



Agroindustry Advanced Technologies S.p.A.

User Manual



Orange Juice Vending Machine

OR 130
OR 70

English

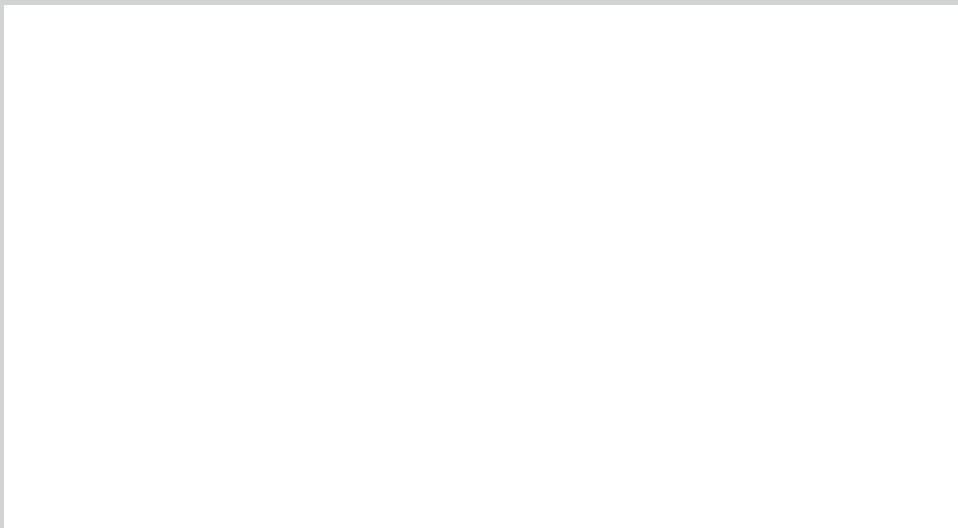
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La macchina è costruita e progettata in maniera tale da consentire una semplice individuazione e soluzione dei guasti

Si invita l'operatore a consultare il presente manuale prima di contattare il rivenditore.

Nel caso in cui i malfunzionamenti o le anomalie riscontrate non risultassero risolvibili rivolgersi a:



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Si dichiara che la macchina di nuova produzione matricola n° è conforme alle disposizioni legislative armonizzate alle direttive: 89/392 CEE - 89/336 CEE - 73/23 CEE e successive modificazioni e integrazioni.

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Index

1	Information and preliminary operations	
1.1	Identification	1-1
1.2	Transport	1-1
1.3	Placing the Machine	1-2
1.4	Electrical connection	1-4
1.5	Technical features	1-5
1.6	Demolition	1-6
2	Get familiar with the machine	
2.1	Internal functioning and components overview	2-1
2.1.1	The squeezing Process	2-4
2.2	Cleaning Systems	2-6
2.3	Payment system	2-7
3	Mechanic components	
3.1	Juicer squeezing unit	3-1
	External structure	3-2
	Knife cover	3-3
	Pushing kit	3-5
	Squeezing Pot	3-5
3.2	Orange storage	3-11
3.3	Fruit dispenser	3-14
3.4	Spout Unit	3-15
3.5	Cup dispenser	3-16
3.6	Hydraulic components	3-17
3.7	Cooler unit	3-20
4	Electrical and electronic devices	
4.1	Overview of the electric board	4-1
4.2	Juice level sensor	4-7
4.3	Orange counter sensor	4-10
4.4	Orange storage sensors	4-12
5	Programming, interface and payment systems	
5.1	Operator menu	5-1
5.1.1	Sales settings	5-2
5.1.2	Machine Test	5-4
5.1.3	Sales status	5-6
5.2	Control via PC and remote control	5-6
5.2.1	Communication via PC and updating download	5-6

5.2.1.1	<i>F1 Diagnostic Panel</i>	5-8
5.2.1.2	<i>F2 Sale Parameters Panel</i>	5-13
5.2.1.3	<i>F3 Download Updated Panel</i>	5-13
5.2.2	<i>Connections, configuration and GSM utilization</i>	5-14
5.3	<i>Payment systems</i>	5-16
6	<i>Maintenance and troubleshooting</i>	
6.1	<i>First use, loading and cleaning</i>	6-1
6.2	<i>Identification and breakdowns resolving</i>	6-3

1. Information and preliminary operations

This section shows the general features of the AAT OR70 squeezed orange juice vending machine and the preliminary information necessary to identify, transport, place and connect the machine correctly. We recommend that you carefully observe the following in order to avoid damages or malfunction of the machine.

The last paragraph outlines the procedure to be followed during demolition.

1.1 Identification

The machine can be identified from the nameplate located on the back of the machine (Figure 1.1.1). The serial and the model numbers are engraved on the nameplate. It is essential to know all the product data to allow the immediate deployment of technical information and spare parts.

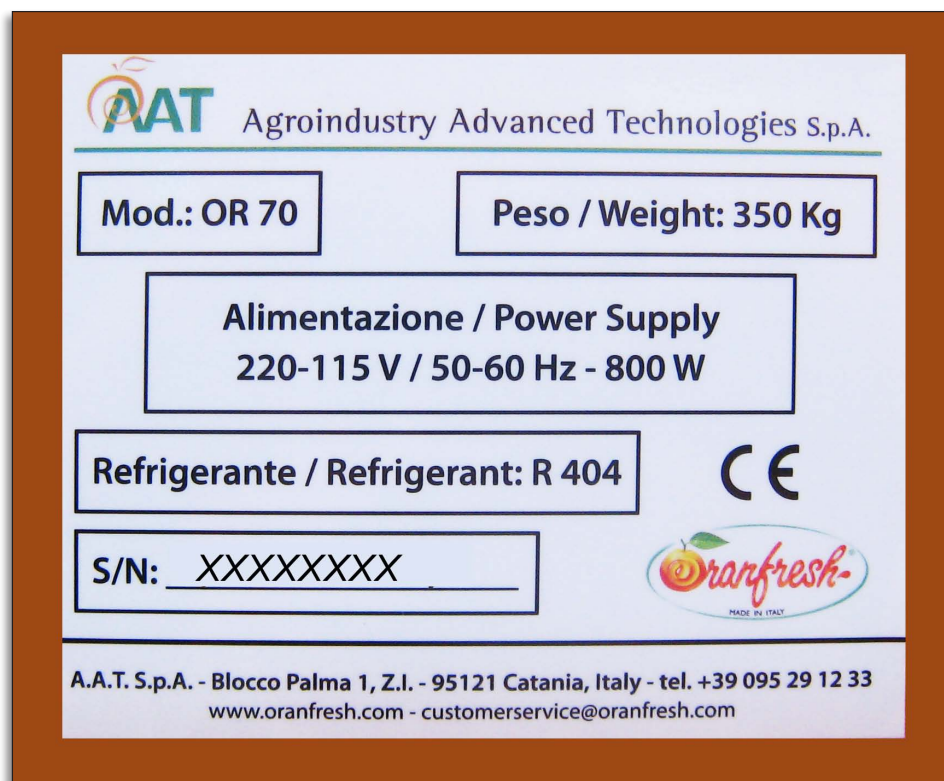


Figure 1.1.1 - Identification plate

1.2 Transport

During the transport operations, all the loading and unloading manoeuvres must be performed with particular care. The machine, complete package, can be lifted by normal means of transport such as forklifts and pallet trucks (Figure 1.2.1). You must observe the following steps:

- Be careful never to tilt the machine during handling operations
- Do not tip the distributor
- Do not lift the distributor when plugged

- Do not use lifting slings or ropes
- Do not shake the machine
- Unload the machine carefully, avoiding violent impact



Figure 1.2.1 - Correct lifting procedure

Store in a dry place with temperature between 0 °C and 40 °C and without additional loads on the top.

1.3 Placing the Machine

Before placing the machine proceed with the removal of the packaging. The OR70 is sent on an plastic attached pallet fixed with stripes, the packaging is completed with bubble wrap and cardboard. Make sure of the presence of the bag containing the four rubber feet and the two bolts spacers of 8 mm (Figure 1.3.1). Remove the attached pallet and insert the rubber feet into the threaded holes in the bottom (Figure 1.3.2 - A). Insert the spacers into the holes on the top of the back of the machine (Figure 1.3.3 - B). Be careful not to tighten the spacers more than 1.5 cm.



The bolts spacers provide the minimum space between the back of the machine and the wall. A missing or incorrect installation may cause overheating of the internal parts compromising its functioning.

The distributor cannot be installed outside but in a dry place with temperatures between 0 °C and 40 °C and maximum humidity of 70%. It should not be placed near sources of intense heat or in the



Figure 1.3.1 - Provided feet and spacers

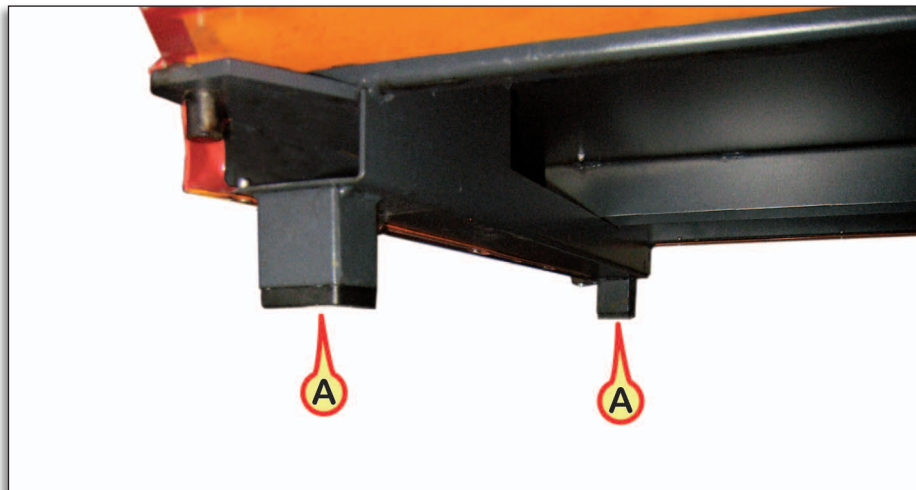


Figure 1.3.2 - Feet supporter

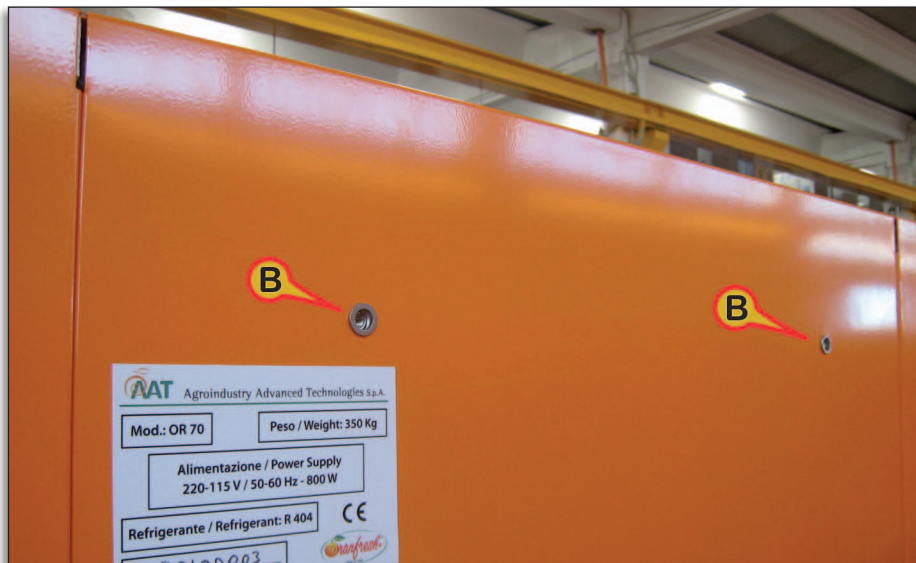


Figure 1.3.3 - Holes spacers

presence of water spray.

Make sure to position the machine in a shaded location and that the window is not directly exposed to sunlight.

Place the distributor at a minimum distance of 5 to 10 cm from the back wall to ensure the rear ventilation and inside ventilation. The correct installation of the spacers always assure the required minimum space. The areas of flow in the inlet and outlet should be kept free (Figure 1.3.4). When installing in closed box, we recommend to make holes at the height of the (handle/ socket) and to provide the box of forced ventilation.

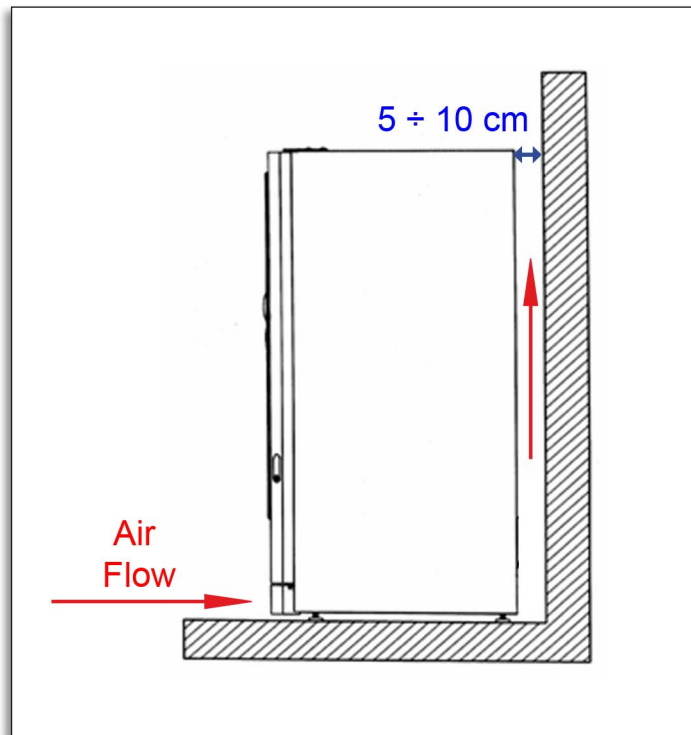


Figure 1.3.4 - Air flow

Do not place the equipment so that it is inclined to the horizontal, setting the feet to overcome any unevenness.

Before positioning the distributor consider the space to open the door and explore the possibility of access to the inside of the machine.

The installation should be performed by qualified personnel and must comply with local regulations. The adequacy of the (connection facilities) and of the compliance with the standards of such a system shall be tested at least once a year.

1.4 Electrical connection

The distributor is delivered equipped with cable and plug connector according to your voltage and plug outlet. To connect the machine to the main network, plug the cable into the specific connector on the back. Make sure that the connection meets the requirements of related standards.



Warning

Ensure the presence of ground connection and its continuity and the presence of required network security.

Check the connections and their integrity periodically. Do not change for any reason the electric circuit inside the machine.



Warning

All operations should be performed by qualified personnel.

All working voltage is always indicated in the appropriate section of the identification plate of the product.

<i>Power cable color</i>	
<i>GREEN-YELLOW</i>	<i>GROUND</i>
<i>BLUE</i>	<i>NEUTRAL</i>
<i>BROWN</i>	<i>PHASE</i>

Table 1.4.1

1.5 Technical features

<i>Technical features OR 70</i>	
<i>Dimension</i>	
<i>Height</i>	<i>190 cm</i>
<i>Width</i>	<i>75 cm</i>
<i>Depth</i>	<i>87 cm</i>
<i>Weight</i>	<i>350 kg</i>
<i>Power voltage</i>	<i>230 V</i>
<i>Frequency</i>	<i>50 Hz</i>
<i>Refrigeration motor</i>	<i>1/4 hp</i>
<i>Defrost system</i>	<i>automatic</i>
<i>Cooler gas</i>	<i>R410A</i>
<i>Insulation</i>	<i>polystyrene</i>
<i>Max orange load</i>	<i>40 kg</i>
<i>Autonomy</i>	<i>70 ÷ 80 cups</i>
<i>Data transmit</i>	<i>Rs232, GSM</i>
<i>Payment systems protocols</i>	<i>MDB, Executive</i>
<i>Glass window</i>	<i>Double gas filled Perspex 27mm</i>
<i>Min temperature</i>	<i>4 °C</i>
<i>Consummation</i>	
<i>Min</i>	<i>200 W</i>
<i>Max</i>	<i>800 W</i>
<i>Language</i>	<i>All main languages available</i>

Table 1.5.1



Warning

The consumption of the machine depends on many factors such as operating temperature, the temperature of the external environment, the location of the machine, the frequency of loading.

English

1.6 Demolition

The distributor has been designed to be completely disassemble at the end of its life cycle (Figure 1.6.1).

All the materials, of which it is composed, are completely recyclable and the parts can be differentiated to be demolished quickly. We suggest that the dismantling be performed by specialized companies.

And it's necessary to follow the different regulations, according to your country, for the safety of environmental safety:

- Ferrous and plastic materials should be delivered to approved warehouses,
- Insulating materials and gases found in the refrigeration unit should be made to reclaimed by specialized firms.

The inner insulation of the machine is easily removable.

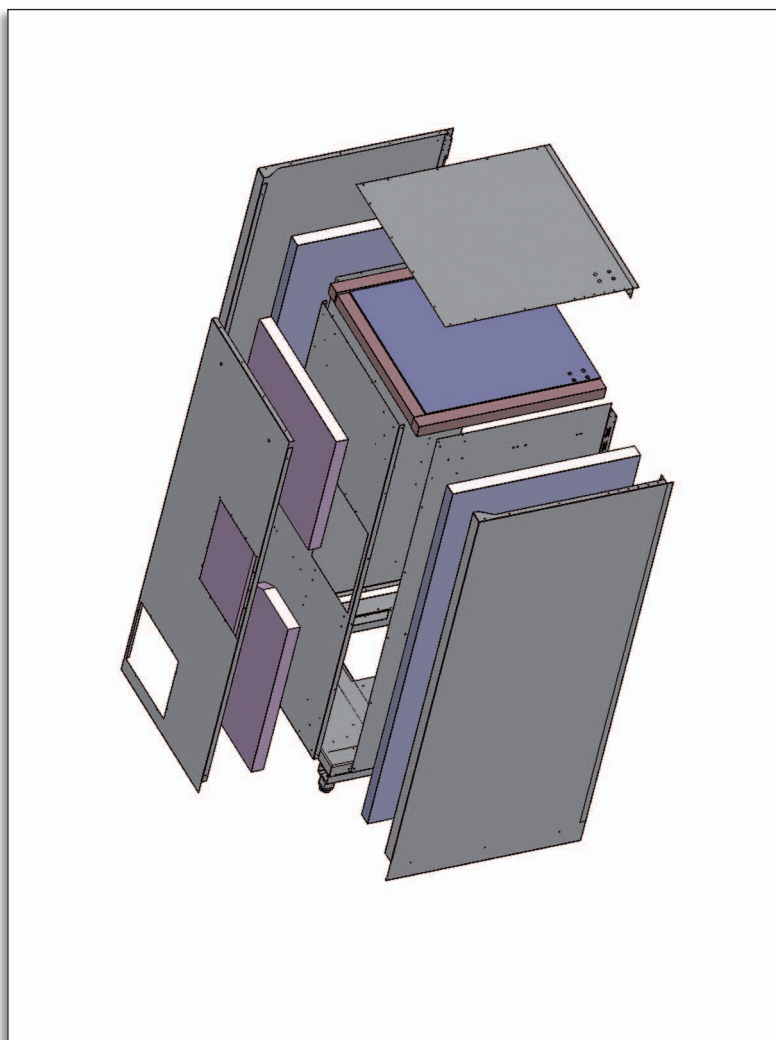


Figure 1.6.1 - Exploded view

2. Get familiarized with the machine

This section presents the various devices of which the machine is made of, to allow the operator to get familiar with the position and the functions of each of them. A brief explanation of the operation of the machine with particular reference to the juicer is also provided. The last sections describe the supported payment systems and the devices for the cleaning systems that come with the machine. For more details you can refer to the next chapters.

2.1 Internal functioning and components overview

The following letters indicate the position of the main devices.



Figure 2.1.1 - Internal overview

English



Figure 2.1.2 - Front view



Figure 2.1.3 - Handle



Figure 2.1.4 - Refrigerator grid



Figure 2.1.5 - Electrical grid

- *A External structure*
- *B Orange storage*
- *C Orange dispenser*
- *D Juicer*
- *E Waste container*
- *F Hydraulic box*
- *G Cooler (unit)*
- *H LED lights*
- *I Internal panel control*
- *L Cup dispenser*
- *M Coin box*
- *N Panel*
- *O Glass window*
- *P External panel control*
- *Q Cup slot*
- *R Door handle*
- *S Vent grid*
- *T Electric rear panel*

The external structure of the machine consists of a main block (figure 2.1.1 - A) and a front door (figure 2.1.1 - N) with a glass window (figure 2.1.2 - O) and closed manually by handle (figure 2.1.3 - R). The window and all the internal sides of the machine are insulated to improve energy efficiency and keep the fruits refrigerated.

Figure 2.1.1 - B shows the top position of the orange storage. The compartment is designed to hold about 200-240 oranges according to the size of fruits for a total of about 40 kg. Internally, there are two conveyors (upper and lower belt) needed to move the fruits to the orange dispenser (figure 2.1.1 - C). The belts are particularly designed to avoid any jamming and to convey the oranges properly. The orange dispenser automatically detects the presence of the fruit through an optical sensor and delivers the fruits to the juicer.

The juicer (figure 2.1.1 - D), squeezes the oranges and conveys the juice to cup through a spout placed on the bottom of the juicer. The spout movement allows the correct flow of the juice to the cups. The spent peels ejected by the juicer are collected in a provided waste container underneath the machine (figure 2.1.1 - E). When the machine is loaded, the waste container must always be empty to prevent the machine to be blocking for excess waste. Use resistant and waterproof plastic bags that fit in the waste container. To avoid that the trash bag accumulates liquid waste, a filter is placed on the waste container. It is very important that the filter be placed on the bottom of the bag to allow a proper suction of excess liquids.

When the green button is pressed, a cup will be released by the cup dispenser (figure 2.1.1 - L). Always refill the cup tube holder to the maximum level.

The hydraulic box (figure 2.1.1 - F) contains all the devices needed for the manual and automatic cleaning and for the suction of the waste water. There is also, a peristaltic pump for the removal of the accumulated residual liquids in the waste container, a water pump for the automatic and manual cleaning of the juicer, the electro valve and the water tanks for the residual liquids. A water gun is also located there for the manual cleaning. Please note that it is very important to not use the water gun directly on any electric parts.

The cooler unit (figure 2.1.1 - G) contains the compressor to keep the inside of the machine at the best temperature to preserve the oranges. The air exchange is made through the grid in the back of the machine (2.1.4 - S). As mentioned in previous chapter, the machine must be placed in a distance

of 5-10 cm from the wall.

Inside the machine, on the left side of the door, there is a panel with the electronic components of the machine and space left to install the eventual payment systems. All major payment systems available on the market are suitable for our machines the banknote reader will be placed on the top and the coin acceptor at the bottom. The main PLC boards are connected with the user control panel (figure 2.1.2 – P), in the power supply and the other PLC are located in the back of the machine (figure 2.1.5-T).

In order to simplify the functioning of the machine, the front panel is equipped with only one control green button to activate the machine to serve the cups of juice, a change giver button to release any spare change, a slot to insert the coins and a blue coloured LCD display.

The internal illumination is made through cold LED of high intensity (figure 2.1.1 – H) to optimize the energy consumption and the reliability.

2.1.1 The squeezing Process

To get a squeezed orange juice of good quality it is necessary that during the squeezing process the juice is not mixed with the essential oils of the peel. Indeed the patented mechanical system of the juicer is based on this fundamental requisite. The flow of the oranges is regulated through the fruit dispenser. The orange is conveyed by the pushers to a blade that cuts it in two equal parts without deforming it (figure 2.1.1.1). The two parts are dragged inside the system of cylinders that separates the juice and the pulp from the peel. The juice is released through the hole set on the front part of

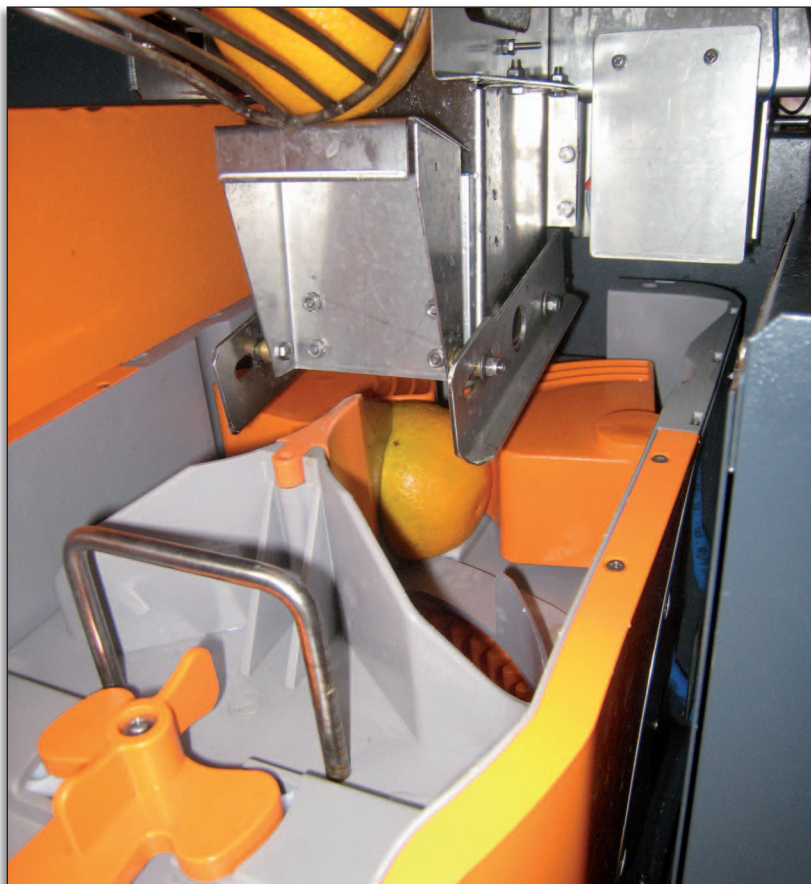


Figura 2.1.1.1 - Cut process



Figura 2.1.1.2 - Faucet

the juicer while the discharges are expelled by the inferior part. At the beginning of the squeezing process the spout softly goes down leading the juice to the glass without squirts (figure 2.1.1.2). Once the squeezing process is completed the spout returns to the initial position in order to avoid that the residual dripping juice dirties the edge of the glass or the hand of the consumer. When the squeezing cycle ends the machine advises the consumer to withdraw the product with a written message on the display and a short acoustic signal (figure 2.1.1.3).

The operator of the machine can establish the price, the quantity and the temperature of the juice. The size of the cups must be compatible with the specifications of the machine, according to the explanations in the chapter 6. The OR70 allows to establish the quantity of juice served by the machine with two main systems: by the number of oranges and by the level of juice. When the first system is selected the quantity of juice is established in relation to the number of squeezed oranges; in the second case the quantity of juice is directly calculated by a sensor that reads the level on the cup. The machine starts a short cleaning cycle after the time you determined from the last serving to discharge any eventual orange left inside the juicer (see Chapter 5).

The temperature of the served juice coincides with the inside temperature of the machine and it should necessarily be maintained below 8 °C. As outpointed in the former chapter, in the phase of installation make sure to position the machine in shaded places and not excessively warm. Should you not follow the above mentioned instruction the refrigerating unit may not be able to maintain the desired temperature. For further information on the payment systems and how to set the price per serving please refer to the paragraph 2.3 and to the chapters 5 and 6.



Figura 2.1.1.3 - Display message

2.2 Cleaning Systems

OR70 is equipped with two stage cleaning system: a manual operation and an automatic operation. The figure 2.2.1 shows the water unit containing the cleaning water tank, the waste water tank; the pumps, the electric valve and the water gun. For detailed information regarding the hydraulic cabinet please refer to chapter 3.



Figura 2.2.1 - Hydraulic cabinet

The automatic cleaning can be set up at pre-determinate times, after a certain amount of cups that have been served, and/or after a pre-determinate time after the last cup was served.

During the cleaning process the squeezing parts in contact with the juice are cleaned with water jets. After each cleaning the peristaltic pump is activated to remove the waste water into a 15L tank. The manual cleaning should be done opening the butterfly cover of the squeezing unit and cleaning the internal parts using the water gun. The total cleaning of the internal parts of the squeezing unit (figure 2.2.2) should be done at least twice a week under tap water or in the dishwasher. It is necessary to empty the contents of the waste container and the waste water tanks every time you reload the machine.



Figura 2.2.2 - squeezing set

2.3 Payment system

OR70 can support three different payment systems from the control panel:

- Free Vend
- MDB
- Executive

When the machine is set up on Free Vend no money is needed to serve the juice.

The payment system can support coin or note acceptor connected through the protocol MDB or EXECUTIVE. The machine is equipped with a cable (figure 2.3.1) to connect both kind of payment systems.



Warning

Never connect contemporarily the MDB and the EXECUTIVE payment system.

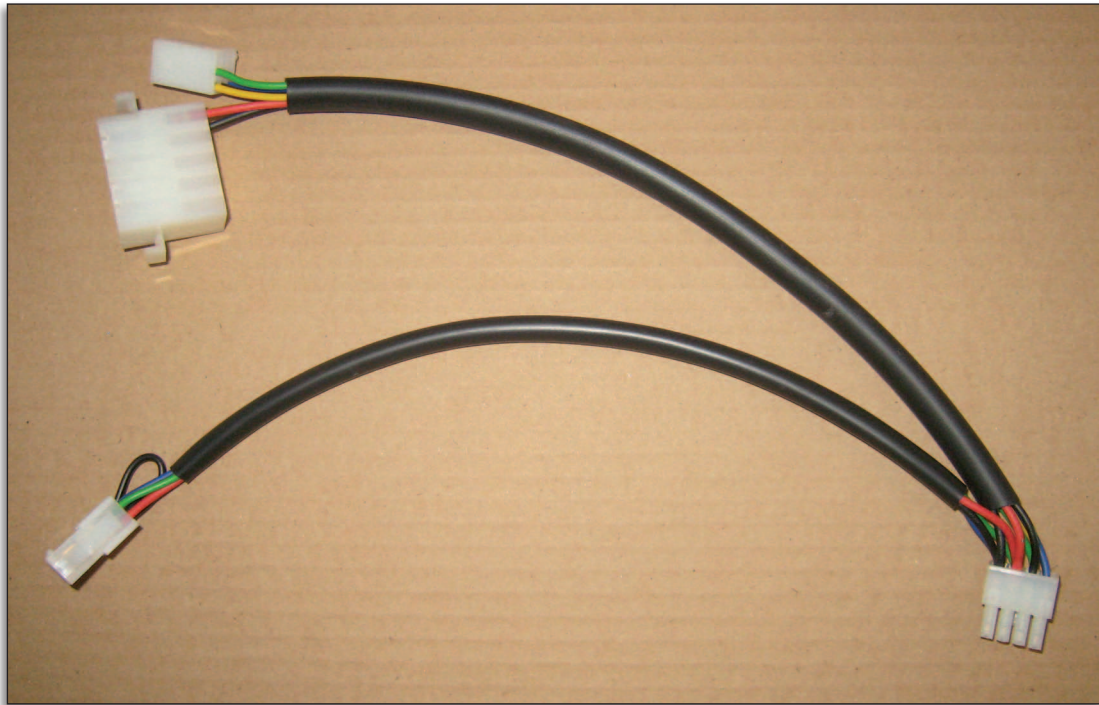


Figura 2.3.1 - MDB/Executive cable



Warning

For further information about the configuration of the coin acceptor Contact your payment system supplier.

During the connection of the payment systems please consider:

- MDB coin and bill acceptors can directly be connected to the master electronic card of the OR70.
- EXECUTIVE coin acceptors can directly be connected to the master electronic card of the OR70.
- EXECUTIVE bill acceptor has to be connected to the coin acceptor and NOT directly to the master electronic card of the OR70.



Figura 2.3.2 - Coin acceptor

English

3. Mechanic components

This section of the manual presents the internal mechanical devices of the machine. Here are provided details on the functioning of each device as well as the instructions for the maintenance and for the eventual substitution in case of malfunction.



Warning

The automatic movements of the mechanical parts are automatically blocked when the front door is open. For more safety, you should however pay careful attention during the internal operations of the machine, because some metallic parts may be dangerous to the operator.

3.1 Juicer squeezing unit

The Oranfresh squeezing unit mechanically separates the juice from the rest of the orange and is consequently the most important device of the machine. To preserve the correct functioning of the juicer it's important to have a good knowledge of the various parts of which it is composed and pay the highest attention during the extraordinary maintenance. In the case of an intensive use of the machine we recommend to provide periodic inspections of the most used parts to avoid any possible breakdowns.

