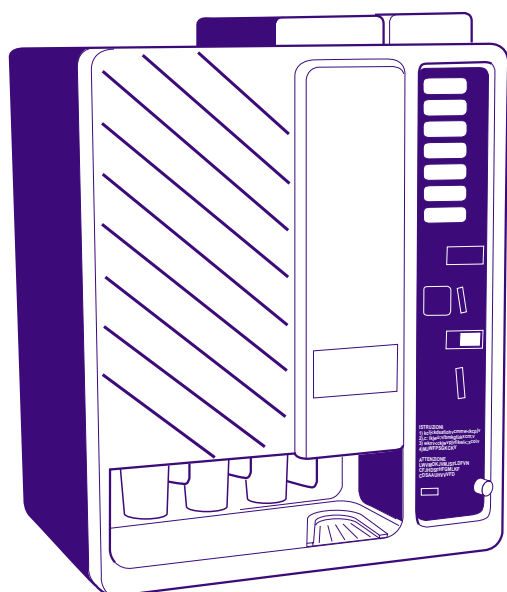




**Distributore automatico di bevande**  
**Vending machine for hot beverages**  
**Distributeur automatique de boissons**  
**Heissgetränkeautomat**  
**Distribuidor automatico de bebidas calientes**

**mod. SAECO D.A. 7P**



**INSTRUCTION FOR INSTALLATION AND USE**

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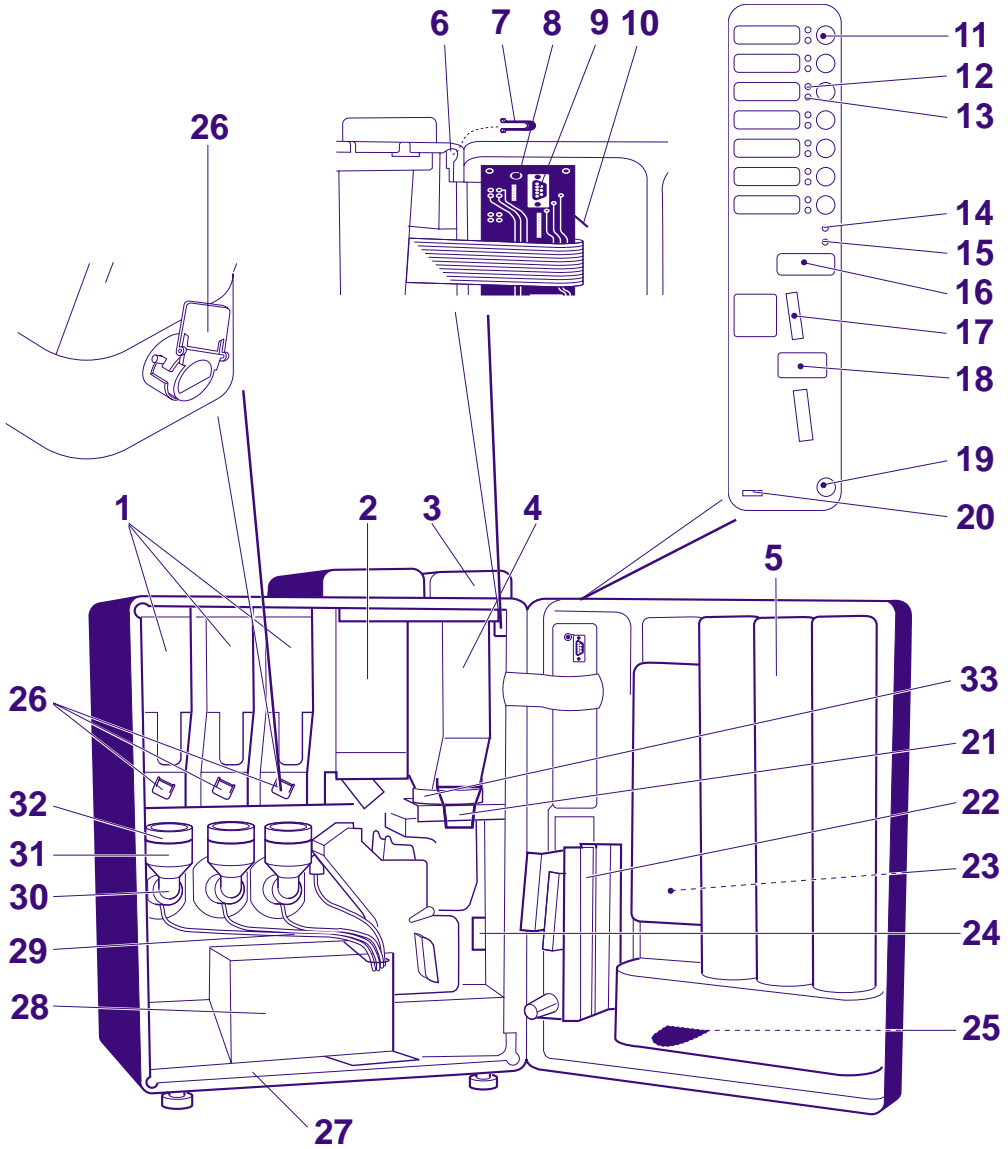
1 - General information .....	5	7 - Supply .....	8
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## Legend

