



ASTRO UK

OPERATOR GUIDE



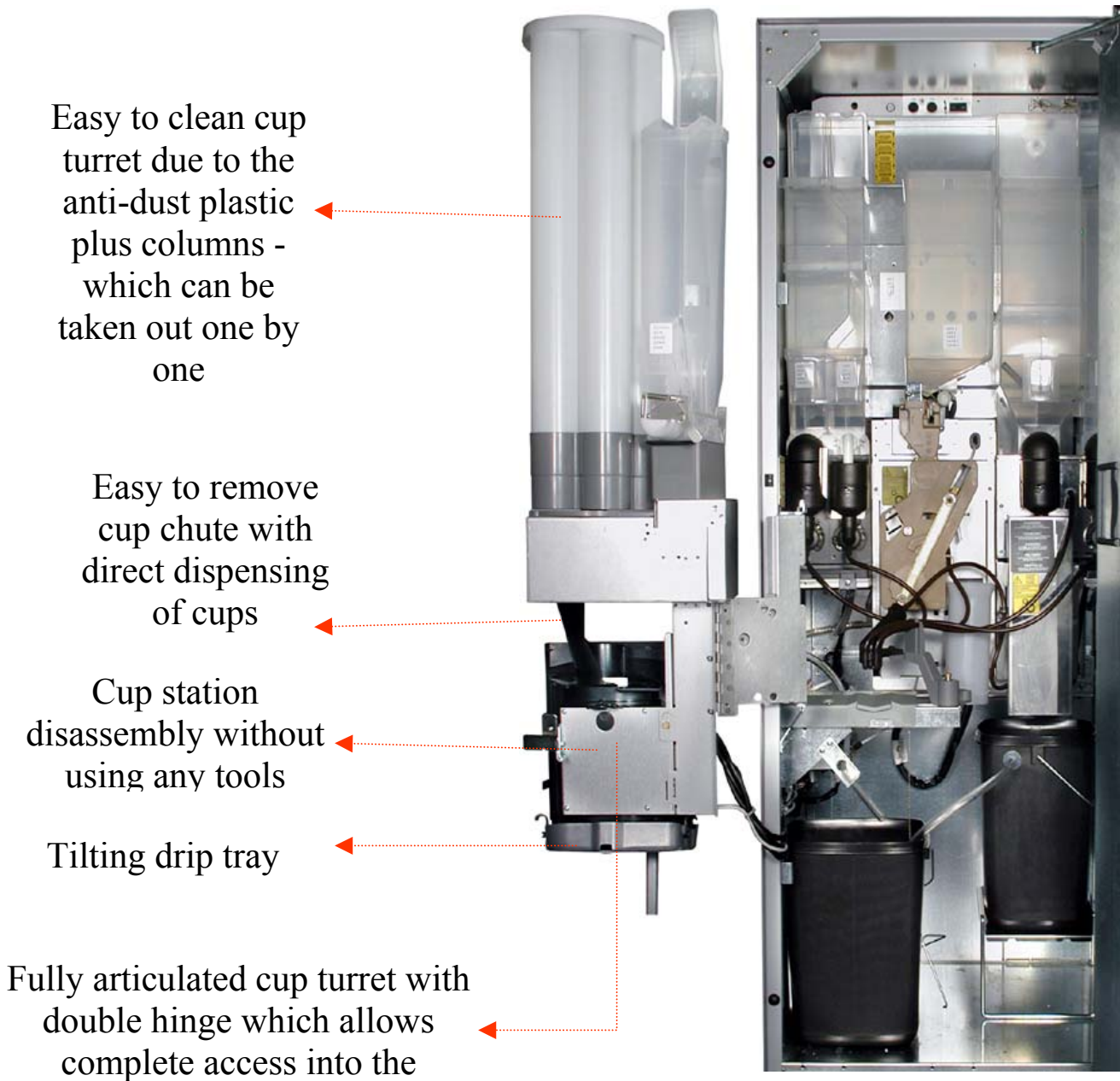
OPERATOR GUIDE

“ Astro ”

BASIC OPERATOR MANUAL

NECTA SPA: OPERATOR MANUAL "ASTRO"

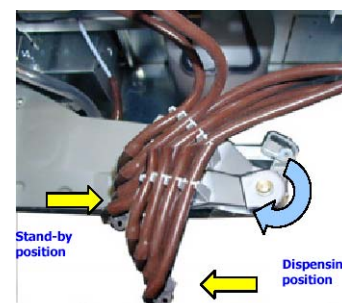
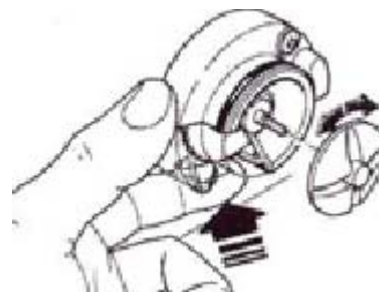
OPERATOR Manual: **ASTRO**



Espresso + Fresh Brew

Astro, cleaning, loading, filling overview. **Frequency = DAILY**

1. Check cup size, load cups
2. Remove canisters to fill
3. Remove all contact surface items
4. Clean whipper stations with brush provided
5. Remove whipper trays and waste buckets
6. Remove powder conveyors from the canisters
7. Remove sugar tube and sugar chute (if fitted)
8. Remove ES brewer unit and rinse, dry top.
9. Remove fresh brewer components and rinse.
10. Clean and soak all hygiene parts.
11. Reassemble all parts.
12. Ensure that the spout assembly is replaced as per the instruction sheet
13. Remove cup station assembly, clean and replace.
14. Empty waste buckets, clean base of machine, Replace waste buckets.
15. Use the ingredient priming feature to ensure ingredient canisters are primed and ready to vend.
16. Perform a mixer rinse using the rinse button on the inside of the door.
17. Carry out a test vends to ensure that the machine functions correctly.



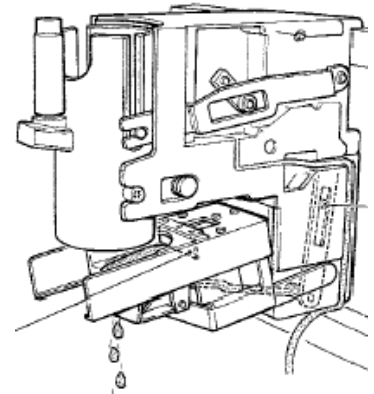
In addition to the routine above, on a weekly basis, the fresh brewer filter plate should be destained as detailed separately

N & W recommend the use of a de-tannin liquid cleaner such as "EX 2000"
We also recommend the use of a vend cleaning agent such as "Vendklean"

N&W Fresh brewer cleaning instruction

The following procedure should be carried out on a weekly basis, the procedures should be carried out more frequently for machines having above average drink throughput or if heavy tannin build up is experienced.

