

mira



Thank you for choosing UNIC, the first French manufacturer of professional espresso machines since 1919.

The manufacturer reserves the right to modify the appliances presented in this publication without notice.
Read carefully the safety instructions before use.

RB9002
MARCH 2014 EDITION

TECHNICAL NOTE

UNIC

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1. SAFETY ADVICES

- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
- Children should be supervised to ensure that they do not play with the appliance.
- This appliance is intended to be used only for its specific purpose.

The manufacturer shall not accept any liability for damages due to improper or wrong use.

- Access to the service area is restricted to persons having safety and hygiene knowledge with practical experience of the appliance.
- Before plugging in or unplugging the power cord, place the main switch to position "0".
- If the power cord is damaged, it must be replaced by the manufacturer, its service agent or similar qualified persons in order to avoid a hazard.
- For electrical safety, be sure the appliance is correctly earthed.

The manufacturer shall not accept any liability for damage due to faulty earth.

- Only a qualified technician is allowed to access the internal parts of the appliance for maintenance and service operation.
- Be careful of hot surfaces such as: cup warmer, group heads, hot water and steam outlets.
- Do not expose oneself to steam or hot water flow.

2. IMPORTANT NOTES

- This appliance is intended to be:
 - Placed on an horizontal and stable surface
 - Used in an ambient temperature between 5°C and 35°C (41°F – 95°F).
 - Installed to comply with the national rules that may be applicable.
 - Connected to a water system with pressure ranging from 1 to 8 bar

(0.1 to 0.8 Mega pascal)

- Before connecting the electrical supply, verify that the electrical network comply with the data plate of the appliance.
- For more details about installation, adjustments and connections, please refer to the installation guide or the technician guide.
- This appliance must not be exposed to water jet or splash.
- Be careful not to block the air inlets with towels or other items.
- If the appliance has to be stored with ambient temperature less than 5°C (41°F), the water circuit (boiler – pipes) should be emptied.

3. PREPARATION OF THE SITE

The machine is delivered in a cardboard box screwed onto a wooden pallet.

➤ **Unpack the machine**

- Cut the tightening strap with shears.
- Open the cardboard box and take the accessories' container out.
- Undo the screws by slightly inclining the cardboard box.
- Take the machine out of the cardboard box and put it on wooden blocks.
- Remove screws and washers used for transport.

➤ **Install the machine and preparation of the site**

- Put the machine in its final place and level it up with the help of rubber washers, as necessary.
- The machine must be placed on a horizontal surface.
- There must be a free space of 5 cm behind the machine and the ventilation holes on the top of the machine must not be obstructed.
- A socket with a ground system and a water-supply pipe corresponding to the characteristics of the machine are sufficient for connecting.
- Set up cup racks after making adjustments.
- The machine is not to be operated without its legs.

4. HYDRAULIC CONNECTION

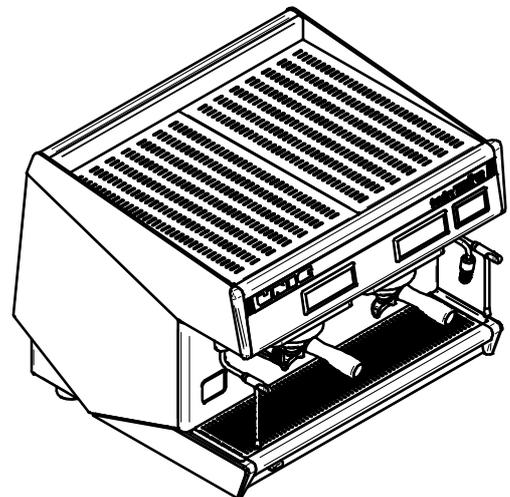
A water softener is necessary over 5°KH.

Water Intake

- Pressure ranging from 0 to 10 bar
- Connection : 3/8 gas female socket (male plug on machine)
- Pipe with a minimum 8 mm internal diameter
- Stop valve to be set up.

Drainage

- Connection : 3/4 gas female socket (male plug on machine)
- Pipe with a minimum 12 mm internal diameter.



5. ELECTRIC CONNECTION

- None of the switches must be in ON position.
- Make sure that the voltage, frequency and power values marked on the descriptive plate of the machine are in conformity with the electric network mains.
- Mount a plug on the end of the machine cable (plug with grounding: green/yellow wire).

➤ Power connections

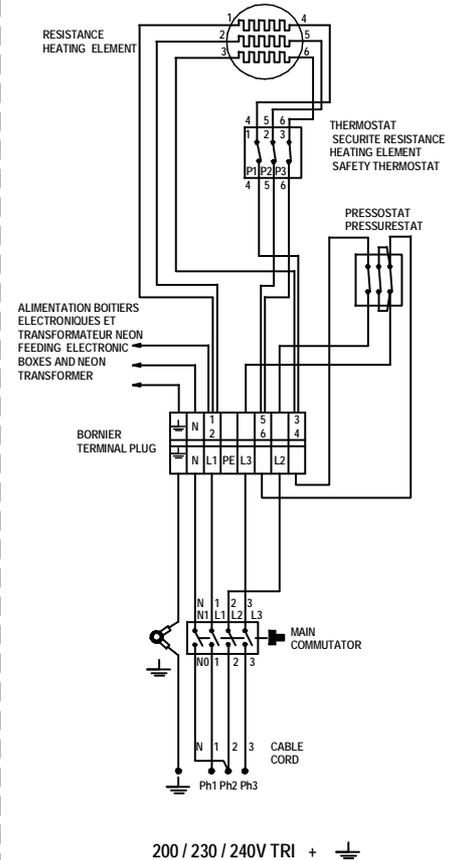
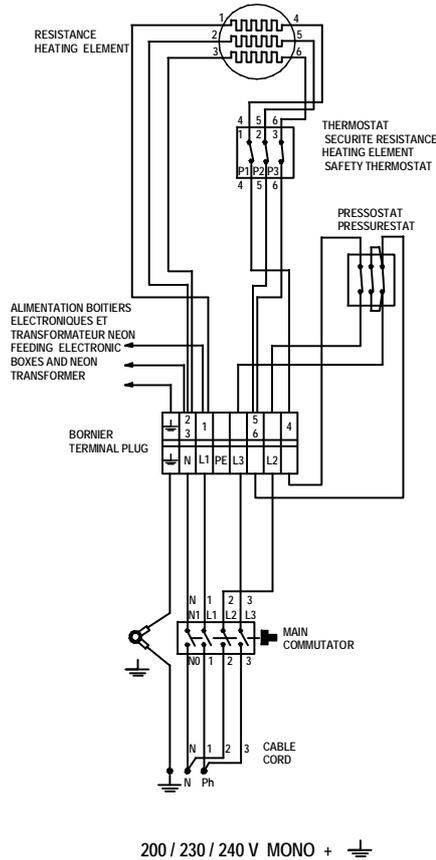
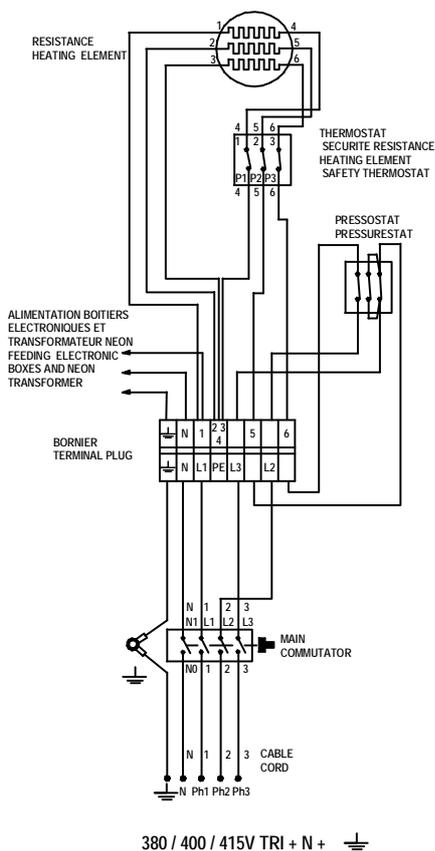
Set the machine switch to Position



The machine is delivered with a cable consisting of 5 numbered wires.