English

1	Soluble product bins	12	Green LEDs	23	Sugar dispenser
2	Water tank	13	Red LEDs	24	Automatic rinsing jumper
3	Coffee hopper cover	14	Green LED "Ready for use"	25	Drain cover/Dispensing point
4	Coffee bean hopper	15	Red LED "Water empty"	26	Mobile covers
5	Cup dispenser tubes	16	Coin display	27	Drip tray
6	Sensor switch	17	Coin slot	28	Dump box
7	"Orange key"	18	Coin return button	29	Dispensing tubes
8	Reset switch	19	Stirrer dispenser button	30	Mixing chamber
9	Connection for 7P programmer	20	Stirrer dispenser slot	31	Whipper funnel
10	Rinse switch	21	Shutoff slide	32	Whipper cap
11	Selection buttons	22	Stirrer magazine cover	33	Grinder adjustment ring

# VENDING MACHINE FOR HOT BEVERAGES

## D.A. 7P

### 1 - GENERAL INFORMATION

#### 1.1 Manual purpose

- Purpose of this manual is informing user of all functions of the vending machine, simplifying its use and achieving the highest performances.

### 2 - TECHNICAL FEATURES

#### 2.1 Machine description

- The DA 7P is an automatic dispenser which rapidly serves a freshly ground cup of espresso and hot beverages made from soluble products. In all the user has a selection of 7 different beverages.
- Safety index:  
The machine has been tested and approved according to the European safety regulations.

#### 2.2 Technical data

- Model name: D.A. 7P - D.A. 7P RI (directly connected to the cold water line)
- Dimensions (L x H x W): ..... 510 x 675 x 400 mm.
- Weight: ..... 39 Kg.
- Water tank (dismountable, transparent) capacity: ..... 5.5 litres
- Coffee hopper (dismountable, transparent) capacity: ..... 1.6 Kg.
- Soluble product bins (N°3, dismountable, transparent) capacity: ..... 0.8 - 2 Kg.
- Power cord length: ..... 50 cm.
- Warm-up time: ..... approx 90 sec.
- Current: see data plate on the machine rear side
- Power : ..... 1250 W
- Water connection: ..... 3/4" Gas fitting
- Water line pressure (only for machines with water connection feature): ..... 1.5-8 bar

### 3 - SAFETY PRECAUTIONS AND OPERATING PROCEDURE

- **For the user's safety, always take following precautions:**
- Carefully read all the instructions of this manual and keep it within reach for reference.
- Unplug the machine before performing any operation on the electrical wires.
- Do not try to open or force the protective plates or panels, as no parts on the inside of the machine are to be tampered with by the user. In case of failure, call your authorized dealer for technical assistance.
- Do not use the machine in water, nor in very humid or dusty locations. Use the machine at 10°C-40°C temperature.
- Do not pour water over the machine, but inside the special tanks only.