1. Remove the brewer extraction hood
2. Remove the mixer bowl and diffuser insert
3. Remove the brewer chamber feeding pipe from the cover
4. Remove the brewer cover plate
5. Remove the brewer chamber & piston by pulling the lever across to the right and pulling the chamber forward
6. Separate the chamber and piston ready for cleaning
7. Remove filter plate assembly by pressing the lever below the holder
8. Remove the scraper by pulling forward and out from the brewer assy.
9. Remove the gasket and filter from the filter plate assembly
10. Soak the filter plate in de-tannin solution for the recommended time
11. Soak the brewer chamber, piston and scraper in vend cleaning solution
12. Replace the scraper, assemble the brew chamber and piston
13. Replace the brewer chamber, push the lever to the right to relocate and push home the chamber
14. Pull the chamber forward to make sure that it is located securely
15. Rinse and replace the filter to the filter holder, lift the "T" bar to meet the holder, which should snap into place.
16. Lift the filter plate assembly to check that it is in line with the chamber
17. Make sure that the filter outlet pipe is running from the side not the front
18. Refit the brewer cover plate
19. Fit the mixer tube that runs from mix chamber to brewer
20. Refit the mixing chamber to the mixer tube
21. Make sure to fit the diffuser to the mixing bowl
22. Refit the extraction hood



*N & W recommend the use of a de-tannin liquid cleaner such as "EX 2000"
We also recommend the use of a vend cleaning agent such as "Vendkleen"*

N&W Espresso brewer Z 2000 cleaning instruction

For coffee use, the interval for de-stain of the lower filter is 10,000 vends.

For Tea use, the recommended interval for de-stain of the lower filter is 2,500 – 4,000 vends

- 23. Remove the brewer from the machine**
- 24. Remove the brewer cover plate from the right hand side of the brewer**
- 25. Make sure you retain the sealing washer on the brewer water inlet pipe**
- 26. Remove the top filter from the brewer by releasing the snap ring**
- 27. Soak the upper filter assembly in de-staining solution and hot water**
- 28. Take the brewer outlet pipe and bend it over, so as to prevent water running through it.**
- 29. Push the pipe through the retaining loop to hold the pipe in a kinked position**
- 30. Prepare a solution of destain solution and hot water as per dilution instructions on the bottle**
- 31. Pour a capful of the prepared cleaning solution into the lower filter holder**
- 32. Leave upper and lower filters to soak for the recommended time**
- 33. Release the kinked pipe to allow the solution to drain away**
- 34. Rinse thoroughly, both the upper and lower filters in clean water**
- 35. Rinse the complete brewer assembly in clean water to remove any residue**
- 36. Re-fit the upper filter using the snap ring**
- 37. Make sure to fit the upper filter into the highest position**
- 38. Replace the brewer unit into the machine, aligning the two arrows on the body and cam**
- 39. Turn the cam to make sure that it is located securely, it should not rotate**
- 40. Refit the brewer cover plate to the right hand side of the brewer**



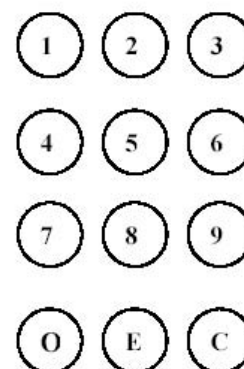
Astro Quick Reference Guide



- **Open Door**
 - **Insert Service Key**
 - **To enter the program press the button on the inside of the coinage door.**
-

Statistics

- Press program button (Statistics).
- Press button **E** (Statistics printing)
- Press button **8** (statistics display)
- Press button **E** (display selection counter)
- Press button **E** (count display x selection)
- Press button **8** (display total counter)
- Press button **E** then use button **8** to scroll through selections.



Reset Failures

- Press program button (statistics)
 - Press button **C** (present failures)
 - Press button **E** (read failures)
 - Press button **8** (reset failures)
 - Press button **E** (display will read confirm)
 - Press button **E** (**Working** then change to **Done**)
-

Set Prices

- Press program button (statistics)
- Press button **8** (set prices)
- Press button **E** (price band 0)
- Press button **E** (make selection)
- Use buttons **8&9** to scroll up or down to the price required
- Press button **E** to confirm the change

To exit the program press the button on the inside of the door

HACCP DIRECTIVE (EEC 93/43 and 96/3)

Outline and instructions for use

Notes: What is indicated by the European Directive

Directives **EEC 93/43 and 96/3** regard the hygiene of food products and are based on the **HACCP** (**H**azard **A**nalysis **C**ritical **C**ontrol **P**oint).

The purpose of this directive is to safeguard the consumer health, suggesting a series of actions to be taken by the vending company, aimed at checking, identifying and correcting any critical aspects in the foodstuff chain, from the purchase of products and machines to the dispensing of the product.

The **HACCP** is therefore a system that addresses the analysis of any potential risks in the manufacturing and distribution cycle of food product and the identification of critical points where such risks can occur; the system also highlights the actions to be undertaken and the decisions to be made with regard to such critical points, as well as the implementation of checking and monitoring procedures.

Therefore, each vending company must develop a Company Hygiene Self-control Manual according to the provisions of the directive - and if necessary use the information and recommendations formulated by some associations in the sector. The manual must contain a programming and checking schedule for the vending machine hygiene condition

Important notes:

For a correct use of the machine, the directives must be fully applied. **The operator is responsible for correct operations on a vending machine**

HACCP Directives (EEC 93/43 and 96/3)

Guidelines for correct application

- Ensure hygiene control with a special manual for correct hygiene practices.
- After cleaning, do not touch the surface of any elements that may come into contact with food.
- Wash your hands thoroughly, preferably using disinfectant, before starting any hygiene operations
- Use disposable sterile gloves
- Always use a clean cloth to wipe dry.
- Keep the work area tidy.
- Check that the product packages are intact and not damaged.
- Keep coffee and powder products in a cool, dark and dry place.
- Use products within the recommended time period (see expiry date on the package).
- Always use products from the warehouse according to the principle of "first-in first-out".
- Tightly close and seal any product packages not completely used.
- Coffee and consumables must be kept and transported separate from the cleaning products.
- The product containers must be cleaned regularly (see operation instructions).
- Only fill coffee or other product containers with sufficient amount for the expected use until the next cleaning.
-

Cleaning the machine (Page 32, 33, 34)

- Carefully observe the following cleaning instructions!
- Clean the machine, preferably at the end of the day or in the morning before the machine is used.
- After cleaning, dispense and check a drink (see last check).
- Fill in the checklist log for cleaning operations.
- When the display indicates an error message immediately check the trouble-shooting sheet.
- Use only recommended cleaning products approved for foodstuff, preferably liquid; avoid the use of powder and abrasive products.