Make sure that the machine connection matches the available voltage network (see wiring diagrams hereunder). Bring the necessary modifications into the supply cable and the plug located near the electrically-driven pressurestat.

➤ Wiring diagrams



N = NEUTRE / NEUTRAL
 1 = PHASE MARRON / BROWN
 2 = PHASE NOIR / BLACK
 3 = PHASE GRIS / GREY

A : Electronic box
 B : Switch

**IN ALL CASES, THE GREEN/YELLOW WIRE
 MUST BE EARTHED**

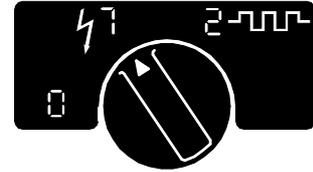
6. STARTING-UP

➤ Filling the boilers

Turn on the shutoff valve.

Plug in the machine.

Set the charge switch to Position 1. (Do not set the charge switch to Position 2 until the boiler has been filled).



ON/OFF SWITCH

▪ Steam boiler

- As soon as the machine is turned on, the filling takes place automatically.

A safety is programmed, if the filling does not occur before 3 minutes. In this special case, the electrovalve and the pump are cut off.

The light   blinks.

- Check the hydraulic connection of the machine.

- Switch off and switch on the machine by setting the charge switch to Position 0 then to position 1.

- The filling starts again and lasts 3 minutes.

▪ Internal boilers

- With the filter holder in place, press the continuous/stop  key of each unit.

As soon as the water flows correctly from the spout (with no air), press the same key again to stop the water.

➤ Heating

When the boilers have been filled, set the charge switch to Position **2**.

When the operating temperature of the machine is reached, the pressure-gauge must indicate a pressure of 0.9 to 1 bar (red scale).

It is better to keep the machine switched on permanently and the filter-holders inserted in machine even when you are not making coffees.

7. CHECKS AND ADJUSTMENTS

To get to the various adjustments, the cup rack, the rear panel or the sides must be removed. Proceed as follows:

CUP RACK:

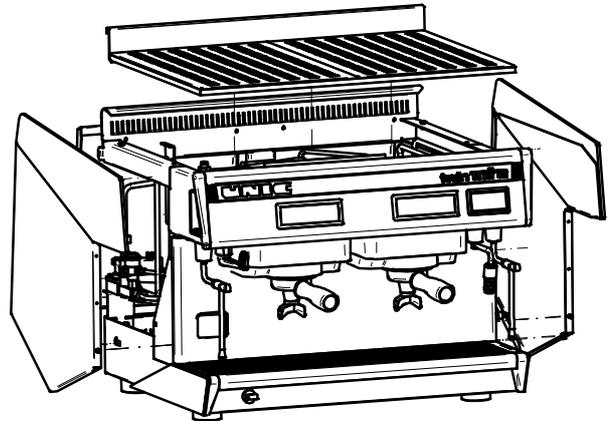
Remove the grids, then undo the 4 upper screws. And remove the cups rack.

REAR PANEL(S):

Undo the 2 upper screws located inside the machine at its back (under the cup rack); then make the panel(s) glide vertically outwards.

SIDES:

On each side, undo 1 screw under the front panel; pull the side to the back.



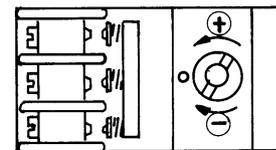
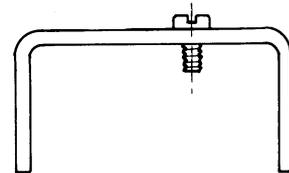
➤ **Temperature adjustment by means of the electric pressure controller**

The pressure controller (pressurestat) is located at the back.

Dismantle the cup rack; remove the cover of the pressure controller to get to its adjustment screw.

-TIGHTEN to LOWER the temperature
-LOOSEN to RAISE the temperature

The pressure-gauge (red scale) must indicate a pressure of between 0.9 and 1 bar which corresponds to a temperature of 120°C.



➤ **Pressure-release valve adjustment**

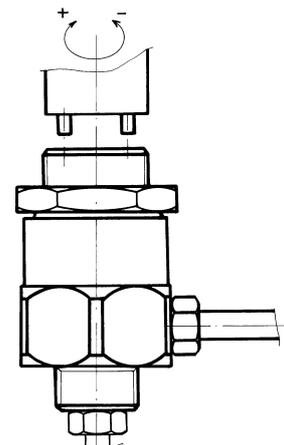
MIRA Model

The HP valve is located on the right side of the machine: it is necessary to dismantle the sides and the rear panel.

The valve is set above the pump; its adjusted pressure must just be greater than the water network pressure. Recommended value: 7 to 8 bar (green scale of the pressure gauge).

- If the valve opens ABOVE 8 bar: LOOSEN
- If the valve opens BELOW 7 bar: TIGHTEN

Use a pin-wrench; after the adjustment, do not forget to block the counter nut.



TWIN, TRI and QUATTRO MIRA Models

The HP valve is located in the lower part at the left rear of the machine: it is necessary to dismantle the left side. The valve must open at about 13 bar (green scale of the pressure gauge).

- If the valve opens ABOVE 13 bar LOOSEN
 - If the valve opens BELOW 13 bar TIGHTEN
- Use a pin-wrench; after the adjustment, do not forget to block the counter nut.*

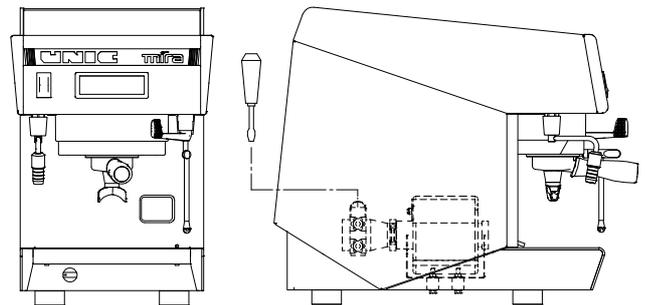
➤ **Pump-pressure adjustment**

In infusion, the pressure must be between 9 and 10 bar (pressure gauge - green scale).

MIRA Model

The pump is located in the left side and the adjustment must be done from the same side of the machine.

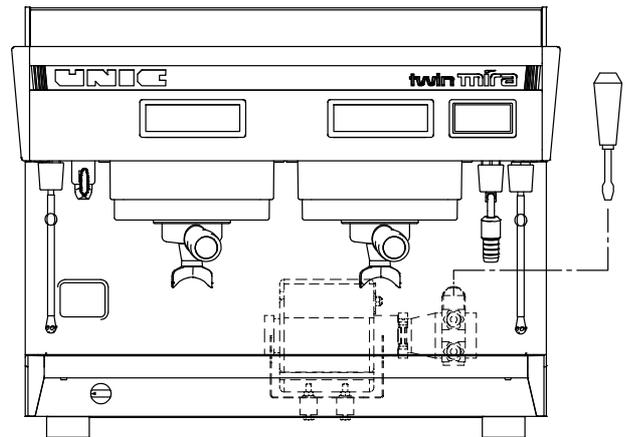
TIGHTEN to INCREASE the pressure.
LOOSEN to DECREASE the pressure.