The figure 3.1.1 shows the different parts of the juicer:

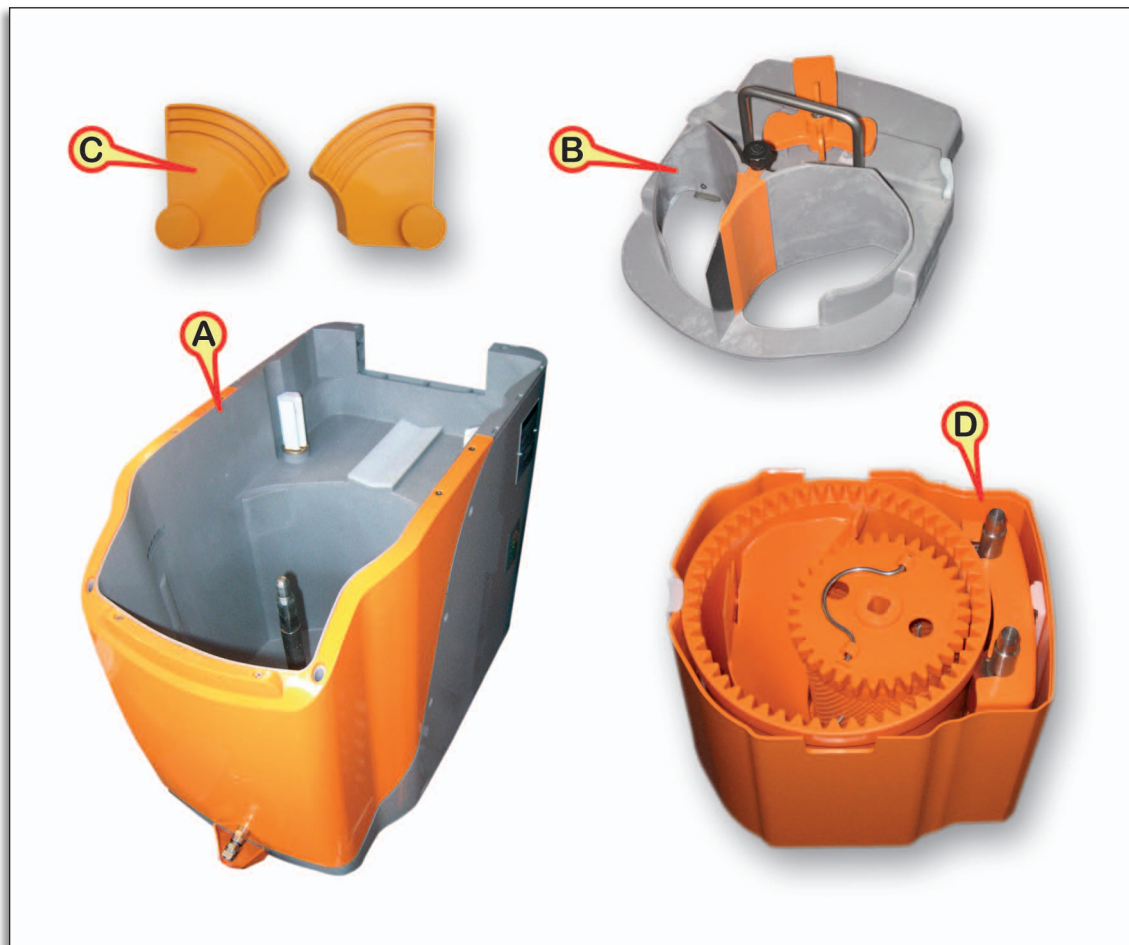


Figure 3.1.1 - Juicer parts

- A • External structure
- B • Knife cover
- C • Pusher kit
- D • Squeezing pot

External structure - The structure holds further devices that are related to the motor (figure 3.1.2) and the sensor of the peel (see Chapter 4). In figure 3.1.3 you can see the different parts of the squeezing kit.



Figure 3.1.2 - Juicer motor

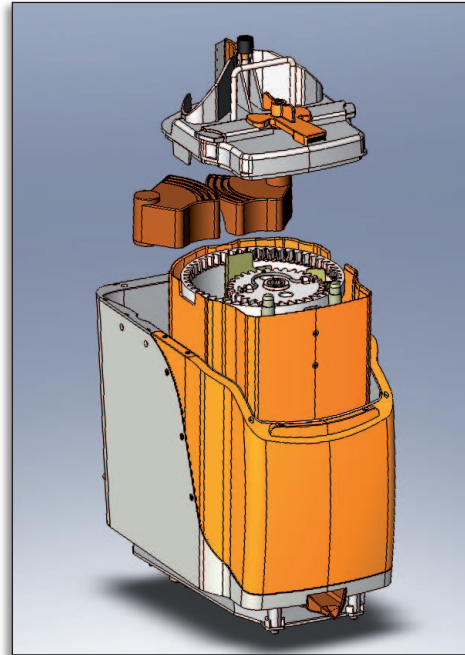


Figure 3.1.3 - Exploded view of the juicer

Thanks to the rails located on the side of the juicer, for the maintenance operations it is possible to extract partially o totally the juicer after having disconnected the closing pin (figure 3.1.4).

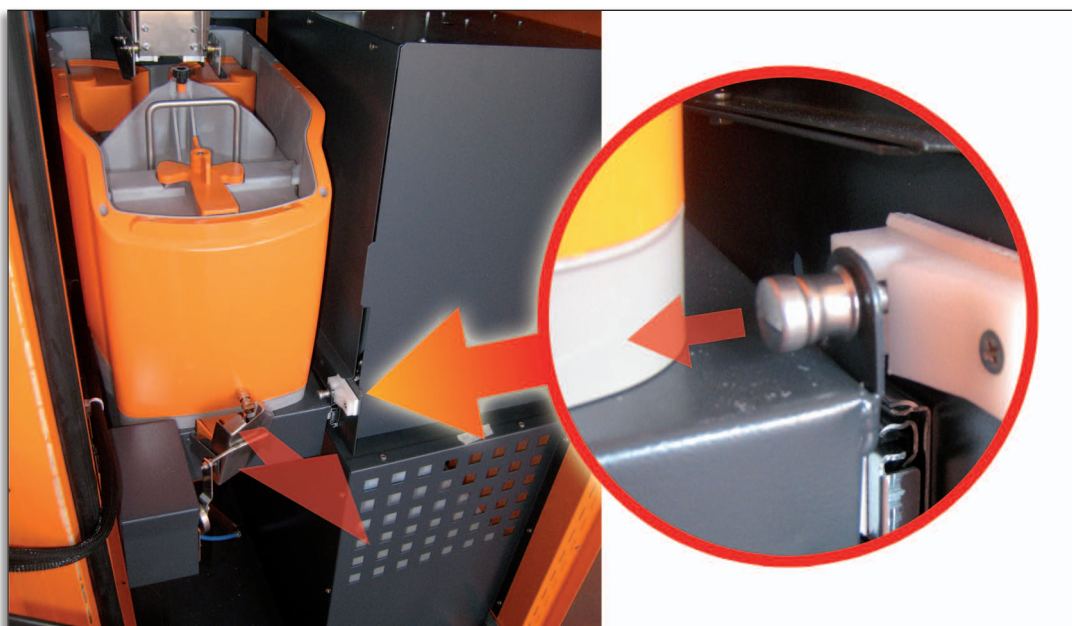


Figure 3.1.4 - Juicer body extraction

Before extracting the juicer, make sure that the pusher kit is in the home position as shown in figure 3.1.5. When it is necessary proceed to the fast procedure to re-establish the initial position of the pusher kit (see Chapter 6). The electrical connection of the juicer to the rest of the machine is made through the electric joint connector on the back of the juicer. This device allows to eliminate all the connection cables and to establish the electrical connection, by simply pushing back the body of the juicer until the pins are inserted. The absence of the connection cables makes it very simple to remove the structure that can be easily extracted by removing the screw (figure 3.1.6) and pulling out the rails that are located on the sides of the juicer (figure 3.1.7).

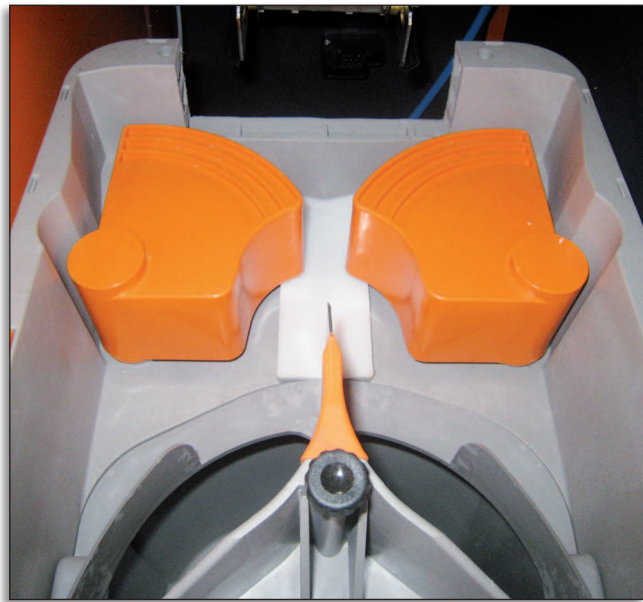


Figure 3.1.5 - Home position of the pusher

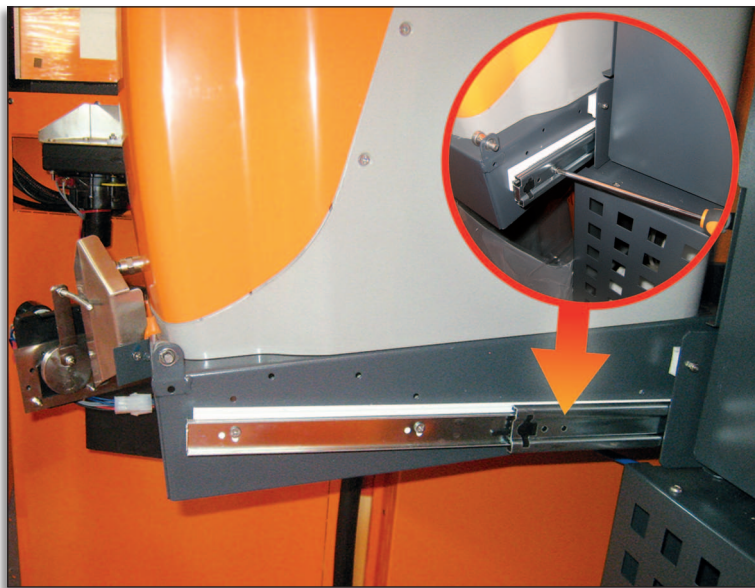


Figure 3.1.6 - Extracting of the juicer unit



Figure 3.1.7 - Rails

The non periodic maintenance can be done leaving the structure connected on the rails; but it's necessary to remove the pot, the cover and the pusher kit for the cleaning.



Warning

To preserve the safety of the operator it is necessary to remove the knife cover right after having pulled out the structure of the juicer. Put away the cover far away from the non-trained personal.

Knife cover - The figure 3.1.8 shows how to rotate the butterfly lever when you need to extract (open) or reposition (close) the cover on the juicer. The juicer is equipped with a sensor to ensure that the butterfly lever is on the right closing position. During the reestablishment of the juicer make sure that the butterfly lever doesn't stays in an intermediate position because a partial rotation could generate the vending machine to become Out of Service.

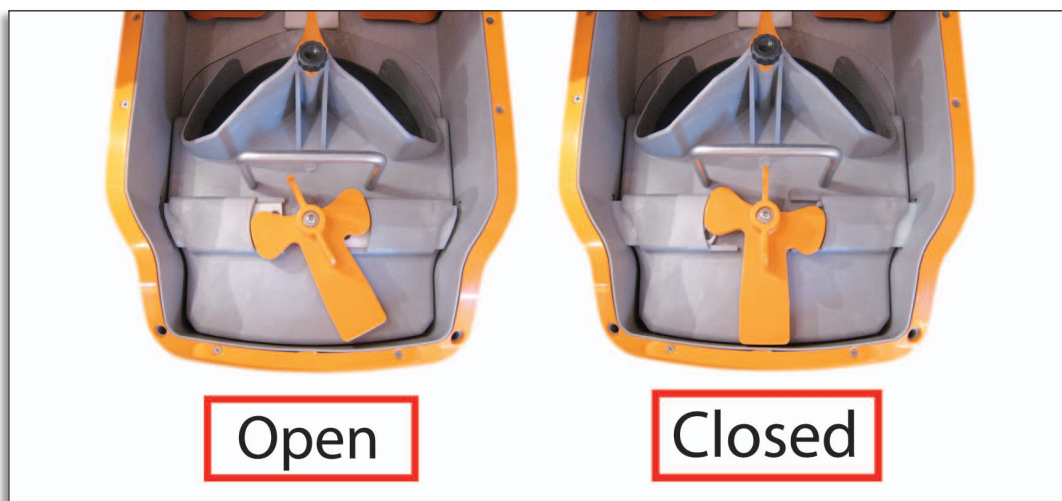


Figure 3.1.8 - Butterfly lever position Open/Closed

Therefore, whenever it is needed to place the machine in the “Out of Service” status, simply place the butterfly lever in the “open” position. The cooler box will work normally to keep the oranges fresh, but the message “Out of Service” will appear on the display and the machine will not supply any serving. The knife of the cover will probably wear with time and for that reason, it might need to be periodically substituted. In those cases, remove the fixing screw, extract the wear blade and proceed as shown in figure 3.1.9.



Warning

Pay careful attention when you proceed to this operation. Not handling the blade properly might cause severe injury to the operator.

Proceed to the following operations:

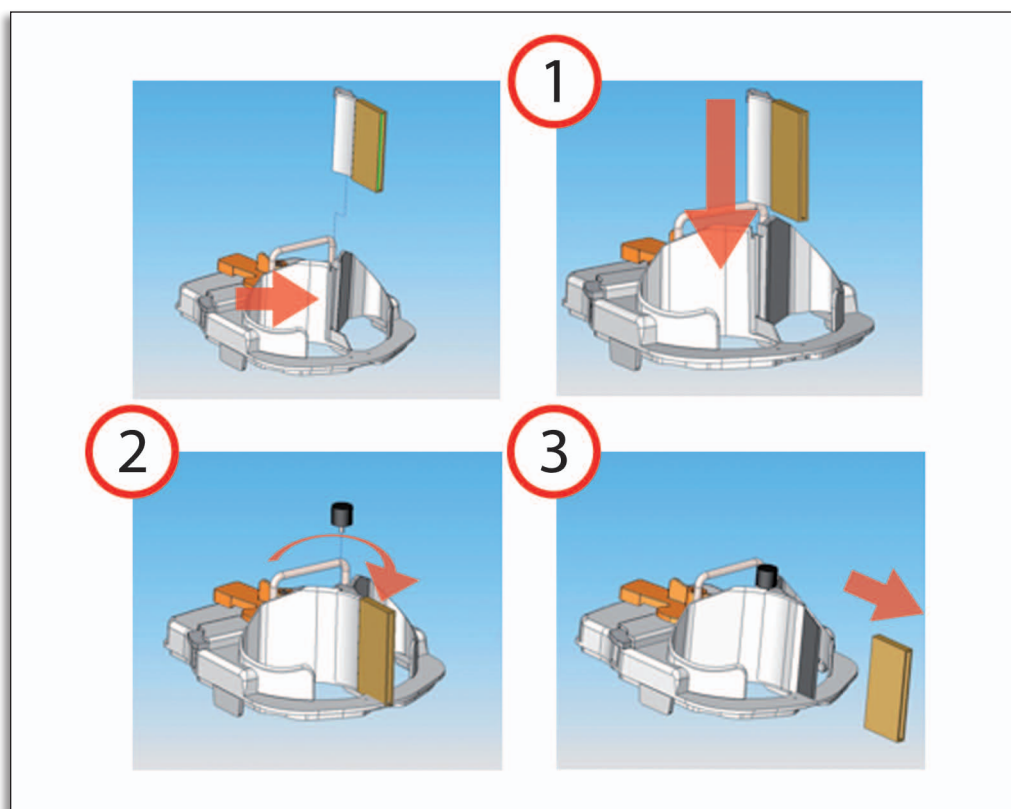


Figure 3.1.9 - Substitution of the blade

- 1 • Completely insert the rear part of the blade in the compartment
- 2 • Unscrew the blocking screw
- 3 • Extract the protection of the blade

Pushing kit - The extraction of the pushing kit is necessary only during the cleaning operations of the juicer. The paddles are inserted on their respective poles and without needing any screws. The figure 3.1.10 shows the necessary steps.

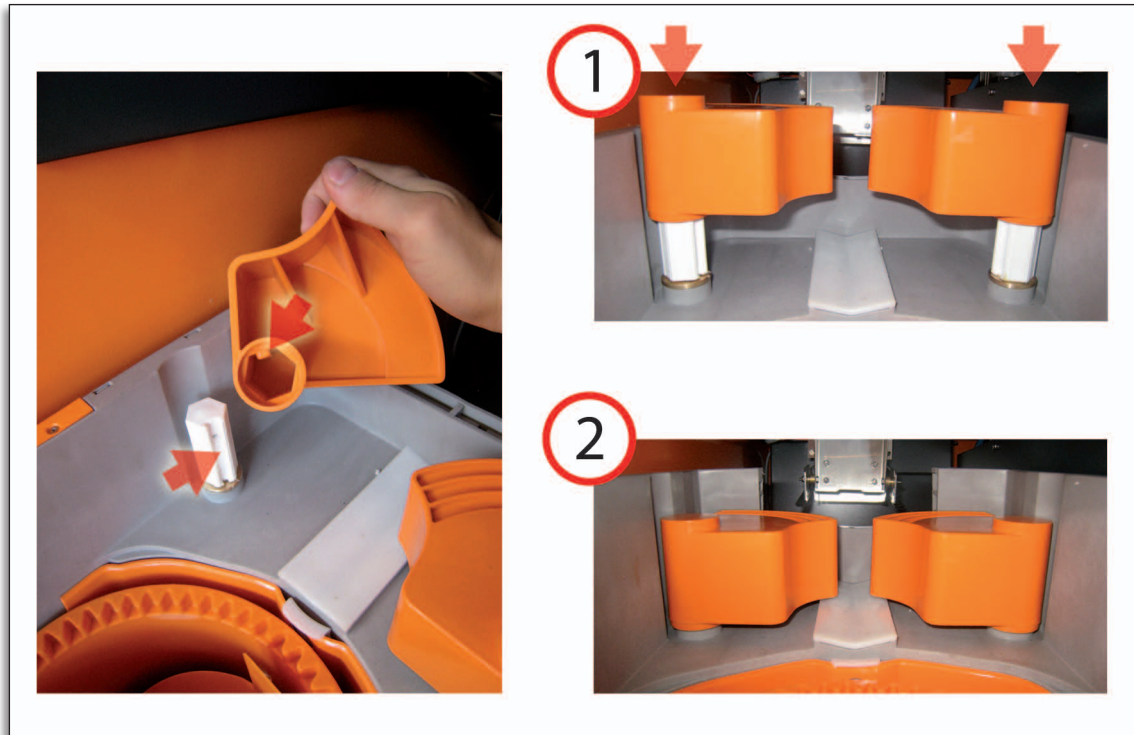


Figure 3.1.10 - Pusher insertion

Squeezing Pot - The pot is constituted of the following parts:

- A • Pot
- B • Star
- C • Big cylinder
- D • Small cylinder
- E • Plastic glide
- F • Shock absorber kit

The figure 3.1.11 shows a diagram with the relative positions of the different parts. In figure 3.1.12 every single components are shown in details. For the removal of the parts it is possible to extract simultaneously all the different parts by simply pulling up the white handles of the pot (figure 3.1.2). On the other way around, when you insert the squeezing unit back into the structure of the juicer we recommend to insert each part singularly to make sure that they are all correctly positioned.

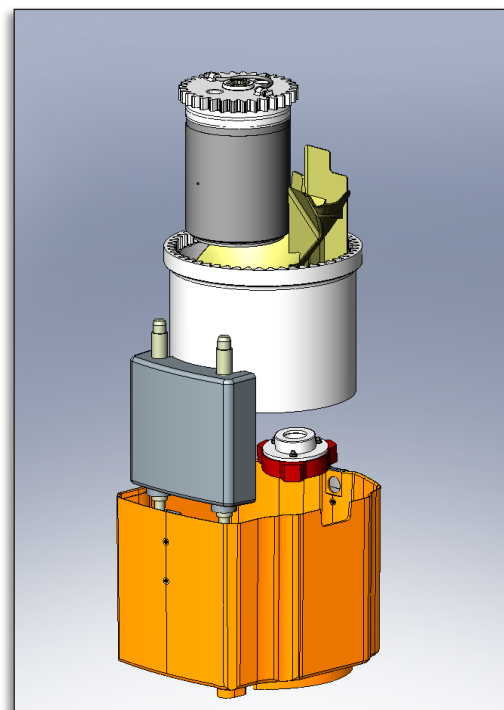


Figure 3.1.11 – Exploded view of the squeezing pot

English

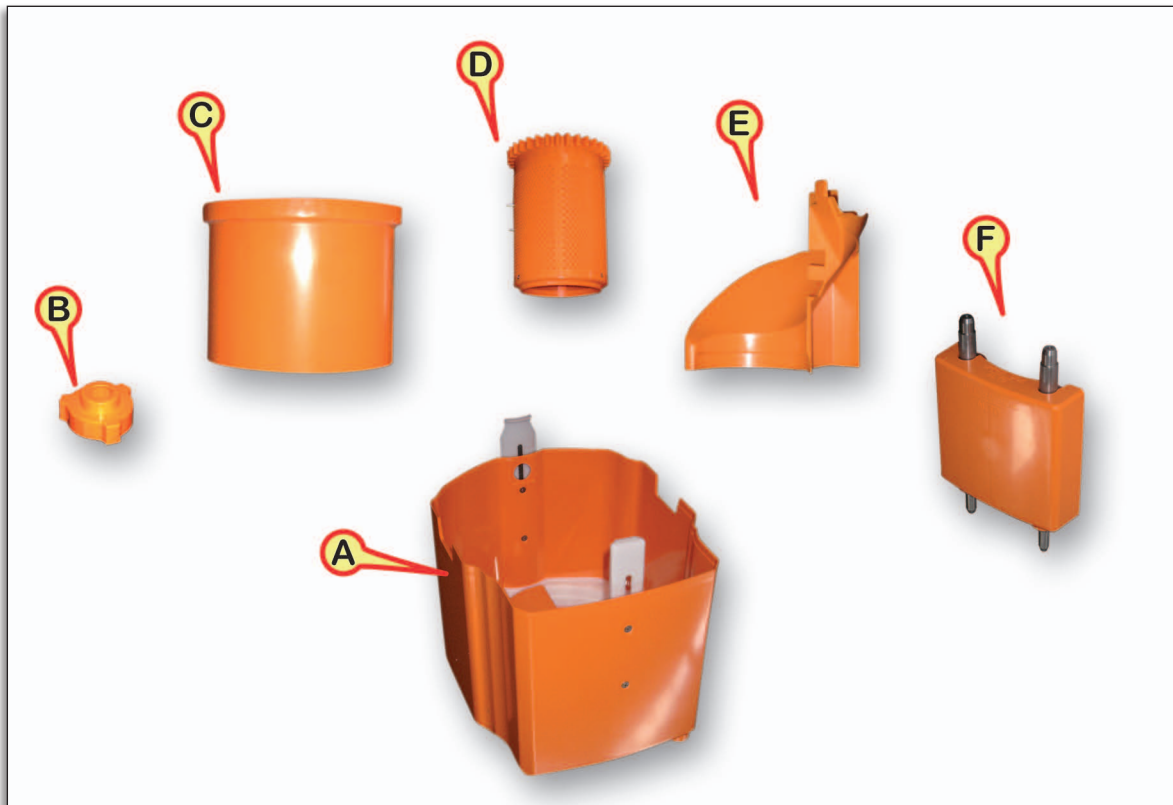


Figure 3.1.12 - Squeezing pot parts

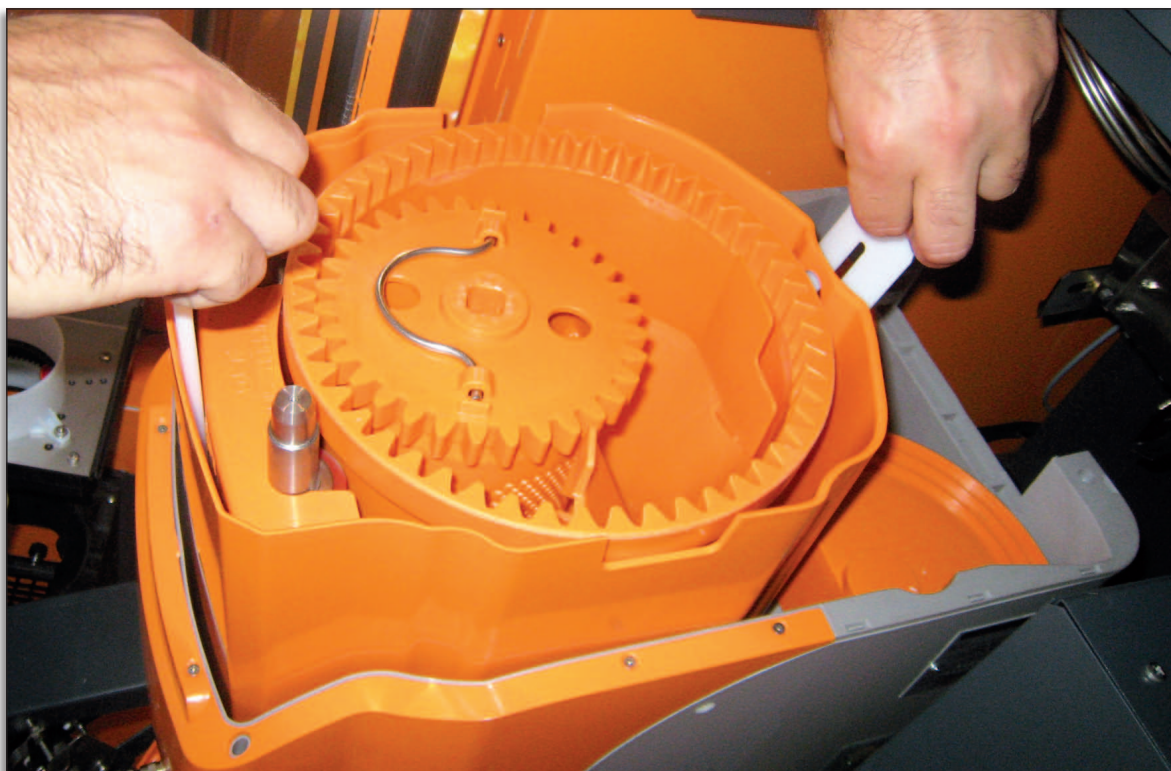


Figure 3.1.13 - Squeezing pot extraction

Proceed to the following steps for the correct assembling of the parts of the squeezing unit.

- 1 • **Pot inserting** - Insert the pot by grabbing the handles. The correct position is determined by the alignment of the edge of the internal structure (figure 3.1.14).

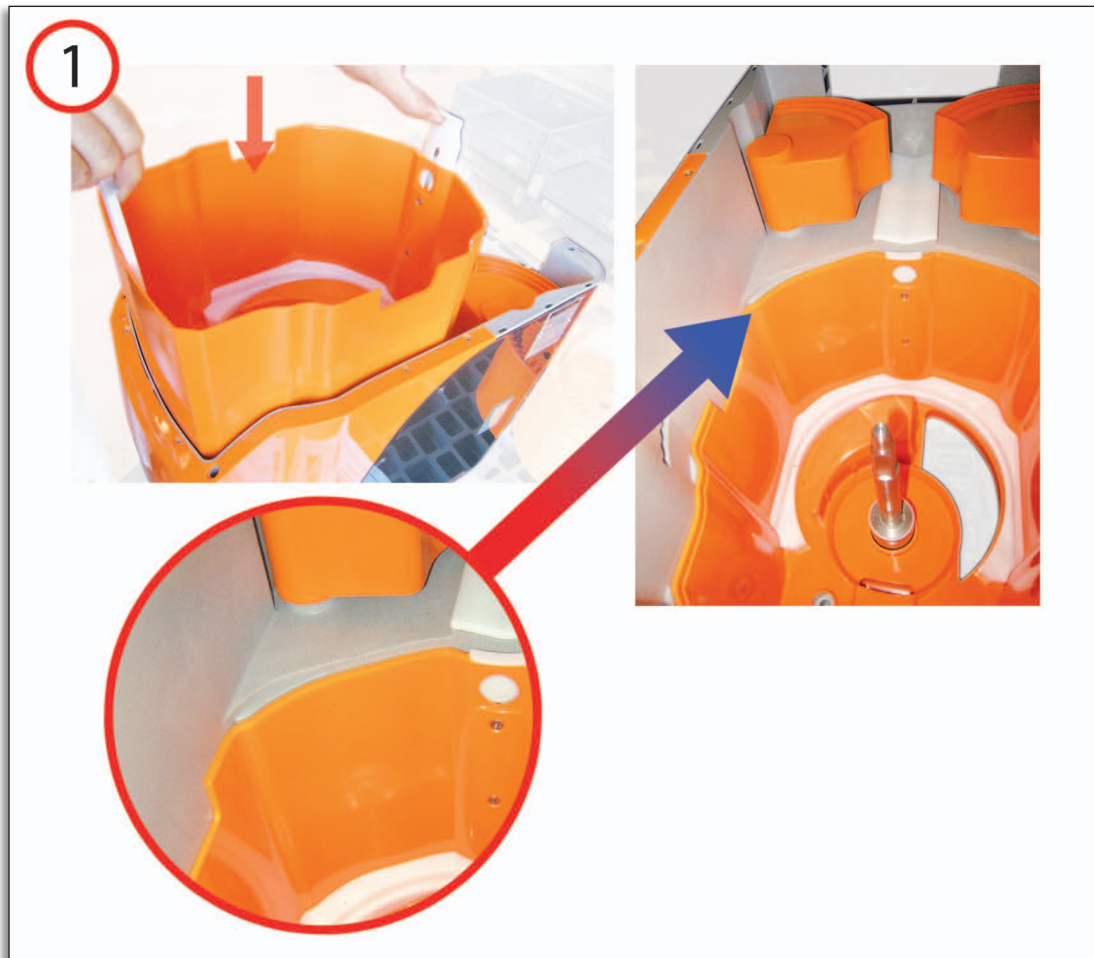


Figure 3.1.14 - Squeezing pot insertion

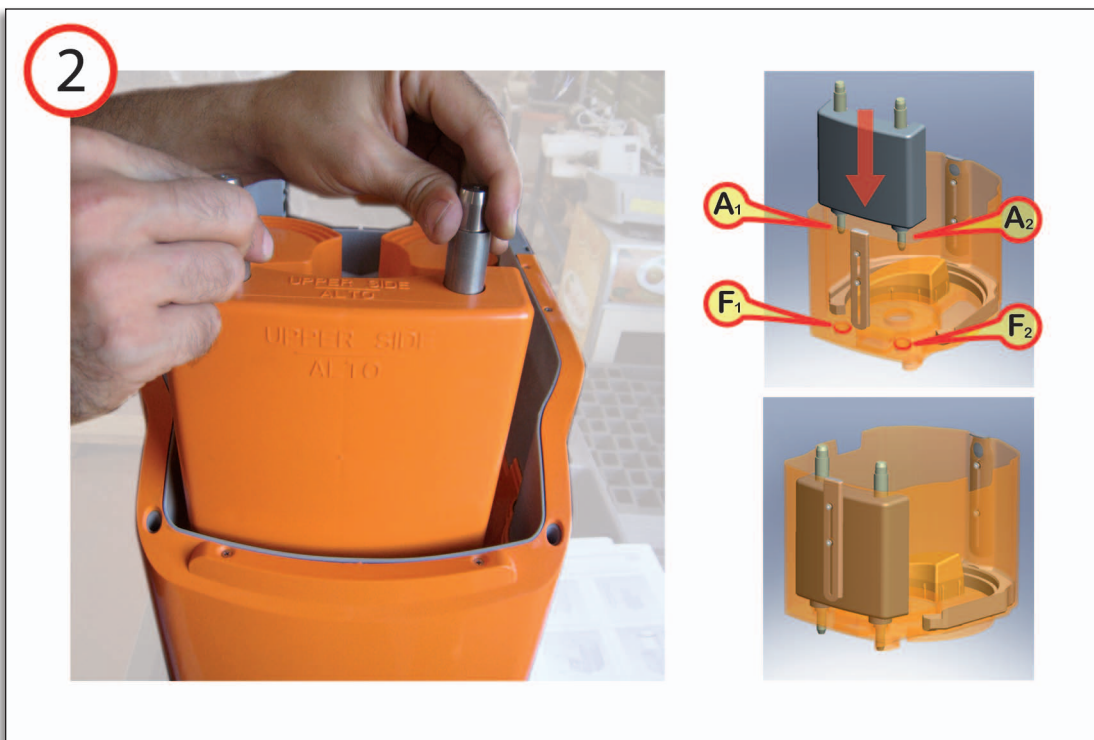


Figure 3.1.15 - Shock absorber insertion



Figure 3.1.16 - Big cylinder insertion

- 2 • **Shock absorber insertion** - Insert the shock absorber holding it by the side where it is written “upper side”. The correct position is determined by the insertion of the poles A1 and A2 in the holes F1 and F2 (figure 3.1.15).
- 3 • **Big cylinder insertion** - Insert the big cylinder inside the pot grabbing it by the top; make sure that after the insertion the squeezing unit appears as shown in figure 3.1.17 at the right.
- 4 • **Plastic glide insertion** - The figure 3.1.18 shows the procedure for the insertion of the plastic glide. To facilitate the positioning, there is a predisposed structure (indicated in red). After the insertion make sure that the plastic glide is perfectly tight fit with the predisposed structure.
- 5 • **Star insertion** - Insert the star as shown in figure 3.1.19. The bottom edge of the juicer’s pole has to be completely tight fit with the central hole of the star.
- 6 • **Small cylinder insertion** - Insert the small cylinder as shown in figure 3.1.20. After the insertion make sure that the top square hole of the cylinder is completely tight fit with the corresponding part of the pole. Make sure that that the gear of the two cylinders are perfectly aligned.
- 7 • **Insertion of the cover** - The cover and the pusher kit “paddles” complete the assembly of the juicer. To assure a correct positioning of the cover, proceed as shown in figure 3.1.21. Insert the cover on the squeezing unit paying careful attention that the pole A3 of the juicer corresponds to the hole F3 (indicated in blue) and that the poles A4 and A5 are inserted in the corresponding holes F4 and F5 (indicated in red). Make sure that the cover is well positioned by testing the