ASTRO LOADING AND CLEANING

DOOR SWITCH

When opening the door a special switch disconnects the power from the machine electrical system to allow the operations described below, regarding loading and routine cleaning, in full safety.

All operations requiring the machine to be energized with the door opened must be carried out EXCLUSIVELY by qualified personnel informed about the specific risks of such situation.

MAINTENANCE AND DISINFECTION

According to current safety and health rules and regulations, the operator of an automatic vending machine is responsible for the hygiene of materials that come in contact with foodstuff; therefore he must carry out maintenance on the machine to prevent the formation of bacteria.

At installation the hydraulic circuits and the parts in contact with foodstuff should be fully sanitised to remove any bacteria which might have formed during storage.

It is advisable that specific sanitising agents (such as chlorine-based detergents or similar) are used for cleaning also the surfaces which are not directly in contact with foodstuff.

Some parts of the machine can be damaged by strong detergents.

The manufacturer declines all responsibility for any damage resulting from failure to comply with the above or from using strong or toxic chemical products.

Before starting any maintenance operations requiring parts of the unit to be removed, the machine must always be switched off.

USING THE VENDING MACHINES OF HOT DRINKS IN OPEN CONTAINERS (Ex.: plastic cups, ceramic cups, jugs)

The vending machines of drinks in open containers should be used only to sell and dispense drinks obtained by:

- brewing products like coffee and tea;
- reconstituting instant and lyophilized products;

These products should be declared by the manufacturer as "suitable for automatic vending" in open containers.

The dispensed products should be consumed immediately. They should never be preserved and/or packed for later consumption.

Any other use is unsuitable and thus potentially dangerous.

CONTROLS AND INFORMATION

The machine operating condition must be between a temperature of 2 to 32°C.

All user controls and information are conveniently located on the external side of the door (see Figure 5).

The labels with the selection menu and instructions, supplied with the machine, must be inserted at the time of installation.

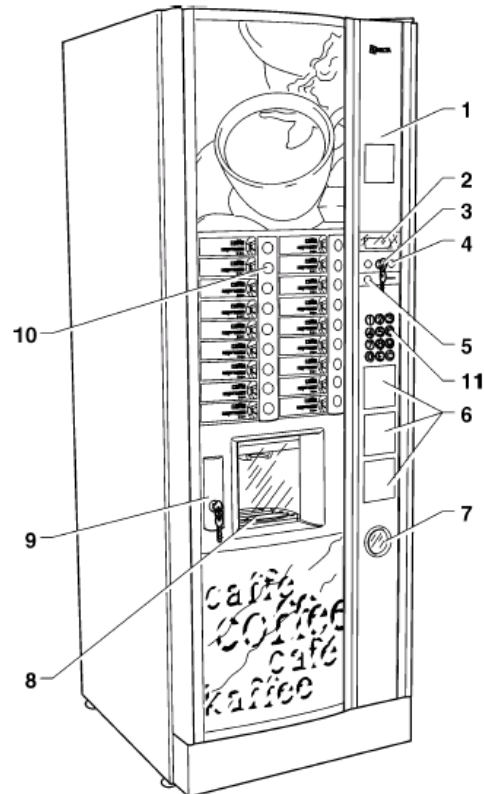


Fig. 4

- 1 - Space for payment systems
- 2 - Alphameric display (4x20)
- 3 - Jug facilities-free vend key
- 4 - Sugar dose selection
- 5 - Coin slot-return
- 6 - Operating instructions labels
- 7 - Coin return flap
- 8 - Dispensing compartment
- 9 - Lock
- 10 - Direct selection buttons as alternative to (11)
- 11 - Numeric buttons as alternative to (10)

The Programming button, to access the machine functions, and the mixer cleaning button are located inside the machine, on the right-hand side of the coin mechanism compartment.

NOISE LEVEL

The continuous, weighted equivalent acoustic pressure level is below 70 dB.

LOADING CUPS

When loading cups for the first time (i.e. with the cup dispenser completely empty) do as follows:

- disconnect the electricity from the machine;
- rotate the shelf outwards, undoing the securing magnet;
- remove the lid from the cup container;
- fill the columns with cups, except the one aligned with the dispensing opening;
- switch the machine on and the full column will be positioned automatically over the dispensing opening;
- fill the empty column;
- release one or more cups with the special button and replace the cover.

The cup dispenser shelf has a double joint that improves access to the cup dispenser, especially when the machine is installed in a bank.

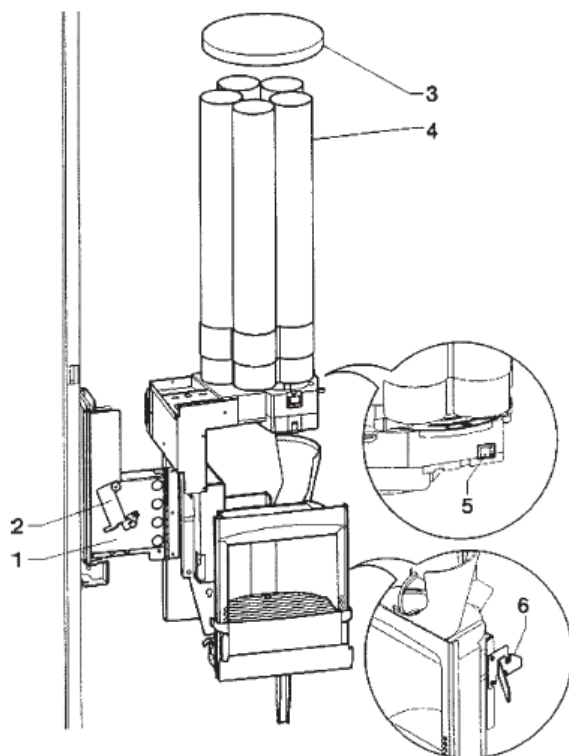


Fig. 2

- 1 - Hinged bracket
- 2 - Hinge release lever
- 3 - Lid
- 4 - Cup stacker
- 5 - Cup release button
- 6 - Shelf securing stop

LOADING COFFEE

Lift the cover and fill the hopper with coffee, ensuring that the shutter is fully open (see Fig. 3).