TWIN, TRI and QUATTRO MIRA Models

The pump is located in the right side and the adjustment must be done from the same side of the machine.

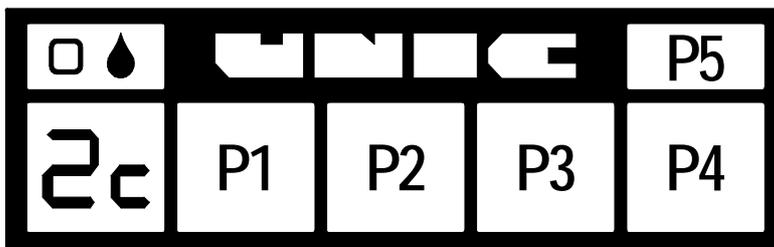
TIGHTEN to INCREASE the pressure.
LOOSEN to DECREASE the pressure.



➤ **Coffee grinding adjustment**

- Wait until the machine has reached the proper temperature (0.9 to 1 bar).
- The fineness of the grinding determines the time it takes for hot water to pass through the coffee.
- The passage-time is usually checked by using the 2-cup filter, with 2 doses of ground coffee.
- The average passage-time for 2 cups (6 to 7 cl. per cup) is from 30 to 35 seconds.
- If the passage-time is shorter, grind the coffee finer.
- If the passage-time is longer, grind the coffee coarser.
- For a good cup of coffee, use at least 6 gr. of ground coffee per cup.

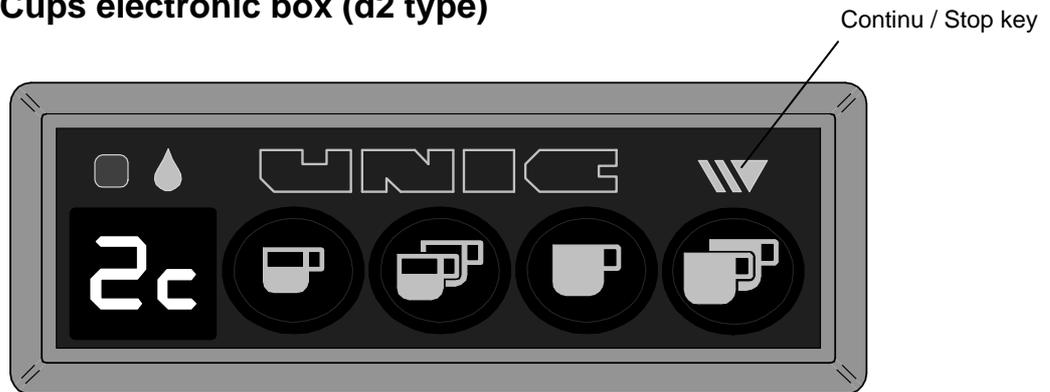
8. PROGRAMING OF THE DIFFERENT COFFEE QUANTITIES IN THE CUP



The keys from P1 to P4 can be programmed.
 The multiple doses (1, 2 or 3 cups) are calculated automatically from the programming of one of them on each box.

1	Set the machine switch to Position 0.	
2	Keep the key P5 pressed and put again the machine on. Display of Pn then Pc and Pr by pressing several times the key P5	
3	Pc = CALCULATED PROGRAMMING	
	Insert a filter-holder (with coffee) into the unit Install cups	
	☞ P5	Display Pc
	☞ P1 à P4	Select the dose to be programed (2c for example)
	☞ P5	Start the infusion cycle
	☞ P5	Press again to stop when the amount of coffee desired is correct. Display of the corresponding digital value (from 00 to 99)
	Repeat operation at 3 for the other doses (2C for example)	
4	Pn = DIGITAL PROGRAMMING	
	Quick programming without coffee and/or values carried forward on other units.	
	☞ P5	Display Pn
	☞ P1 à P4	Select the dose to be programed
	☞ P5	Display of the digital value of the selected dose
	☞ P1	Increase the value
	☞ P4	Reduce the value
	ε P5	Memorize the new value
	Repeat operation at 4 for the other doses	
5	Pr = MANUAL PROGRAMMING	
	Same proceeding as in calculated programming Pc. The manual programming doesn't calculate the other doses (1, 2 or 3 cups), only the programed dose is modified. Caution: any new programming (Pn or Pc) cancel ALL previous programed values.	
6	Wait until the program mode is automatically inactivated (from 10 to 15s), or switch off and on again the machine.	

➤ 2 Cups electronic box (d2 type)



▪ Use of the doses to be programmed

- 4 coffee doses and 1 manual function, Continu/Stop are available.
During the infusion, it is displayed :
 - * 1c or 2c = 1 or 2 small cups
 - * 1C or 2C = 1 or 2 large cups
 - * C- = Continu/Stop
- At any time you can change the selection by pressing another key.
- The dosage is automatic but the infusion can be stopped manually by pressing the key Continu/Stop.
- Programming: The multiple doses being computed, only two programming are necessary (1c or 2c) and (1C or 2C).

▪ Configuration parameters

- * dn / dt For the automatic calculation of the multiple doses
dn = normal dosage
dt = dosage with "Torino" kit
- * C0 / C1 Chronometer for the infusion time
C0 = no chronometer
C1 = display of the infusion time
- * A0 / A1 Authorization to program
A0 = prohibited programming
A1 = authorized programming

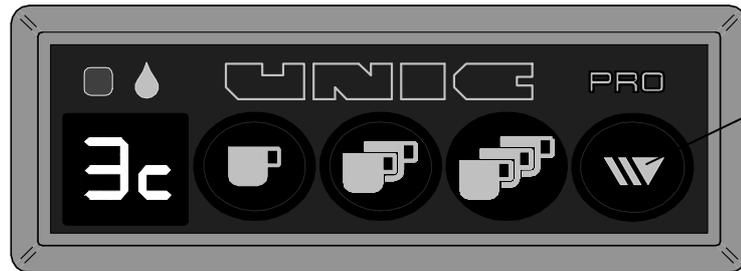
After switching on, the display shows the following information in order:

- The version number of the electronic memory: ex. r1
- The type of box: d2
- The active functioning parameters: ex. dn, CO, A1

▪ Modification of the configuration parameters

- Switch the machine off (switcher 0/1)
- Press simultaneously both keys P1 and P4, and in the same time, switch again the machine on
- Press the key P4 to change the selection (ex. dn or dt)
- Press the key P5 to change function (ex. dosage dn/dt or Chrono: C0/C1)
- Switch off to leave the configuration mode or wait the automatic leaving at the end of 10s.

➤ 3 Cups electronic box (d3 type)



Continu / Stop key

▪ Use of the doses to be programmed

- 6 coffee doses and 1 manual function, Continu/Stop are available.
During the infusion, it is displayed :
 - * 1c, 2c ou 3c = 1, 2 or 3 small cups
 - * 1C, 2C or 3C = 1, 2 or 3 large cups
 - * C- = Continu/Stop
- At any time you can change the selection by pressing another key.
- The dosage is automatic but the infusion can be stopped manually by pressing the key Continu/Stop.
- To switch from a small dose to a large one (or reverse): press the same key (ex 3C → 3c)
- Programming: The multiple doses being computed, only two programings are necessary (1c, 2c or 3c) and (1C, 2C or 3C). If it is necessary, the "Continu" dose can also be programmed.