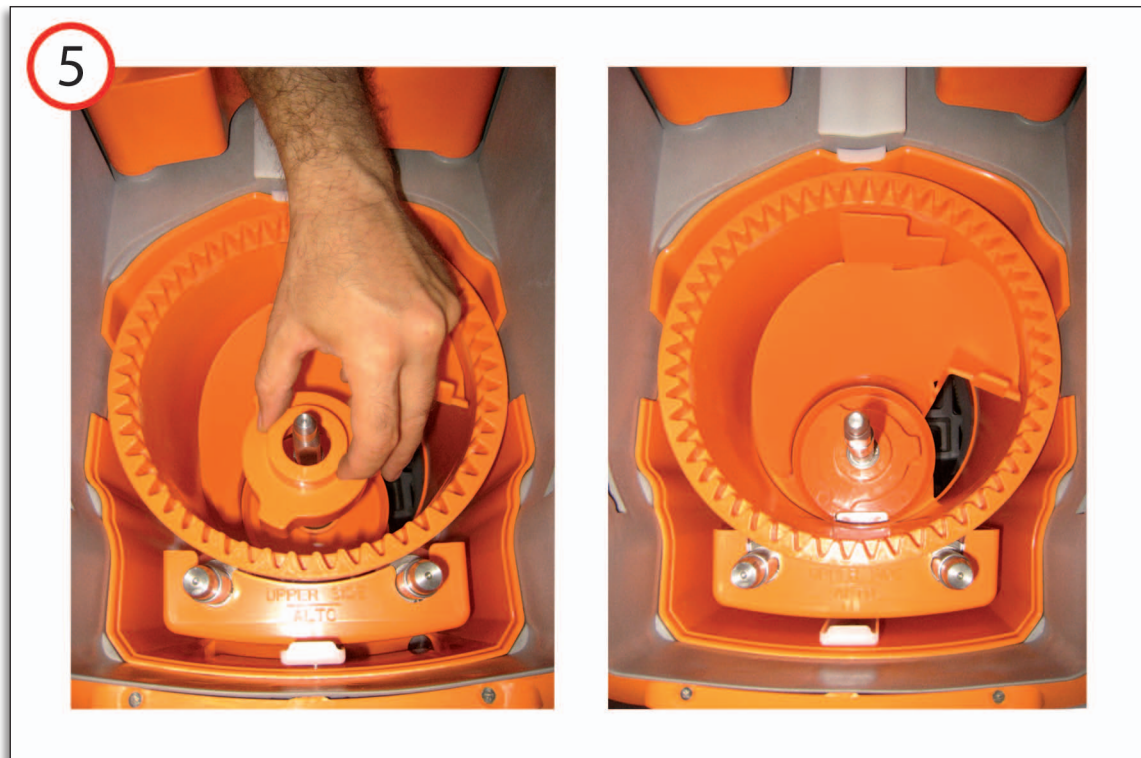
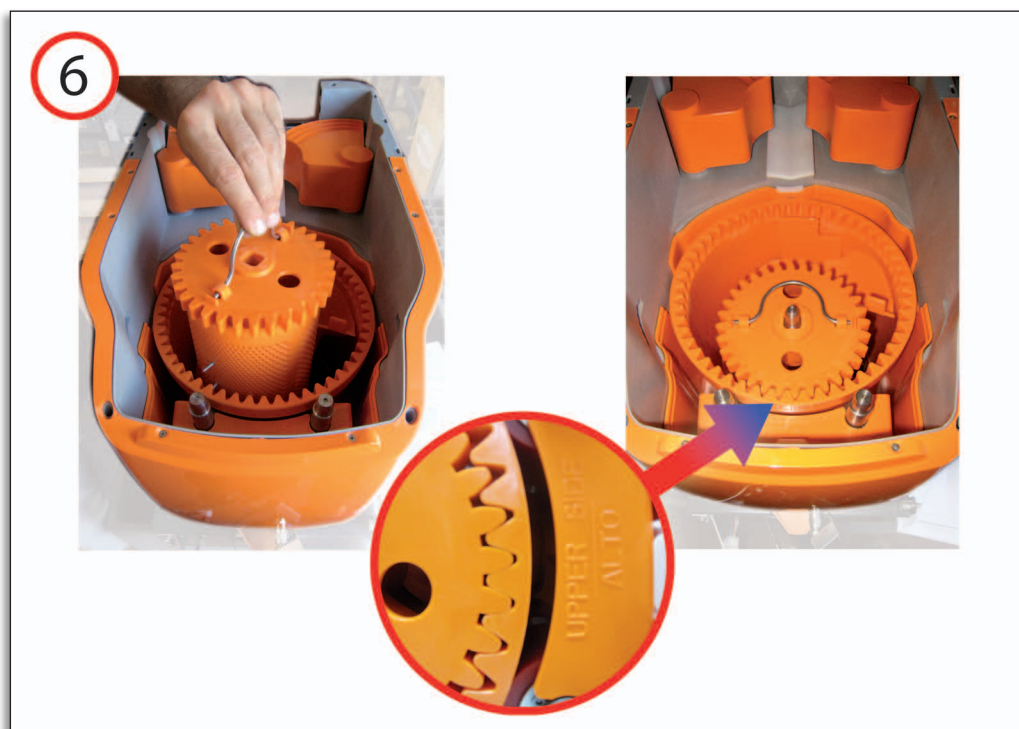


Figure 3.1.17 - Plastic glide insertion

correct functioning of the butterfly closing as described on the top.



The internal parts of the pot are continuously subject to substantial mechanical pressure. We recommend periodical inspections of the small cylinder, big cylinder, plastic glide and the star to avoid unexpected damages that would prejudice the correct functioning of the machine.

*Figure 3.1.18 - Star insertion**Figure 3.1.19 - Small cylinder insertion**English*

To make sure that OR70 supplies a fresh product of high quality it is necessary to take a major care and clean well all the internal parts. Even if the machine is equipped with a programmable rinse system, the operator has to clean the complete squeezing unit at least once every three days. All the components of the pot can be cleaned in the dishwasher. More frequent cleaning operations improve the quality of the produced product and can also be done daily with the water gun that comes with

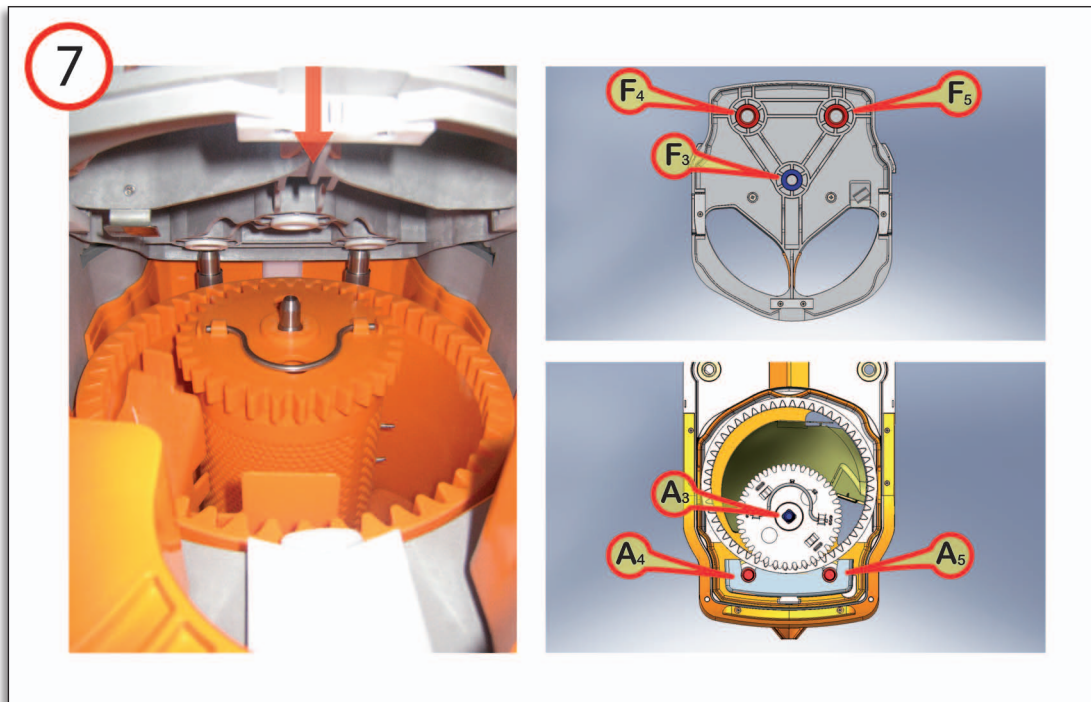


Figure 3.1.20 - Knife cover insertion

the machine. In those cases, you can only lift up the small cylinder and direct the water spray inside the pot.



Warning

While you clean with the water gun make sure not to spray water directly on the electric and electronic components.

3.2 Orange storage

The orange storage contains the fruit reserve of the vending machine. The figure 3.2.1 shows the parts that compose it.

- A • Lower belt motor
- B • Lower belt shaft
- C • Lower belt
- D • Upper belt motor
- E • Upper belt shaft
- F • Upper belt
- G • Belt stretch regulator
- H • Orange guard rail
- I • Front door
- L • Door front closing pin
- M • Storage closing pins

For the loading operations you can proceed previously through the front grid or from the top, extracting the storage after having pulled the side pins (figure 3.2.2).

The mobile belts alternate the movement in both directions to avoid any jamming of the oranges before they arrive to the juicer. The motors will get activated in relation with the status of the sensors so

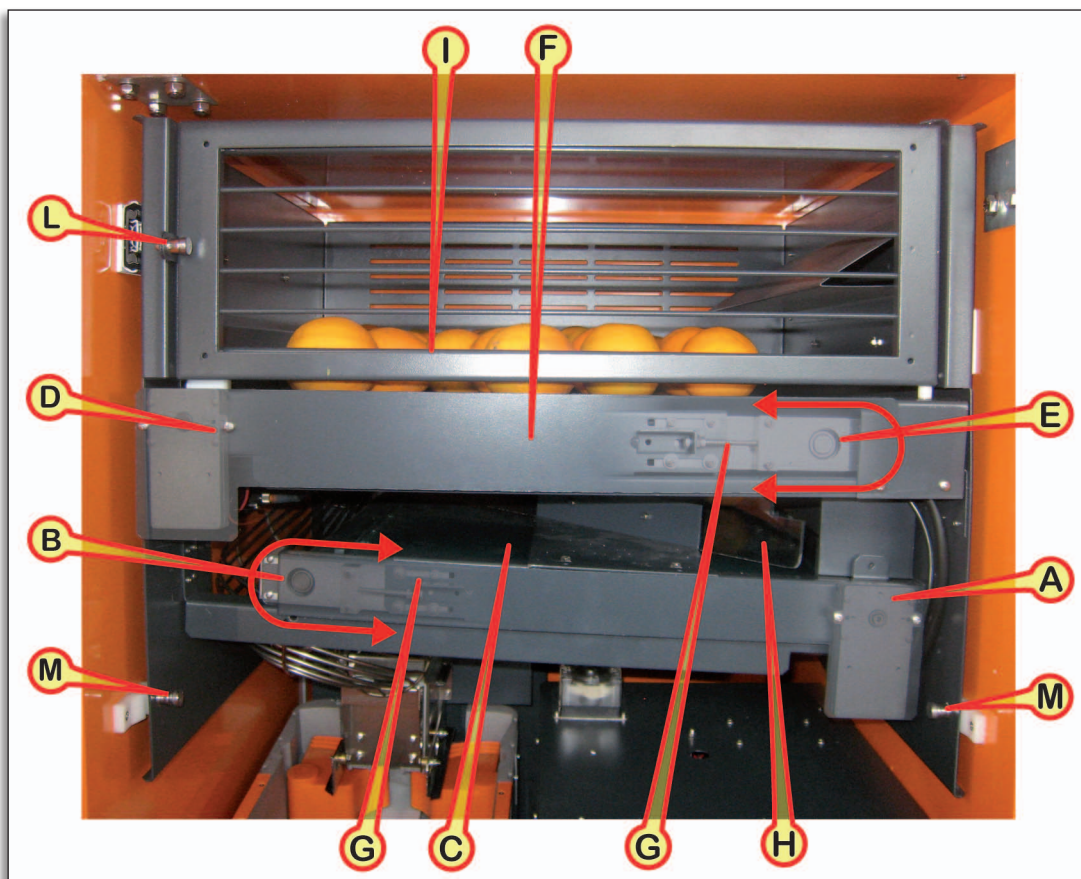


Figure 3.2.1 - Orange storage



Figure 3.2.2 - Orange storage extraction

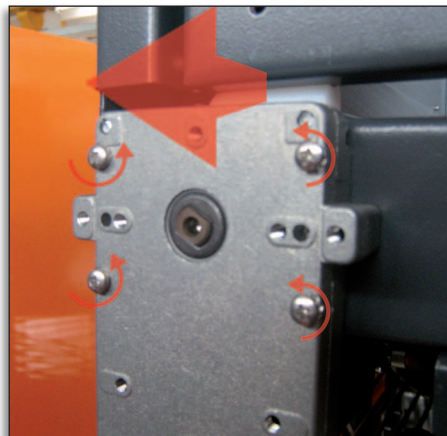


Figure 3.2.3 - Belt motor substitution

that the belts are moved only when the sensors don't notice the presence of any oranges (see Chapter 4). The vending machine automatically generates warning messages of error when the storage runs out of stock (see Chapter 6).

Usually the wear can cause two types of mechanical problems:

- Breakdown of the motor
- Grip reduction between the belts and the shafts

In the first case, the only solution is the substitution with original spare parts. In the second case, it's possible to increase the stretch of the belts operating on the belt stretch regulator.

To substitute the motor remove the metallic cover and operate on the screws as shown in figure 3.2.3. When the screws are removed, the motor can be slipped off from the belt shaft and reinstall the screws. The spare parts are equipped with electrical connectors for a fast and simple installation. In the case in which you would want to increase the grip, you need to lightly unscrew the screws, operate on the bolt stretch regulator and block the screws again (figure 3.2.4).

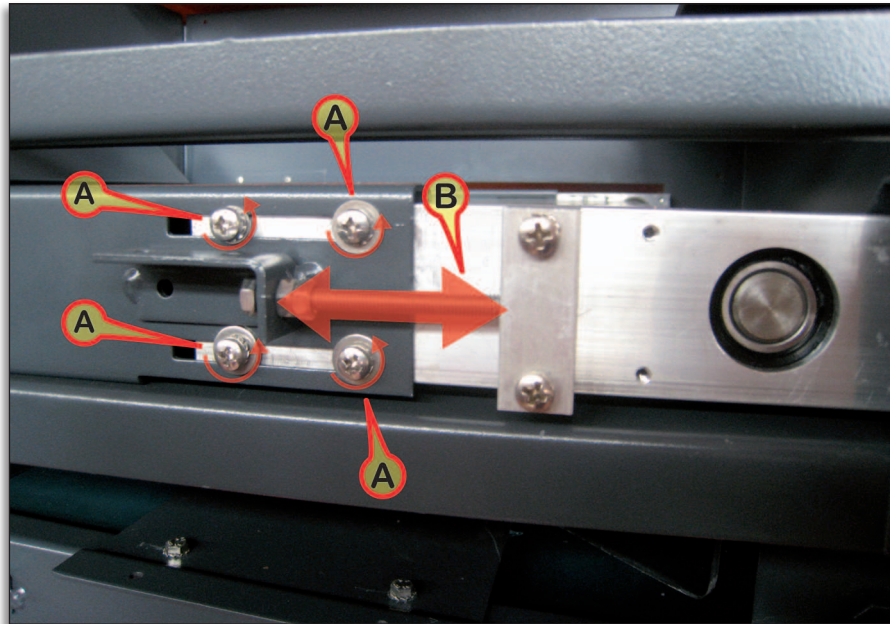


Figure 3.2.4 - Storage motor substitution

The electrical connection between the storage and the rest of the distributor is realized without any cables. A specific connector disconnects the storage when it is pulled out. As for the juicer, this solution considerably simplifies the maintenance operations. It's possible to completely extract the storage by unblocking the rails through the flaps shown in figure 3.2.5.



Figure 3.2.5 - Orange storage removal

English

3.3 Fruit dispenser

The figure 3.3.1 shows the orange dispenser and the movement that it executes during the normal functioning. The cam transforms the rotary movement of the motor in the linear movement necessary to manage the oranges flow. The switch individuates the home-position of the mechanism. Possible relative problems of a non correct positioning of the mobile storage might be caused by the malfunctioning of the switch. Before proceeding to the substitution, test the correct functioning through the control panel (see Chapter 5).

All the rails of the movement organs need to be periodically lubricated with Vaseline fat. The rail and the brasses shown in figure 3.3.2. particularly need to be lubricated.

In the case that the orange dispenser motor has to be replaced, it's necessary to unscrew the four

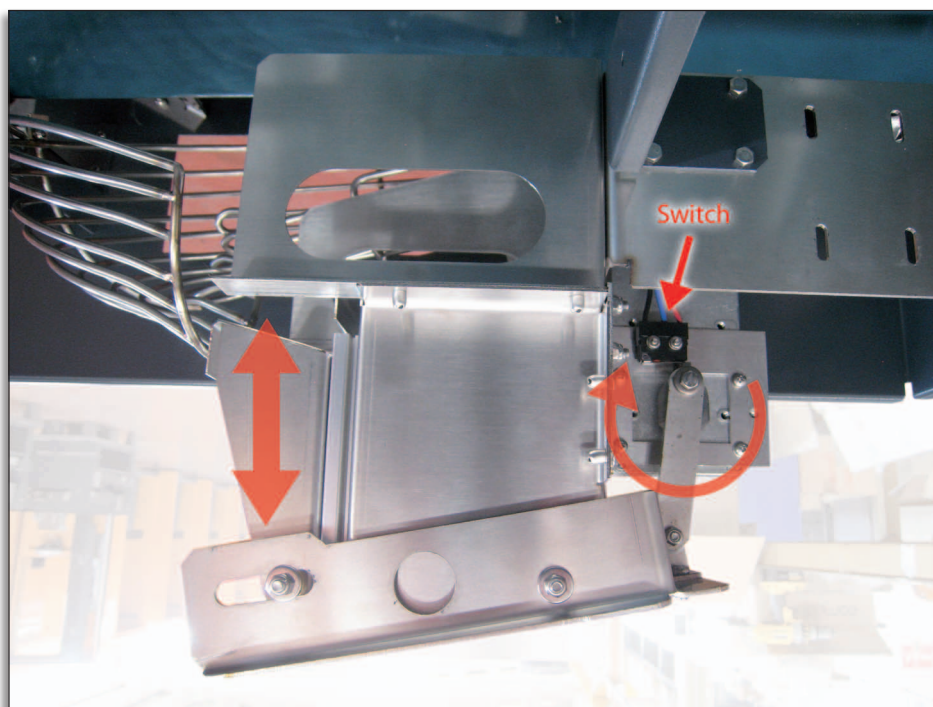


Figure 3.3.1 - Fruit dispenser

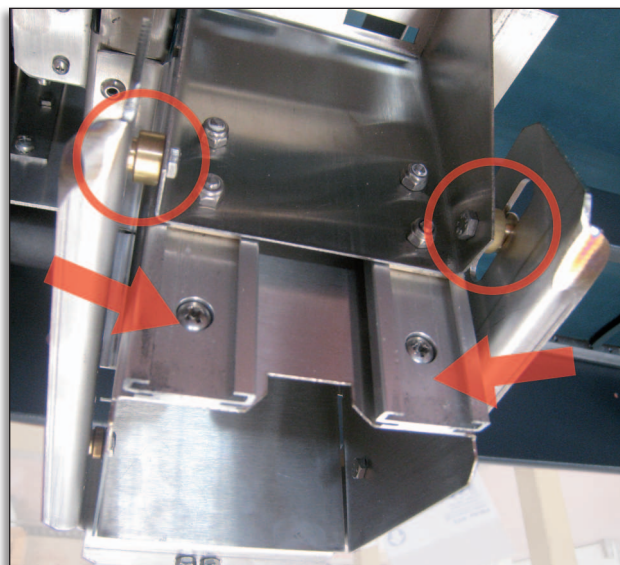


Figure 3.3.2 - Fruit dispenser brasses and rails

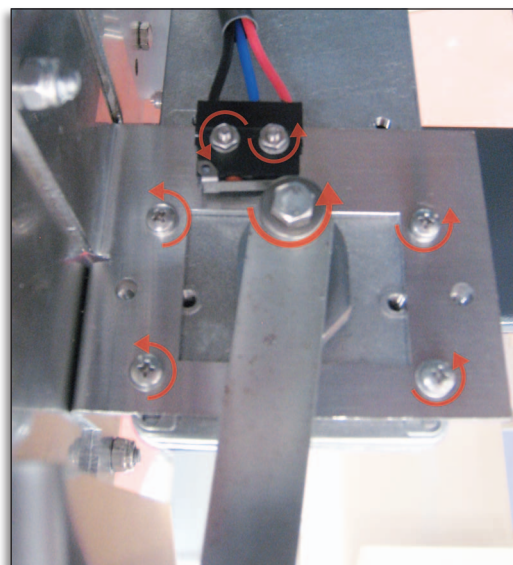


Figure 3.3.3 - Fruit dispenser motor screws

screws and the bolt as shown in figure 3.3.3. The motor is already equipped with cables to facilitate the substitution in case it is damaged. For the substitution of the switch operate on the screws shown in the same figure. Even the switch is equipped with a relative wiring for a fast and safe substitution.

3.4 Spout Unit

The spout is made out of two parts (figure 3.4.1):

- A • Spout motor block
- B • Spout

The spout is activated by the motor and its position is determined through the switch. During the normal functioning, it can be on the stand-by or low (supplying) position as shown in figure 3.4.2. A non correct position during the ordinary functioning could be caused by the malfunctioning of the phase switches. Before proceeding to the substitution check it through the control panel (see Chapter 5).

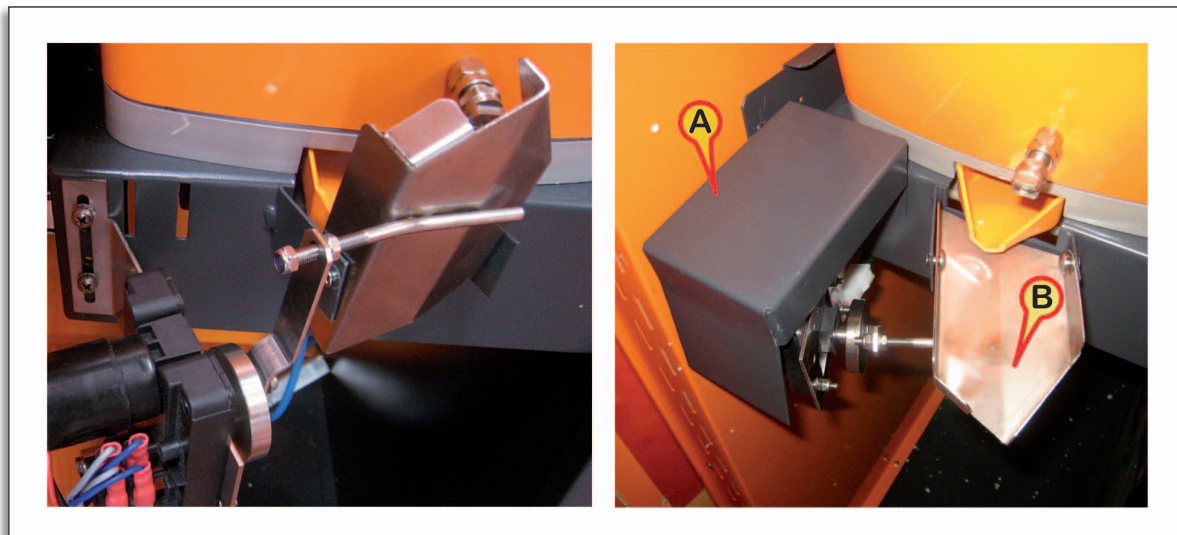


Figure 3.4.1 - Spout

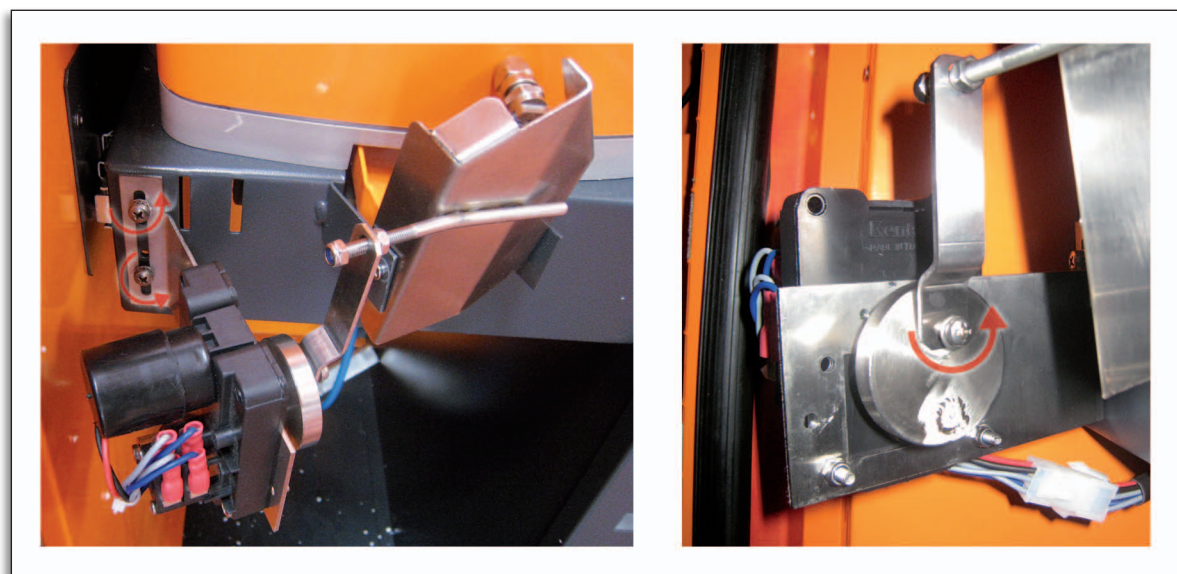


Figure 3.4.2 - Spout removal

In the case in which you would observe the malfunction of the motor or the switches it's possible to proceed to the removal and to the substitution of the block that operates on the screws and on the nut as shown is figure 3.4.2. To simplify at the maximum the operation, the block is equipped with a wiring with a unique connector for the motor and the switches.



Warning

In relation with its position, the spout is particularly exposed to impacts. Pay attention during the maintenance operation to avoid damages.

The substitution of the spout can be executed by operating on the screws C, D and E (figure 3.4.3). During the assembly pay attention that the screws C and D are well tighten and fixed with adhesive threadlocker. Normally the slide has little space between the corresponding joint and the screws named before; if it's substitution is necessary make sure that the space remains after the operation and test the correct functioning of all the block throughout the control panel (see Chapter 6).

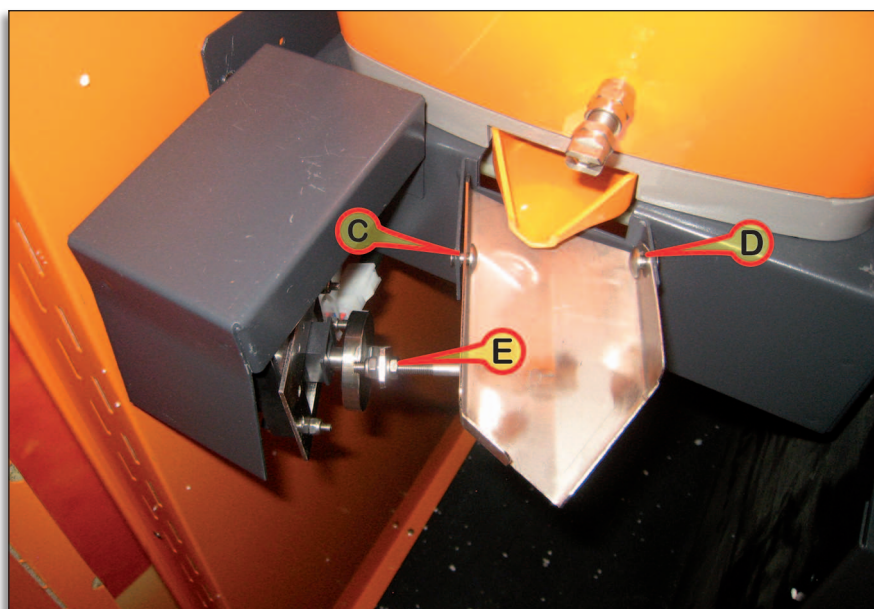


Figure 3.4.3 - Slide removal

3.5 Cup dispenser

The cup dispenser manages the flow of the cups during the squeezing process. The full load is of about 100 cups, much more superior than the load capacity of the storage.

To guarantee the correct functioning we recommend using only antistatic cups of 70 mm of diameter. Other dimensions are available under request.

The supplying is managed through the movements of some small spirals driven by an electrical motor. All the mechanism constitutes a unique block and that also simplifies any eventual operation of substitutions. In case of malfunctioning, before proceeding to the substitution, we recommend to test the functioning through the control panel (see Chapter 6).

For the substitution of the cup dispenser you only have to remove the screws indicated in figure 3.5.1. The electrical connections are facilitated by the presence of a unique connector for the whole block.