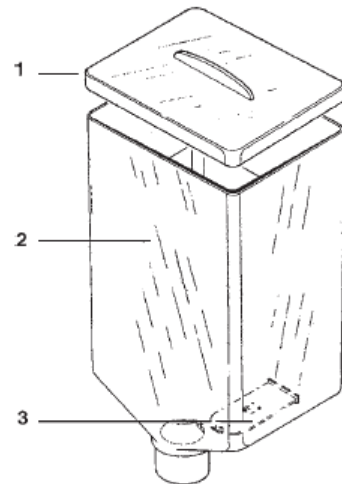


Fig. 3

- 1 - Lid
- 2 - Coffee hopper
- 3 - Shutter

LOADING SUGAR AND INSTANT PRODUCTS

A self-adhesive label indicating the product is attached on each container.

After lifting their cover, fill the single containers with the appropriate products, taking care not to compress them to prevent packing. Make sure the products do not contain any clots.

SANITISING THE MIXERS AND THE FOODSTUFF CIRCUITS

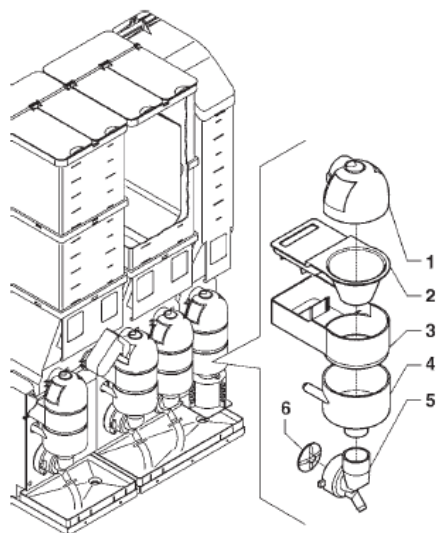
When installing the machine, and then at least once a week or even more frequently according to the use of the machine and the quality of the inlet water, the mixers and the dispensing conduits must be thoroughly sanitised (cleaned and disinfected), to guarantee proper hygiene of the dispensed products.

Do not use sprayed water for cleaning.

The parts to be cleaned are as follows:

- powder deposit drawers, mixer and instant drink dispensing conduit;
- dispensing tubes and spouts;
- dispensing compartment;
- remove the powder and the water funnels, the feeders, the powder deposit drawers and the mixer wheels from the mixers (see Fig. 4);

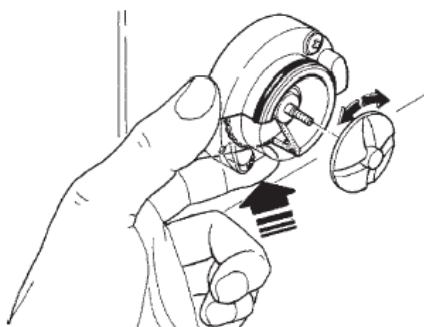
Fig. 4



- 1 - Powder feeder
- 2 - Powder funnel
- 3 - Powder deposit box
- 4 - Water funnel
- 5 - Mixer feeder
- 6 - Mixer impeller

- in order to undo the rotors, simply block the disk fitted on the mixer shaft with a finger (see Fig. 5);

Fig. 5



- wash all parts with detergent (using the doses indicated by the manufacturer) being sure that all visible residue and product layers are mechanically removed, using a brush if necessary;

Disinfection should be carried out using chlorine-based detergents.

- soak all components for approx. 20 minutes in a container filled with the previously prepared chlorine-based detergent;

- reinstall the feeders and the water funnels;
- reinstall the powder deposit drawers and the powder funnels after thoroughly rinsing and drying them.

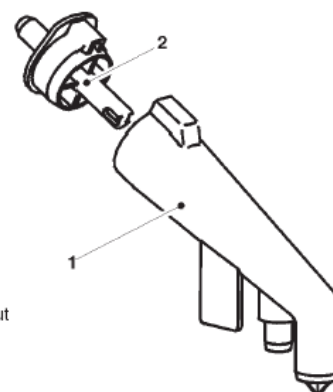
After reinstalling all parts the following is however required:

- enter into "Filler" mode to clean the mixers (see relevant paragraph) and add a few drops of the chlorine-based detergent in the various funnels.
- After disinfection thoroughly rinse all components to ensure that all residue of the detergent solution is removed.

All operations requiring the machine to be energized should be carried out by qualified personnel ONLY, informed about the specific risks of such situation.

Some models, with fresh product dispensed directly into the cup, are fitted with a special spout (see Fig. 6) that prevents the pressure created by the brewing piston from discharging directly into the cup.

Fig. 6



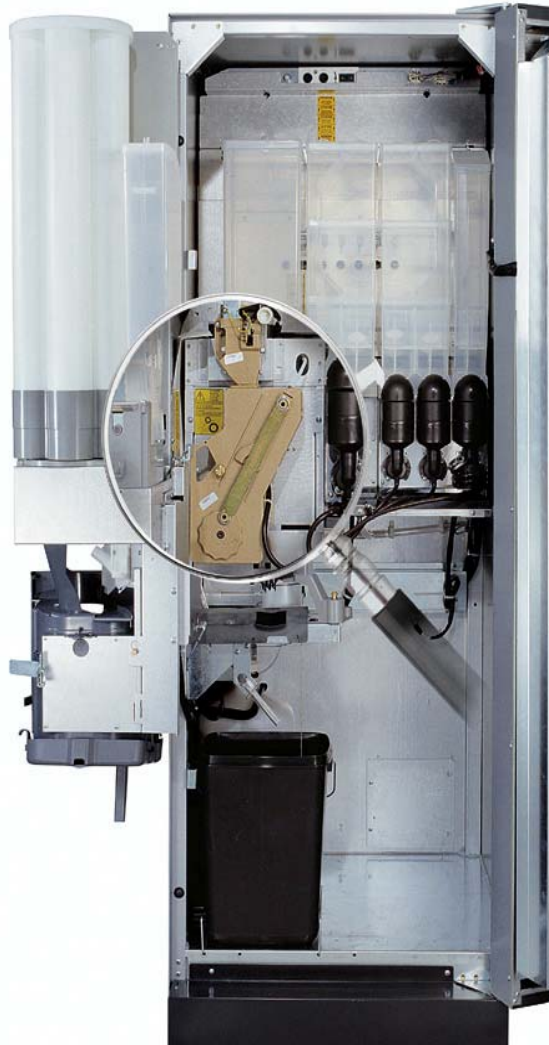
- 1 - Tea dispensing spout
- 2 - Cap

Also this spout and the cap should be cleaned following the same procedure described for the mixers.