▪ Configuration parameters

- * dn / dt For the automatic calculation of the multiple doses
dn = normal dosage
dt = dosage with "Torino" kit
- * C0 / C1 Chronometer for the infusion time
C0 = no chronometer
C1 = display of the infusion time
- * A0 / A1 Authorization to program
A0 = prohibited programing
A1 = authorized programing
- * cc/cC/CC Start of infusion in small or large cup
cc = always starts in small cups
CC = always starts in large cups
cC = keep the last selection: c or C

After switching on, the display shows the following information in order:

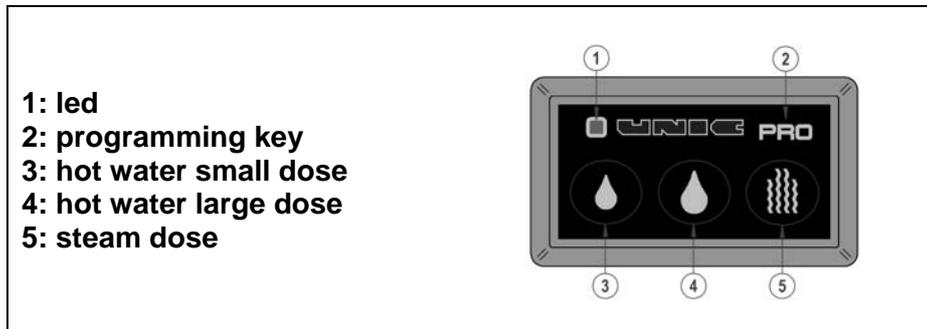
- The version number of the electronic memory: ex. r1
- The type of box: d3
- The active functioning parameters: ex. dn, CO, A1, CC

▪ Modification of the configuration parameters

- Switch the machine off (switcher 0/1)
- Press simultaneously both keys P1 and P4, and in the same time, switch again the machine on
- Press the key P4 to change the selection (ex. dn or dt)
- Press the key P5 to change function (ex. dosage dn/dt or Chrono: C0/C1)
- Switch off to leave the configuration mode or wait the automatic leaving at the end of 10s.

9. HOT WATER-STEAM BOX, STEAMAIR OPTION

➤ Hot water – steam box



- 1: led
- 2: programming key
- 3: hot water small dose
- 4: hot water large dose
- 5: steam dose

▪ Use

- An impulse on the keys 3 to 5 makes the corresponding dose flow:
Hot water keys 3 and 4 – Steam key 5.
The led lights in green during an hot water dose delivery, in red for a steam dose.
- You can stop before the end of the dose by pushing again the same key.
Note: a safety cuts the flow after 105 seconds.

▪ Programming

- The programming mode allows the delivery time adjusting for steam and hot water
- Keep the key PRO (2) pressed on until the led lights in orange.
- Place a container under the appropriate outlet and press the key (3 to 5) to set.
- When the level in the container is convenient press again on the same key.
- Press on PRO (2) to confirm the new adjustment and come out of the programming mode.
Note: the programming mode is automatically switched off after 20 seconds without any action.

➤ SteamAir option



- 1: led
- 2: programming key
- 3: hot water dose
- 4: steam dose
- 5: **steamAir**

The SteamAir option allows, particularly when making cappuccino, to foam the milk very easily and automatically: the supply of air mixed with steam brings milk to a programmed temperature (60° to 70°) and foams it.

The stop is done automatically when the temperature is reached which saves milk from boiling. By this way the milk qualities are preserved.

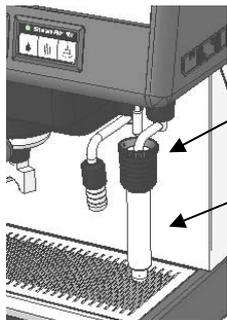
Once the air/steam adjustment is defined, the operation is as follows:

- Insert the SteamAir outlet into the milk container
- Push on the SteamAir key

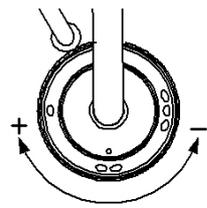
Wait for it to stop automatically.

The SteamAir box also controls a timed steam and hot water outlet.

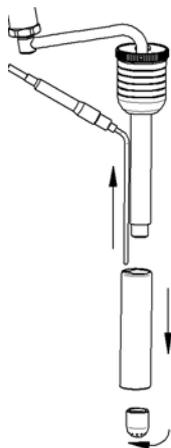
▪ Components



Air/steam adjust
steamAir
Outlet



	o	oo	ooo
Steam only	Level 1 Very fine foam	level 2 Fine foam	level 3 Medium foam



Outlet cleaning:

- Brake down the device and clean it once per day minimum.
- After each use, rinse the outlet using the Steam.

▪ Use

Steam and hot water keys:

- An impulse on the key activates the corresponding flow delivery. The led lights in green for an hot water dose and in red for a steam dose.
- To stop before the end of the delivery, press again the same key

Note: a safety stops the flow after 105 seconds for the water and after 180 seconds for the steam.

SteamAir key:



- Automatic mode: (To reach the programmed T°)
One impulse on the key makes the SteamAir flow until the liquid reaches the preset temperature (see § programming)

You can stop it manually by pushing again on the key.

- Manual mode: (Over the programmed T°)
If after the stop in automatic mode (temperature reached) you wish to continue the heating, you have to press again the key. Then you go into manual mode and the outlet is again activated. To stop you will have to push again on the same key. If you don't do it, it will be stopped automatically by one of the two safeties: after 180 seconds or when the liquid temperature reaches 96°

Note: when a safety is switched on, the led blinks.

▪ Programming

The programming mode allows adjusting the steam and hot water time together with the SteamAir level temperature adjustment.

Hot water / steam delay time adjustment:

To adjust the hot water and steam delay time you have to:

- Switch off the machine by cutting the main switch.
- Keep the programming key (2) pressed on, when switching on until orange blink of the led which confirms that you have entered the programming mode.
- Place a container under the appropriate outlet and press on the key to set (3 or 4).
- When the level in the container is convenient press again on the key.
- Press on the programming key (2) to confirm the new adjustment and come out of the programming mode (the led blinks twice in orange).

SteamAir temperature adjustment:

To adjust the SteamAir temperature, you need (with power on) to:

- Maintain the key pressed on until orange blink of the led which confirms that you have entered the programming mode.
- Press the SteamAir key paying attention to the number of blinks and colour of the led which shows the temperature adjustment registered: the led lights in orange, it means that the adjustment is as in factory 62°C.

A blink corresponds to a difference of 2°C compared to the factory value; with green colour it is below, in red it is above.

Examples:

2 green blinks means that the temperature is set to 58°C ($62^\circ - 2 \times 2^\circ$)

3 red blinks means that the temperature is set to 68°C ($62^\circ + 3 \times 2^\circ$)

To modify the adjustment:

- Each impulse on hot water key (3) reduces the temperature of 2°, on the steam key (4) increases of 2°.
- Press on the SteamAir key to check the adjustment: check the number of blinks looking the colour of the led.
- Press on the programming key (2) to confirm the new adjustment and come out of the programming mode (the led blinks twice in orange)

Note: The temperature adjustment can be done in a range of 50°C to 90°C.

10. CLEANING AND MAINTENANCE

- DO NOT FORGET TO REGENERATE YOUR WATER SOFTENER PERIODICALLY.
- DON'T USE SCRUB OUT ABRASIVE PRODUCT AND SCOURING SPONGE, DON'T USE BLEACH OR DETERGENT COFFEE.

