1 Preventive maintenance**

You can only access the internal part of the machine (*maintenance area*) using the special key supplied with the vending machine.



FIG. 6.1 - ACCESS KEY

#### **6.2 Preventive maintenance**

To guarantee the machine operates perfectly we recommend that you periodically carry out the following maintenance operations:

- Check the vending machine and the surrounding area, check for signs of rust on the outer cabinet and obstructions in the air vents.
- Open the door and check there is no accumulation of water, signs of rust, and humidity around the corners.
- Check the evaporator outlet is not blocked (the condensed water in the evaporator must drain out towards the condenser pan).
- Periodically check the door seals. Should they be damaged, replace the seals immediately.
- Periodically check that the condenser is clean.
- Check that the evaporator fan and the heating system work normally (the fan blades must be free from every foreign matter).
- Check that the compressor and the condenser fans work normally (the fan blades must be free from every foreign matter).
- Check that all the selections are correctly delivered.



#### 6.3 Replacing neon lamps

To replace a neon lamp, work as follows:

- Open the door of the vending machine using the special key supplied (ref. Fig. 6.1).
- Press the luminous green **LIGHT SWITCH** pushbutton to disconnect power to the neon lamps: switch from position "1" to position "0"



CAUTION: AT THIS STAGE ONLY THE POWER CIRCUIT OF NEON LAMPS IS CUT OFF, THE VENDING MACHINE IS STILL POWERED

- By means of the inspections holes (ref. Fig. 6.2) take out the neon lamps to be replaced by the two fastening clips
- Disconnect the neon lamp from its wiring
- Wire up the new neon lamp and fasten it to with the clip

Once you have replaced the neon lamp work as follows:

- Press the luminous green LIGHT SWITCH pushbutton to switch on the neon lamps, turn from position "0" to position "1";
- Re-close the door of the vending machine and make sure you lock it using the access key supplied

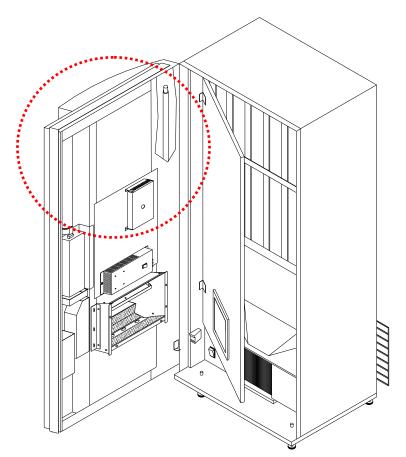


FIG. 6.2 - INSPECTIONS HOLES



#### 6.4 Cleaning the vending machine

The vending machine should be generally cleaned in order to keep the machine in perfect working order. In general we advise that you:

- Check the vending machine and the surrounding area; check for sign of rust on the outer cabinet and obstructions in the air vents
- Open the door and check for accumulation of water, sign of rust, humidity around the corners



#### **CAUTION: NEVER USE PRESSURED WATER CLEANER AND WATER JETS**

#### 6.5 Warnings

Before carrying out any cleaning operation on the machine, pay careful attention to the following directions:

- Cut off the power supply to the machine
- Do not use blades or other sharp tools to scrape parts or components in the vending machine.
- Do not clean the machine in direct sunlight or in high temperatures.
- Cut off the power supply to the machine before cleaning the electrical parts and/or parts protected by covers.
- Do not use cleaning materials other than those recommended.
- All types of cleaning that require the use of liquids should only be carried out after disconnecting the machine from the power mains.



#### 6.6 General cleaning operation

In order that the machine is in perfect working condition, it is important that it is clean and well kept. Please follow the instructions below:

	Clean the Vendor with water and soap. The exterior may be waxed with any good automobile wax
	Small internal signs of corrosion can be removed using sand paper and covering the surface with nitrocellulose lacquer
Cleaning of painted areas and removal of small scratches	Paint splashes and grease or glazing compounds can be removed using solvent
Small scratches	Small traces can be removed with a Automobile wax
	Kerosene, fuel or alcohol can be use full for the cleaning.
	If some adhesive material like PVC cannot be removed with a solvent, warm up slightly surface with a drier can soften the adhesive and facility the removal.
	Attention: a excessive warm up will damage permanently the surfaces
	The neon-advertising panel should be cleaned with care. It is advisable to
	follow these directions: Wash with neutral soaps or detergents in warm water
Cleaning the neon	Use soft cloths or sponges.  Do not rub harshly
advertising board	Rinse with warm water
	Dry with cotton rags or synthetic skin cloths
	CAUTION: almost all the organic solvent fuel oils, kerosene or alcohol will
	corrode the panel material. If used the panel will be permanently
	damaged The condenser and the evaporator must be kept clean for efficient
	operation. Be sure that all vanes and tubes are clean and there are no
Cooling area	obstructions of air passage.
	Clean the fins with a brush ( metal ) or better, use a vacuum cleaner or
	compressed air
Product delivery exit	Keep the product exit clean and without deposits
Cleaning of drainage tube	Check that there are no obstructions in the drainage tube
Crown box	Empty periodically the crown box (when used)
	Never use:
	Cleaning products that are abrasive or chemically aggressive
	Cleaning products that are strong (alkaline) or acids
	<ul><li>Benzene</li><li>Leaded petrol</li></ul>
	Leaded petrol     Acetone
	Never clean with blades or pointed objects
General precautions	Never clean at high temperatures
	Never clean if the surface of the Vendor has been heaten by strong
	Sun
	<ul> <li>Do not wash with water jets</li> <li>Be careful when cleaning parts under power; turn off power supply</li> </ul>
	Do not use water or other liquid detergents
	If using liquid detergent, turn off the power supply
	5 1 5 ,