## 4 - CONTROLS

- **Main switch:** placed on the machine rear side, below on the right.
  - **Selection panel:** consisting of 7 selection buttons (11) which correspond to the same number of beverages marked as A-B-C-D-E-F-G.
  - **Display (16):** displays the inserted coin value.
  - **Green LEDs (12) next to the selection buttons:** they will illuminate when beverages are available (once the user has inserted coins for a corresponding or higher amount than the one established).
- N.B.** If the unit has been programmed to provide selections at no charge the green LEDs are always illuminated.
- **Red LEDs (13) next to the selection buttons:** They will illuminate when the selected beverage is out.
  - **Green LED (14) "READY FOR USE":** the machine is ready for normal operation.
  - **Red LED (15) "WATER EMPTY":** indicates unit is out of water.
  - **Coin return button (18):** Press to return the coins jammed inside the coin box.
  - **Stirrer dispenser button (19):** Press button to dispense from the stirrer dispenser (20).

## 5 - INSTALLATION

### 5.1 Preliminary operations

- Check that the machine is inside its original packing, closed with traps and that it has not been tampered during transport.
- Remove the machine from the packing. We recommend to retain the packing material for future transfers or transports.
- Set the machine on an adequate sized and perfectly horizontal top, and make sure it can tolerate either the machine and the component weight.
- **Attention:** strong magnetic fields or electric machines generating strong noises and located next to the equipment, could cause troubles to the machine electronic control.

### 5.2 Power connection

- Connect the machine to an adequate power supply (consult the data plate on the machine rear side).
- Ensure that the electric installation, where the machine has to be installed, is made according to the current safety regulations.

### 5.3 Water connection (only for machines directly connected to the cold water line )

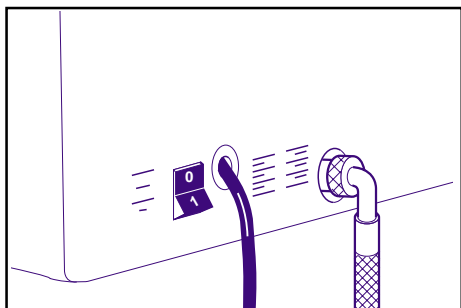


Fig. A

- Connect the machine to a drinking water system, where the pressure is between 1.5 and 8 bars. For this operation, use an adequate tube and connect it to the 3/4" Gas fitting, protruding through the machine rear panel (Fig.A).

## 5.4 Set up

- Fill the water tank (2) (except for those machines directly connected to the waterline), the coffee bean hopper (4) and the soluble product bin (1), paying attention not to fill the latter over 2/3 of their max.