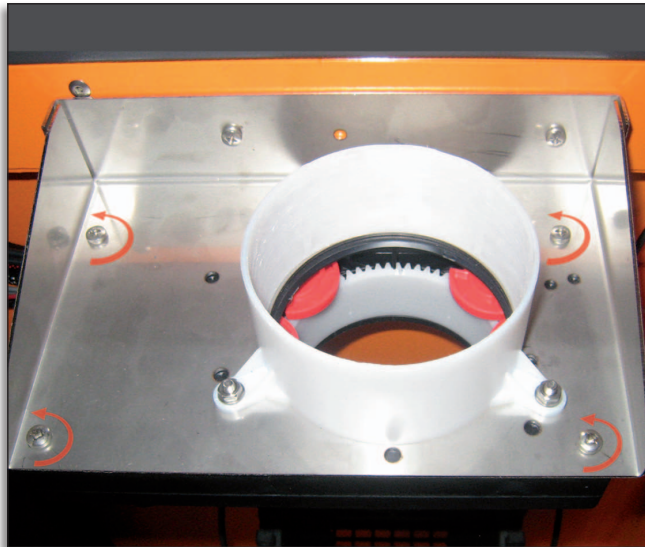


Figure 3.5.1 - Cup-dispenser



Figura 3.5.2 - Cup-unit

3.6 Hydraulic components

The OR70 hydraulic circuit (figure 3.6.1) is composed of:

- A • Water pump
- B • Clean water tank
- C • Electro-valve

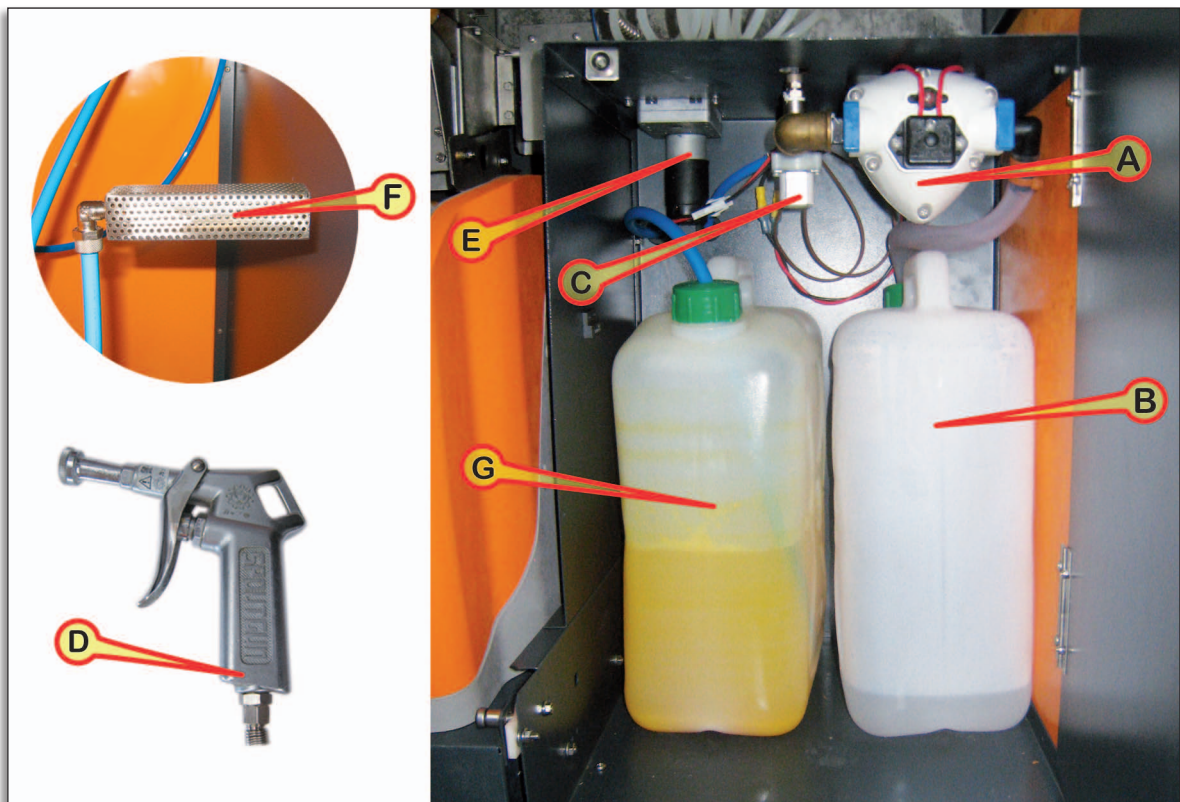


Figure 3.6.1 - Hydraulic components

English

- D • Water gun
- E • Drawing pump
- F • Drawing pump filter
- G • Waste liquid tank

The circuit can be represented in accordance with the scheme in figure 3.6.2.

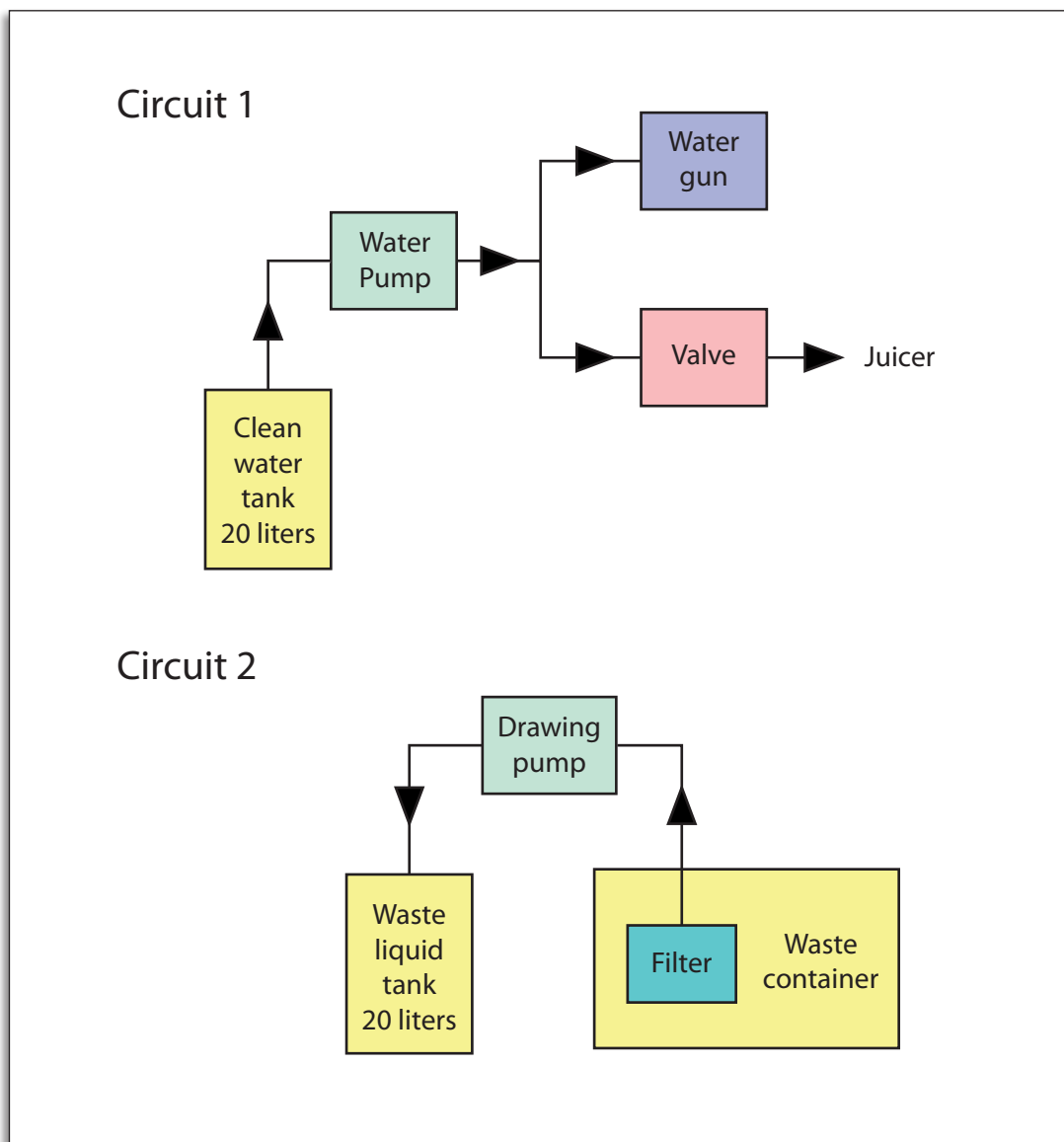


Figure 3.6.2 - Hydraulic circuit scheme

The circuit 1 is used for the manual and automatic cleaning of the machine. In the first case, the water contained in the tank can be sprayed on the parts that you want to clean through the water gun that comes with the machine. To activate the pump it's necessary to push the red button that is located at the left side of the front electrical compartment.



Warning

During the cleaning make sure not to squirt the water directly on the electrical or electronic parts.

In the second case, the circuit 1 is used for the automatic cleaning cycles of the machine. During each

of those cycles, the internal parts of the juicer are sprayed by a powerful water jet.



Warning

The automatic cleaning cycles cannot replace in any case the manual cleaning. In order to maintain good health and hygiene standards, it's necessary to execute a manual cleaning of the internal parts of the juicer, as well as the removal of the liquids and the solid part wastes.

The drinking water tank has a capacity of about 10 liters.



Warning

We recommend to fill the tank of the circuit 1 with only drinking water or tap water.

The circuit 2 allows to remove the accumulated liquids in the waste recipient and their discharge towards the G tank; is periodically activated and after every automatic cleaning. The waste liquids are constituted of the pulp, the waste dripping of the juicer and of the used water to clean the machine.



Warning

During the supplying operation you should empty the waste water tank and make sure not to reverse the containers B and G.

The water pump and the drawing pump can be manually tested through the control panel as described in chapter 6. In the case in which some malfunctions would be found, check preliminarily the functioning of every device.

To remove the drawing pump cut the narrow band and operate on the screws shown in figure 3.6.3. After the installation of the new pump reestablish the hydraulic circuit as shown in the figure and also the electrical one, reconnecting the faston connector.

For the substitution of the water pump see figure 3.6.4. Remove the screws that supports the structure of the pump and disconnect the electro valve operating on the bolt and on the screw nut as shown in the figure. After the installation of the new pump re-establish the hydraulic circuit as shown in the figure and also the electrical one, reconnecting the fast-on connectors.

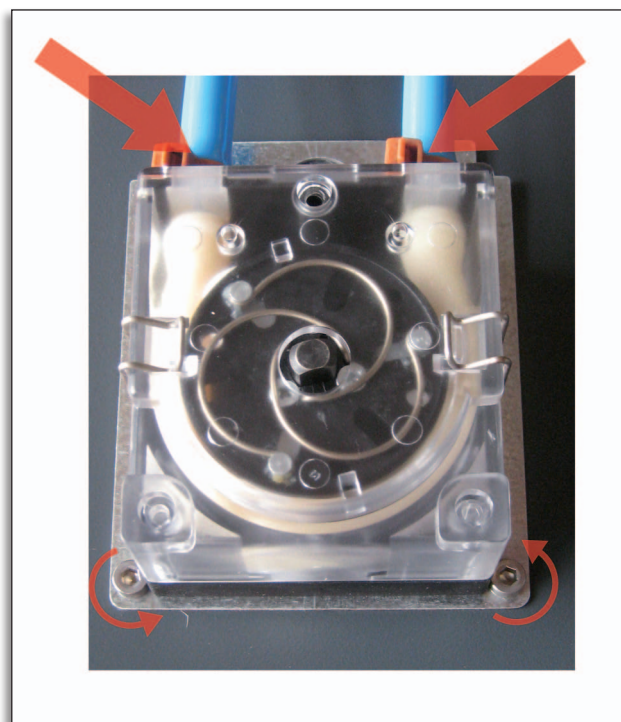


Figure 3.6.3 - Peristaltic pump removal

English

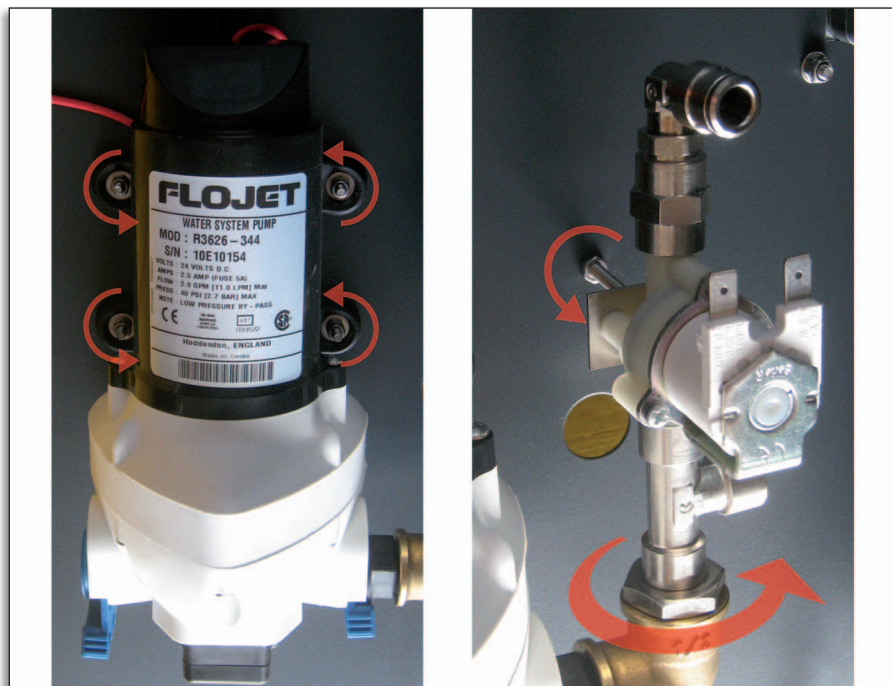


Figure 3.6.3 - Electro-valve and/or water pump removal

3.7 Cooler unit

The cooler unit is constituted of a completely extractable unique monoblock (one-piece) that is reachable from the front of the machine. In figure 3.7.1 you can identify:

- A • Condenser
- B • Evaporator
- C • Compressor
- D • Condensate collection basin
- E • Drainage tube
- F • Fans

The performance depends on many different factors as, for example:

- External temperature of the machine (room temperature)
- Air humidity
- Location of the distributor
- Number of the times the door opens and the number of servings

You obtain the best performances when the external temperature remains below 32 °C. Under superior temperature, the cooler unit might not be capable to maintain the desired internal temperature. In these cases, the distributor will generate an error message.

The defrosting of the cooler unit takes place automatically on the strength of some algorithm that are based on the length of its continual functioning and on the established temperature.

For the good conservation of the distributor it is necessary to execute the following maintenance operations:

- Periodical check up and cleaning of the condenser and removal of dust (every 60 days)
- Periodical check up of the fan (every 60 days)

- Periodical check up of the compressor
- Periodical check up of the drain tube

The check up of the functioning of the fan and the compressor can be manually executed through the control panel.



Warning

If you notice some water drops under the distributor in situation of permanent humidity, put additional containers or sponges inside the condensate collection basin.

Before extracting the cooler unit it's necessary to disconnect the vending machine from the power supply, to remove the front and back protection grids and then disconnect the fridge connectors. To access the internal devices of the fridge, remove the front grid, the polystyrene block located on the low part and the following metallic plate.



Warning

All the operations regarding the disassembling and assembling of the group have to be executed by qualified personal and without any power supply on the network.

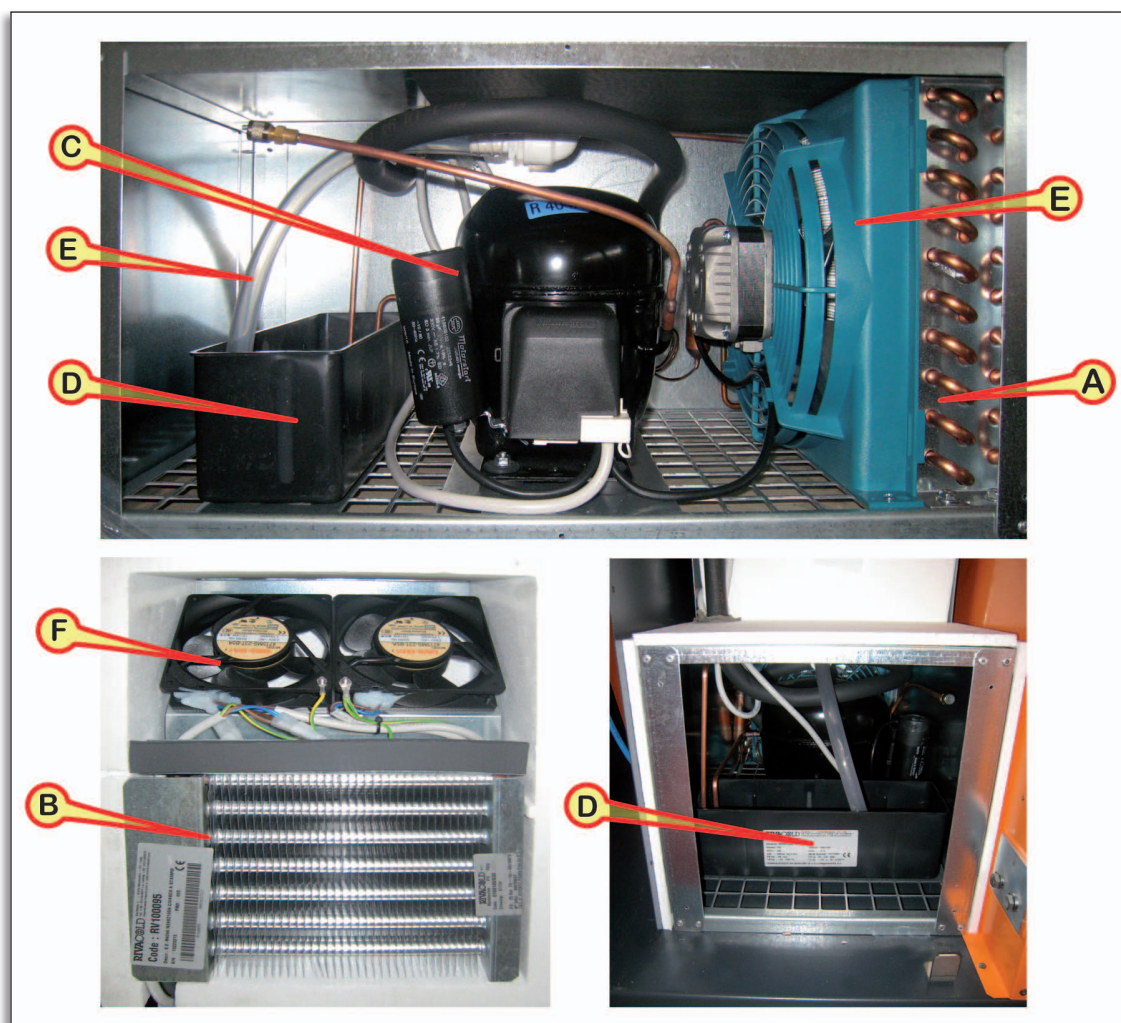


Figure 3.7.1 - Cooler unit internal devices

4. Electrical and electronic devices

OR70 has a large number of electrical and electronic components. This section of the manual wants to provide to the operator a wide view on the most important aspects and a guide for fast solutions of possible breakdowns. All the system is organized to be able to guarantee the modular programming of its subparts; this facilitates the comprehension of the functioning, the identification of the problems and the operations for the installation of the eventual spare parts.



Warning

All the operations of repair of the electrical and electronic components have to be carried-out by the qualified staff and after having disconnected the vending machine from the electrical supply. Wrong interventions may put at risk the safety of the operator and compromise the performance of the machine.

4.1 Overview of the electronic board

OR70 electronic is structured on four different boards in the front and rear electric compartments and as shown in illustration 4.1.1 and 4.1.2. They will be indicated as follows:

- A • Master Board
- B • Power Board
- C • Fridge Board
- D • Display

The Master board is the main controller of the machine and is located in the front electrical compartment (illustration 4.1.1). Because it is the only programmable device, all the updating operations of the firmware and setting parameters will be done through it. The front electrical compartment also takes

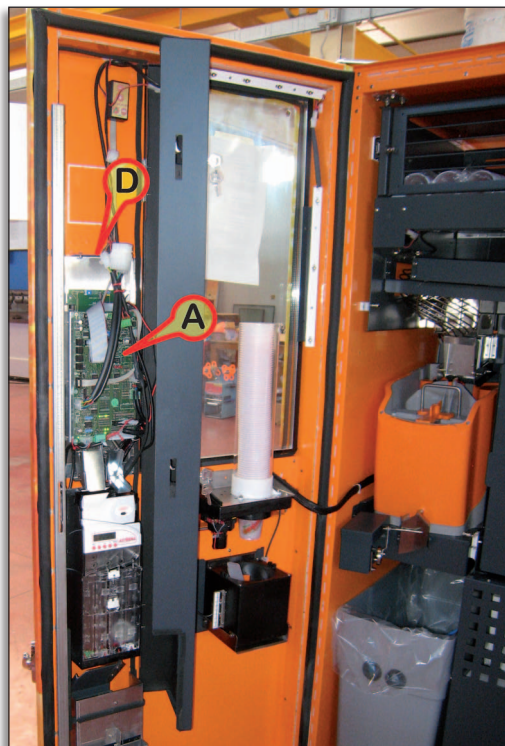


Figure 4.1.1 - Front electrical compartment



Figure 4.1.2 - Back electrical compartment

English

care of the display visible through the user command panel. The Power board is managed by the Master and contains the drivers of almost all the motors present in the vending machine. The fridge board delivers the supply to switch on and off the refrigerated system. The Master board and the Fridge board are plugged in the rear electrical compartment on the transformer (figure 4.1.4 - F) and on the power supply filter (4.1.4 - E).

The diagram in figure 4.1.3 shows how the power supply is distributed from the power supply filter, the physic connection is demonstrated in figure 4.1.4. The power supply filter and the Master, the Power and the Fridge boards, are equipped with a specific fuse of protection against the over-currents (figure 4.1.3). Each time that a failure happens due to the lack of power supply, fuses and connections

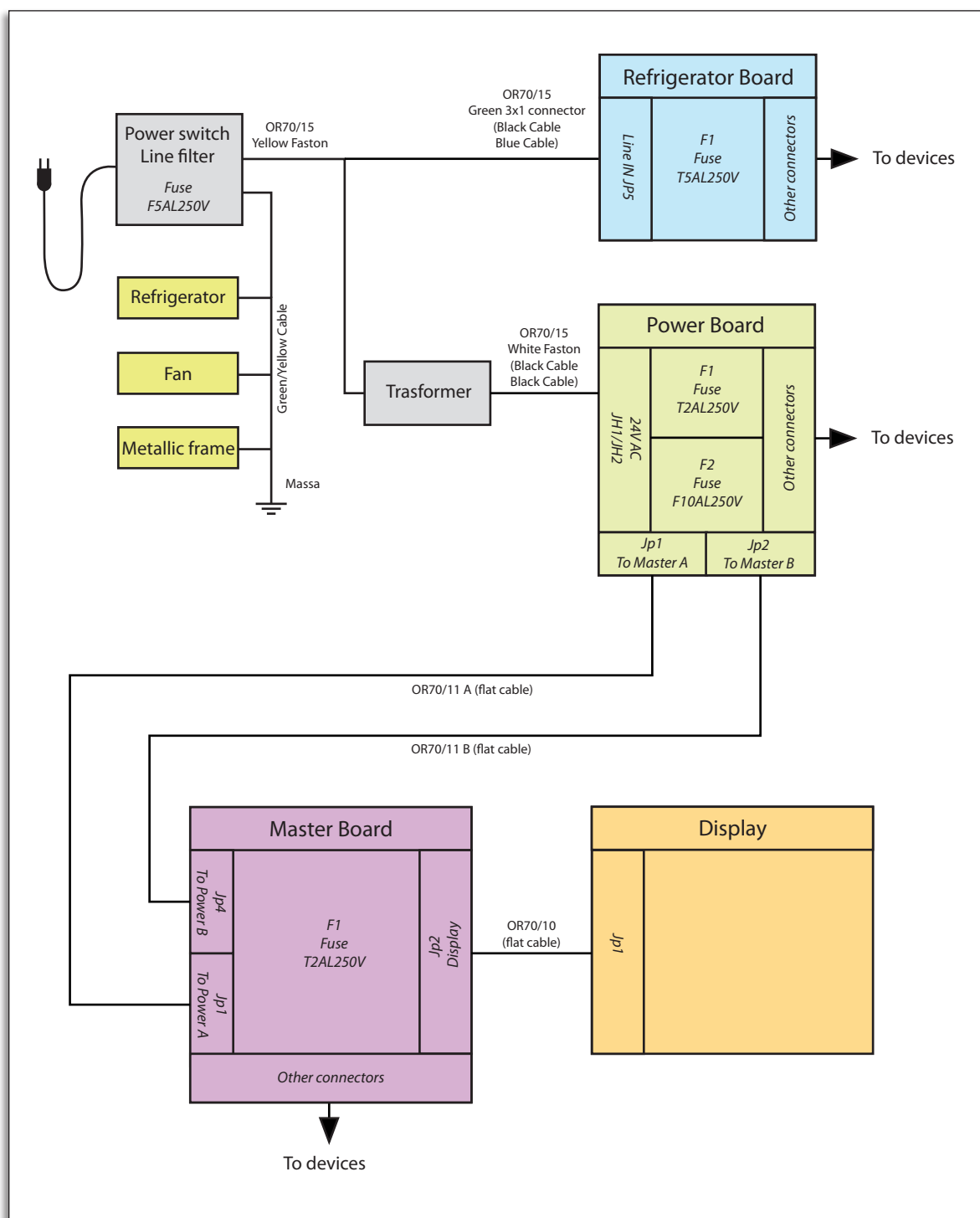


Figure 4.1.3 - Power supply

should be verified first.

Excluding the rear electric compartment and the fridge, all the machines internal device are supplied with less tension of 24V. This detail minimizes the danger situations caused by possible failure of the masses.

The diagrams in the figure 4.1.5, 4.1.6 and 4.1.7 show all the respective connections of the Master, the Power and the Fridge boards. The names of the connectors are indicated in the diagram, as well

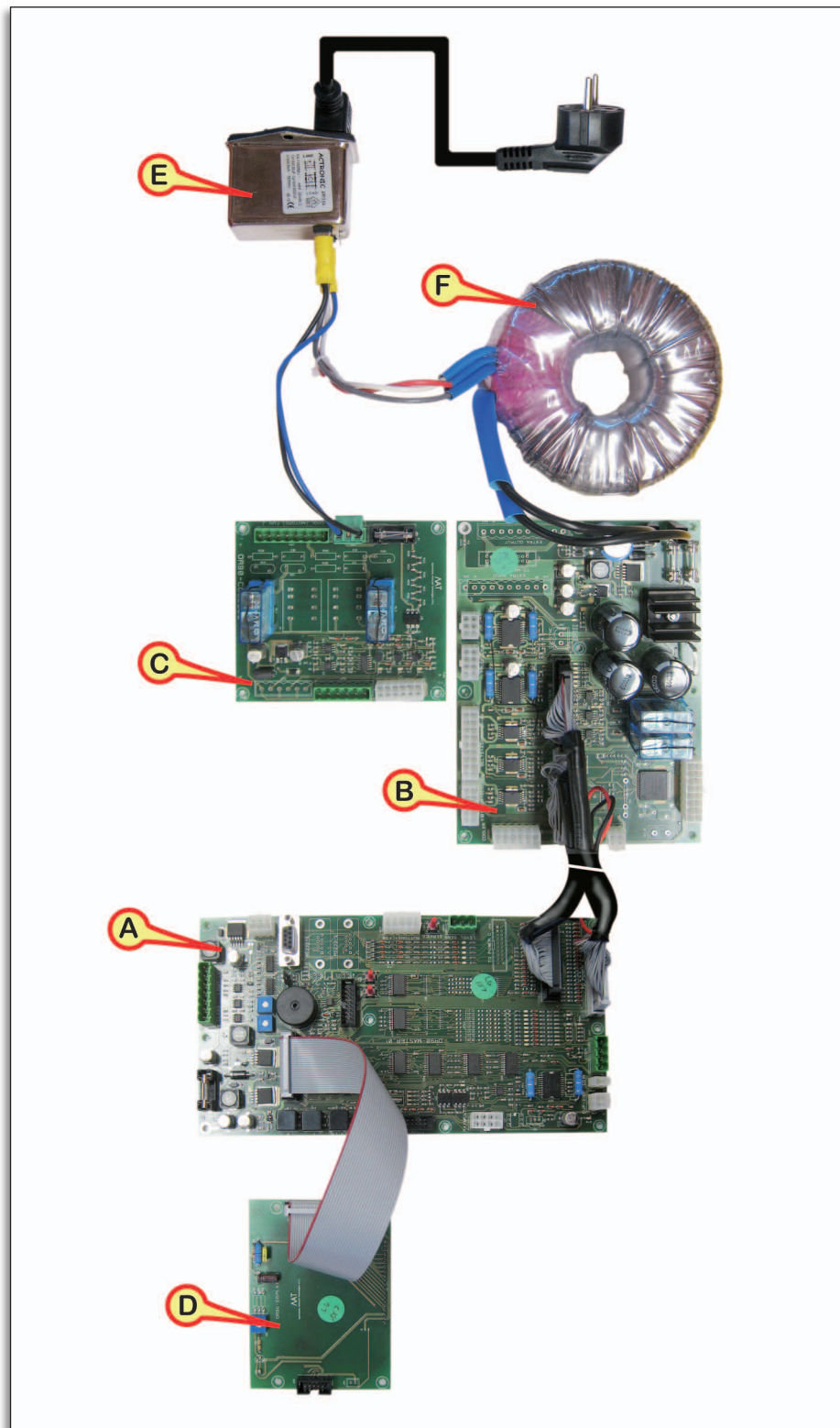


Figure 4.1.4 - Power connections

as on the boards and the connection cables. Each cable is unique and is conceived to be replaced without possibilities of error.