Only technicians from SandenVendo or authorised personnel may carry out the operations that require the machine's lower protection to be opened, because of possible risks due to electric shock and moving mechanical parts.



4

PERICOLO!

DANGER!

ACHTUNG!

PELIGRO!

PN 404657

#### 6.7 Recommended cleaning products

We recommend cleaning the machine using only the following types of products and materials:

- Neutral detergent
- Compressed air (2 bar max)



 $\underline{\sf CAUTION}$ : in order to avoid any oxidation, corrosion, brattling, peeling of paint and other damages to the machine,  $\underline{\sf NEVER}$  under any circumstance the following products:

- Abrasive detergents
- Very alkaline or acidic detergents
- Benzene
- Petrol
- Acetone

#### 6.8 Cleaning safety device

For each cleaning operation, it is advisable to wear protective gloves and/or clothing.







<u>CAUTION</u>: Follow all cleaning product instructions and read the relevant COSHH data.



#### 7 INFORMATION - DANGER SIGNS

A series of warning messages are written inside all the SandenVendo vending machines; this is to make the user is aware of the dangers that exist while he is working on the machine.

Here follows some examples:

Watt indicator of the neon advertising panel	1×15 W.
CAUTION: the vending machine must be fitted with a grounding system.	WARNING This wendor must be properly grounded ACHTUNG Dieses Gerdir mus ordhungsgemäß gerdet werden ATTENTION Le distributeur connecté a la terre ATENZIONE Lo madquina debe estar correctemente connectida a tierra ATTENZIONE Il distributomente connectida a tierra ATTENZIONE Il distributor deversione a tierra and a contectionente connectida a tierra and a conte
3) Type of gas in the cooling system.	CFC FREE R134A
Fuse type and state indicator	F10A/250V
5) DANGER: Mains voltage	4
6) Ground connection indicator	
7) Alternate current indicator	
8) Fuse symbol	
9) Lamp indicator	$\otimes$
10) Equipment only suitable for internal use indicator	
11) ON	
12) OFF	0



13) Vending machine identification and main technical data  Manufacture date:  Month / Year	COSTRUITO DALLA  Vendo Sanden Europe S.p.A.  CONIOLO (ALESSANDRIA)—ITALY  MOD.  SERIAL N  ALIMENTATION  NOMINAL POWER
14) CAUTION: Hazardous Area pay extreme care whilst operating the vend mechanisms	<b>%</b>
15) CAUTION DANGER AND PROHIBITION: danger of electric shocks and mechanical risks	PERIODIO IN SHOCK ELETTRICO RESCHO NECCANCO  WITHOUT ORIGINATION AND SHOCK ELETTRICO RESCHO NECCANCO  WITHOUT ORIGINATION AND SHOCK ELETTRICO  DANGER IS  DANGER OF ELECTRIC SHOCK  DANGER OF ELECTRIC SHOCK  DANGER OF ELECTRIC SHOCK  DANGER OF ELECTRIC SHOCK  PERIODIO IN SHOCK ELETTRIC SHOCK  DANGER OF ELECTRIC SHOCK  PARTICIPATION AND SHOCK ELETTRIC SHOCK  ATTENION AND SHOCK ELETTRIC SHOCK  ATTENION AND SHOCK ELETTRIC SHOCK  PELIGRO IN SHOCK ELETTRIC SHOCK  ATTENION AND SHOCK ELETTRIC SHOCK  AND SHOCK ELETTRIC SHOCK  THE AND SHOCK ELETTRIC SHOCK  AND SHOCK ELETTRIC SHOCK  PELIGRO IN SHOCK ELETRIC SHOCK  PELIGRO IN SHOCK ELETR
16) Final inspection certificate.	WHEN ORDERING REPLACEMENT PARTS GIVE THE FOLLOWING INFORMATION  MODEL  SERIAL NO.  FINAL INSPECTION CHECK INSULATION TESTED HIPOT. TESTED  COOLING UNIT TESTED AND TESTED  VEND MECHANISM TESTED LIGHTS WORKING  SAFETY CUT-OUT ALL DOORS CHECKED FOR PROPER CLOSING  MACHINE CLEAN FINAL ACCEPTANCE



#### **8 TROUBLESHOOTING**

The following table lists the problems that may occur on our vending machines. We have listed the possible causes together with the recommended solutions to eliminate the problems.