In order to speed up the sanitising operations, the machine is supplied with spares to replace the parts to be cleaned, following the instructions included with the machine.

WEEKLY CLEANING OF ESPRESSO UNIT

Every time coffee is refilled, or at least once a week, any powder residue should be removed from the external parts of the coffee unit, particularly from the coffee funnel.



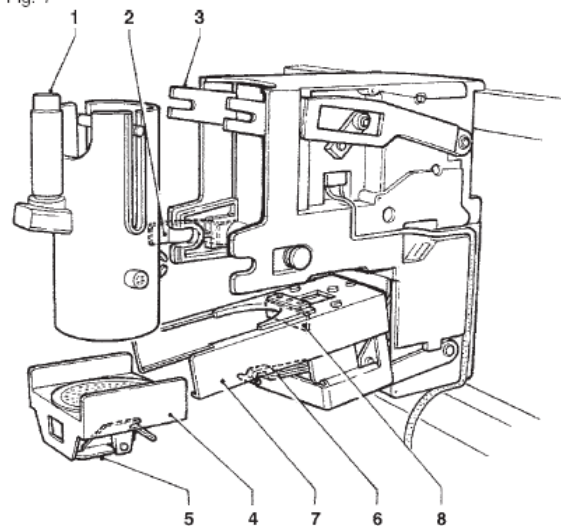
WEEKLY CLEANING OF BREWER UNIT

Every week, as well as removing powder residue from the external parts of the brewer unit, especially from the funnel area, all parts that come into contact with the brewer unit's drink should be sanitised.

These operations must be carried out with the machine switched off.

- Undo the 2 fastening screws and remove the cover to access the brewer unit.
- Disconnect the tube from the mixer and remove the mixer itself (7-1) from the brewing cylinder.
- Release the cylinder from the unit by pulling the release lever (7-2) and remove the piston control fork (7-3) by pulling it outwards.
- Remove the piston from the cylinder.
- Extract the sliding filter holder (7-4) from the slide (7-7) releasing the rod (7-6) from the stop lever (7-5).
- Extract the scraper assembly (7-8).
- Wash all parts with mild detergent being sure that all visible residue and product layers are mechanically removed, using a brush if necessary.
- Soak them for approx. 20 minutes in a container filled with the chlorine-based detergent of the type used for the mixers.

Fig. 7



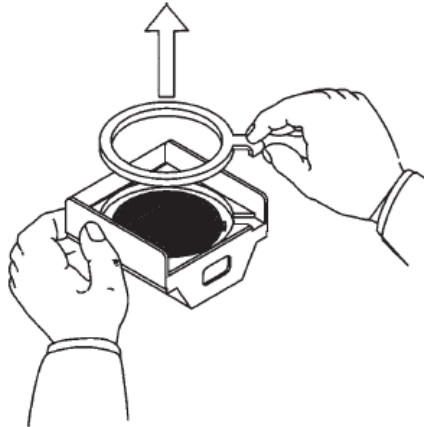
- 1 - Mixer
- 2 - Cylinder release lever
- 3 - Piston control lever
- 4 - Sliding filter holder
- 5 - Control rod
- 6 - Filter holder release lever
- 7 - Slide
- 8 - Scraper assembly

Do not use screwdrivers or other sharp objects on the filter holder gasket and do not place it onto any surface that could damage it.

Should the metal filter be clogged, it should be replaced or cleaned with a specific product.

To remove the metal filter, take the gasket out by forcing its edge (see Fig. 8).

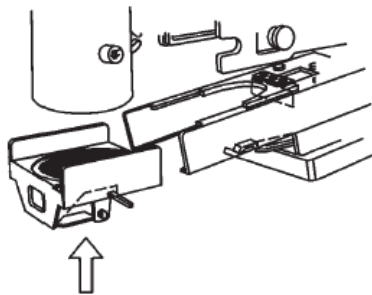
Fig. 8



The filter must be cleaned in any case at least once every 2500 selections.

To reassemble the brewer unit proceed in the reverse order from the one indicated above, taking care to fit the gasket before inserting the filter (see Fig. 9).

Fig. 9



REPLACING THE FILTERING CARTRIDGE

Every 30,000 selections, or in any case every 6 months, the main filter cartridge should be replaced, proceeding as described in the chapter "Fitting the filtering cartridge".

SUSPENDING FROM USE

If for any reason the machine is switched off for a period exceeding the use-by date of the products, the following will be necessary:

- completely empty the containers and thoroughly wash them with the chlorine-based detergents used to clean the mixers;
- completely empty the dosing grinder by dispensing coffee until the empty condition is indicated;
- completely empty the air-break and the instant product boiler, by means of the special valve.

Before restarting the machine the cleaning and sanitation operations described in the chapter "Yearly sanitation" must be carried out.

Chiller unit

Cleaning

Important: Warm water should be no higher than 45 °C

Important: After any cleaning dispense 3 drinks from each flavour to ensure all cleaning fluid residue is flushed out.

Daily Clean - Use the appropriate methods below for parts in contact with food products

Multi Purpose Disposable Cloth.

Use the cloth to apply the cleaning agent. Submerge a clean cloth into the cleaning agent (concentration recommended by manufacturer's instructions). Remove the cloth and remove excess water. Clean the dispense components wiping the cloth over the entire area resubmerging the cloth as necessary. Rinse the cloth in clean warm water and wipe off excess cleaning agent residue and soil. Dry using disposable paper towels, replace dispense components.

Spraying on Cleaning Agent.

Remove all dispense components. Liberally spray the cleaning agent at the concentration recommended by the manufacturer onto the dispense component ensuring that the whole area has been covered. Finish the clean by exchanging the cleaning agent for warm water, remove the soil with a multi purpose disposable cleaning cloth and dry the component with disposable paper towels.

Food Grade Antibacterial Wipe.

Remove the dispense components, wipe the dispense component with the food grade antibacterial wipe, remove all visible soil. Replace dispense component.