➤ **After each use**

▪ Steam outlet tube:

After each use, clean the steam tube with a wet rag and push steam push-button for a short moment to eliminate the small amount of liquid that could left inside the tube.
(Remove the rod end from steam outlet for easier cleaning).

➤ **Daily**

▪ Before service or after several hours of inactivity:

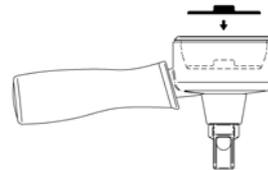
Dispense to the drain:

- Through each coffee head and water nozzle 0.5 liter of water.
- Through each steam nozzle some steam for 1 minute.

"BEFORE PREPARING ANY BEVERAGE"

▪ After service:

- Take the 2-cup filter-holder.
- Place the rubber plug (DO-197) inside the filter



Decompression circuit:

- Insert and tight the filter-holder in the unit.
 - Press a coffee key to put the filter-holder under pressure, and then stop the unit.
- Repeat this operation several times, each time removing the water from the filter-holder.

Filter-holder joint:

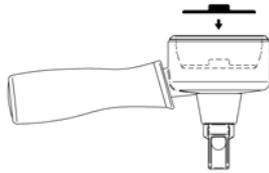
- Insert the filter-holder into the unit without tightening it.
- Press a coffee key then tighten and loosen alternately the filter-holder in order to create a leak at the filter-holder joint to clean it.

➤ Weekly

▪ Cleaning with detergent tablet (automatic cycle)

Filter holder:

Take the 2 cups filter holder.
Place the rubber plug (DO-197) inside the filter. Put a detergent pellet above the rubber plug then insert and tighten the filter-holder in the unit.



- Keep pressed the key  then press the 2 large cups  *
- display shows nP
- Press again  to start the automatic cycle (2s On / 8s Off – x 10 sequences)

* (If the box is set in chronometer mode: Press twice , the second time holding it, then press ).

- When the display shows rP: take off the filter-holder from the unit and wait the end of the rinsing cycle (3x 30 seconds)

- At the stop of the automatic cycle: put back the filter holder without the plug and without coffee then start a 2 large cups cycle  to rinse it.

DHA Option:

Use 1 pair of cleaning-rinsing capsules. Inside each introduce 1 Detergent tablet. Close the rotary cover. Engage the 2 capsules inside the holder. Close the DHA.



- Keep pressed the key  then press the 2 large cups  *
- display shows nP
- Press again  to start the automatic cycle (2s On / 8s Off – x 10 cleaning sequences follows by 3x 30 seconds of rinsing)

* (If the box is set in chronometer mode: Press twice , the second time holding it, then press ).

At the stop of rinsing cycle, remove the capsules (be careful of the hot water inside)

- Filter holder

Wash the filter-holders and the filters (removing the filter) in soapy water.

- Overflow tray:

Remove the overflow tray to empty it and rinse it under the tap.

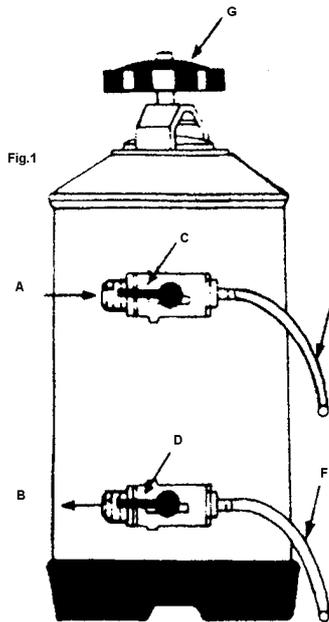
- Body:

Clean the body of the machine using a soft cloth and alcohol for the stainless-steel parts and a non-abrasive detergent for the painted parts.

➤ Water Softener

▪ Water Softener Regeneration: how?

- A - Water intake
- B - Water outlet
- C - Intake tap
- D - Outlet tap
- E - Discharge pipe
- F - Regenerating pipe
- G - Lid wheel

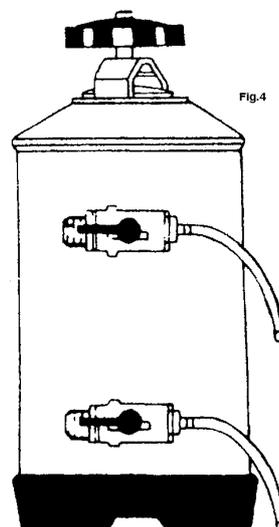
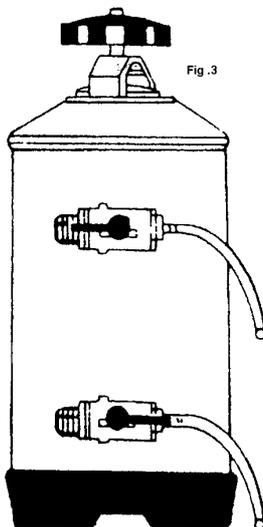
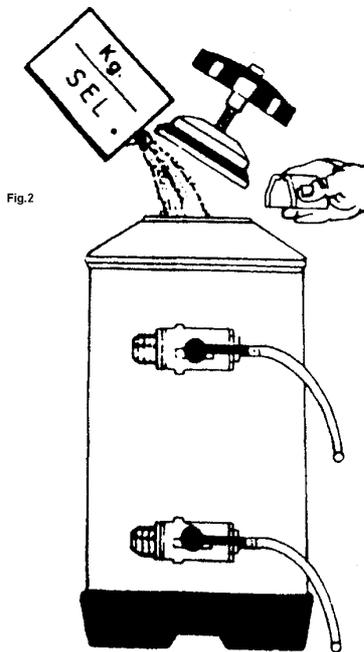


Use 1 kg of salt when the softener is 400 mm high.

Use 2 kg of salt when the softener is 600 mm high.

INSTRUCTIONS FOR USE :

① Install an empty vessel with a 2-litre capacity under Pipe E.



② Turn Handles C and D from the left to the right.

Unscrew G to remove the lid.

Insert salt.

③ Restore the lid to its initial position.

Turn Handle C from the right to the left

Let the salted water run through Pipe F until it gets soft.

④ Turn Handle D from the right to the left

▪ Water Softener Regeneration: when?

Example:

Daily amount of used coffee: 3 kg
 Number of 7-centilitre cups: 420
 Daily water consumption: 30 litres

Daily number of 20-centilitre cups of tea: 150
 Daily water consumption: 30 litres.

Conclusion:

- Total daily water consumption is 60 litres
- Water hardness is 30°TH.

See 30°Column and line 60 of Table hereunder.

- DV 50 Water softener must be regenerated every 2 weeks.
- CN 97 Water softener must be regenerated every 5 weeks.

CN 97 Model Height : 600 mm Diam. : 185 mm Resin : 16 litres Salt : 2 kg												
Water hardness °TH		20°	25°	30°	40°	50°	60°	80°	Daily consumption			
Softened water → CN 97 Model		2500	2350	2100	1800	1600	1400	1000	Water in litres	Coffee in kg		
		36	34	30	26	22	20	14	10	1		
1	10	17	16	14	13	11	10	7	20	2		
1,5	15	11	10	9	9	7	7	5	30	3		
2	20	9	8	7	6	5	5	4	40	4		
2,5	25	7	6	6	5	4	4	3	50	5		
3	30	6	5	5	4	4	3	2	60	6		
3,5	35	5	4	4	4	3	3	2	70	7		
4	40	4	4	4	3	3	2	2	80	8		
4,5	45	4	3	3	3	2	2	2	90	9		
5	50	3	3	3	3	2	2	1	← NUMBER OF WEEKS BETWEEN 2 REGENERATING TREATMENTS ACCORDING TO FLOW CAPAC. & WATER °TH.			
6	60	3	3	2	2	2	2	1				
6,5	65	3	2	2	2	2	1	1				
7	70	2	2	2	2	1	1	1				
7,5	75	2	2	2	2	1	1	1				
8	80	2	2	2	2	1	1	1				
Coffee in kg	Water in litres	1200	1100	1000	900	760	700	500			Softened water DV 50 Model	
Daily consumption		20°	25°	30°	40°	50°	60°	80°			Water hardness °TH	
DV 50 Model Height : 400 mm Diam. : 185 mm Resin : 8 liters Salt : 1 kg												

11. CONNECTION TO A COMPUTER SYSTEM

➤ Generalities

Connection to a computer system (Hartwall, Walla, Remenco ...)