CAUTION: IN CASE OF FAILURE AND/OR POOR OPERATION ONLY CONTACT THE SKILLED PERSONNEL AT OUR SERVICE CENTRES

## MAY WE REMIND YOU THAT OUR AFTER SALES SERVICE CENTRE IS AVAILABLE FOR ANY TECHNICAL INFORMATION YOU MAY NEED.

PROBLEM	POSSIBLE CAUSES	RECOMMENDED SOLUTIONS
	The vending machine is not powered.	Check the electrical plug.
	The coin box is not powered.	Check that the connection wiring is not faulty and that the fuse has not blown.
All coins returned.	The coin box is out of use or the money return handle does not close.	Check the coin box or replace the levers.
	Dirty money channel.	Clean the coin box with an approved detergent. Dry completely.
	Machine has sold out.	Either all the columns are empty or the full columns have signalled a product blockage to the board. Check that the full columns work properly with the manual test after which reset the errors (ref. Programming Manual).
	Prices are set too high.	Set the prices (ref. Programming Manual).
Coins accepted no product delivered.	Communication error coin box – board.	Check the connection wire between the coin box and the board. If necessary, try replacing the coin box or board.
	The motors are jammed.	Make sure the motor is powered by 24V when the selection is made (always cancel the errors on the board).
The delivery motor runs until two or three products are sold, after which the column signals sold-out.	The motor has a dirty micro switch.	Clean or replace it.
The sales made are not counted.	The door switch does not activate when the door is closed.	Adjust the door square and try a sale with the door closed.
The display shows the sales counter.	The "door closed" sensor is not installed correctly.	Adjust the position of the "door closed" sensor
The column signals sold-out even when it is full.	The products are over the sold out sensor.	Check that the column arrangement is correct. Check if the sold -out micro switch works.



PROBLEM	POSSIBLE CAUSES	RECOMMENDED SOLUTIONS	
The cooling system	The vending machine is not powered.	Check the power source. Check the power cable connections and the fuses.	
does not work.	Communication failure between the power board and the vending machine.	Check the communication cable is intact.	
The compressor does not work, the	The overload protection and relay do not work.	Check the overload protection or the compressor relay.	
condenser fan works, the compressor is cold.	The relay board is faulty.	Check that the compressor windings have the right electrical resistance. Check that the guide relay has control wiring.	
	The condenser fan does not work.	Check the circuit. Replace the motor. Check if the fan is blocked. Check the guide relay board.	
	The condenser is dirty.	Check if the condenser fins are dirty or obstructed.	
The compressor works, but the	The evaporator fan does not work.	Check the circuit. Replace the motor and check that the fan is not blocked. Check the guide relay board.	
temperature is not ideal.	No gas in system.	Check for any leaks and only reload with the quantity and type of gas recommended by the manufacturer.	
	The temperature setting is not exact.	Set the desired temperature (ref. Programming Manual).	
	EMS programmed badly.	Check if the energy saving program is correct and change if necessary (ref. Programming Manual).	
	Faulty relay board.	Check the relay board and wiring.	
The compressor works continuously.	Incorrect temperature setting.	Check the setting.	
	Gas leak.	Reload the cooling system after repairing the leak.	
Evaporator covered in ice.	Evaporator fan does not work.	Check the evaporator fan (see previous instructions).	
	The cooling compartment is badly sealed.	Change the sealing and/or adjust the internal door closure. Check that the product door is not blocked.	



ONLY TECHNICIANS FROM SANDENVENDO EUROPE OR AUTHORISED PERSONNEL MAY CARRY OUT OPERATIONS THAT REQUIRE THE MACHINE'S LOWER PROTECTION TO BE OPENED, BECAUSE OF POSSIBLE RISK OF ELECTRIC SHOCKS AND MOVING MECHANICAL PARTS.



#### 9 STORAGE AND DISPOSAL

#### 9.1 Storage

Should the vending machine not be used immediately or is stowed for long periods, check that it is correctly packed and positioned vertically.

Meaning it should be stored in a closed, but well ventilated room and which does not have particular characteristics hazardous to the machine's components, in particular the electronic ones.

Protect unpainted parts against corrosion with greases or special sprays, if necessary stow them with dehydrating salts.

In any case, after lengthy periods of inactivity, the machine requires controls and special checks that cannot be described in this context, ask the manufacturer for instructions.