Fig. B

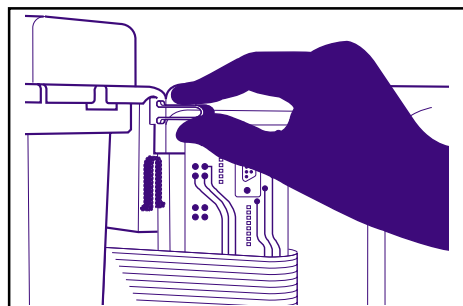


Fig. C

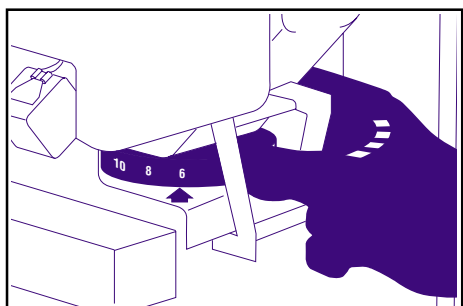


Fig. D

- capacity and to set them in the right position (Pos.1 Tea or other drinks, Pos.2 Chocolate, Pos.3 Milk) (Fig.B).
- Turn the main switch located on the machine rear side, to position 1 and then fill the water system, proceeding as follows:
- Open the front door panel and override the sensor switch (6) by inserting the "orange key " (7) (fig.C).
- **Caution:** This operation, which is necessary for the machine installation, overrides the safety system which powers off the unit when the front door panel is opened. **Therefore, it is to be carried out by trained personnel only, aware of the risk run when working with equipments under voltage.**
- Hold down the rinse switch (10) until water readily flows from one of the dispensing tubes (29).
- Calibration of coffee grinder  
Position the coffee grinding adjustment to one of the following recommended settings, turning the grinder adjustment ring (33) (Fig.D):  
Italy : 4-7  
Spain : 5-8  
France - Switzerland : 5-8  
Germany - Austria : 6-9  
USA - Canada: 6-14
- Insert the necessary coins, select the desired product and check the product quality. If coffee flows too slow, adjust the grinder to a coarser setting. On the contrary, if coffee flows too fast, adjust the grinder to a finer setting.
- **Attention:** Brew one or two coffees between adjustments to purge coffee with the old grind setting from the grinder
- Make sure that the soluble product dispensers (26) are open, take away the "orange key"(7) and close the door.
- Wait until the green LED "Ready for use" is illuminated (if all red LEDs next to the selection buttons are illuminated, the machine has not reached the right temperature).
- Insert the correct change and check proper functioning of the machine by dispensing some hot beverages.

**N.B.:** In order to change the beverage features (concentration, coffee volume and selection price) use the 7P Programmer.

## 6 - OPERATION

### 6.1 Beverage Dispensing

- Select a beverage among those available and check the corresponding amount.
- Insert coins into the slot (17) until the required amount is displayed on the coin display (16). **N.B.** If you insert a higher amount, the machine will **neither return change nor retain the credit.**
- Extract a cup from the holder and place it at the dispensing point (25).
- Press the button corresponding to the desired beverage.
- In the sugar dispenser (23) you will find the sugar packets, while the stirrers are available by pressing the button (19).
- Remove the cup from the dispensing point. The machine is now ready for another selection

## 7 - SUPPLY

### 7.1 Machine supply

- Periodically supply the machine with: soluble products, coffee, water, stirrers and sugar packets, according to the number of products dispensed by the machine
- Soluble product bins:
- Lift out the bins towards front of unit
- Pour the soluble product without exceeding 2/3 of their max. capacity.
- Close the soluble product dispenser and reinsert the bins paying attention to the given positions (Fig.B).
- Water tank:
- Remove the water tank (2) cover and lift the tank out the unit.

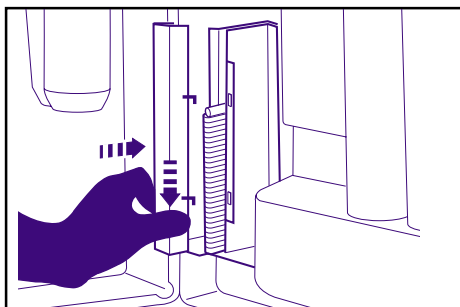


Fig. E

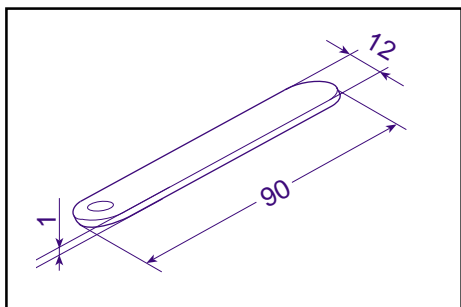


Fig. F

- Fill with fresh water, reinsert in the unit with its cover .
- **Attention:** For machines fitted with floor cabinets with a 20 liter tank, it is obviously not necessary to fill the upper tank. In this case it would be better to remove it together with the valve, in order to avoid useless operations. For the floor cabinet installation and connection see par.11 " M.B. 7P cabinet - Installation and Use"
- Coffee hopper
- Remove the cover (3) and fill the box with coffee beans.
- Stirrer dispenser
- Remove the stirrer magazine cover (22) and the metal weighing bar.
- Insert the stirrers perfectly aligned, then replace the weighing bar and the stirrer magazine cover (Fig.E).
- Check if it works properly by extracting one stirrer at least.
- **Attention:** The stirrer dispenser is preset for working with stirrers as shown in (Fig.F). The use of slightly different products could create difficulty.
- Cup dispenser
- Insert cups into the top of the cup dispenser tubes (5)



- **Attention:** The cup tubes hold only cups with a max. diameter of 70 mm. and a max. length of 90 mm.
- Sugar dispenser
- Put the packets into the special dispenser, located behind the front door panel.
- **Attention:** For hygienic reasons, we recommend to use sugar packets only (no sugar lumps).