The coffee machine informs the computer (in real time) about the number of cups of coffee and tea (made with temporized hot water). The computer is in charge of the management of the collected data from the coffee machine.

Each barman has got a coded badge that gives him permission to use the coffee machine and directly charge the served drinks.

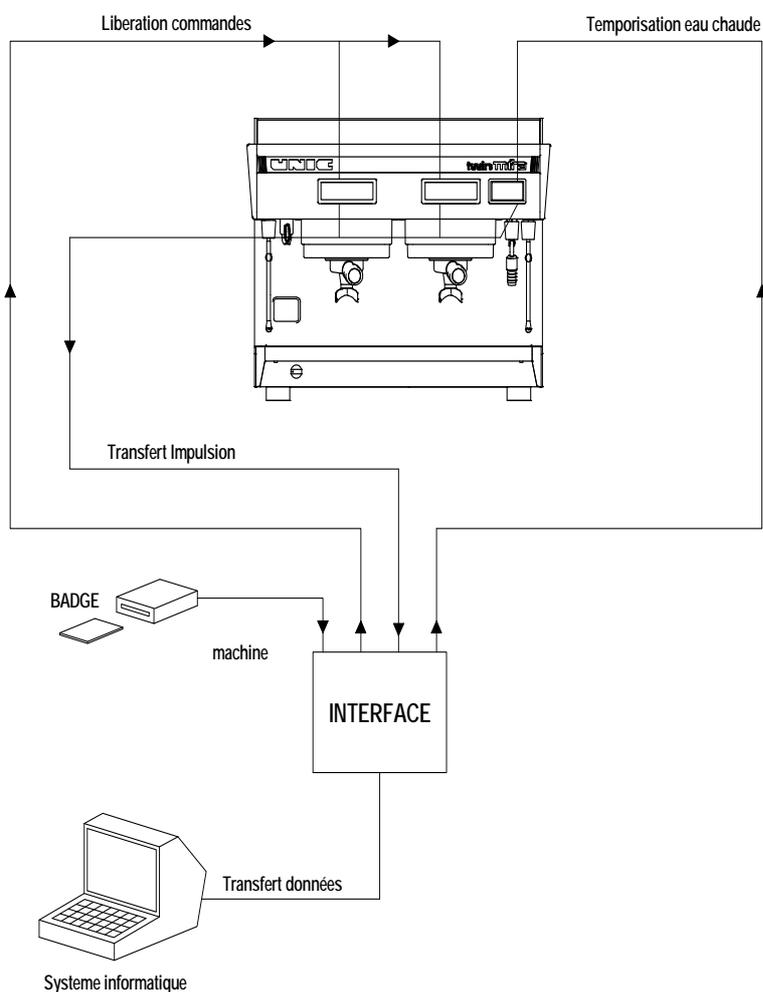
➤ Machine preparation

If the machine is not already equipped for connection to a computer system, a coffee machine of the MIRA range must be modified as follows:

- Electronic box, ref 45124 and 45126 have to be replaced by electronic box ref. 45128 and 45137.

The following equipment is also supplied:

- An interface box that records impulses coming from units and hot water outlets and transmit them to the computer
- The cables connecting the interface to the coffee machine
- A key switch to enter in programing mode.



TROUBLE SHOOTING

VERY IMPORTANT!

BEFORE TAKING ANY ACTION MAKE SURE THAT ALL THE ADJUSTMENTS ARE CORRECT.

- TEMPERATURE 120°C

STEAM PRESSURE 0,9 to 1 bar (14 PSI)

- INFUSION PRESSURE 9 to 10 bar (140 PSI)

High pressure valve opening: over 13 bar (188 PSI)

- WATER SUPPLY PRESSURE 0 bar to 6 bar (0 PSI to 90 PSI)

If the machine "sucks" water directly from an external reservoir, check the water level in the reservoir and the non-return valve and filter fixed at the end of the inlet pipe.

- PRECAUTIONS TO BE TAKEN

A. Switch off the machine before any action on the electric circuits.

B. Cool the machine and make the pressures down before any action on the hydraulic circuit.

12. DISPLAYED FAILURES

<p> Push button 1</p> <p> Push button 2</p> <p> Push button 3</p> <p> Push button 4</p> <p> Push button 5</p>	<p>See on § Problems in connection with the electronic boxes' control button (page 24)</p>
<p> Fuse</p>	<p>See on § Fuse problems (page 24)</p>
<p> Time</p>	<p>See on § Dosage problems (page 25) → > 105 sec</p>
<p> Metering + Time</p> <p> Dosage Metering</p> <p> Short circuit Metering</p> <p> Opened Metering</p>	<p>See on § Metering safety system (page 26) → > 105 sec</p> <p>See on § Metering safety system (page 26)</p> <p>See on § Dosing device safety system (page 27)</p>

➤ **Problems in connection with the electronic boxes' control button**

If it is displayed P1, P2 ... or P5, this means that the corresponding key is in short-circuit and can't be used any more.

Remedy:

- Check that the front is not deformed
- Change the electronic box

➤ **Fuse problems**

Display: **F_**

F- is displayed when the fuse located at the back of the electronic box is "cut out". The fuse can be reached from the upper part of the machine after removing the cup warmer.



If the fuse is "all right"

If the fuse is "cut out"



Check the fuse-holder

Clean fuse / fuse-holder contact points

Check the box connections:
Do not invert wires
(valve and motor-pump wires)

The cause must be determined, prior to fuse replacement.

Possible causes:

- The valve coil of the unit is short-circuited
- The motor-pump coil or R.C circuit is short-circuited
- The motor-pump or valve outlets of the electronic box are short-circuited (inside the box)
- Cables are short-circuited
- Fuse failure.



- Replace faulty elements
- Replace the fuse

➤ Dosage problems

▪ 105-second safety system of the coffee unit

Thanks to such a safety system, the maximum infusion time is reduced and ranges to 1 minute and 45 seconds. As a result, the infusion process automatically stops, if the dosing device no longer works or if the flow capacity is insufficient so that the motor-pump and the valve of the unit are better protected.

When the safety system is on, **t** is displayed.

The flow of the water going through the coffee filter is insufficient.
The infusion time corresponding to the programed dose is more than 105 seconds.



The pump is faulty

Check:

- The pressure
- Power supply:
 - * cables
 - * condenser
- The mechanical state of the motor-pump:
 - * filter
 - * coupling

One of the water passage holes is clogged.

Check the hydraulic circuit:

- Nozzle of dosing device
- Unit nozzle
- Unit filter
- Unit valve
- Coffee filters
- The spout

The coffee grind is too fine:

- Use a coarser grind.

▪ Metering safety system

During the infusion process, **cd** is displayed. This means that the dosing device has been no longer transmitting impulses to the unit electronic box for 5 seconds.