The firmware of the Master board execute diagnostic functions that allow to protect from the breakdown of the motor in case of jamming. In those cases, the vending machine automatically becomes out of service and generates encoded messages that allow the operator to identify and rapidly solve various problems. Thanks to this functionality the machine can almost always be easily

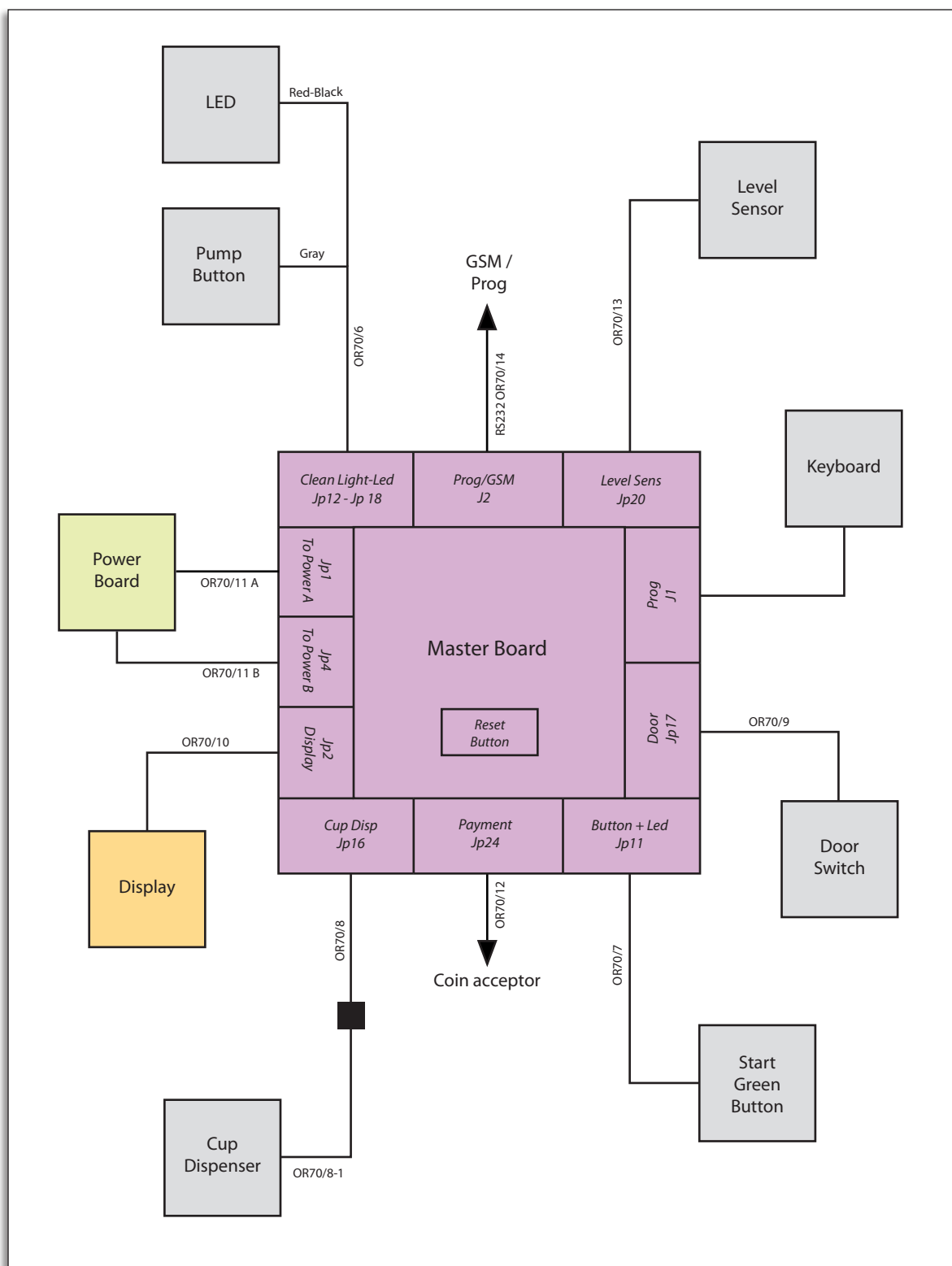


Figure 4.1.5 - Master board connection

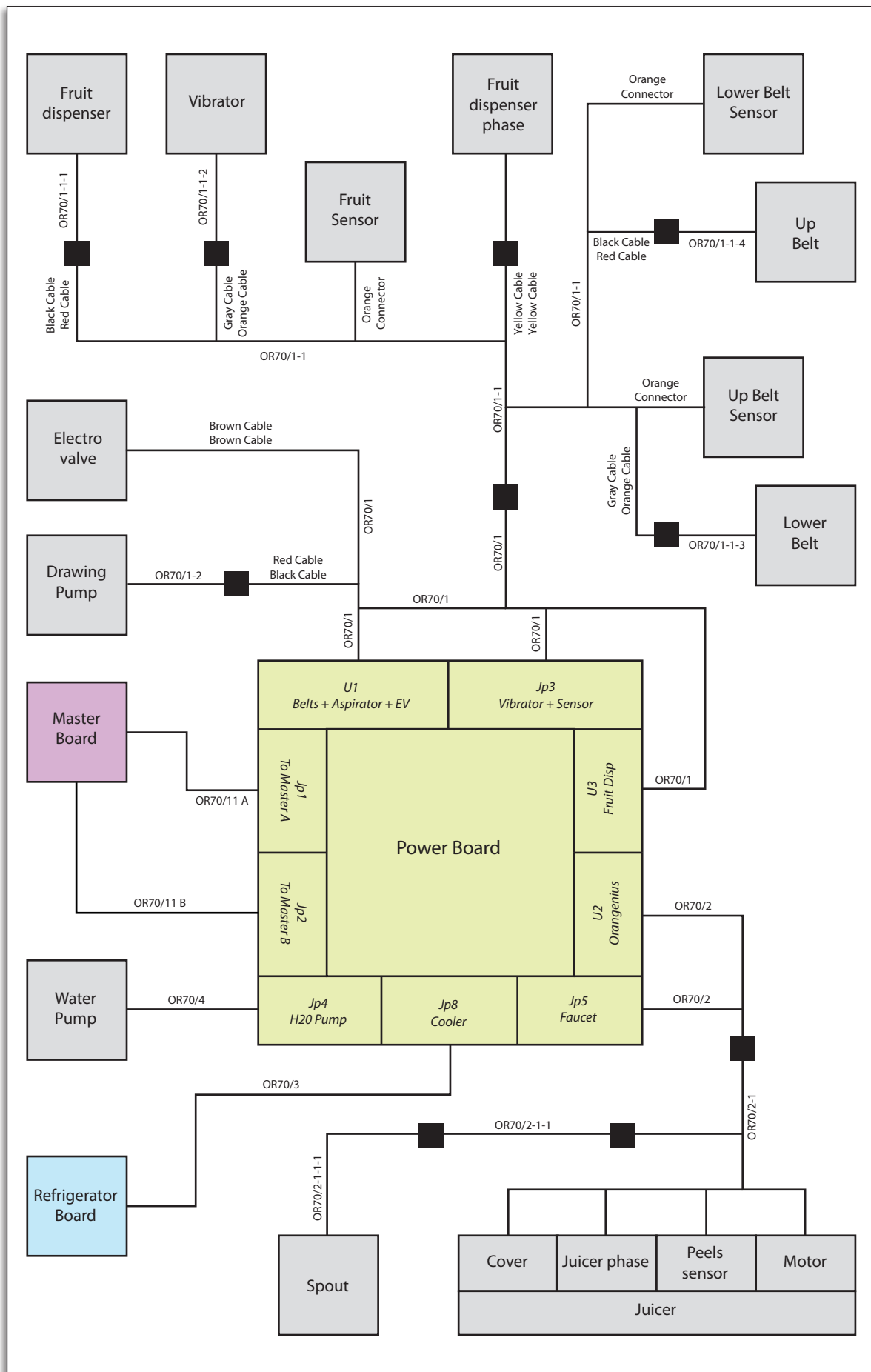


Figure 4.1.6 - Power board connection

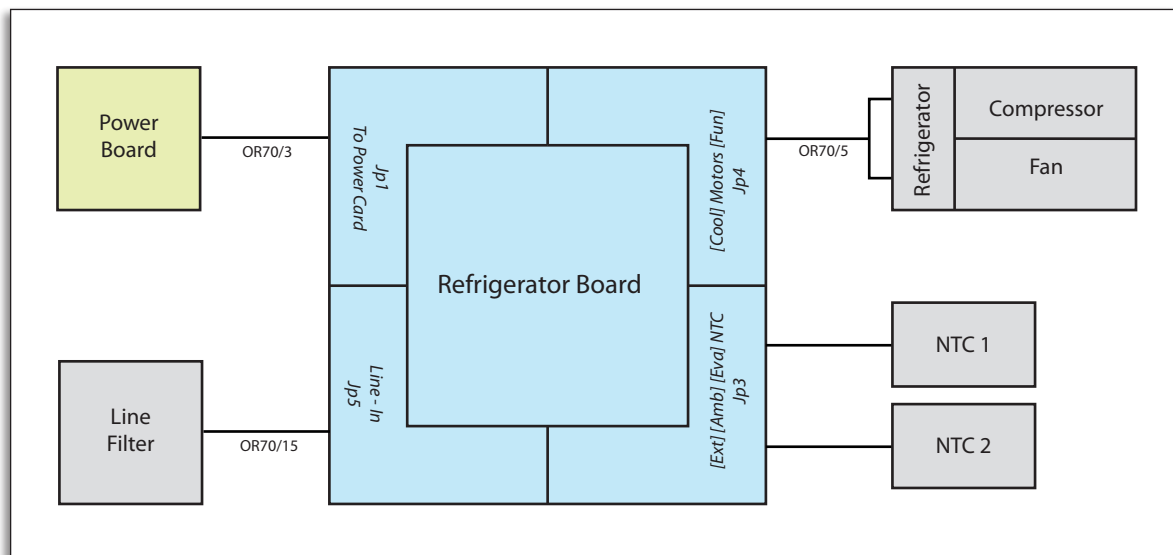


Figure 4.1.7 - Refrigerator board connection

restored without any specialized technical intervention.

Each time that an error message is generated, it would be appropriate to execute the test of the specific device through the keypad showed in figure 4.1.8 or by means of the +, -, Enter, Esc keys that are on the Master board (illus. 4.1.9). For more details please refer to chapter 5. The specific button to reset the system is placed in the center part of the Master board.

During all the operations keep in mind that, for security reasons, all the internal parts can be moved only when the door is closed. The (open / closed) status can be modified by pressing or pulling out the specific button located in the interior low part of the door (figure 4.1.10).

Some electrical devices, such as the motor of the orange dispenser, of the spout and of the cup dispenser are equipped with a switch to determine the initial phase. In the case that they would need to be replaced, it's important to remember that they come with specific cable and therefore the substitution can be done by operating on a unique connector.



Figure 4.1.8 - Keyboard

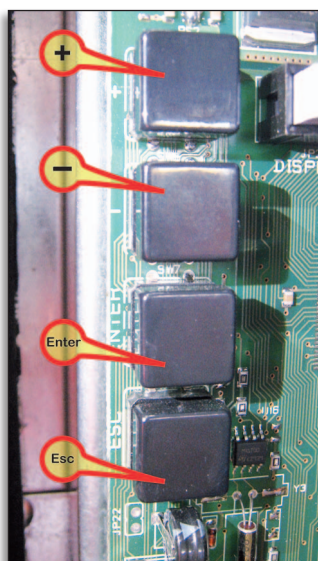


Figure 4.1.9 - Enter, Esc, +, -



Figure 4.1.10 - Door Switch

4.2 Juice level sensor

The quantity of juice can be determined by the effective level of squeezed orange juice in the cup. The level reading system is based on a pair of sensors placed on the side of the cup compartment (figure 4.2.1).



Figure 4.2.1 - Cup unit

The figure 4.2.2 shows how the sensors work and also how they identify an obstacle located at their height. It's necessary to execute the set up so that only the full cups constitute an effective obstacle for the sensors; for that reason the cups have to be transparent. During the normal functioning, the sensors indicate their proper status (free-busy) through the indicators located on the left device. When the sensors are free and work properly, the Led appear as on the left side in illustration 4.2.2. When the sensors are busy, both of the Led can be active or only the orange one.

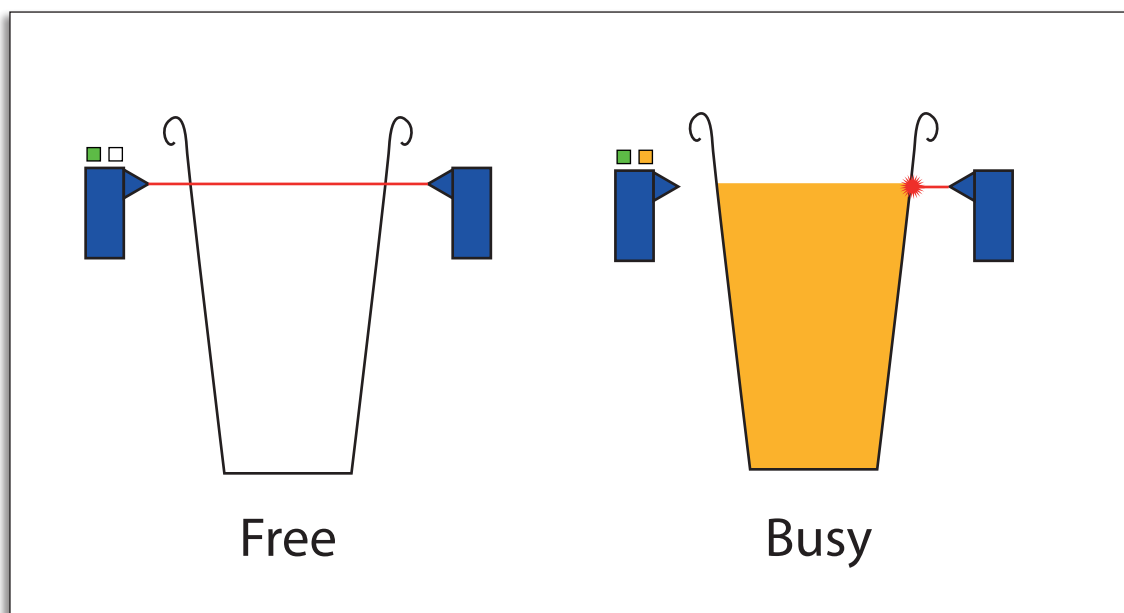


Figure 4.2.2 - Sensor operation

Generally, the level sensors that come with OR70 don't need any preliminary calibration. In some cases, however, such operation might be needed. It is necessary to proceed to a new calibration when you intend using different cups from those coming with the machine or in the case the machine is installed in highly different environmental conditions from the one in which the calibration has been originally done. For an optimal calibration, proceed to the following steps in order.

The figure 4.2.3 shows the left sensor on the "free" status and the small regulators on which it is necessary to proceed.

- Make sure that the trimmer T1 is in position "D" as shown in figure 4.2.3;
- Make sure that the trimmer T2 is on "max";
- Put a cup filled up with a mix of water (50%) and of orange juice (50%) in the cup compartment as shown in figure 4.2.5;
- Check out the status of the sensor:
 - if the sensor is busy no calibration is necessary,
 - if the sensor is free, slowly rotate the trimmer T2 to "min" until it becomes "busy" (figure 4.2.4).
- Control that with a cup full of juice the sensor indicates the status "busy".
- Control that with an empty cup the sensor indicates the status "free".

It's important to note that when the last verification turns out to be negative, the used cups are not appropriate for the level sensor functioning. In those cases, you should use more transparent cups or set up OR70 so that the supplied juice works by the number of squeezed oranges. For an optimal functioning, it is advisable to use antistatic cups and of a similar consistency of those coming with

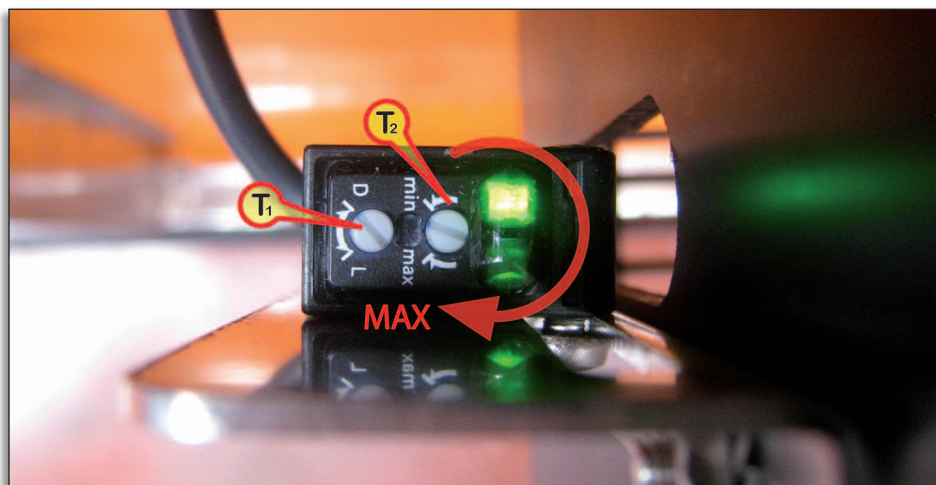


Figure 4.2.3 - Free state



Figure 4.2.4 - Busy state

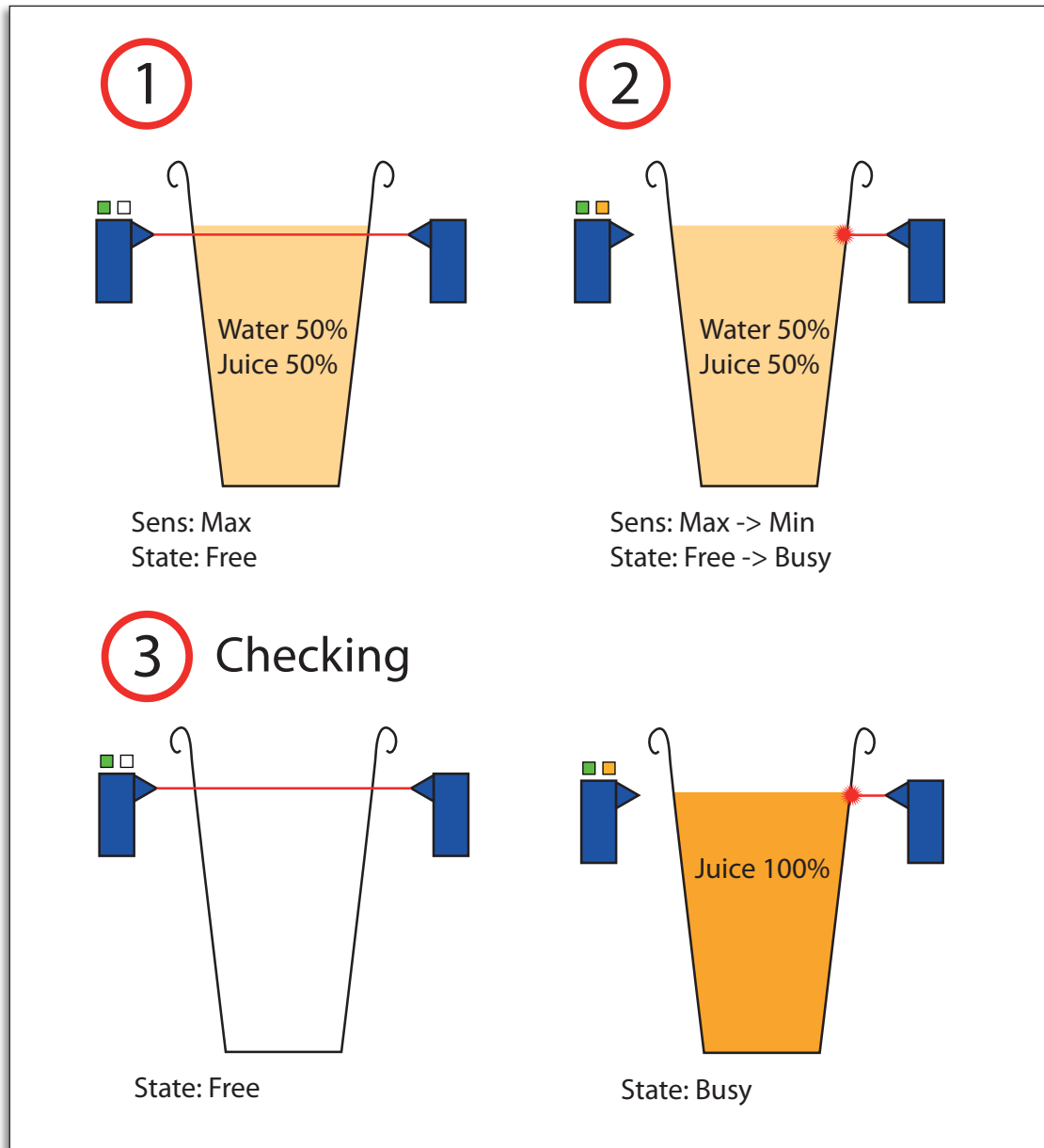


Figure 4.2.5 - Sensor calibration

the machine.

Keep in mind that when the intensity of the signal is too low the sensor will always be in the “free” status. In the other way around, when the intensity is too high, the sensor will stay in the “busy” status even if it is interposed by a cup full of juice.

To calibrate the amount of juice in the cup, set the two parallel sensors using the scale on the side of the cup compartment (figure 4.2.6).



Figura 4.2.6 - Juice scale

4.3 Orange counter sensor

The orange counter sensor (figure 4.3.1) allows to determine the quantity of supplied product related to the number of squeezed oranges. Generally, the sensor coming with the machine doesn't need any preliminary calibration even if, in some cases such operation might be necessary. The functioning of the machine is extremely easy to verify and can be done in a few seconds by positioning an orange as shown in the figure 4.3.2

The status of the sensor can be easily determined by reading the indicators. When the green led is the only one activated (figure 4.3.1) the sensor is on the "free" status, while when the orange led or both of them are activated, they are in the "busy" status (figure 4.3.2). When the calibration is correct it's possible to observe the switching from free/busy putting an orange in the orange dispenser. In some cases, it may occur that the sensor is not capable to correctly notice the presence of the orange and therefore it will be necessary to proceed to the calibration again. To proceed to the calibration it's possible to operate as in illustration 4.3.3.

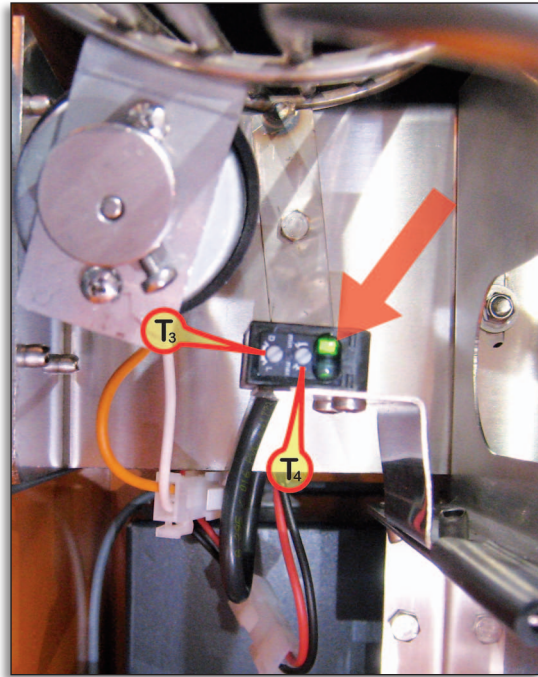


Figure 4.3.1 - Orange counter sensor

- Make sure that the trimmer T3 is positioned on "L";
- Put the trimmer T4 on max;
- Place an orange as shown in illustration 4.3.4;
- Slowly rotate the trimmer T4 towards min until the sensor switches to the "free" status.
- Check the functioning of the sensor once again.



Figure 4.3.2 - Orange counter sensor check

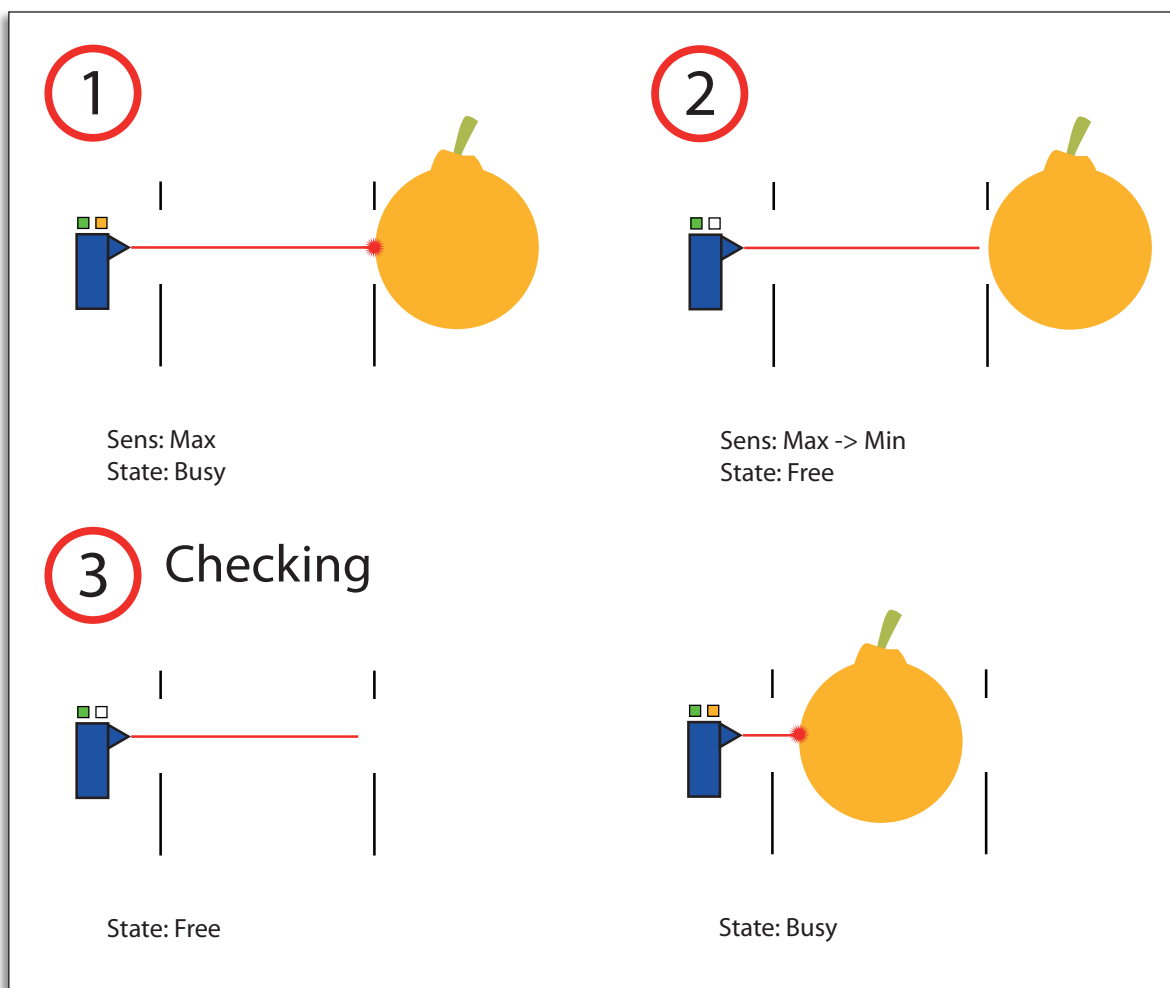


Figure 4.3.3 - Orange counter sensor calibration

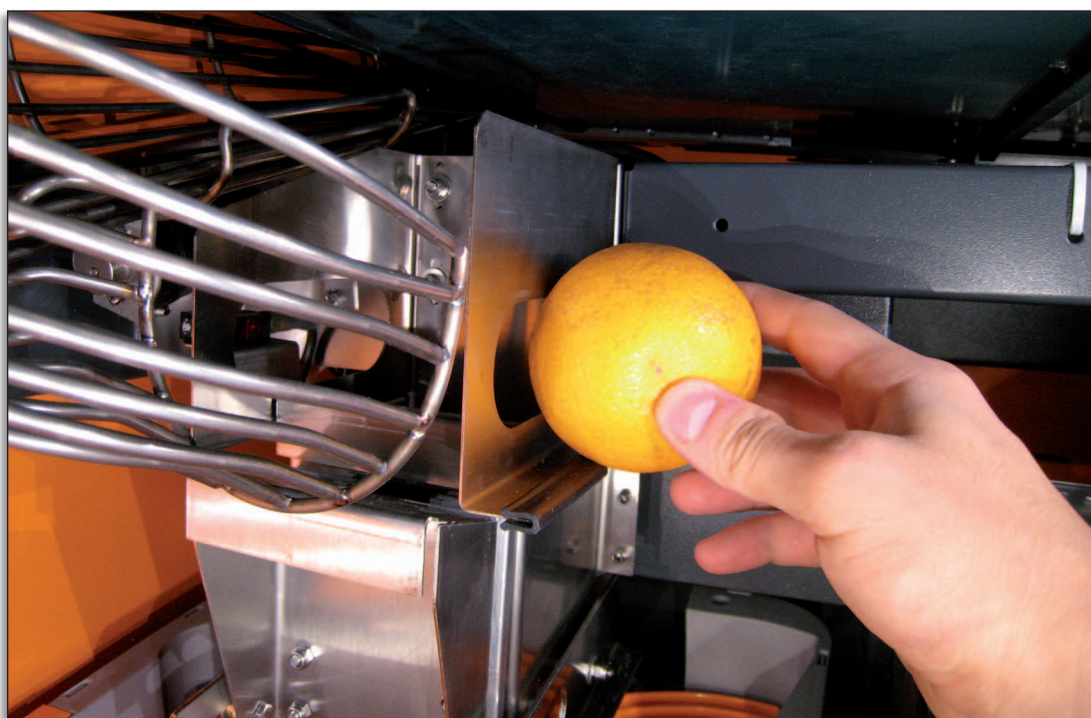


Figure 4.3.4 - Orange counter sensor calibration

English

4.4 Orange storage sensors

The figure 4.4.1 and 4.4.2 show the sensors of the orange storage for both the lower and upper conveyor belts. It's easy to understand how the activity of the conveyors depend on the status of the sensors: the movement is only stopped when the corresponding sensor is busy. Even if the storage sensors don't need any calibration, a rotation of the support that holds them might be necessary, so that their orientation appear as shown in the figures.



Figure 4.4.1 - Orange storage sensor (lower belt)

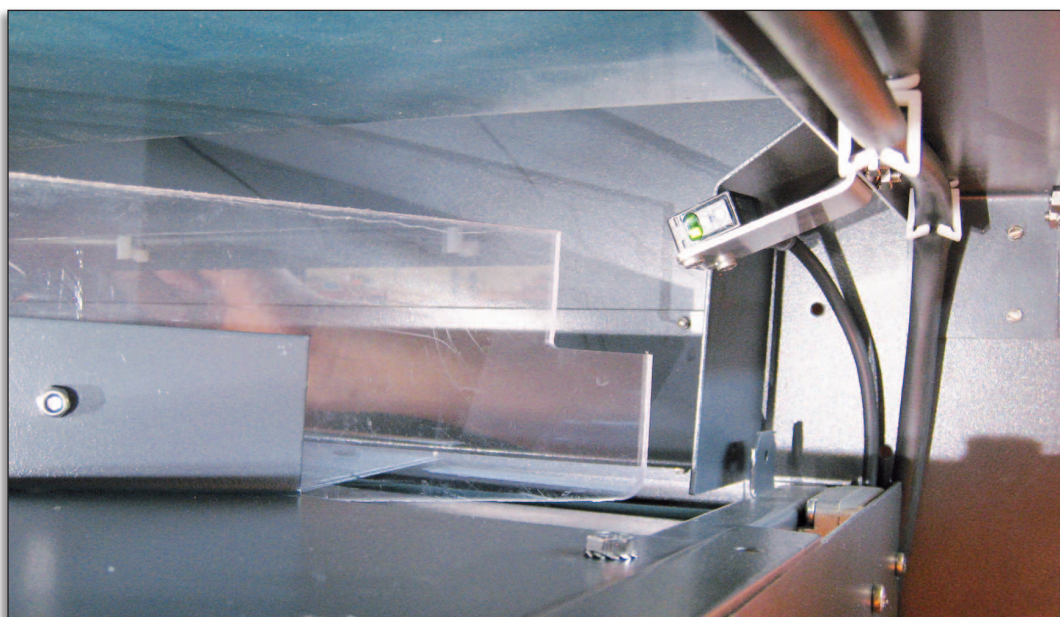


Figure 4.4.2 - Orange storage sensor (up belt)

5. Programming, interface and payment systems

The OR70 vending machines are equipped with a graphic digital display 128x64 for a more simple and immediate order management. The interaction between the final consumer and the machine is extremely basic; the product is supplied by simply inserting the required price and pressing the main control button. The figure 5.1 shows the consumer interface panel. Where you can see:

- 1 • Graphic display
- 2 • Main control button
- 3 • Coin slot
- 4 • Coin changer

For the programming of the machine, the operator disposes of a keyboard (figure 4.1.7), the keys on the Master board (figure 4.1.8) and the monitoring software from a PC (see para. 5.3).

The figure 5.2 shows a screenshot of the display during the startup of the vending machine. Above at the right it is indicated the version of the firmware that comes with the machine (figure 5.2 – A). When the start-up is done, the display appears as in figure 5.3 and the machine is ready to execute the first squeezed orange juice. At this state, you can visualize the time (figure 5.3 – C) and the internal temperature of the distributor (figure 5.3 – B).



Figure 5.1 - User interface panel



Figure 5.2 - Screenshot startup



Figure 5.3 - Main window

5.1 Operator menu

The menu of which the operator disposes to manage the machine presents a tree structure with sub-menus.

To access the menu you only have to press the “Enter” key on the Master board or on the keyboard, the display will appear as shown in figure 5.1.1. The four main entries:

- Sales settings
- Machine test
- Machine settings
- Sales status

are associated with the sub-menus described in the next paragraphs.

The keys “+” and “-“ allow to navigate between the many entries whereas the key “Enter” and “Esc” have the selection and function.



Figura 5.1.1 - Main menu window

5.1.1 Sales settings

The figure 5.1.1.1 shows all the entries of the Sales Settings sub-menu. To access it, select “Sales Parameters” in the main menu and press Enter. To navigate follow the procedure described in the previous paragraph.

S1 - Payment option: The figure 5.1.1.1 shows all the entries of the Sales Settings sub-menu. To access it, select “Sales Settings” in the main menu and press Enter. To navigate follow the pro-

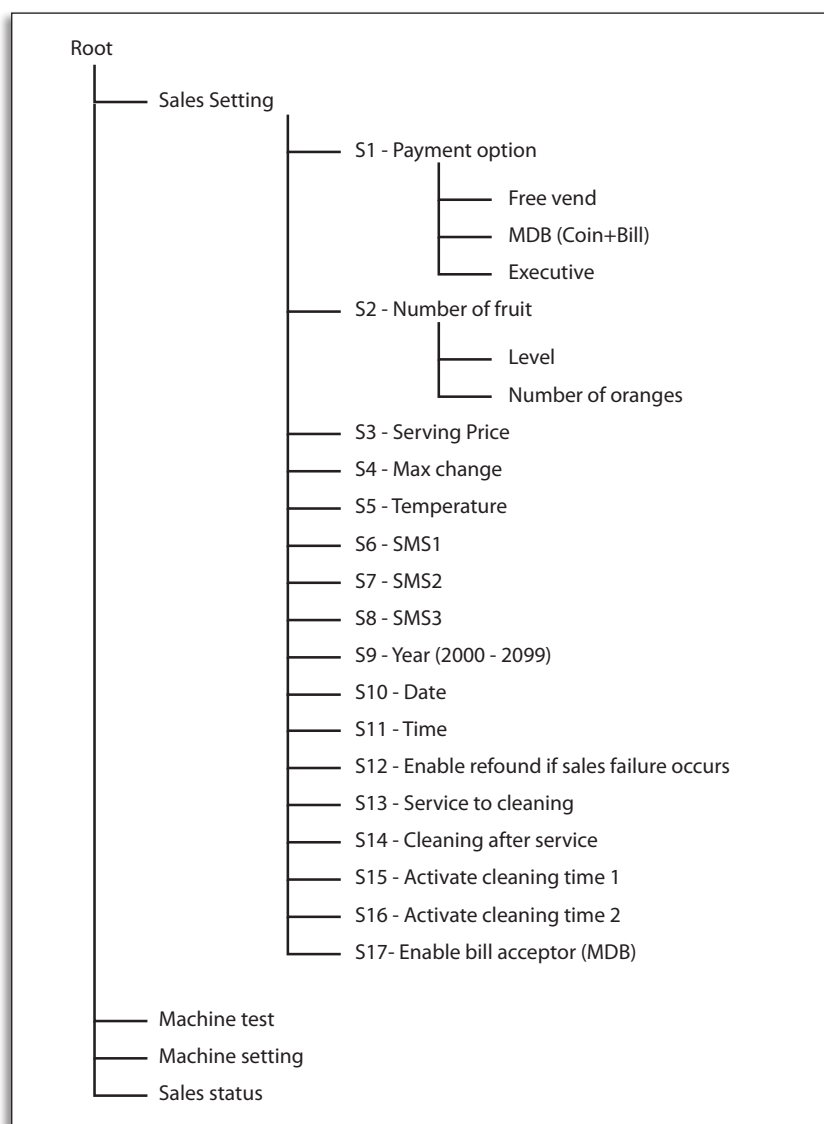


Figura 5.1.1.1 - Sales setting menu

cedure described in the previous paragraph.