## 7.2 Counter reset

- The machine is fitted with different electronic counters. Once all necessary data have been programmed using the programmer, the counters allow to stop the dispensing of hot beverages before the respective ingredients run out.(i.e.: coffee, powders, water)
- It is therefore recommended to reset the counters by the 7P Programmer, once the machine has been completely supplied - see "Instruction manual", Par.4.2.

## 7.3 Selection panel indicators and machine status

The machine is totally or partially disabled, in case of shortage of some ingredients or under anomalous conditions. The LEDs on the selection panel indicate the status of the D.A. 7P:

- **"Water out" - Red LED on:** water is empty and all selection buttons are disabled. Refill the tank and keeping the reset switch (8) pushed, press the rinse switch (10) until water readily flows from the dispenser lines. Now the LED is off and the unit is ready to work again
- **A-B-C-D hot beverages - Red LED on:** Bean hopper is empty and the corresponding selection buttons are disabled. Refill the coffee beans press one of the corresponding selection button A-B-C-D-while pressing the reset switch (8) Now the LEDs are off and the unit is ready to work again.
- **E or F or G hot beverages - Red LED on:** The soluble product corresponding to the red led is out. Refill the soluble product and press the selection button corresponding to the red LED while pressing the reset switch (8) Now the LED is off and the unit is ready to work again.

## 8 - CLEANING AND MAINTENANCE

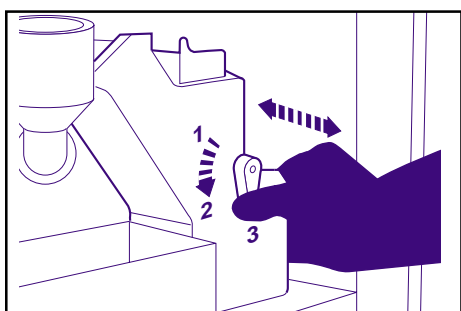


Fig. G

- In order to get always the best quality of the dispensed beverage and for ensuring a proper function of the machine the following guidelines for cleaning and maintenance should be strictly followed:
- Coffee unit:
  - Remove the unit keeping the lever in position 3 (Fig.G), rinse it in warm water, dry it and reinstall it keeping the lever in position 3.
  - **Attention:** during the unit installation, pay attention that the reference arrows coincide. If necessary, align them by means of the special key. (Fig.H)
- Mixers and dispensing tubes:
  - Remove the dispensing tubes (29) paying attention to the gaskets at their ends. Remove the whipper cap (32) found on the air manifold and separate the whipper funnel (31) from the underlying part, removing the nozzle with silicone tube as well (Fig.L). Now, rotate the mixing chamber (30)