If the metering interruption is only temporary, the infusion cycle will stop as soon as the number of metered impulses matches the number of programed impulses.

Obviously the obtained dose will be heavier.

If the metering interruption is permanent, the infusion will stop automatically 105 seconds after the cycle has started and **Ct** is displayed.

Or stop manually by pressing the Continu/Stop key. Display of **cd**

Display of **ct** or **cd**. The dosing device has stopped transmitting impulses to the unit electronic box for more than 5 seconds.



Start a coffee cycle.
Check the control LED located on the dosing device.



It does not flash

It flashes



The water does not run through the spout

The water runs through the spout

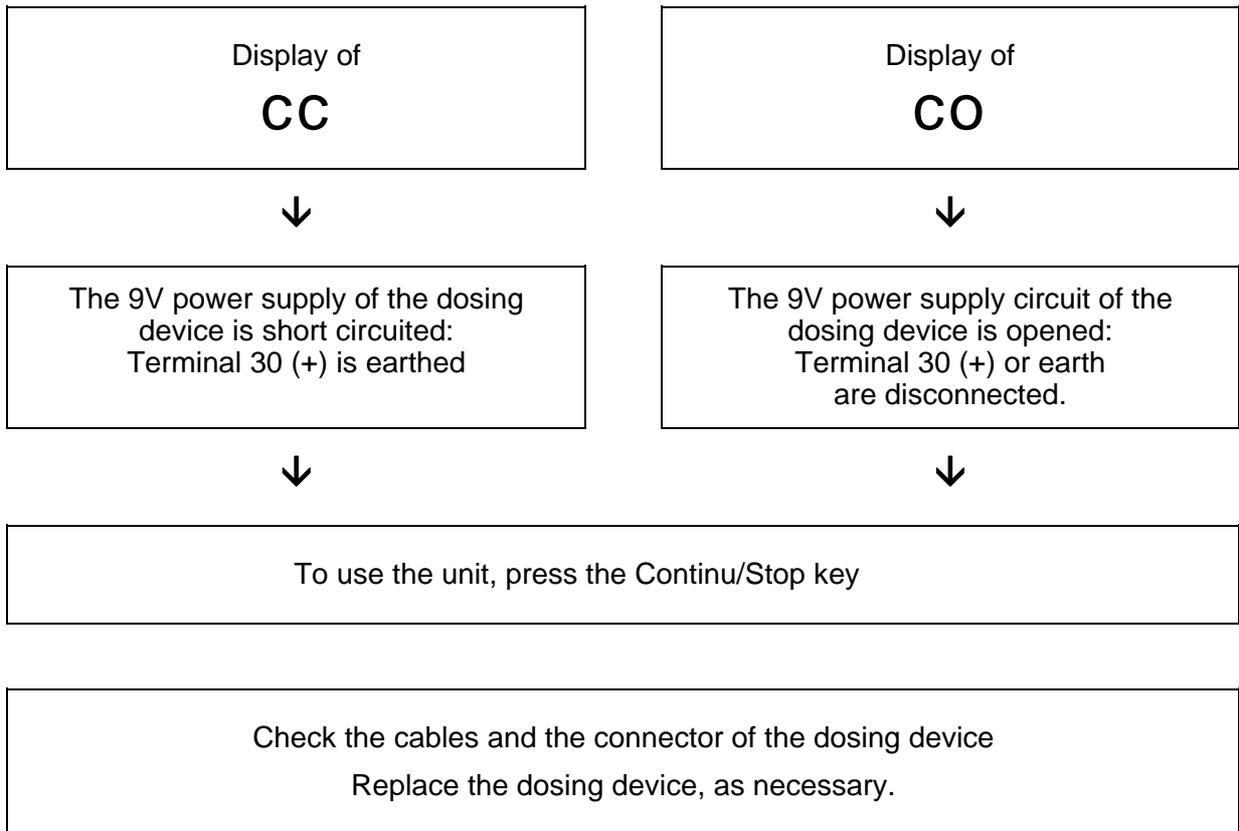
- Either there is no more problem and it all normally works.
- Or the outgoing signal wire of the device is disconnected. (terminal: 32-out)



The hydraulic circuit is blocked
Check:
- There is water above the dosing device
- Coffee filters are clean
- The grind is not too fine
- The device nozzle is all right
- The unit valve is opened
- The unit nozzle
- The unit filter.

The dosing device no longer works
Check:
- The device cables (power supply + 9V)
- The free rotary movement of the turbine
- The magnets drowned in the turbine are clean
- The dosing device (outgoing signal)
Replace the dosing device, as necessary.