Soaking Post Mix Dispense Nozzle & Diffuser.

If removable, remove and submerge the dispense components into the cleaning agent solution. Leave the dispense components submerged for the desired contact time (2 to 10 minutes). After the contact time is over remove the dispense components, rinse in warm water and dry using disposable paper towels.

If not removable, clean using cleaning agent solution and brush.

Chiller cleaning - Monthly

Deep Clean - Parts in contact with food products

Important: This is to be carried out monthly or more frequently if host machine is heavily used.

Remove dispense components, pre clean using a damp multi purpose disposable cleaning cloth soaked in warm water.

Soak cloth in cleaning agent solution, remove excess water and clean dispense components. Using a brush, brush dispense head to dislodge any dried on soil. Remove soil with the cloth.

Rinse dispense head with a new multi purpose disposable cleaning cloth soaked in warm water until all soil and cleaning agent residues have been removed.

Soak multi purpose disposable cleaning cloth in disinfectant solution, apply to dispense component, ensure that the whole area is wiped. Leave for 10 minutes. Rinse off disinfectant using multi purpose disposable cleaning cloth that has been soaked in clean warm water. Dry dispense component with disposable paper towels.

Refit all dispense components.

General Cleaning - Parts not in contact with food products

Condenser. Thoroughly clean at least once a month with a small stiff brush and /or vacuum cleaner. Do not use screwdrivers or other sharp implements which may puncture the fins.

Warning: Failure to clean the condenser can shorten the life of the compressor causing premature failure of the unit.

Outer Panels. Clean the outside panels, pay particular attention to the edges of the panels where spillage from ingredients could have ingressed and the area around the base of the unit. If necessary, remove the unit and thoroughly clean around the base and floor.

Important: If ingredients are present inside the unit, the cause must be found and rectified.

Every 3 months

Sanitize the Syrup Lines

13. Switch on the main power.
14. Place dip tubes into the container of sanitizing fluid & operate the syrup priming switches until the fluid pours from the dispense nozzle.
15. Leave to stand for the period recommended by the sanitizer manufacturer.
16. Switch off power.

[Programming instruction](#)

OPERATING MODES

Three different operating modes are provided for the machine; the buttons will have different functions according to the machine operating mode.

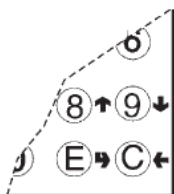
The available operating modes are as follows:

	FUNCTIONS
Normal operating mode	coins accepted products dispensed
Filler menu	test dispensing machine maintenance
Technician menu	Programming of different parameters

USER INTERFACE

The interaction between system and user occurs through the following components:

- Liquid Crystal Display (LCD), 4 lines x 16 characters.
- External numeric selection keypad which takes on the following functions when in "Filler" and "Technician" mode:



Scrolling keys "↓" and "↑":

To move to the next or previous menu option.

Confirm key "→":

To go from a menu to a sub-menu, or to confirm the information on the display.

Exit button "←":

To move back from a sub-menu to the higher level menu, or used to cancel the current information on the display. It is also used for going from "Technician" mode to "Filler" mode and vice versa.

SERVICE BUTTONS

Flush button:

used for performing a mixer wash cycle.

Statistics button:

used for immediate reading of the machine statistics.

Spout button:

used for testing the movement of the spouts, to verify that the hoses are not too taut during such movement.

Programming button:

used for accessing the "Technician" and "Filler" menus.

Ingredient Priming button:

used for rotating the instant product doser devices, holding the button pressed, when the feeders are empty.

NORMAL OPERATING MODE

When switching the machine on, the message "Starting" is displayed for a few seconds, after which the machine goes into normal operating mode.

The displayed messages indicating the operation being carried out are fixed, while the instructions requiring an action from the user are blinking; the messages include the following:

DISPLAY	FUNCTION
Select drink Press button	Machine ready
Vending machine out of service	Machine out of service
Selected drink in process Wait please	Drink preparation drink
Drink ready Take drink	Dispensing ended correctly

FILLER MENU

When pressing once the programming button located on the coin mechanism compartment, the machine goes into "Filler menu" mode.

The first option of the "filler" menu is displayed, allowing the following functions:

"Statistics"	Data reading
"Prices"	Changing the price for one selection
"Tubes control"	Manual refill and release of change tubes
"Boiler temperature"	Displaying the boiler temperature in degree C.
"Test"	Complete dispensing Dispensing water only Dispensing powder only Dispensing without accessories Dispensing accessories only
"GSM"	Pre-alarm counter reset
"EVADTS"	Connection

STATISTICS

Data on the machine operations is stored in both total counters and relative counters, which can be reset without losing total data.

PRINT

Connect an RS232 serial printer having a Baud rate of 9600, 8 data bit, no parity, 1 stop bit to the serial port located on the push button board to print all of the statistics, and namely:

Total

- 1 - counter by selection
- 2 - counter by time bands
- 3 - discount counter
- 4 - failure counter
- 5 - coin mechanism data

Relative

- 1 - counter by selection
- 2 - counter by time bands
- 3 - discount counter
- 4 - failure counter
- 5 - coin mechanism data

The printout will also contain the machine code, the date and the software version.

To connect the printer, do as follows:

- press the confirm print button "⏏", displaying the message "Confirm?";
- connect the printer before confirming;
- press the confirm button "⏏" to start printing.

DISPLAY

When pressing the confirm button "⏏" the data described in the paragraph "Printing the statistics" is sequentially displayed.

DELETING THE RELATIVE STATISTICS

Statistics can be reset for relative counters globally (all types of data) or selectively for:

- selections
- failures
- coin mechanism data

Press the confirm button "⏏", and the message "Confirm?" starts blinking.

Press the confirm button "⏏", the message "Working" is displayed for a few seconds and all statistics are reset.

SELECTION PRICES

This function is used for changing the sales price for each selection and for each time band that may be set.

CHANGETUBESCONTROL

By accessing the "Tube control" function the change tubes can be filled or released manually.

Confirm refilling, and the display will indicate "Credit: —" which is the value of money available in change the tubes; insert the desired coin into the validator and the display will indicate the value of money available in the change tubes.

When confirming releasing, it will be possible to decide which tube to release. Each time the confirm button "⏏" is pressed, a coin is ejected from the active tube.

DISPLAYING THE TEMPERATURE

With this function, it is possible to read the temperature from the coffee boiler and from the instant boiler, directly in °C.