S2 - Number of fruits: Selecting “level” the product is supplied by calculating the quantity of squeezed orange juice through the level sensors. On the other hand, if you select the number of oranges, the quantity of squeezed orange juice will be managed by counting the oranges through the orange counter sensors (figure 5.1.1.2.).

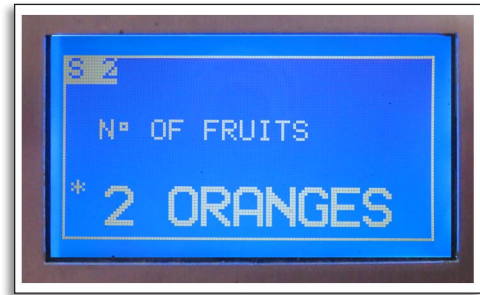


Figure 5.1.1.2 - Sales type

S3 - Serving price: Price of the squeezed orange juice in euro cents (also available in all currencies). For the credit management it is necessary to set up the type of sales on MDB or Executive.

S4 - Max change: The maximum amount of change that can release the coin changer in euro cents (or any other currency). This function is only available with the MDB protocol

S5 - Temperature: Internal temperature of the vending machine.

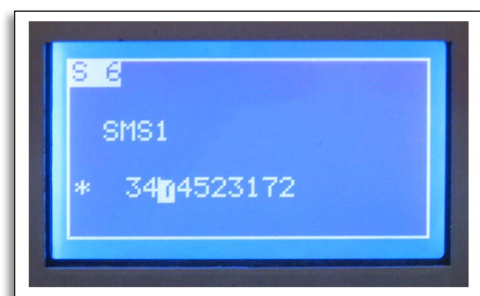


Figure 5.1.1.3 - Notification SMS number

S6 - SMS1: Phone number to send notices that are automatically generated from the machine. Go through the numbers by means of the Enter key and set them up using the keys + and – (figure 5.1.1.3).

S7 - SMS2: Phone number to send notices that are automatically generated from the machine.

S8 - SMS3: Phone number to send notices that are automatically generated from the machine.

S9 - Year (2000 - 2099): Year

S10 - Date: Date (month and day) figure 5.1.1.4



Figure 5.1.1.4 - Date

S11 - Time: Time

S12 - Enable refund if sales failure occurs: Allows to give back the change in case that the supplying is not successfully fulfilled because of an internal error of the machine.

S13 - Servings to cleaning: Number of squeezed juice between two subsequent cleaning cycles.

S14 - Cleaning after service: Cleaning cycles from the last serving

S15 - Activate cleaning time 1: First daily scheduled cleaning (figure 5.1.1.5).



Figure 5.1.1.5 - Programmed cleaning

S16 - Activate cleaning time 2: Second daily scheduled cleaning.

S18 - Enable bill acceptor (MDB): Allows to enable a MDB bill acceptor.

5.1.2 Machine test

The test machine menu allows to manually test the devices of the vending machine. To access it, select “machine test” from the main menu and press Enter. To navigate follow the described procedure in paragraph 5.1. The figure 5.1.2.1 shows all the available entries:

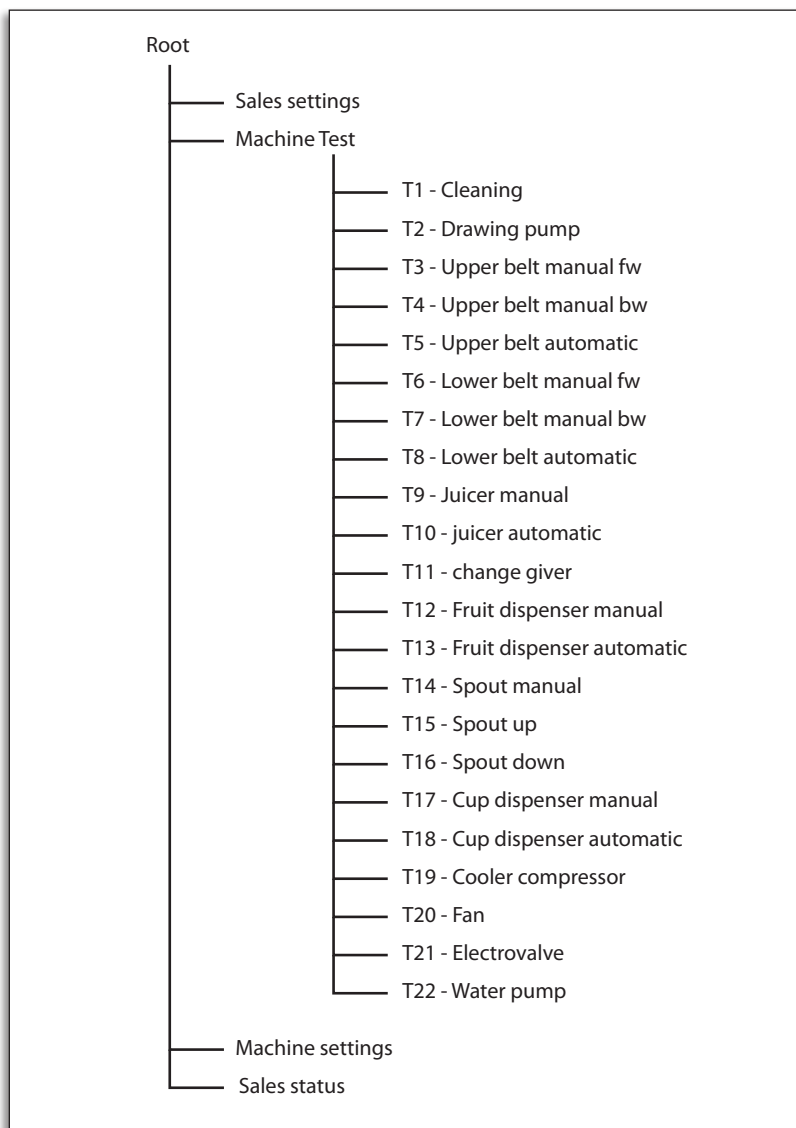


Figura 5.1.2.1 - Machine test menu

T1 - Cleaning: Enter, Esc, Door. To start a cleaning cycle press orderly Enter, Esc and then close the door.

T2 - Drawing Pump: Enter--> On/Off. Press Enter to activate or disable the drawing pump (figure 5.1.2.2).

T3 - Upper Belt Manual fw: Enter --> On/Off. Press Enter to move the upper belt forward (figure 5.1.2.3).

T4 - Upper belt manual bw: Enter--> On/Off. Press Enter to move the upper belt backwards.

T5 - Upper belt automatic: Enter. Press Enter to activate the automatic movement of the upper belt.

T6 - Lower belt automatic fw: Enter --> On/Off. Press Enter to move the lower belt forward.

T7 - Lower belt manual bw: Enter --> On/Off. Press Enter to move the lower belt backwards.

T8 - Lower belt automatic: Enter. Press Enter to activate the automatic movement of the lower belt.

T9 - Juicer manual: Enter --> On/Off. Press Enter to manually activate or disable the Juicer

T10 - Juicer automatic: Enter. Press Enter to start a complete cycle of the Juicer

T11 - Change giver: Enter. Press Enter to activate the motor of the coin changer (only for machines with installed changer)

T12 - Fruit dispenser manual: Enter --> On/Off. Press Enter to manually activate or disable the dispenser.

T13 - Fruit dispenser automatic: Enter. Press Enter to activate a complete cycle of the dispenser.

T14 - Spout manual: Enter --> On/Off. Press Enter to manually activate or disable the spout.

T15 - Spout up: Enter. Press Enter to bring up the spout

T16 - Spout down: Enter. Press Enter to bring down the spout.

T17 - Cup dispenser manual: Enter --> On/Off. Press Enter to manually activate or disable the cup-dispenser (figure 5.1.2.4).

T18 - Cup dispenser automatic: Enter. Press Enter to activate a complete cycle of the cup-dispenser.

T19 - Cooler compressor: Enter (funct. 5 sec.). Press Enter to activate the fridge motor for 5 seconds.

T20 - Fan: Enter (funct. 5 sec.). Press Enter to activate the fan for 5 seconds

T21 - Electrovalve: Enter --> On/Off. Press Enter to activate or disable the electro-valve

T22 - Water pump: Enter (funct. 3 sec.). Press Enter to activate the water pump for 3 seconds.

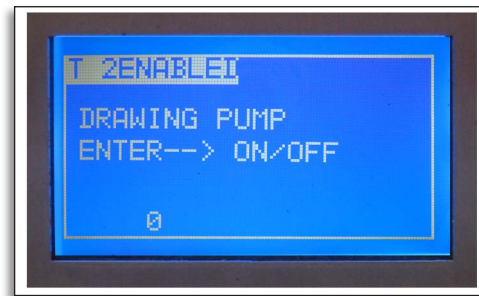


Figure 5.1.2.2 - Cleaning



Figure 5.1.2.3 - Upper belt manual activation

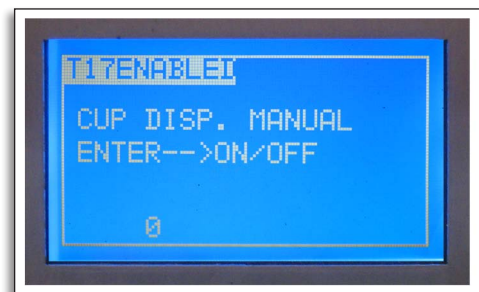


Figure 5.1.2.4 - Cup dispenser manual

5.1.3 Sales status

The sales status menu (figure 5.1.3.1) allows to visualize the counters of:

- Total Sales
- Partial Sales
- Total Fruits
- Partial Fruits
- Total Door
- Partial Door



Figure 5.1.3.1 - Sales status

The first two entries allow to have information on the sales status. The third and fourth entries respectively count the total and the partial number of squeezed oranges. The two last entries allow to count the number of times that the door of the vending machine has been opened; thanks to these counters it is possible to keep track of the executed maintenance operations. It's possible for the operator to reset the partial counters by pushing the "Enter" key. To access the sales status choose the corresponding entry from the main menu and press "Enter".

5.2 Control via PC and remote control

The AAT OR70 can be equipped with a GSM local and remote management system to be used by means of:

- Mobile Phone
- Personal computer

Through mobile phone it is possible to have the remote access to the fundamental information on the status of the machine and receive notice SMS and status of the machine by "calling" the phone number of the SIM card on the GSM inside the machine. It is possible to receive anytime and in real time a SMS with the following information:

- Date and time
- Serial number of the machine
- Partial sales
- Internal temperature
- Partial door counter
- Warnings or errors

That way the operator will always be informed on the necessary ordinary and extraordinary interventions and can ask the vending machine to know the status. Through a PC the operator can update the algorithms and the parameters, have the total remote control of all the automatism and obtain generated reports. Thanks to these functions it is possible to reduce to the minimum the specialized technical interventions, execute the loading operations only when it is necessary and eliminate the wrong use dead times due to eventual damages and internal malfunctions of the machine.

5.2.1 Communication via PC and updating download

The intent of this paragraph is to describe the necessary operations to connect your own PC to the vending machine and the features of the software that comes with the machine are also illustrated here. Before starting you need to dispose of a PC (Windows), of a USB-Serial Rs232 converter and of the Monitor OR70 software. To install the software on your own PC, you simply have to decompress the file "AAT OR70.zip", provided by the retailer and move the decompressed folder

“AAT OR70” on c:\. The c:\AATOR70 folder holds the file monitor OR70 containing the executable OR70_Monitor_x_xxx.exe and the configuration of the OR70 folder containing the updating of the parameters and the firmware provided by the distributor. In relation to the preferences of the user, it is possible to create a connection to the file C:\AAT_OR70\OR70_Monitor_x_xxx.exe and move it on the desktop. Connect the USB-Serial Rs232 converter in one of the USB port of your own PC and check that the driver is correctly installed. (figure 5.2.1.1):

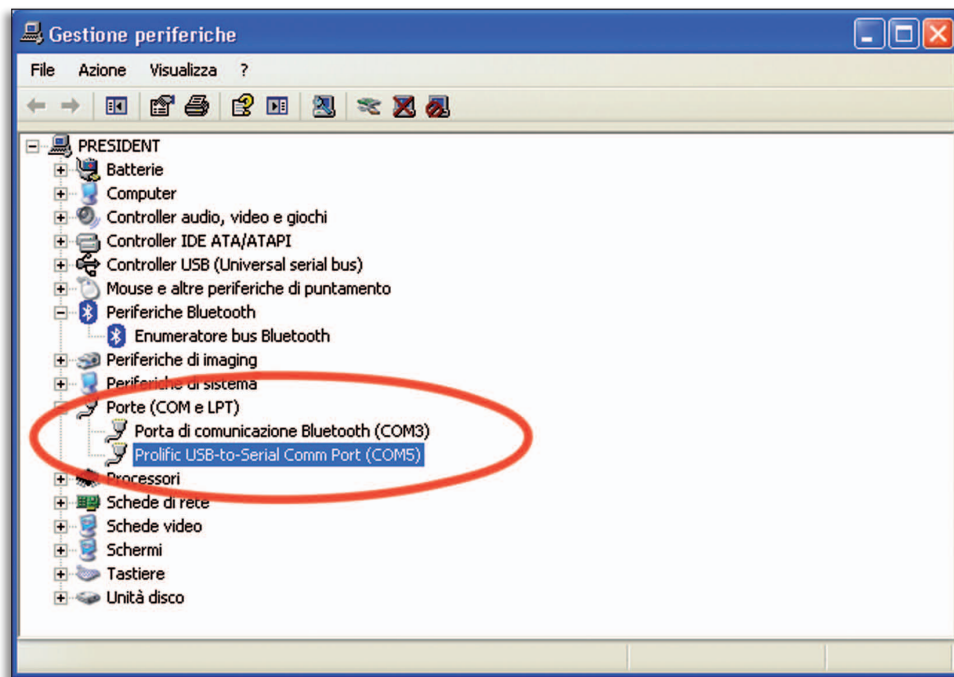


Figura 5.2.1.1 - Check driver, identification COM port

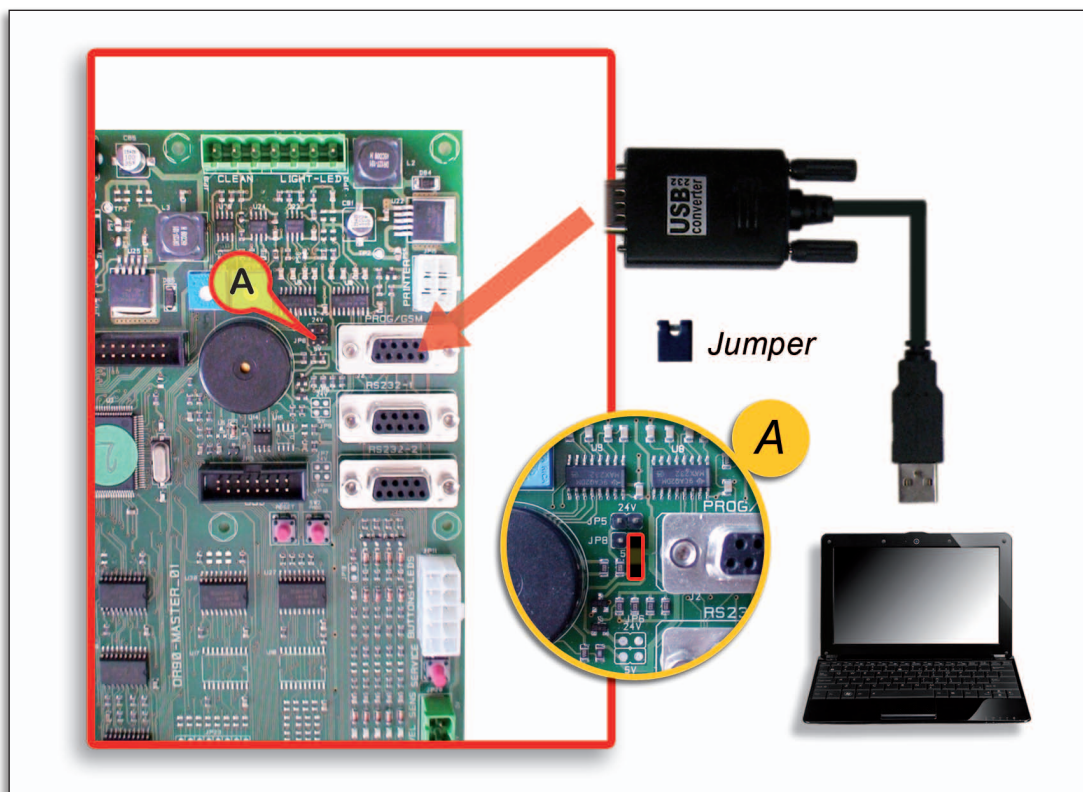


Figura 5.2.1.2 - USB-seriale converter connection / Master Board

Windows > Control Panel> System > Hardware > Device manager> Port COM

That same window allows to identify the COM port on which the device is connected to. Insert the DB9 connector of the USB- serial converter in the corresponding connector (GSM/Prog) of the Master board of the vending machine (figure 5.2.1.2). Make sure that the jumper is on the right position, as shown in figure 5.2.1.2 – A. Run the executable:

C:\AAT_OR70\monitor OR70\OR70_Monitor_x.xxx.exe

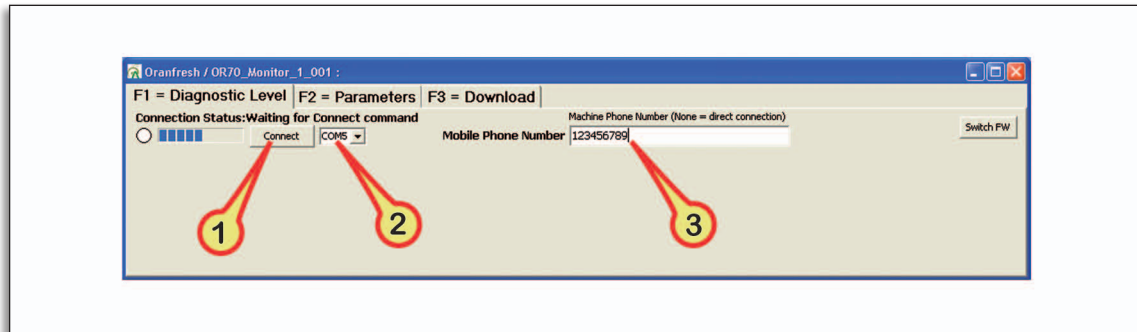


Figura 5.2.1.3 - Monitor Main Window

The figure 5.2.1.3 shows the main windows of the program.

To establish the connection set up from the drop-down menu (figure 5.2.1.3 - 2) first determine the COM port and press the connect key (figure 5.2.1.3 – 1). In this context, no numbers have to be inserted in the inset as shown in figure 5.2.1.3 – 3. When the connection is established it is possible to access the windows shown in the figures 5.2.1.1.1, 5.2.1.2.1 and 5.2.1.3.1.

5.2.1.1 Panel F1 diagnostic

The panel F1 = Diagnostic (figure 5.2.1.1.1) foresees a Juicer section (figure 5.2.1.1.1 – F11) for the test of the juicer, a Machine State section (figure 5.2.1.1.1 - F12) to read the machine state, a Electro Valve/Pump section (figure 5.2.1.1.1 - F13) for the hydraulic circuit test, a Motors section (figure 5.2.1.1.1 F14) for the motors test, a Display section (figure 5.2.1.1.1 - F15) to relate some viewed

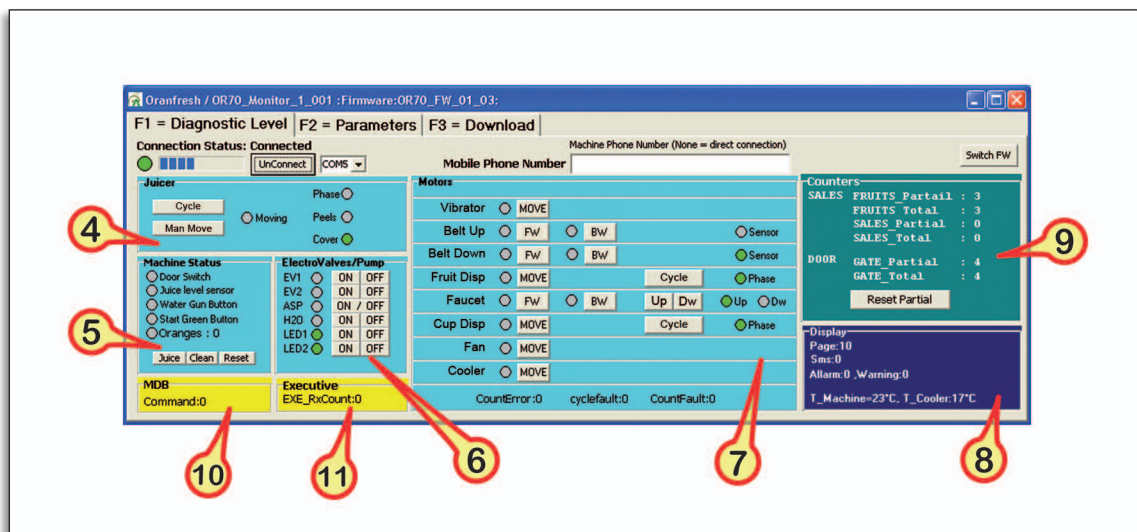


Figura 5.2.1.1.1 - F1Window = Diagnostic

information on the display, a Counters section (figure 5.2.1.1.1 - F16) for the counting of some important parameters, a MDB section (figure 5.2.1.1.1 - F17) for the diagnostic of the MDB connection and a Executive section (figure 5.2.1.1.1 - F18) for the diagnostic of the Executive connection.

F1₁ • Juicer

Button Cycle: the juicer executes a complete cycle and then returns to the home position.

Button Man Move: the movement of the juicer is performed when you press the key

Moving Indicator: becomes green when the machine is working, grey in the other cases

Phase Indicator: becomes green when the machine is working, grey in the other cases.

Peels Indicator (optional): becomes green when the sensor of the peel container is busy (full recipient), grey in the other cases.

Cover Indicator: becomes green only when the butterfly lever of the cover is correctly positioned, grey in the other cases.

F1₂ • Machine state

Door Switch Indicator: becomes green when the door is closed (door push button is pressed), grey in the other cases.

Juice Level Sensor Indicator: becomes green when the level sensor is busy, grey in the other cases.

Water Gun Button Indicator: becomes green when the water pump push button is pressed, grey in the other cases.

Start Green Button Indicator: becomes green when the main control button is pressed, grey in the other cases.

Oranges Indicator: becomes green when the orange counter is busy, grey in the other cases.

Oranges Counter: it is incremented in every cycle of the fruit dispenser during each squeezed juice.

Juice Button: a complete squeezing cycle is performed

Clean Button: a complete cleaning cycle is performed

Reset Button: the vending machine mechanic parts return to their home position

F1₃ • ElectroValve/Pump

EV1 Indicator: the indicator becomes green when the first electro valve is activated.

EV1 On Button: activates the first electro valve.

EV1 Off Button: disable the first electro valve

EV2 Indicator (optional): the indicator will become green when the second electro valve is activated.

EV2 On Button (optional): activates the second electro valve

EV2 Off Button (optional): disable the second electro valve.

ASP Indicator: the indicator will become green when the drawing pump is activated, grey in the other cases.

ASP On/Off Button: press the button to activate or disable the drawing pump.

H2O Indicator: the indicator will become green when the water pump is activated, grey in the other cases.

H2O On Button: activates the water pump.

H2O Off Button: disables the water pump.

LED1 Indicator: the indicator becomes green when the first LED group is activated, grey in the other cases.

LED1 On Button: activates the first LED group.

LED1 Off Button: disables the first LED group

LED2 Indicator: the indicator becomes green when the second LED group is activated, grey in the other cases.

Pulsante LED2 On Button: activates the second LED group

Pulsante LED2 Off Button: disables the second LED group

F1₄ • Motors

Vibrator indicator: the indicator becomes green when the vibrator is activated, grey in the other cases.

Vibrator button: the vibrator is activated when you press the button.

Up Belt Indicator FW: the indicator will become green when the upper belt moves forward, grey in the other cases.

Up Belt Button FW: when you press the key the upper belt moves forward.

Up Belt Indicator BW: the indicator will become green when the upper belt moves backwards, grey in the other cases.

Up Belt Button BW: when you press the key, the upper belt moves backwards.

Up Belt Sensor Indicator: the indicator will become green when the upper belt sensor is busy, grey

in the other cases.

Lower Belt indicator FW: the indicator will become green when the lower belt moves forward, grey in the other cases.

Lower Belt Button FW: when you press the key, the lower belt moves forward.

Lower Belt Indicator BW: the indicator will become green when the lower belt moves backwards, grey in the other cases.

Lower Belt Button BW: when you press the key, the lower belt moves backwards.

Lower Belt Sensor Indicator: the indicator will become green when the lower belt sensor is busy, grey in the other cases.

Fruit Disp Indicator: the indicator will become green when the fruit dispenser is moving, grey in the other cases.

Fruit Disp Move Button: the fruit dispenser moves when you press the key.

Fruit Disp Cycle Button: the fruit dispenser executes a complete cycle and then returns to the home position.

Fruit Disp Phase Indicator: the indicator will become green when the dispenser assumerà colore verde quando il cadenzatore è in fase, grigio negli altri casi.

Spout Button FW: when the button is pressed the spout executes a counterclockwise rotation.

Spout Indicator BW: the indicator will become green when the spout executes a clockwise rotation, grey in the other cases.

Spout Button BW: when the button is pressed the spout executes a clockwise rotation.

Spout Button UP: the spout will go in stand-by position.

Spout Button DW: the spout will go in supplying position.

Spout Indicator UP: the indicator will become green when the spout goes in stand-by position, grey in the other cases.

Spout Indicator DW: the indicator will become green when the spout is in the supplying position, grey in the other cases.

Cup Disp Indicator: the indicator will become green when the cup dispenser is moving, grey in the other cases.

Cup Disp Move Button: when the button is pressed the cup dispenser executes a movement.

Cup Disp Cycle button: the cup dispenser goes in the initial position.

Cup Disp Phase Indicator: the indicator will become green when the cup dispenser is on the initial position, grey in the other cases.

Fan Indicator: the indicator will become green when the fan is activated, grey in the other cases.

Fan button: activates the fan (5 sec).

Cooler Indicator: the indicator will become green when the cooler is activated, grey in the other cases.

Cooler Button: activates the cooler (5 sec).

Fault Cycle: decrement counter indicating the maximum number of executable cycles for the supplying of squeezed juice (starting value 12). When the counter assumes the value 0 an error is generated and the Error Count increases of 1.

Fault Count: decrement counter indicating the difference between the number of dispenser cycles and the number of oranges that passed in front of the orange counter sensor (starting value 7). When the counter assumes the value 0 an error is generated and the Error Count increases of 1.

Error Count: counter of the generated errors (during the squeezing process) (Fault Cycle and Fault Count). When the counter assumes values equal to 3, an alarm is generated and the vending machine becomes automatically Out of Service.

F1₅ • Counters

Partial Fruit: Partial counter of the squeezed fruits.

Total Fruit: Total counter of the squeezed fruits.

Partial Sales: Partial sales.

Total Sales: Total sales.

Partial Door: Gate opening partial counter.

Total Door: Gate opening total counter.

Partial reset key: Partial reset of the counters.

F1₆ • Display

Page: Display home page.

Alarm: Last generated error. An alarm causes the machine to stall and the consequent Out of Service.

Warning: Last generated warning. A warning doesn't cause the machine to stall, but warns the operator that a maintenance operation will be necessary as soon as possible.

Machine T: Internal temperature of the machine.

Cooler T: Cooler temperature measured on the evaporator.

5.2.1.2 F2 Sale Parameters Panel

Through the F2 panel Sales Parameters (figure 5.2.1.2.1) it is possible to upload or download some sales parameters of the machine in a different way comparing to what we have already seen in paragraph 5.1.1.

All the values can be saved or downloaded from a .dat file whose path needs to be indicated in the text box showed in figure 5.2.1.2.1 - 1. In the case in which you would want to determine a common sales configuration on many machines you only have to save the configuration on the file pressing the Save to file key (for example my .dat configuration). Then it will be possible to recall it through the Load from File key (figure 5.2.1.2.1 - 2).

Thanks to this function, the definition of the sales parameters doesn't need the access of every single entry of the menu.

After having downloaded the parameters of the .dat file always save them on the machine through the "send to machine" key. On the other way around, if you wish to acquire the parameters of the machine it is possible to use the "load from machine" key (figure 5.2.1.2.1 - 3). For more information on the parameters of the machine (figure 5.2.1.2.1 - 4) please see paragraph 5.1.1

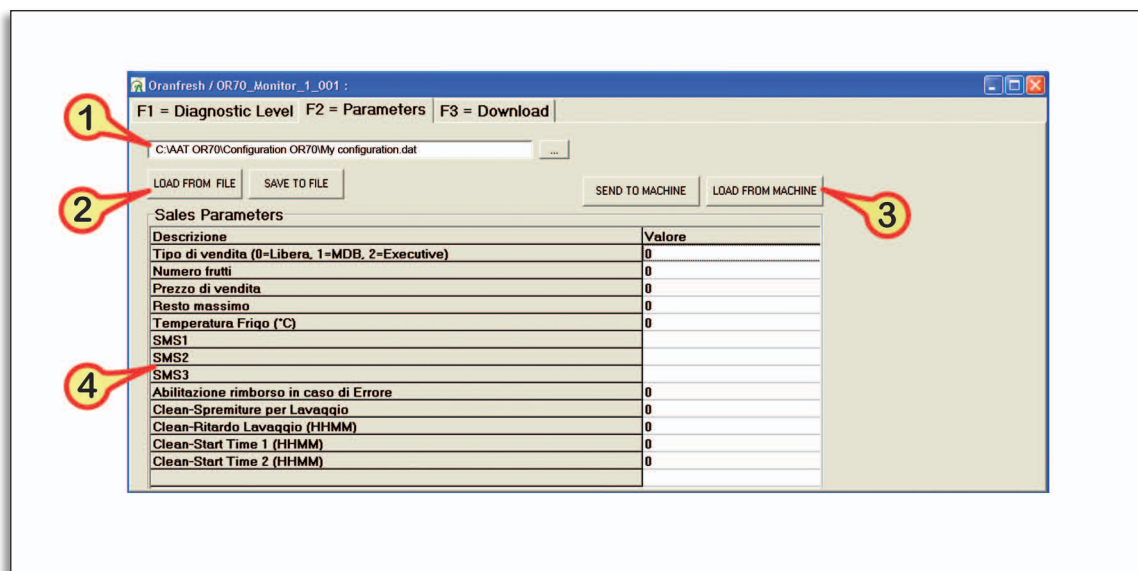


Figura 5.2.1.2.1 - F2 Window = Parameters

5.2.1.3 F3 Download Updated Panel.

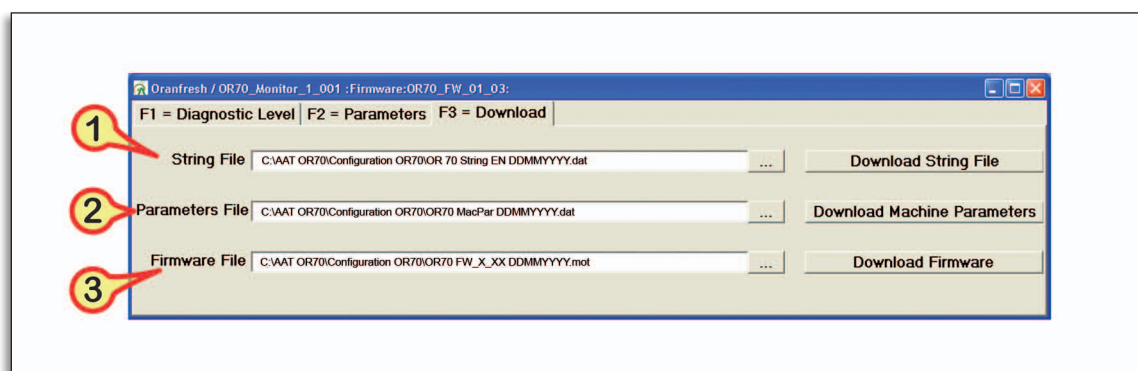


Figura 5.2.1.2.3 - F3 Window = Download

The F3 window (figure 5.2.1.3.1) allows the operator to have the machine updated, downloading the different updating made available from the manufacturer. The updating can concern the strings (the language), the parameters of the machine (specific numerical values used from the algorithm), the firmware (the algorithm that manage the functioning of the machine). Each one of these files can be singularly provided or as part of an updating package, also containing the new versions of the Monitor. In the last case, if the installation has been correctly executed as described, it will be possible to identify the following files:

C:\AAT OR70\Configuration OR70\OR 70 String EN DDMMYYYYY.dat

C:\AAT OR70\Configuration OR70\OR70 MacPar DDMMYYYYY.dat

C:\AAT OR70\Configuration OR70\OR70 FW_X_XX DDMMYYYYY.mot

The path are automatically loaded on the F3 window when the monitor starts (figure 5.2.1.2.3 - 1, figure 5.2.1.2.3 - 2, figure 5.2.1.2.3 - 3). In the case in which you receive the files singularly it's possible to call them back using the searching key placed at the right of each text box.