#### 9.2 Disposal

#### Information about protecting the environment



Dispose of the packing in conformity with the recycling procedures. In this way, you contribute towards reducing the need for virgin wood, using material that would otherwise accumulate at landfills.



Recycling the vending machine. Do not dispose the vending machine with other domestic waste. This vending machine contains electrical and electronic material, which, as indicated by Directive ROHS 2002/95/CE, and Directive WEEE 2002/96/CE, if treated correctly, can be salvaged and recycled at the end of its working life. Recycling this product contributes towards reducing the need for new materials and reducing the accumulation of waste.



<u>CAUTION:</u> THE MANUFACTURER IS NOT RESPONSIBLE FOR DAMAGES TO THE ENVIRONMENT CAUSED BY ILLEGAL WASTE.

<u>To obtain updated information on treatment and recycling WEEE centers, please visit our website:</u>

www.sandenvendo.com



#### 9.3 Person in charge of disposal

Directive **WEEE** 2002/96/CE enforces the obligation **NOT** to dispose **WEEE** (Waste Electrical and Electronic Equipment) as household waste and to select this waste for separate collection.

By law, the person in charge of disposal must, upon receiving an appliance showing this

symbol , before disposing of it select the **WEEE** waste and make it available for collection.

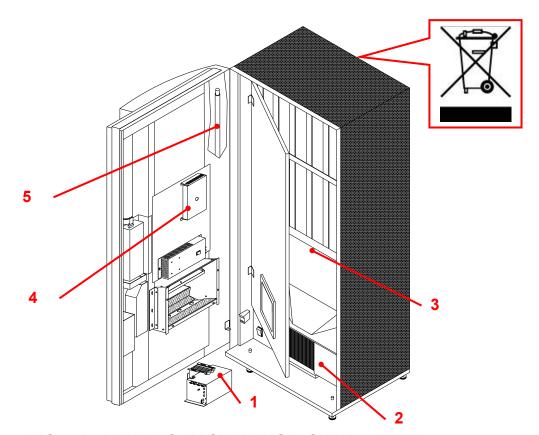


FIG. 9.1 - VENDING MACHINE MOD. SVE 100-189 217 254

- 1 Transformer box
- **2** Cooling system
- **3** Vending motors
- 4 Programming board
- 5 Neon lamps

#### 9.4 Sanctions

The sanctions in case of the illegal DISPOSAL of WEEE waste are indicated in the national decrees related to the Directive ROHS 2002/95/CE, Directive WEEE 2002/96/CE.



# Declaration of Conformity

Dichiarazione di Conformità



### SandenVendo Europe S.p.A.

Regione Cavallino,2 15030 CONIOLO (AL) ITALY

# dichiara sotto la propria responsabilità che la seguente macchina: declares under its responsibility that the following vending machine:

Distributore automatico Modello	SVE100 - SVE189 - SVE217 - SVE254
Vending machine Model	SVE100 - SVE189 - SVE217 - SVE254

#### E' conforme alle seguenti Direttive: Is in conformity with the following Directives:

- Direttiva 2006/42/CE (Direttiva Macchine)
   Directive 2006/42/EC (Machinery)
- Direttiva 2006/95/CE (Bassa Tensione) Directive 2006/95/EC (Electrical Equipment)
- Direttiva 2004/108/CE (Direttiva Compatibilità Elettromagnetica) Directive 2004/108/EC (Electromagnetic Compatibility)

#### E' conforme alle disposizioni delle seguenti norme: Is in conformity with the following standards and normative documents:

- UNI EN 12100 Sicurezza del macchinario – Principi generali di progettazione – Valutazione del rischio e riduzione del rischio

UNI EN 12100 Safety of machinery – General principles for design – Risk assessment and risk reduction

- UNI EN 60204 (Equipaggiamento elettrico delle macchine) EN 60204 (Electrical Equipment of Machines)

Il fabbricante vieta un utilizzo della macchina o di una sua parte in maniera non conforme a quanto indicato sul Manuale d'Uso e Manutenzione fornito a corredo.

The manufacturer forbids the use of the machine/equipment described in this declaration in any different way from the one indicated into the Use and maintenance Manual attached to the machine.

La persona autorizzata a costituire il fascicolo tecnico è il Sig. Carlevaro The person empowered to draw up the Technical Construction File is Mr. Carlevaro

SandenVendo Europe S.p.A.

Director

Coniolo, 18/01/2013

(Luogo e data di emissione) (Place and Date of release)

Stefano Carlevaro

Revision	Data	Change	Page
0			
1			
2	15/10/2013	Update point 1 GENERAL WARNINGS	3~9
		Added point 3.5 Stability	17
		Update table of point 7.6 General cleaning operation	32
		Update page of Declaration of Conformity	40
3	07/03/2014	Update layout	