TEST DISPENSING

For complete or partial dispensing tests each button (or combination of buttons according to the model) is assigned a selection (see the dose selection table).

N.B. For espresso coffee based selections, only the additions are dispensed with the partial dispensing of powder and water; if a selection requires no addition the message "Sel. disabled", indicating a disabled selection, will be displayed.

GSM PRE-ALARMS

The control software can send, via GSM modem, a signal indicating an "ending product" signal, when there is only a certain (programmable) number of pieces or grams of powder of a given product left. With this function the counters that control the pre-alarms are reset.

EVADTS TRANSFER

When activating this function, the machine awaits the connection with a device to acquire the EVADTS statistics.

Problem (and/or indication on the display)	Possible cause	Solution
The machine does not go into the boiler heating phase, remaining in the "installation" phase	No water flow from the mains or insufficient pressure (5-85 N/cm ²) The air-break microswitch is faulty Water inlet solenoid valve locked by the overflow tube and activated by the relevant relay	Call for the Engineer
The display indicates the message "No coffee"	The grinder motor is locked because there is No coffee The grinder wheels are locked because of foreign matter in the coffee Grinder motor overheating device triggered The coffee container shutter was not opened	Call for the Engineer
The display indicates the message "Coffee release failure"	Failure to the release magnet. Failure to the coffee dose microswitch. Failure to relay K01	Call for the Engineer
The display indicates the message "Instant boiler failure"	The boiler does not heat Dry operation protection system triggered. Anti-boiling protection system triggered.	Call for the engineer
The display indicates the message "Espresso boiler failure"	The boiler does not heat Dry operation protection system triggered.	Call for the Engineer

<p>The display indicates the message</p> <p>"No cups"</p>	<p>No cups in the dispenser Microswitch failure The cup column does not rotate</p>	<p>Call for the Engineer</p>
<p>The display indicates the message</p> <p>"Cup release failure"</p>	<p>The signal is activated if the machine is fitted with the cup sensor photocell kit and no cups are detected.</p>	<p>Call for the Engineer</p>
<p>The display indicates the message</p> <p>"Espresso unit"</p>	<p>The espresso unit failed to reposition. Failure to the lower dead centre positioning microswitch. Failure to relay K08</p>	<p>Call for the Engineer</p>
<p>The display indicates the message</p> <p>"Fresh-brew piston 1"</p>	<p>Due to wrong positioning of the FB unit.</p>	<p>Call for the Engineer</p>
<p>The display indicates the message</p> <p>"Fresh-brew scraper 1"</p>	<p>Due to wrong positioning of the coffee waste scraper.</p>	<p>Call for the Engineer</p>
<p>The display indicates the message</p> <p>"Fresh-brew piston 2" Fresh-brew scraper 2</p>	<p>This message is displayed when two fresh-brew coffee units are present in the layout, and the cause is as above.</p>	<p>As above</p>
<p>The display indicates the message</p> <p>"Volumetric counter" (Impeller)</p>	<p>The set liquid is not reached within 60 sec. (The volumetric counter is installed only in the ASTRO espresso model and is used only to measure the water dose for coffee based selections. For instant selections the water dose is determined by the timed solenoid valve opening set via software.</p>	<p>Call for the Engineer</p>
<p>The display indicates the message</p> <p>"Air-break failure"</p>	<p>No water from the mains. Faulty air-break microswitch Failure to the microswitch float actuation system. In the Instant version the air-break is incorporated in the open-top boiler.</p>	<p>Call for the Engineer</p>

<p>The display indicates the message "RAM data"</p>	<p>Wrong RAM data that must be retrieved by initialising the Eprom. There can be many causes, among which also above standard electromagnetic interference.</p>	<p>Call for the Engineer</p>
<p>The display indicates the message "Water failure"</p>	<p>If the air-break microswitch is closed for more than a minute even with the solenoid valve activated.</p>	<p>Is the water turned on</p>
<p>The coffee lacks body and cream and is dispensed too "quickly"</p>	<p>Excessively coarse grinding. Insufficient ground coffee dose.</p>	<p>Call for the engineer</p>
<p>Coffee is dispensed too "slowly" and it tastes burnt</p>	<p>Excessive coffee dose. Excessively fine grinding. Faulty pump by-pass, or stuck open due to calcium scaling. Clogged or scaled coffee filters. Scaled solenoid valves.</p>	<p>Call for the Engineer</p>
<p>The mixers "clog up"</p>	<p>The beater failed to rotate. Powder removal drawer full. Insufficient water to powder ratio. Incorrect variation of dispensing cycles set by default.</p>	<p>Call for the Engineer</p>
<p>The display indicates the message "Mobile spouts"</p>	<p>If the spouts do not reach the dispensing position, the machine is stopped and is disabled completely.</p>	<p>Call for the Engineer</p>
<p>The display indicates the message "Coin mech failure"</p>	<p>The machine locks if it receives a pulse longer than 2 seconds on a parallel line or if the serial communication does not take place for more than 30 seconds (Executive protocol) or 75 seconds (BDV protocol).</p>	<p>Call for the Engineer</p>
<p>The display indicates the message "Machine board"</p>	<p>There is no communication between the machine actuation card and the CPU board.</p>	<p>Call for the Engineer</p>
<p>The display indicates the message "Waste container full"</p>	<p>The microswitch of the liquid waste container float was triggered.</p>	<p>Call for the Engineer</p>

Daily cleaning and hygiene

(Expected time 6 min 30 sec, excluding the time for test dispensing)



Fig. 1

Open the door and disconnect the machine from the power supply (**FIG 1**)

Remove the liquid collection container, empty it and rinse it thoroughly. Empty the grounds container and rinse it thoroughly.

Remove the powder dispensing spouts, open the suction compartment and clean everything thoroughly using specific hygiene products

(**FIG 2-3**)

Remove the coffee waste container and clean.

Remove the coffee unit, clean and rinse with hot water. Dry it thoroughly using an air jet (**FIG. 8**).

Remove the sugar-dispensing spout and clean thoroughly (**FIG 7**).

Clean the cup dispenser assembly (**FIG 4**).

Remove and clean the cup chute (**FIG. 4**)

Remove and clean the mobile dispensing spout assembly (**FIG. 6**)

Remove and clean the dispensing compartment assembly (**FIG. 5**)

Reassemble all parts, taking care not to touch with your hands any parts that come into contact with food.

Carry out a mixer automatic wash cycle according to the pre-set procedures.