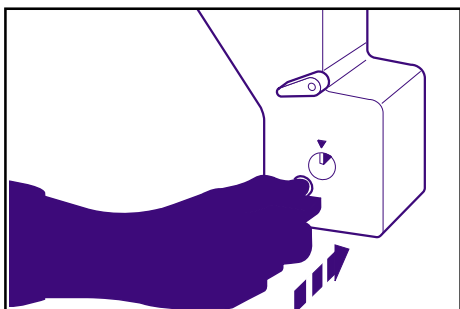


Fig. H

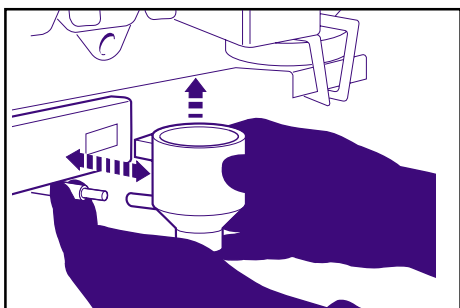


Fig. L

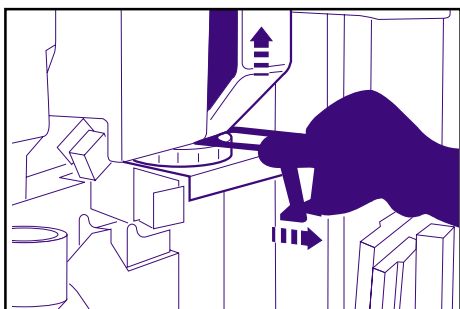


Fig. M

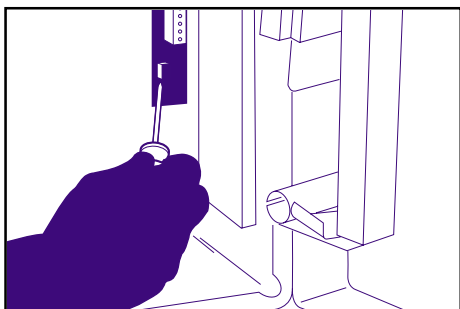


Fig. N

clockwise and remove it. Wipe the mixing blade with sponge and lukewarm water, without pressing too hard as not to compromise the positioning of the seal gasket.

- Wash with warm water all parts and reinstall them, repeating backwards the above-mentioned operations. Pay special attention to re-install correctly the nozzle with silicone tube.

#### • Soluble product bins:

- The soluble product bins do not require special maintenance operations, but they need to be cleaned once per month at least. When refilling the soluble product, make sure the bins are perfectly dry. They can be separated from the outlet and rear bushings, by rotating the latter anticlockwise and by removing the rear pin and the spring. Clean them with a dry cloth or by a blow of compressed air, then reinstall them by repeating backwards all operations checking that the seal ring of the rear pin is not worn.

#### • Coffee hopper:

- The coffee hopper is to be periodically cleaned in order to remove the oil left by the coffee beans. Pull outwards the shutoff slide (21), thus preventing coffee to come out (Fig.M). Remove the hopper from its seat, wash it with lukewarm water, carefully dry it and then reinstall it. Refill with coffee beans and move the plate inwards.

#### • Water tank:

- The water tank must be emptied and cleaned every time it needs to be refilled

#### • Dump box and accessories:

- Wash all other machine parts with lukewarm water: dump box (28), drip tray (27), drain cover (25), as well as the internal top and the machine walls. Moreover, check there is no residual coffee powder on the stirrer dispenser.

- **N.B.:** All mentioned parts should be washed with warm water only, without using detergents or solvents which could change their shape or functionality. **The Manufacturer refuses any responsibility in case of malfunction due to a wrong or poor maintenance.**

#### • Automatic rinsing:

- The machine is provided with an automatic rinse feature enabling the unit to automatically rinse the mixers. The period of time between rinses can be programmed (See 7P Programmer "Instruction manual"). The automatic rinse can be activated by closing the jumper (24) on the electronic board (Fig.N).

## 9 - AUXILIARY FUNCTIONS :

- The machine is provided with some special controls which allow following operations:
- **Front panel LED test**
- **Descaling boiler**
- **Calibration of soluble product specific weight**
  