Please note that DDMMYYYYY indicates the issued date of the version while X_XX the firmware version.

5.2.2 Connections, configuration and GSM utilization

All the operations that are executed locally through the direct connection between PC and OR70 can be remote controlled through the GSM modem. To be able to use this function you need to have two data transmission SIM and preliminarily check the reception of the chosen provider.

Follow the steps described hereafter to connect and set up the GSM modem.

- Only install GSM module provided by your own retailer.
- Remove the protection PIN from the SIM.
- Insert the SIM in the appropriate space of the GSM modem shown in figure 5.2.2.1 - A1 and move to the right the flap that is placed at the left of the SIM.
- Follow the scheme shown in figure 5.2.2.1 to connect the cables that come with the machine to the GSM modem. Insert the jumper as shown in figure 5.2.2.1 - B.

The power is supplied correctly when the SIM always has the red indicator switched on (figure 5.2.2.1 - A2). When the red indicator slowly flashes the modem has revealed the GSM network and goes in stand-by, during the communication this indicator will flash faster.

After having executed all the connections, to establish a GSM remote connection with OR70 you simply have to repeat the operations shown in paragraph 5.2.1 inserting in the text box of figure 5.2.1.3 - 3 the phone number of the SIM placed on the vending machine.



Warning

To establish a GSM connection inevitably introduces delays on the commands given to the vending machine. In some cases, few seconds might pass between the instant in which you give the order and the instant in which it is executed.

When the vending machine has a GSM modem it is also possible:

- To receive notices on mobile phone by SMS
- Question the machine to be aware of the status

The phone numbers (up to 3) to whom are sent all the notices can be set up from the control panel

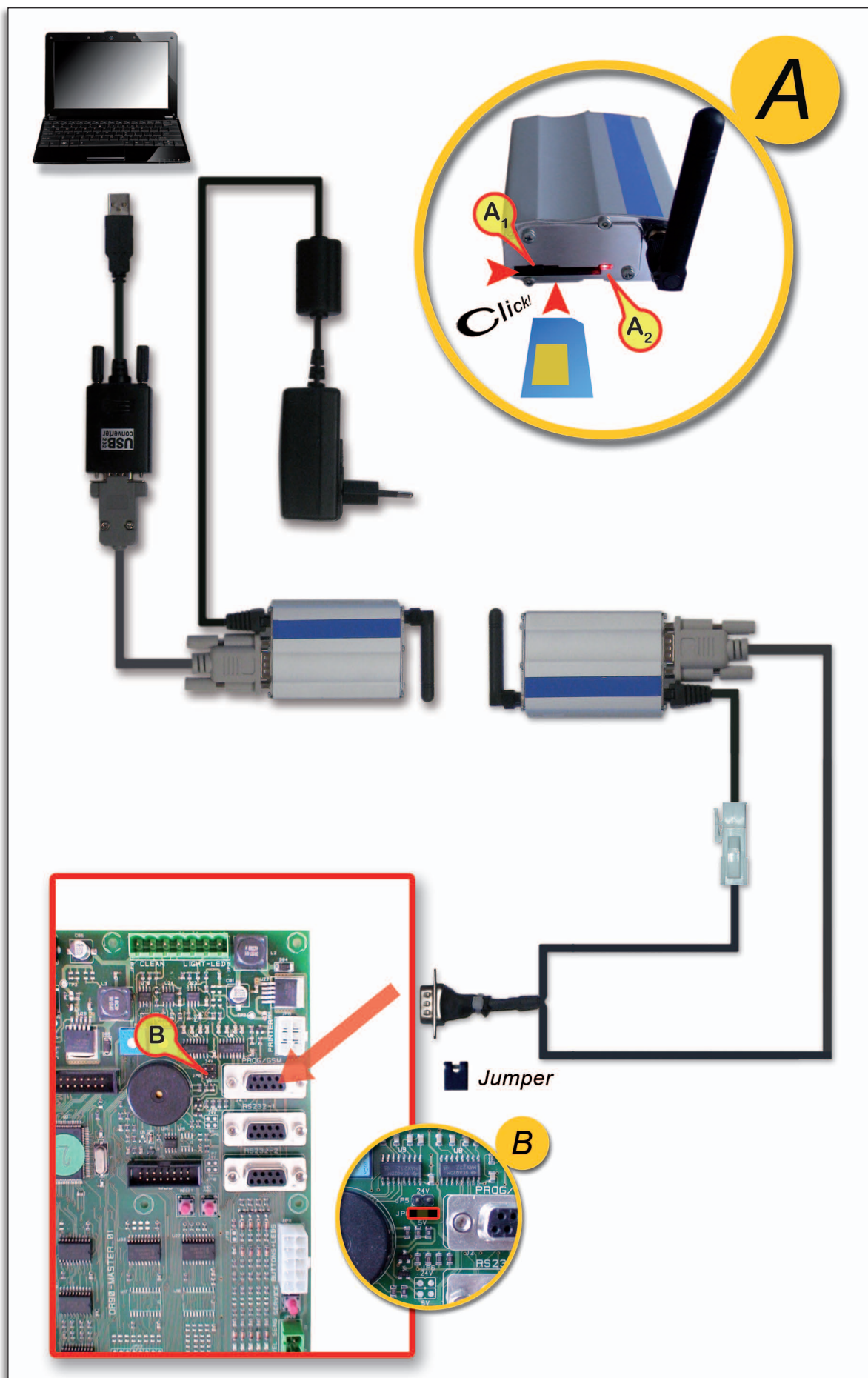


Figura 5.2.2.1 - GSM connections

of the OR70 (see paragraph 5.1.1) or through the Monitor (see paragraph 5.2.1.2). The notices are automatically generated in case of warning or error (see Chapter 6) from those which the vending machine needs the operators intervention (ex. necessity to load the fruit storage, empty peels waste container full, etc.).

To become aware of the status of the machine you only have to dial from your own mobile phone the SIM number put on OR70 and wait at least 5 seconds before ending the call. After a few seconds the vending machine will send a SMS containing the following information:

- Date and Time
- Serial Number and assigned name of the machine
- Number of sales
- Number of door opening
- Internal temperature
- Eventual errors or alarms

5.3 Payment systems

The OR70 vending machines can manage three payment modes.

- *Free sale*: squeezed juice is supplied for free.
- *MDB*: the credit is managed by the MDB slave device.
- *Executive*: the credit is managed by the Executive Master device.

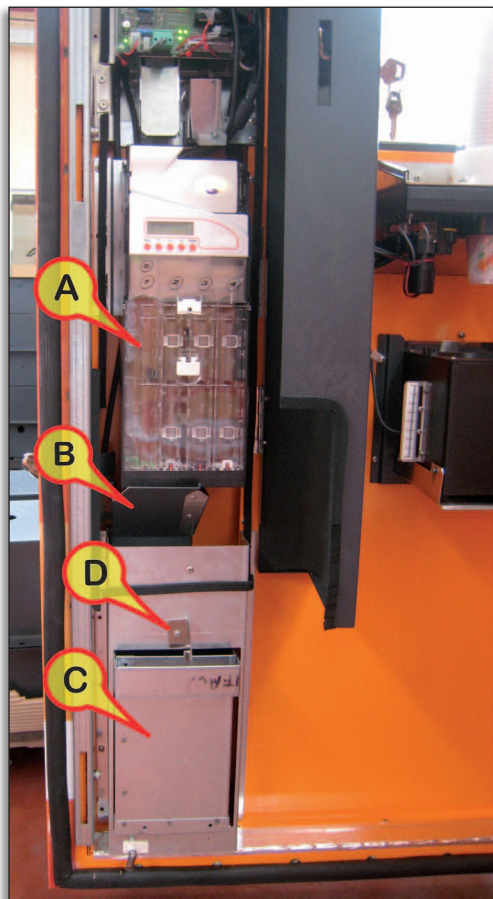


Figure 5.3.1 - Coin acceptor and coin box



Figure 5.3.2 - Coin acceptor Installation

It's possible to set up the desired mode directly from the sale parameters menu of the control panel (see paragraph 5.1.1) or through the F2 window of the Monitor (see paragraph 5.2.1.2); through these menus you can set up the price of the squeezed juice when the devices for the credit management are in VMC mode.

When the vending machine is equipped with a coin acceptor it appears as in figure 5.3.1. You can differentiate the coin acceptor (figure 5.3.1 - A), the coin slot (figure 5.3.1 - B), the coin box (figure 5.3.1 - C) and the relative closing (figure 5.3.1 - D). The coin box collects the profit from the servings. During the installation, pay attention that the coin slide (figure 5.3.2 - E) is well aligned with the corresponding entry on the coin acceptor; in the case in which the device foresees to use a coin changer button, position the lever (figure 5.3.2 - F) in a way that while you press the metallic button you can still operate on the coin acceptor button. The regulation screw is showed in figure 5.3.3

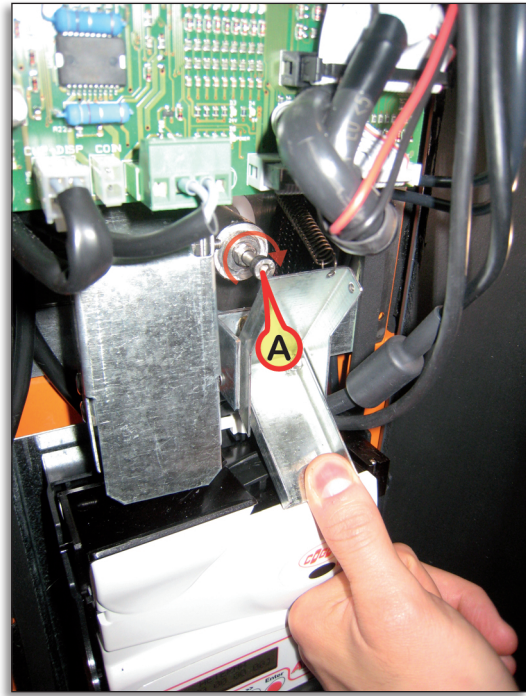


Figure 5.3.3 - Regulation screw

The OR70 is equipped with a cable (OR70/12) to connect both MDB and Executive protocols, (figure 2.3.1) for more details, the figure 5.3.3 shows the electrical scheme. The connector 1 has to be connected to the Jp24 payment connector on the Master Board as shown in figure 4.1.5, the connector 2 allows the connection of the MBD devices while the 3 and 4 are relative to the Executive ones.



Warning

The cable for the connection of the coin acceptor is unique for the MDB devices and also for the Executive ones. Never connect simultaneously two different types of devices on the same cable.

During the connection of the payment systems keep in mind the following:

- MDB coin/ bill acceptor can be directly connected to the Master Board of the OR70. The bill acceptors have to be enabled through the specific entry menu of the sale parameters (see paragraph 5.1.1).
- EXECUTIVE coin acceptors can be directly connected on the Master Board of the OR70.
- EXECUTIVE bill acceptor have to be connected on the coin acceptor and can be directly connected on the Master Board of the OR70.

In the case in which the supplying of the product fails the vending machine gives the inserted credit back. It's possible to enable or disable this function through the specific sale parameters entry menu (see paragraph 5.1.1).

In the MDB case, the maximum amount of change that can be given back has to be set up from the sale parameters menu (see paragraph 5.1.1). Keep in mind that the correct supplying of the change depends on a correct configuration of the coin acceptor. In some cases, the device is able to supply

the change only when the internal tubes are loaded correctly.



To correctly configure the payment system contact your retailer or question the user manual. Eventual difficulties are generally due to a non correct configuration of the credit management device.

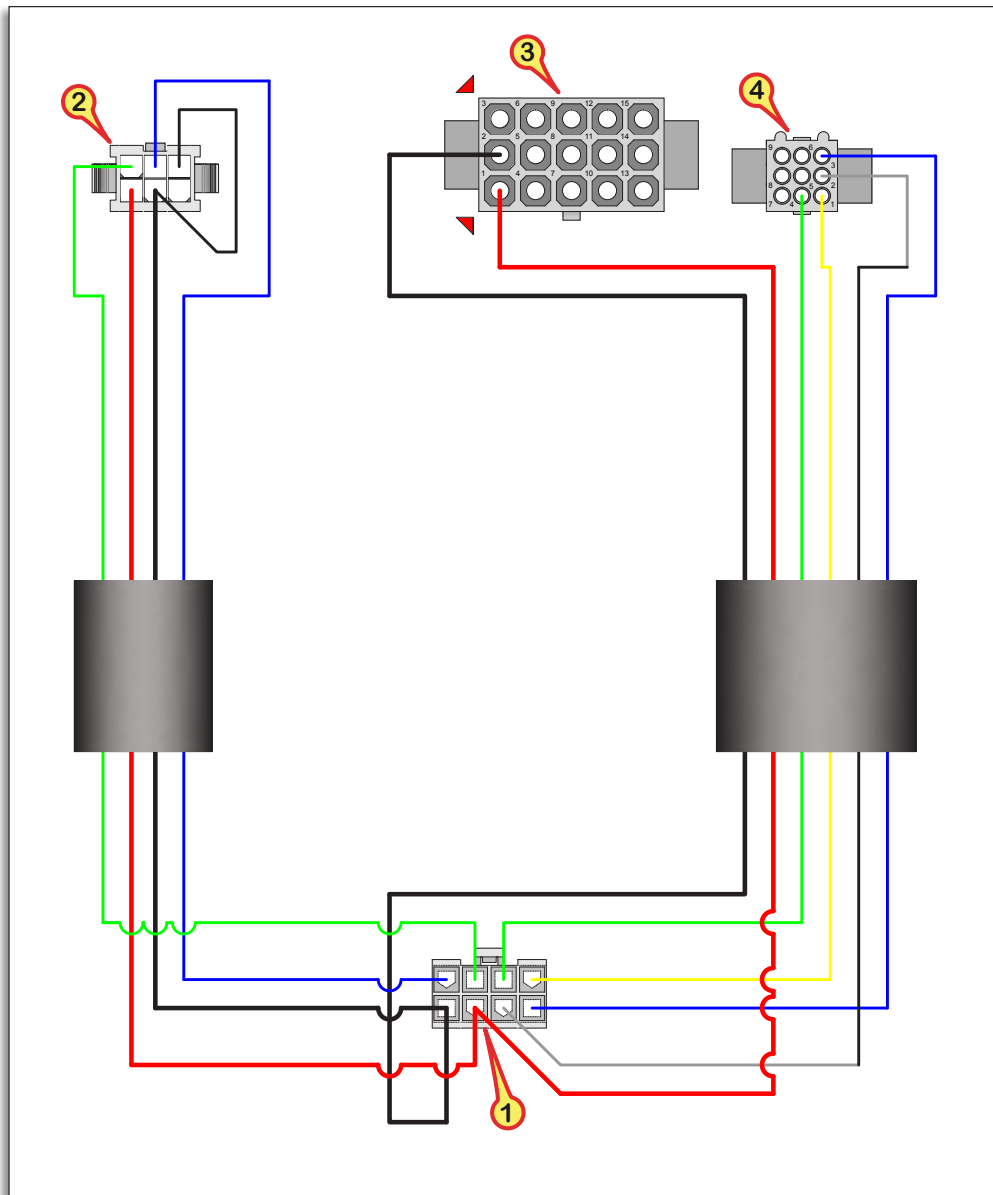


Figure 5.3.4 - OR70/12 Cable for the connection of the MDB or Executive coin acceptor

6. Maintenance and troubleshooting

In this Chapter are stated the various aspects regarding the maintenance and the problem resolution of the machine. The vending machine is designed and realized in a way to allow the easy identification and resolution of breakdowns without needing the intervention of a specialized technician. If you can't find a solution throughout the utilization of this manual it's possible to contact the retailer for more assistance.

6.1 First use, loading and cleaning

To proceed to the first use of the machine you have to proceed to all the operations described in Chapter 1 that are necessary for a correct installation. The vending machine comes already tested and ready to use. However, we recommend to initially squeeze at least 30 oranges to get familiarized with the functioning of each part and to verify that the vending machine hasn't suffered damages during the transport.

All the loading operations (including those of the first use) can be executed in few minutes and can be listed as follows:

- 1 • Remove and substitute the waterproof bag inside the waste container .
- 2 • Put the lift pump filter in the bottom of the waste container (figure 3.6.1 - F)
- 3 • Fill up the tank shown in figure 3.6.1 - B with drinkable water or tap water.
- 4 • Empty the eventual waste liquids that are in the tank shown in figure 3.6.2 - F
- 5 • Fill up the tank with the sanitizer liquid (only for the machine equipped with sanitizer)
- 6 • Put about a hundred cups in the appropriate cup dispenser tube (figure 2.1.1 -L).
- 7 • Substitute the clean squeezing unit as shown in the instructions of the paragraph 5.1 (not necessary for first use).
- 8 • Load the storage with oranges of about 60/80 mm of diameter, inserting them from the top of the container on the upper belt (approximately 260-280 oranges or about 42 Kg). This operation can be executed partially extracting the storage after having disconnect the closing pin as shown in figure 3.2.2. After the loading operation push back the storage until the closing pin are inserted.

When the supplying of the juice is managed by using the juice level sensor it's possible that the presence of an orange close to the pushing kit prevents the extraction of the squeezing unit. In those cases, it's possible to release the squeezing unit by proceeding as follows:

- 1 • Close the door.
- 2 • Push the main command button for 5 seconds.
- 3 • Open the door and close it again after 10 seconds
- 4 • Wait until the movement of the juicer stops

This simplified procedure allows to eliminate the oranges that are present in the squeezing unit without having to access the user control panel. After having executed the loading operations close the

door and put back the machine in service. The movement of the belts will allow the oranges to fill up the lower belt and to arrive up to the slide in a few seconds.

The cup dispenser that comes with the OR70 machines is compatible with antistatic cups of 70 mm of diameter. Other sizes are available on request.

For the payment system maintenance operations see the manual of the adopted device.

In accordance with the hygienic standards, it is necessary to execute a complete cleaning of the machine at least every three days. Such operation has to necessarily anticipate to remove the peels bag from the waste container and to substitute the squeezing kit with the clean spare part. During the cleaning operation, only for the juicer and the waste container, it is possible to use the water gun to clean where necessary. To activated the water gun you simply have to press the red button situated on the top of the black internal panel of the door.



Warning

Pay careful attention not to spray the water gun directly on the electrical and electronic internal part of the machine.

For the cleaning of the internal parts, it is possible to use food equipment detergent and a humid cloth. All the internal parts are constructed in food-safe plastic-coated sheet, pre-varnished or in food-safe stainless steel.



Warning

Use only food equipment detergent. The manufacturer declines all responsibility for damages caused by aggressive chemical agents or caused by an improper use of the water gun.

A more frequent maintenance of the vending machine improves the features of the supplied product. In this sense, depending on the operators' needs, it is possible to execute more frequent interventions through the water gun and the humid cloth without necessarily having to extract the waste container and the substitution of the squeezing unit. Keep in mind that the machine is provided with an automatic cleaning system. From the sale settings menu (see paragraph 5.1.1) it is possible to set up the times in which the daily automatic cleanings will be executed (up to 2) and the number of supplied squeezed juice between two subsequent cleaning.

In the case that a more deepen cleaning would be necessary it's possible to remove the juicer unit (figure 3.1.6) and the orange storage (figure 3.2.5). During the operation, pay attention not to damage the mechanical parts.

The cleaning of the cooler box can be executed every six-months. To access the cooler box follow the instructions shown in paragraph 3.7. Use an aspirator or an air compressor to remove the dirt from the condenser and the evaporator, a sponge to clean the condense basin.



Warning

Proceed to the cleaning of the cooler box only after having disconnected the vending machine from the power supply.

6.2 Identification and breakdowns resolving

The major part of the breakdown and malfunction conditions of the vending machine are automatically diagnosed and signalled to the user through appropriate codes. It's possible to distinguish among:

- Warning
- Error

The warnings identify abnormalities that don't provoke the stall of the machine. The alarm identify the situations in which the vending machine goes Out of Service. In both cases the intervention of an operator is required.

The operator can identify the error through the indication shown in display after opening the door (figure 6.2.1) or and /or SMS notification (optional) (figure 6.2.2). Keep in mind that to enable the SMS notification you have to install the GSM module as shown in paragraph 5.2.2 and insert in the sale parameters of the vending machine, the number of the SIM (up to 3) on which you wish to receive the notifications. Subsequently, is reported the codification of the errors, their description and a simple flow chart for their solution.



Figura 5.2.1 - Indicazione errore



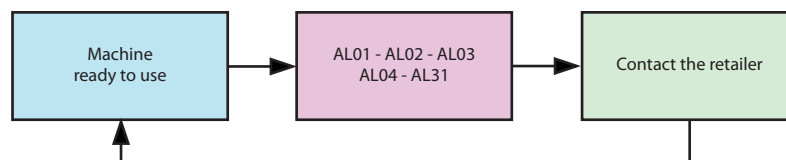
Figura 5.2.2 - SMS di segnalazione

Error code : AL01 - AL02 - AL03 - AL04 - AL31

Error string : EEPROM error

Problem description: Hardware error

Verifications/Solution: Contact the retailer for eventual spare parts.



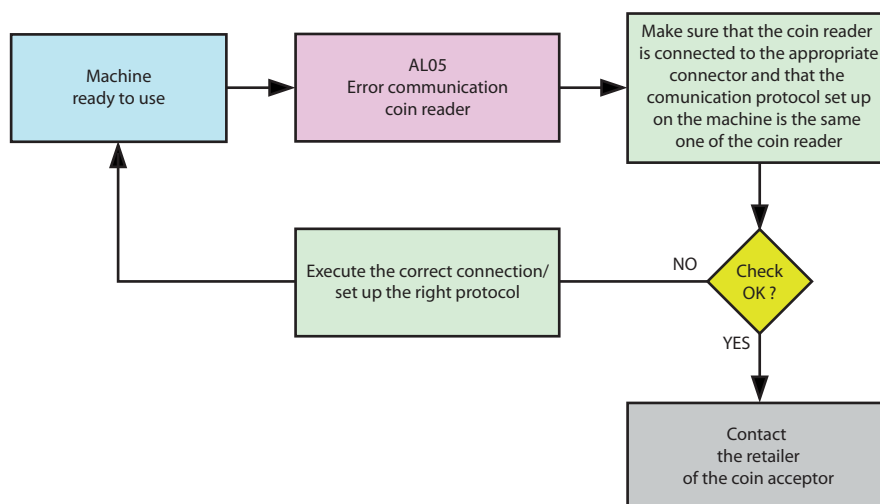
English

Error code : AL05

Error string : Coin acceptor

Problem description: Communication error OR70/ coin acceptor

Verifications/Solution: This error could be determined by a wrong connection between the coin acceptor and the OR70-12 cable. Verify that the connections are as shown in the paragraph 5,3 or reset up the communication protocole of the coin acceptor. If the problem persists consult the manual or the retailer of the coin acceptor

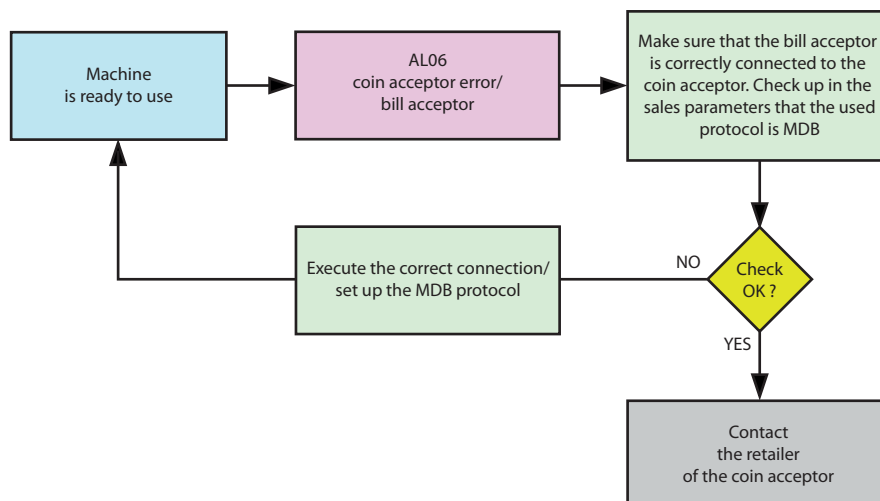


Error Code: AL06

Error string: Banknote reader

Problem description: Communication error OR70/ coin acceptor / banknote reader

Verifications/Solution: This error could be determined by a wrong connection between the banknote reader and the coin acceptor in MDB mode. Verify that the banknote reader is correctly connected to the coin acceptor and that the vending machine is in MDB mode. If the problem persists consult the manual or the retailer of the coin acceptor.



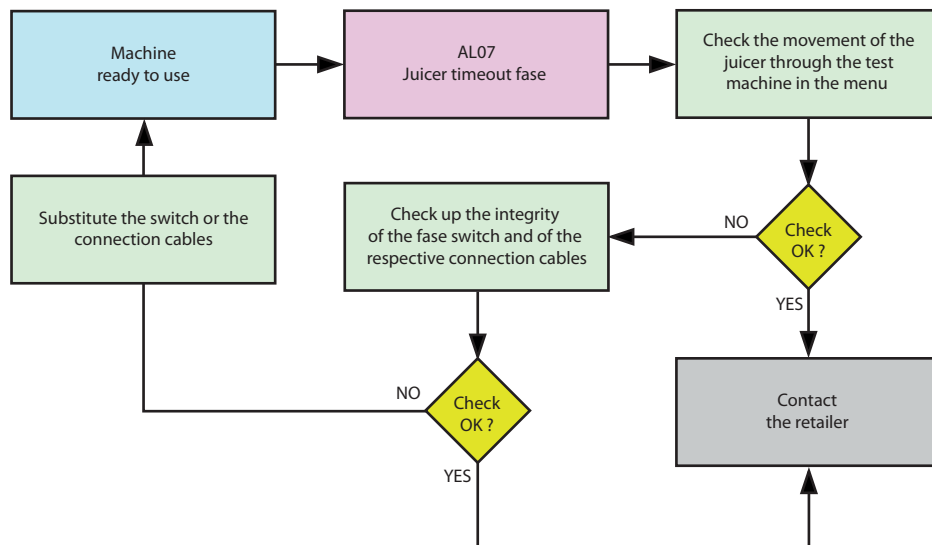
English

Error code : AL07

Error string : Juicer Home Position

Problem description: The juicer doesn't identify the home position.

Verifications/Solution: On the T10 entry of the machine test panel it's possible to test the automatic movement of the juicer (see paragraph 5.1.2). In the case in which, it wouldn't be possible to correctly execute a complete cycle check the phase switch and the connection cables. If the problem persists refer to your retailer.

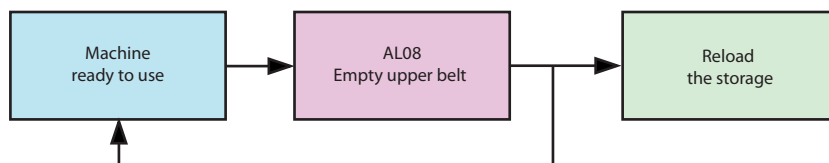


Error code : AL08 (Allarme)

Error string : Empty Upper Belt

Problem description: The orange storage is running out of oranges in the upper belt area

Verifications/Solution: Load the orange storage

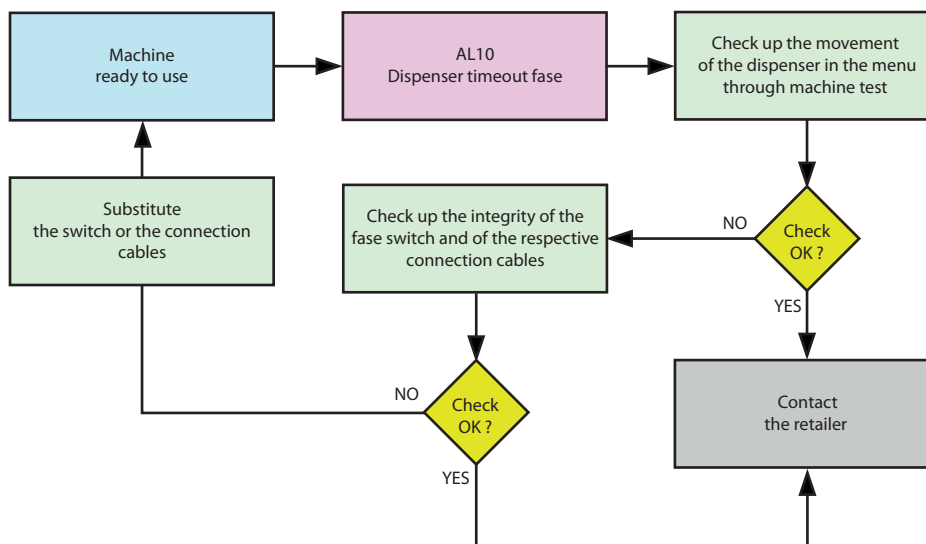


Error Code: AL10

Error string: Orange dis phase

Problem description: The orange dispenser can't identify the home position.

Verifications/Solution: In the entry T13 of the machine test panel it's possible to test the automatic movement of the orange dispenser (see paragraph 5.1.2). In the case in which it wouldn't be possible to execute a complete cycle verify the phase switch and connection cables. If the problem persists contact the retailer.

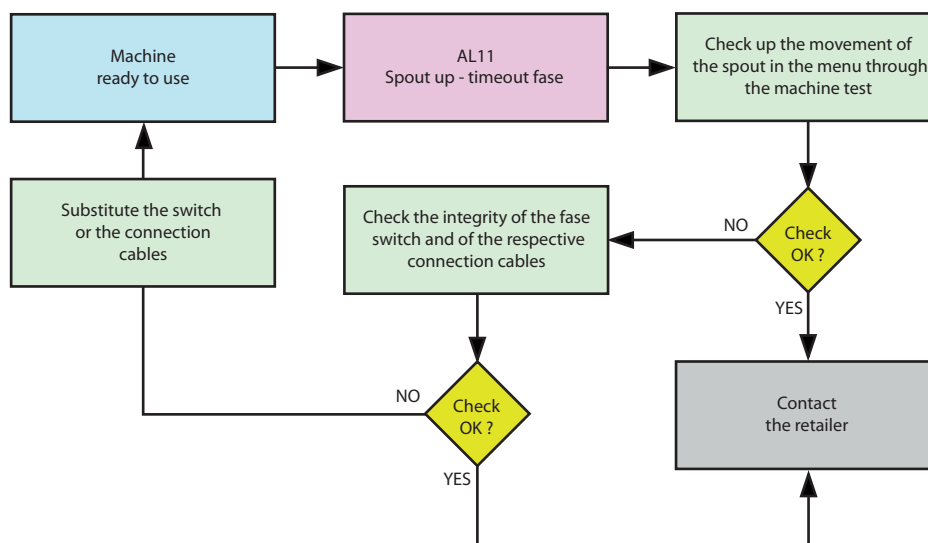


Error Code: AL11

Error string: Spout up pos

Problem description: The spout can't identify the up position (stand-by).

Verifications/Solution: In the entry T15 of the machine test panel it's possible to bring the spout up (stand-by position) (see paragraph 5.1.2). In the case in which it wouldn't be possible to correctly execute that movement check the phase switch and connection cables. If the problem persists contact the retailer.

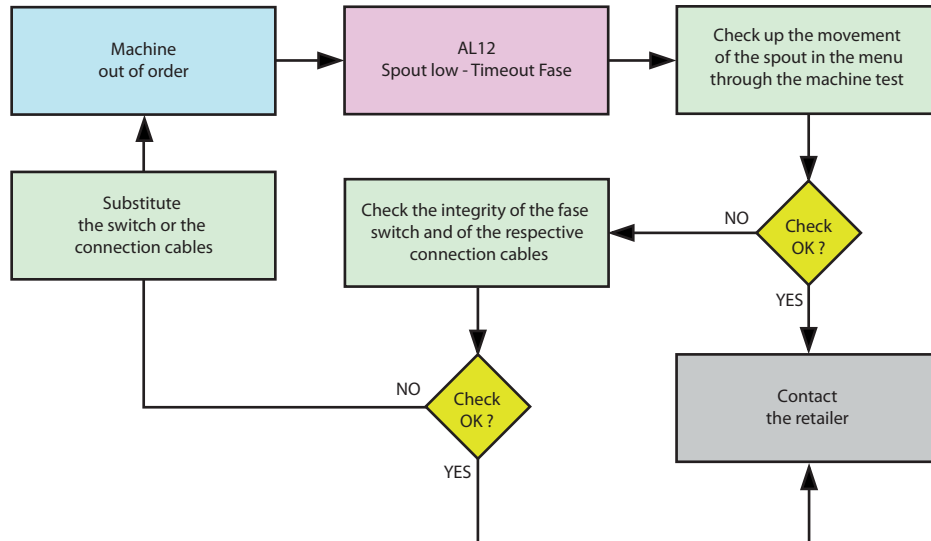


Error Code: AL12

Error string: Spout down pos

Problem description: The spout can't identify the down position (supplying).