Fig. 2



Fig. 3

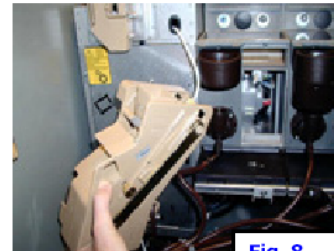


Fig. 8

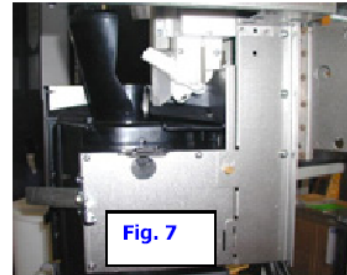


Fig. 7

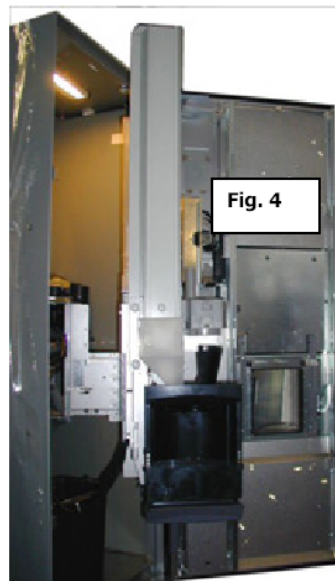


Fig. 4

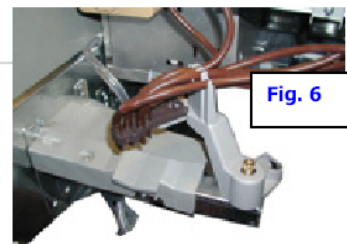


Fig. 6



Fig. 5

Weekly cleaning and hygiene
(Expected time 10 min, excluding the time for test dispensing)



Fig. 1



Fig. 2



Fig. 3

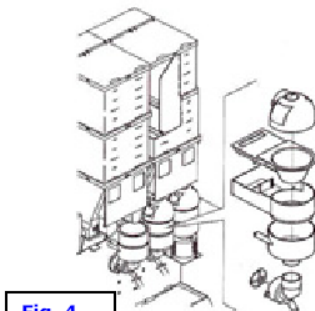


Fig. 4

Open the door and disconnect the machine from the power supply (**FIG. 1**)
Remove the powder dispensing spouts, open the mixer suction compartment and clean thoroughly using specific hygiene products (**FIG. 2-3**)
Remove the containers, empty them completely and clean thoroughly (**FIG. 5**)
Remove the liquid collection container and the grounds container, empty and clean them.
Empty any residue from the coffee dispenser assembly, clean thoroughly and rinse with hot water, paying special attention to the electrical parts.
Remove the sugar-dispensing spout and clean thoroughly (**FIG 7**).
Remove and clean the mobile spouts assembly (**FIG. 8**)
Remove and clean the dispensing compartment assembly (**FIG. 9**)
Disassemble completely the mixers and clean thoroughly (**FIG. 2-3-4**)
Empty the powder collection containers, located within the steam suction system, and disinfect. (**FIG. 2-3-4**)
Clean the rotation base of the cup stacker (**FIG. 6**) clean any encrustations from the cup chute
Reassemble all parts, taking care not to touch with your hands any parts that come into contact with food.
Close the door and make some test selections.
Carry out a mixer automatic wash cycle according to the pre-set procedures. Enter the operations carried out in the log.



Fig. 5



Fig. 9

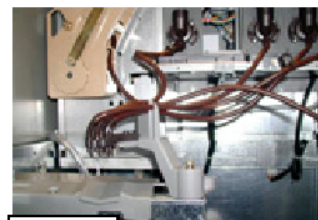


Fig. 8



Fig. 7



Fig. 6

Note: it is advisable to replace the mixers with already sanitised ones and later carry out the hygiene operations at the workshop.

Monthly cleaning and hygiene (or every 5000 selections)

Expected time 18 min (in addition to the time taken for regenerating the filter)



FIG 1

IN ADDITION TO THE **WEEKLY** OPERATIONS, ALSO THE FOLLOWING MUST BE CARRIED OUT:
Disconnect the machine from the power supply, and then open the door (**FIG. 1**).

Remove the brewer unit from the machine and disassemble, then clean all coffee residues and rinse thoroughly with hot water, check the filters for clogging and if necessary descale or replace them. Reassemble all parts and slightly lubricate the piston O-Rings using food-safe grease or replace them if even slightly damaged. (**FIG. 2-3**)

Disassemble the mixers completely, clean and wash using sanitising products, especially the powder removal areas, disassemble completely the wheel and check the state of the seal, when reassembling don not touch with the bare hands (**FIG. 6-7-8**)

NOTE: IT IS ADVISABLE TO CARRY OUT THIS OPERATION AT THE WORKSHOP AND USE ALREADY SANITISED MIXERS

Regenerate the water softener (if installed) using the special salt solution, even if the softener efficiency test is still positive (**FIG. 5**)

The softener filter can be contaminated easily and therefore regeneration ensures maximum hygiene.

Note: it is advisable to carry out this operation at the workshop and use already regenerated filters

During regeneration, it is advisable to completely sanitise the hydraulic system and the water inlet solenoid valves, including the air-break (**FIG. 4-5**).

Thoroughly clean the cup, sugar and stirrer dispenser assembly, if necessary removing it from the machine.

Enter the operations carried out in the HACCP hygiene program log

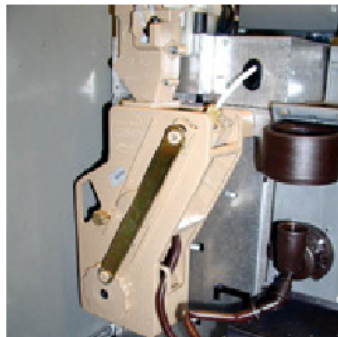


FIG 2



FIG 8



FIG 7

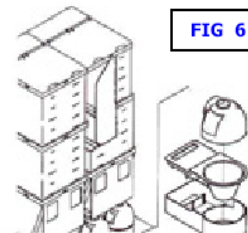


FIG 6



FIG 3

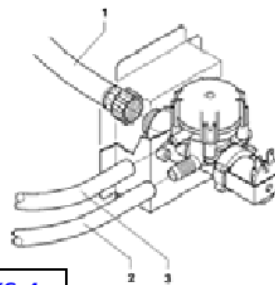


FIG 4



FIG 5