- **Access to the special controls:**
- Switch the machine off, open the front door panel and override the sensor switch (7) by inserting the "orange key" (8). Switch the machine on by the main switch pressing simultaneously the reset button.
- The first 5 green LEDs will illuminate while the signals "Ready for use" and "Water empty" blink alternately
- **Front panel LED test:**
- Once the "Access to the special controls" procedure has been performed, press the first upper selection button and then one by one all buttons next to the green LEDs. At the end of the test, all red LEDs next to the selection buttons will illuminate.
- **Descaling** (for machines with water tank only):
- Fill the water tank with about 1 liter of approved descaling solution following the relevant instructions printed on the packaging.
- Once the "Access to the special controls" procedure has been performed, press the second upper selection button (beverage B) to activate the descaling program.
- The descaling solution (about 400 cc.) is automatically pumped into the boiler and remains here at an ideal temperature of 40°C for about 15 minutes. After this time, the waste solution is discharged and new solution is pumped into the boiler, where it will remain for 15 more minutes. During this period, remove the tank, rinse it well and fill it with fresh water. After 15 more minutes, the system is automatically filled with fresh water and the machine turns automatically to the starting condition.
- Take the "orange key" (7) away and close the door. The machine is now ready to work.
- **Calibration of soluble product specific weight:**
- At the factory the machine is set on the average specific weight of the soluble products found on the market. However for a perfect correspondance between the programmed and the dispensed product weights it's possible to perform a more accurate calibration.
- Once the "Access to the special controls" procedure has been performed, press the 4th upper selection button (D). The green LEDs of the last 3 products corresponding to the relative soluble product bin will illuminate. Set a cup under the soluble product dispenser press the corresponding selection button and calculate the average of the weights obtained after a few cycles. Enter this value into the D.A. 7P using the 7P programmer (See "Instruction manual" Par.3.2).

## 10 - MB7P CABINET - INSTALLATION AND USE

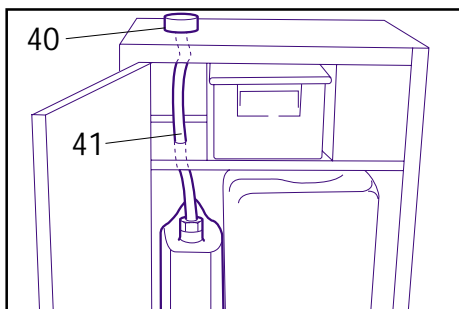


Fig. P

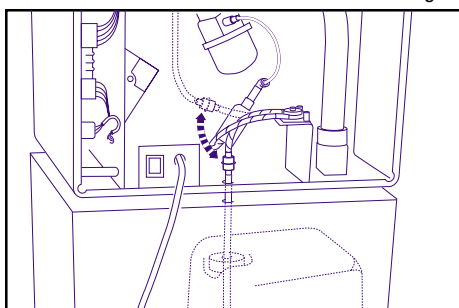


Fig. R

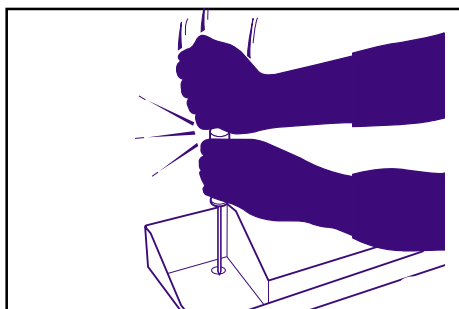


Fig. S

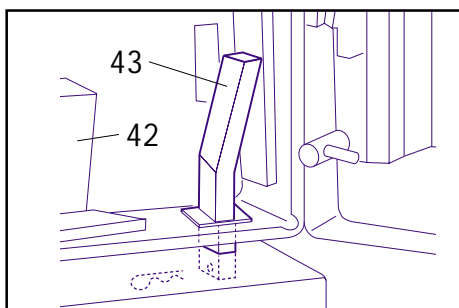
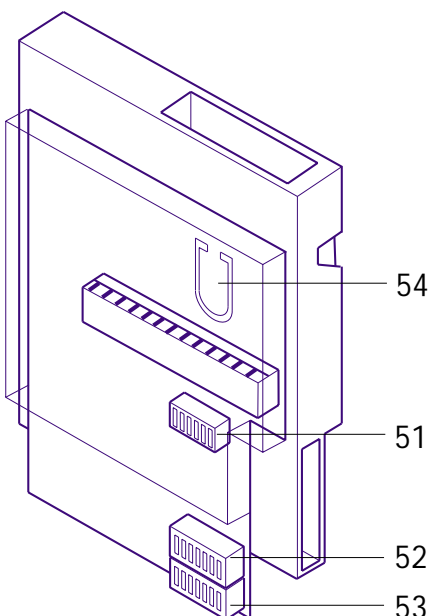
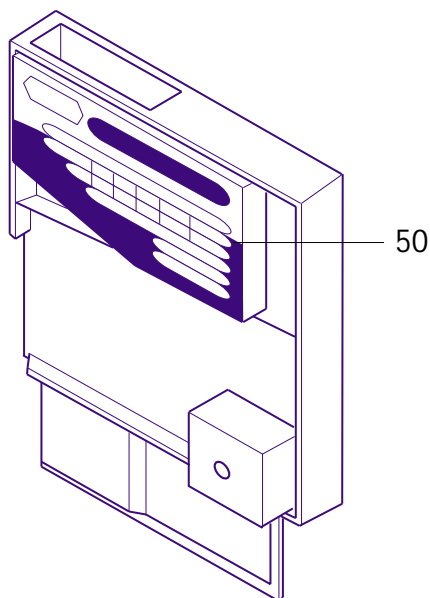