Verifications/Solution: In the entry T16 of the machine test panel it's possible to bring the spout down (supplying position) (see paragraph 5.1.2). In the case in which it wouldn't be possible to correctly execute that movement check the phase switch and connection cables. If the problem persists contact the retailer.

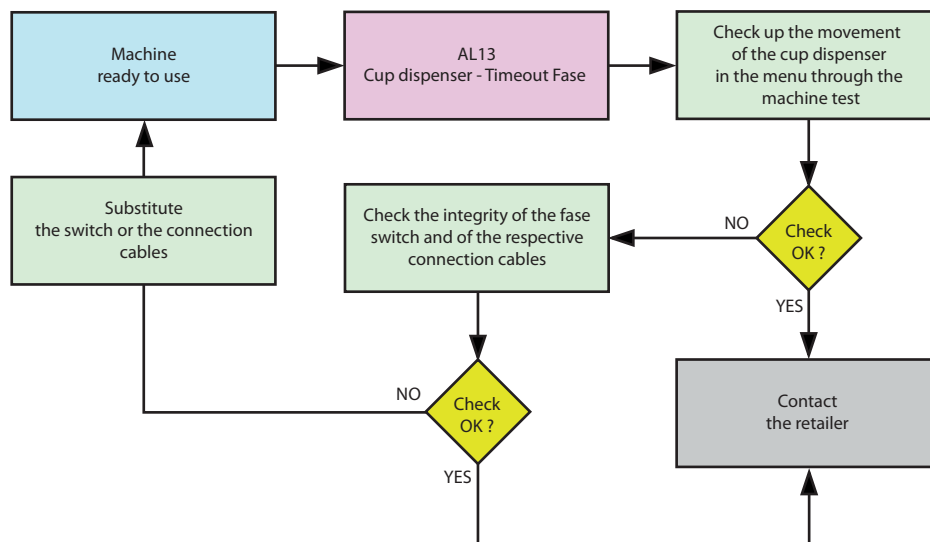


Error code: AL13

Error string: Cup Disp Ph

Problem description: The cup dispenser doesn't identify the phase position.

Verifications/Solution: In the entry T18 of the machine test panel it is possible to execute a complete cycle of the cup dispenser (see paragraph 5.1.2). In the case in which it wouldn't be possible to execute a complete cycle check the phase switch and connection cables. If the problem persists contact the retailer.

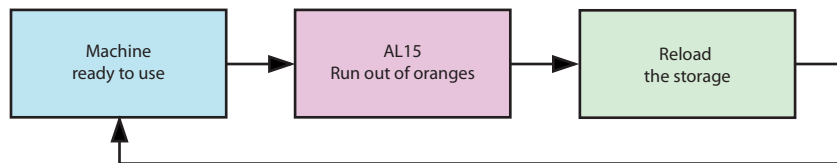


Error code: AL15 (AL14)

Error string: Orang Out Stock

Problem description: The orange storage is empty.

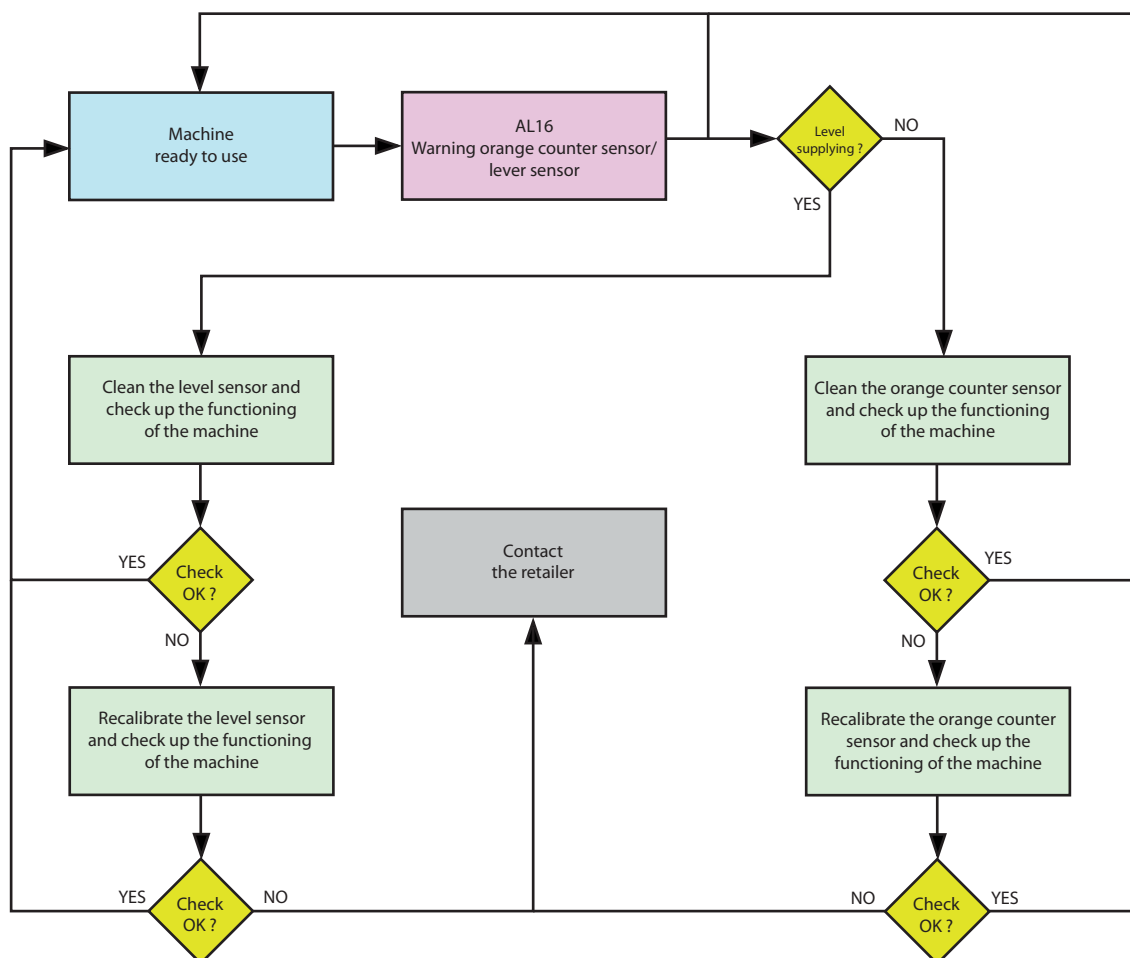
Verifications/Solution: Load storage.



Error code: AL16 (warning)

Error string: Orang Count War

Problem description: Identify possible problems in supplying phase. This is generated when the number of executed cycles of squeezed juice is greater than the maximum admissible number (12) or when the difference between the number of orange dispenser cycles and the number of counted oranges from the sensor is greater than 7. This situation can determined the vending machine being Out of Service only in the case in which it happens repeatedly (AL17).



English

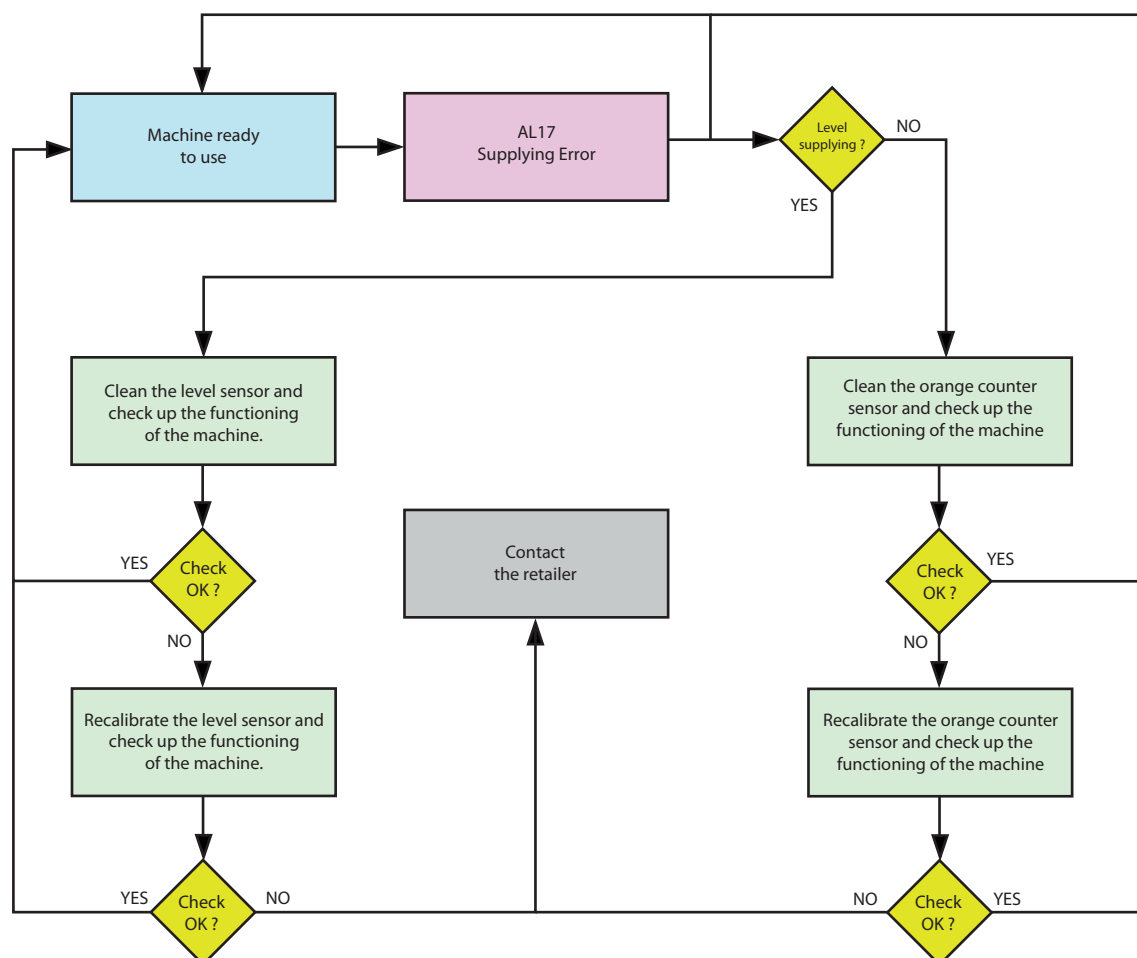
Verifications/Solution: If the supplying is managed through the level sensor you should first clean this sensor; if the problem persists you should proceed to the recalibration (see paragraph 4.2) or ask for the spare part to your retailer. If the supplying is managed through the orange counter sensor you should first clean this sensor; if the problem persists you should proceed to the recalibration (see paragraph 4.2) or ask for the spare part to your retailer.

Error code: AL17

Error string: Supplying Err

Problem description: Vending machine Out of Service. Three or more errors in supplying phase (AL16).

Verifications/Solution: If the supplying is managed through the level sensor you should first clean this sensor; if the problem persists you should proceed to the recalibration (see paragraph 4.2) or ask for the spare part to your retailer. If the supplying is managed through the orange counter sensor you should first clean this sensor; if the problem persists you should proceed to the recalibration (see paragraph 4.2) or ask for the spare part to your retailer.



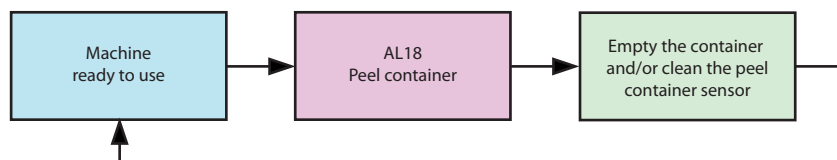
English

Error code: AL18 (optional)

Error string: Waste peel cont

Problem description: Waste peel container's sensor is obstructed or the container is full.

Verifications/Solution: Empty the waste peel container and clean the waste peel container's sensor.

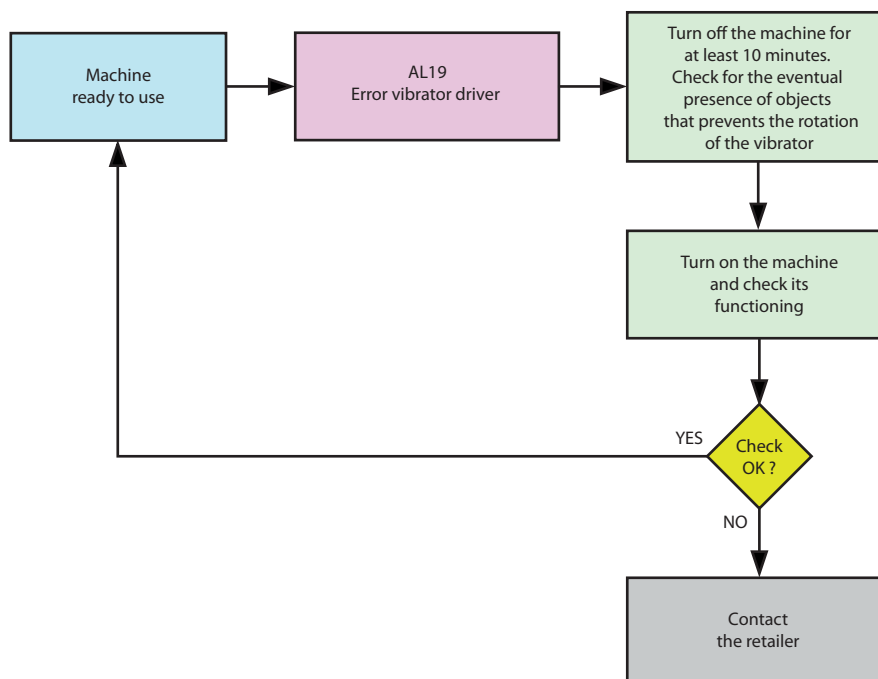


Error code: AL19

Error string: Vibrator Drv

Problem description: Wrong activation of the vibrator driver.

Verifications/Solution: Switch the machine off for 10 minutes. Make sure that there isn't any objects that block the movement of the vibrator. If the problem persists contact your retailer.

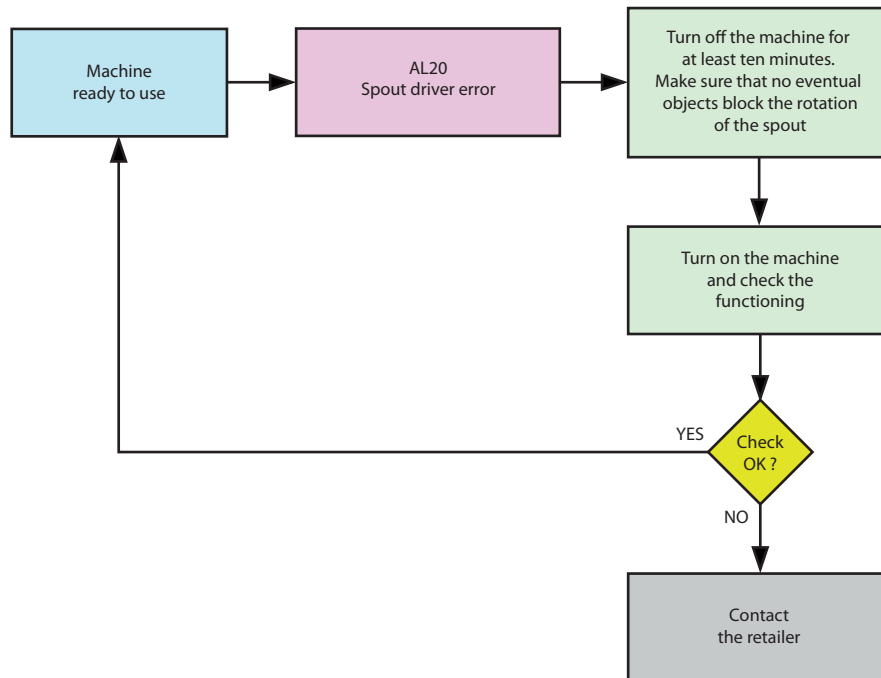


Error code: AL20

Error string: Spout Drv

Problem description: Wrong activation of the spout driver.

Verifications/Solution: Switch the machine off for 10 minutes. Make sure that there isn't any objects that block the movement of the spout. If the problem persists contact your retailer.

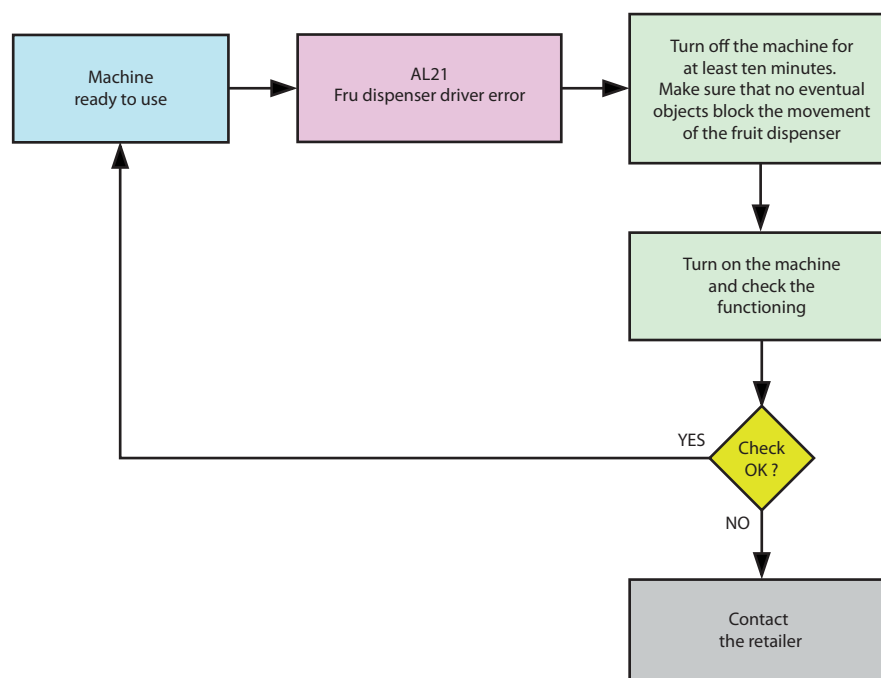


Error code: AL21

Error string: Or dispenser Drv

Problem description: Wrong activation of the orange dispenser driver

Verifications/Solution: Switch the machine off for 10 minutes. Make sure that there isn't any objects that block the movement of the orange dispenser. If the problem persists contact your retailer.



English

Error code: AL22

Error string: Upper belt Drv

Problem description: Wrong activation of the upper belt driver

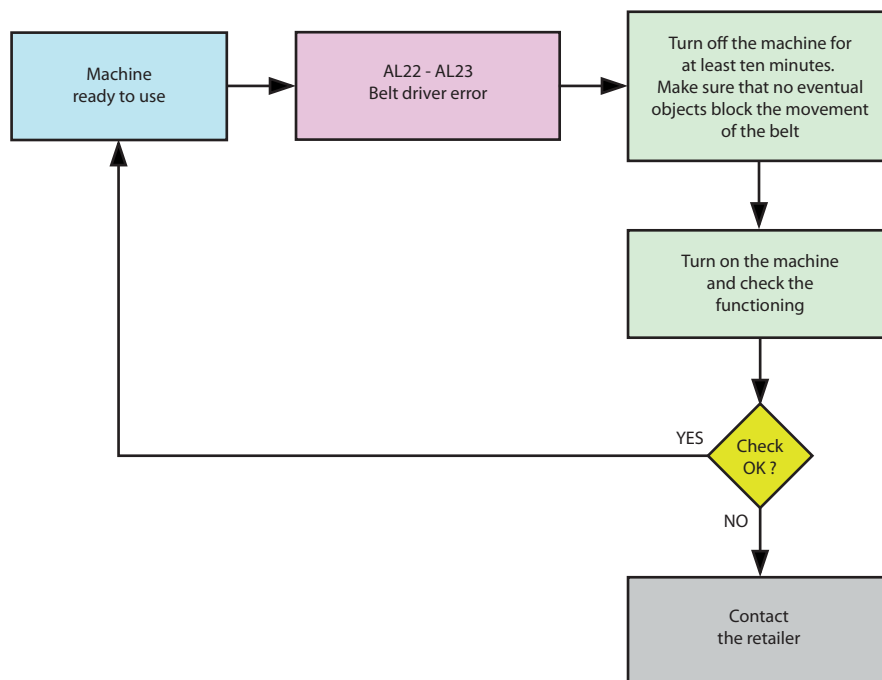
Verifications/Solution: Switch the machine off for 10 minutes. Make sure that there isn't any objects that block the movement of the lower belt. If the problem persists contact your retailer.

Error code: AL23

Error string: Lower belt Drv

Problem description: Wrong activation of the lower belt driver

Verifications/Solution: Switch the machine off for 10 minutes. Make sure that there isn't any objects that block the movement of the lower belt. If the problem persists contact your retailer.



Error code: AL24 (AL25)

Error string: Electrovalv Drv

Problem description: Wrong activation of the electrovalve driver

Verifications/Solution: Switch the machine off for 10 minutes. Make sure that there isn't any objects that block the movement of the upper belt. If the problem persists contact your retailer.

Error code: AL27

Error string: Pump Drv

Problem description: Wrong activation of the water pump driver

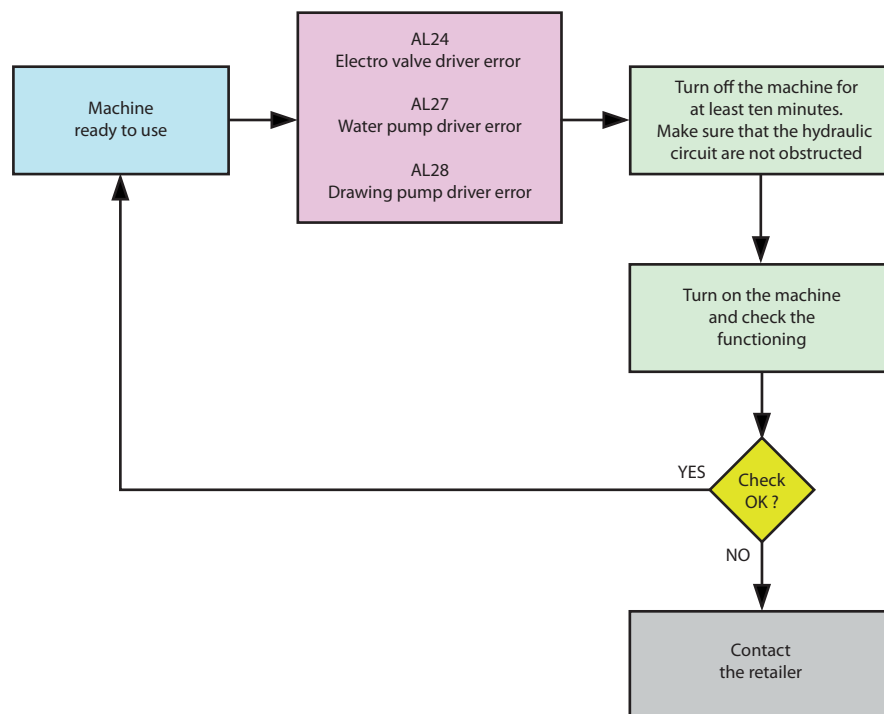
Verifications/Solution: Switch the machine off for 10 minutes. Make sure that the hydraulic circuit of the water pump is not obstructed. If the problem persists contact your retailer.

Error code: AL28

Error string: Drawing Drv

Problem description: Wrong activation of the drawing pump driver.

Verifications/Solution: Switch the machine off for 10 minutes. Make sure that the hydraulic circuit of the drawing pump is not obstructed. If the problem persists contact your retailer.

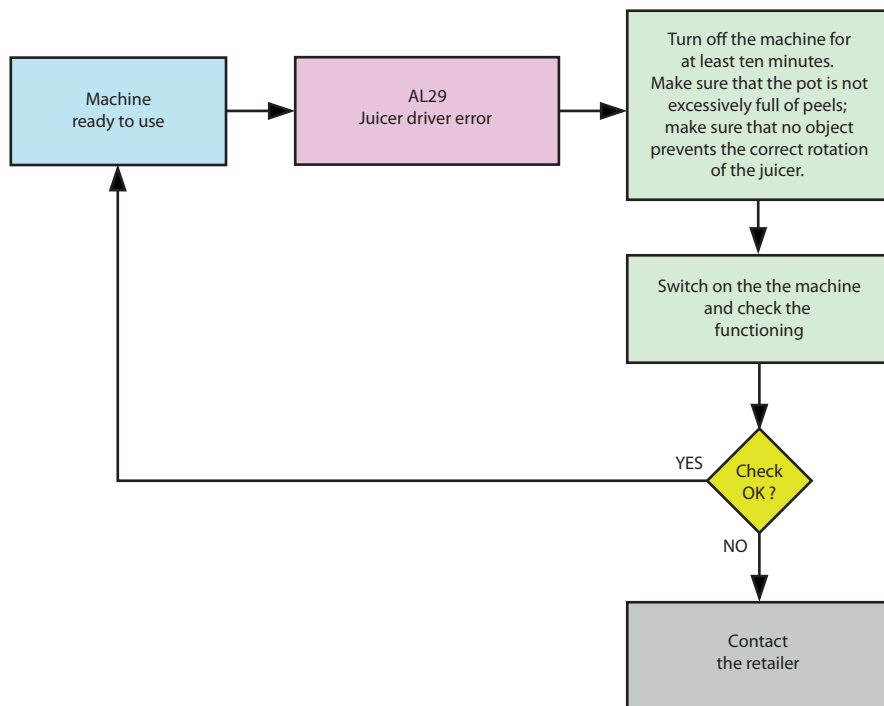


Error code: AL29

Error string: Juicer Drv

Problem description: Wrong activation of the juicer's driver

Verifications/Solution: Switch the machine off for 10 minutes. Make sure that the pot is not excessively full of peels; verify that there isn't any objects that prevent the rotation of the juicer. If the problem persists contact your retailer.

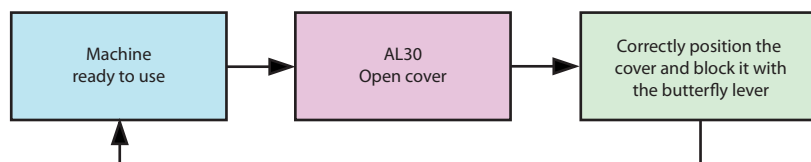


Error code: AL30

Error string: Cover

Problem description: The butterfly lever of the juicer is not correctly closed.

Verifications/Solution: Correctly position the cover of the juicer and block it with the butterfly lever.



Error code: AL32

Error string: Juicer OC

Problem description: Excessive effort of the juicer's motor

Verifications/Solution: see AL29

Error code: AL33

Error string: OC Spout

Problem description: Excessive effort of the spout's motor

Verifications/Solution: see AL20

Error code: AL34

Error string: Or dispenser OC

Problem description: Excessive effort of the orange dispenser's motor

Verifications/Solution: see AL21

Error code: AL35

Error string: Lower belt OC

Problem description: Excessive effort of the lower belt motor

Verifications/Solution: see AL23

Error code: AL36

Error string: Upper belt OC

Problem description: Excessive effort of the upper belt motor

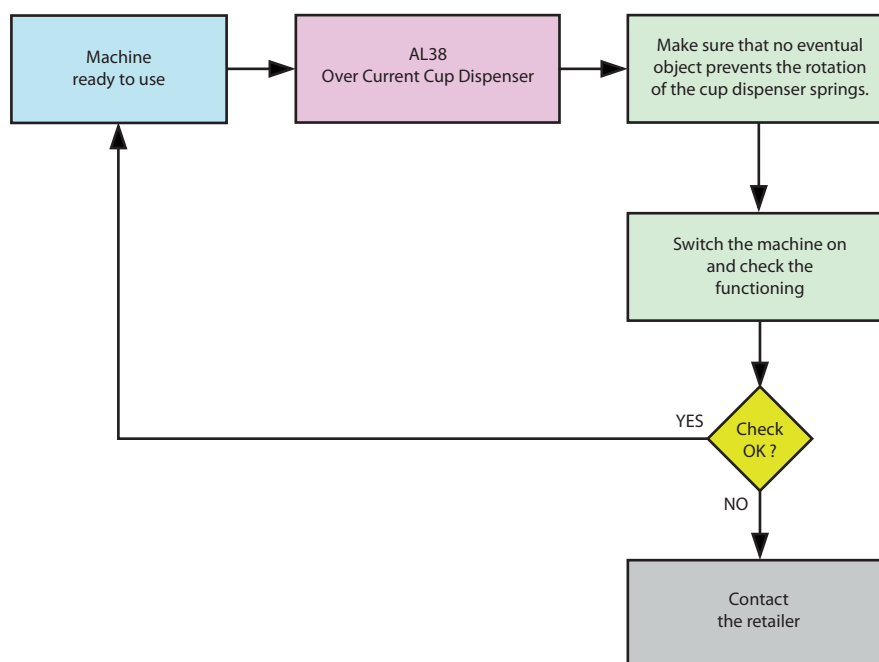
Verifications/Solution: see AL22

Error code: AL38

Error string: Cup disp OC

Problem description: Excessive effort of the cup dispenser motor

Verifications/Solution: Check if some objects prevent the cup dispenser springs to rotate. If the problem persists contact your retailer.

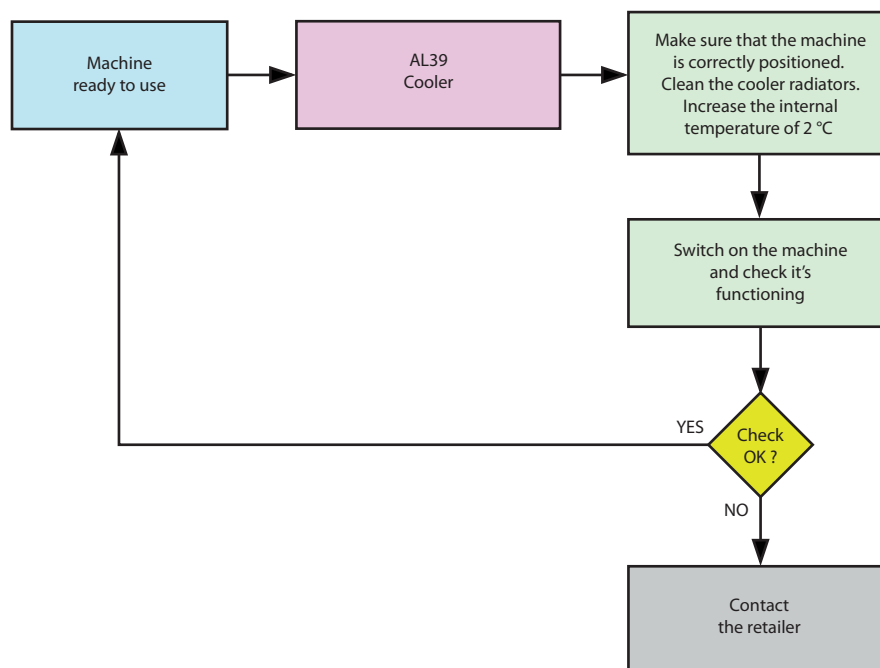


Error code: AL39

Error string: Cooler Error

Problem description: The cooler can't maintain the internal range temperature of the vending machine.

Verifications/Solution: Make sure that the cooler is positioned as shown in Chapter 1. Clean the radiator of the cooler (see paragraph 3.7 – 6.1). Increase the internal temperature of 2 °C



Here are provided some problems that may occur and the different solution.

Problem description: Oranges jammed under orange plastic guard rail

Verifications/Solution: Regulate the position of plastic guard rail operating on locking screws (see paragraph 3.2)

Problem description: Oranges jam

Verifications/Solution: Make sure that the size of the oranges are compatible with the specifications of the machine

Problem description: Wrong reading of the squeezed juice level

Verifications/Solution: Clean the level sensor or execute the calibration again as shown in paragraph 4.2

Problem description: Misreading of the oranges on the belts from the storage sensors

Verifications/Solution: Operate on the supports to orientate the sensors as shown in paragraph 4.4

Problem description: Water underneath the vending machine.

Verifications/Solution: Make sure that the cleaning operations were executed correctly. If the problem persists verify the water level in the condensate Basin of the cooler (paragraph 3.7). In extreme cases, it's possible to add a sponge inside the basin to increase it's capacity.

Problem description: Broken fuses

Verifications/Solution: Make sure that the fusible are properly inserted as shown in the scheme of the paragraph 4.1. If the problem persists contact your retailer.

Problem description: Liquid excess in the waste container

Verifications/Solution: Make sure that the lift pump filter is in the bottom of the container



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