Fig. T

- The M.B.7P cabinet allows a greater autonomy and increases the supply interval.
- Remove the cabinet from its packing as well as all parts contained in the inside of the cabinet.
- Position the drain adapter (40) on the cabinet top and connect it to the drain hose (41)(Fig.P).
- Set the free end into the drain tank.
- Position the machine onto the cabinet and remove the rear cover unscrewing the eight fixing screws.
- Remove the water tank.
- Disconnect the silicone tube which connect the tank valve to the filter.
- Unscrew the screws which fix the valve. Remove the valve in order to avoid possible water leakages by accidentally inserting the water tank.
- Connect the water tank hose found in the inside of the cabinet , to the filter and route it through the machine water supply access hole located in the bottom of the unit. (Fig.R).
- Let the hose pass into the hole of the 20 liter tank cap, once it has been filled with fresh water.
- Remove the punch-out plug from the drip tray (Fig. S), check that the hole aligns with the drain adapter. If this is not the case, move the machine and make them align.
- Insert the dump box adapter (42) into the hole located in the bottom of the unit making sure that the holes coincide (Fig.T).
- Insert the coin box adapter (43) into the proper holes and fix it with screws, washers and nuts (Fig.T).
- Insert the pin into the coin box transversal hole in order to avoid that the machine can be lifted from the cabinet(Fig.T).
- Water filling:
- Open the front door panel and override the front door panel sensor switch by inserting the "orange key" (7) and switch the machine on with the main switch.
- Hold down the rinse switch (8) until water regularly flows out from the dispenser lines. (29).
- Take away the "orange key " (7) and close the door.

## 11 - NRI G13 COIN VALIDATOR PROGRAMMING



- The vending machine is normally equipped with NRI G13 coin validator which can recognize up to 6 different coins or money pieces.
- Values of the programmed coins are given in table (50), positioned next to the coin validator (TK 2007 and TK 2008 point out 24 mm. and 28 mm. coins).
- The electronic control adds up the values of the inserted coins (displaying the total amount) and allows the dispensing of the chosen beverage according to two different prices (respectively price 1 and 2, Low and High price).
- The value of the two prices can be programmed with the Dip-switches (52 and 53) as follows:  
Set the value of the two prices (i.e. 500 and 700) and divide it by the value of the lowest coin, given in the table (i.e. 50). You will get two numerical values:  
 $500:50=10$   
 $700:50=14$   
Such numerical values have to be set on the two Dip-switches (52 and 53):  
Numerical value 10=2+8 Move positions 2 and 8 of Dip-switch (52) upwards  
Numerical value 14=2+4+8 Move positions 2, 4 and 8 of Dip-switch (53) upwards  
Prices 1 and 2 are automatically given to coins (TK 2007 and TK 2008).
- Furthermore it is possible to avoid that the coin validator accepts one or more programmed coins by setting Dip-switch (51), located under the removable cap (54), moving upwards the cursors corresponding to the channels to be locked.

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