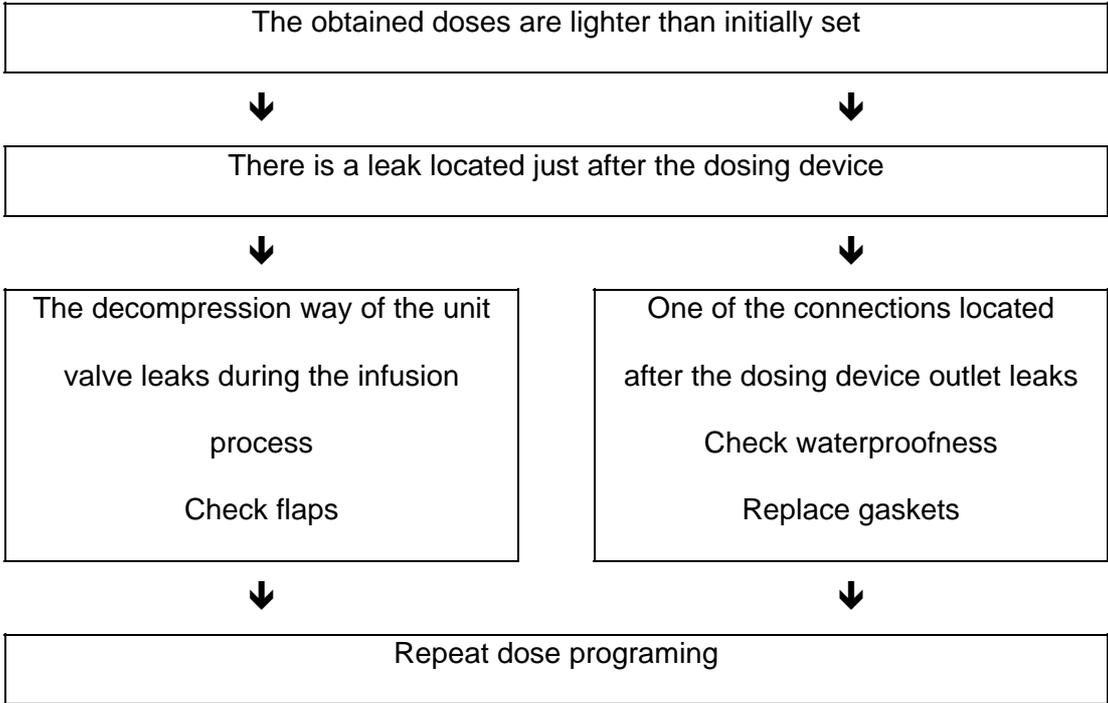
▪ Dosing device safety system



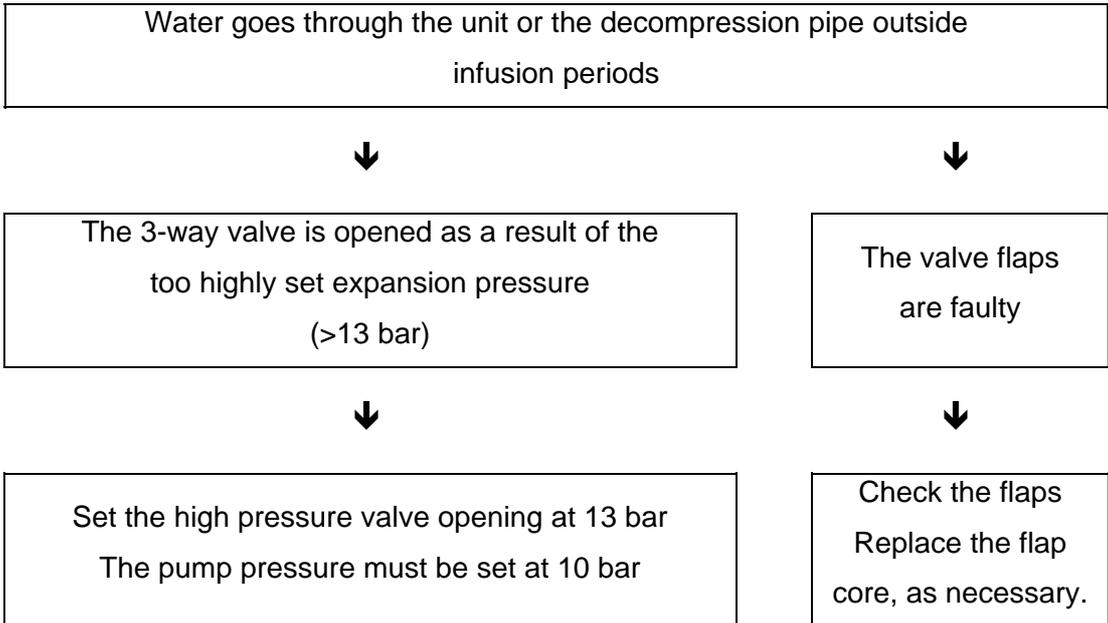
13. OTHER FAILURES

➤ **Hydraulic problems of the coffee unit**

▪ Doses lighter than initially set

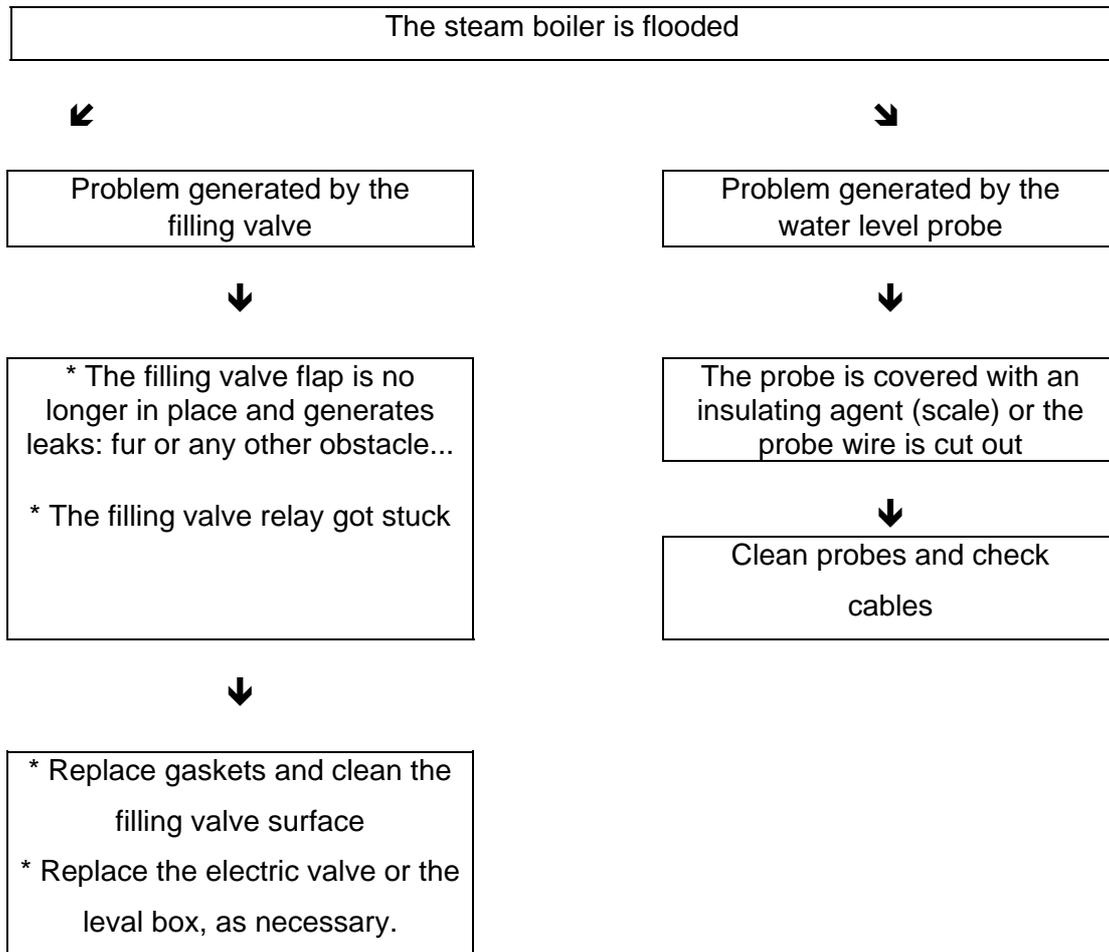


▪ Dripping outside infusion periods



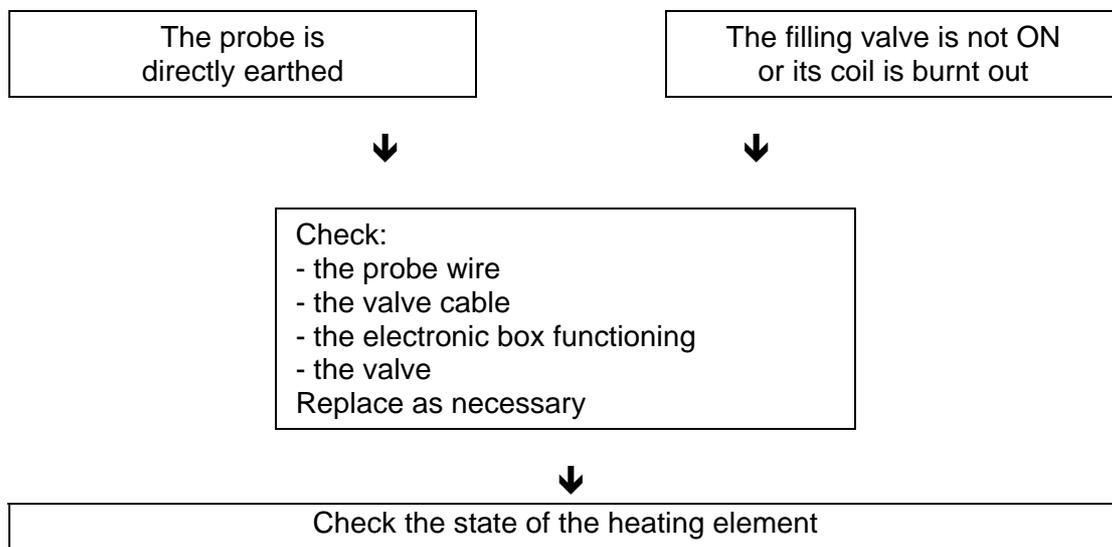
➤ **Problems in connections with the level regulation**

▪ The steam boiler is flooded



▪ The boiler is empty

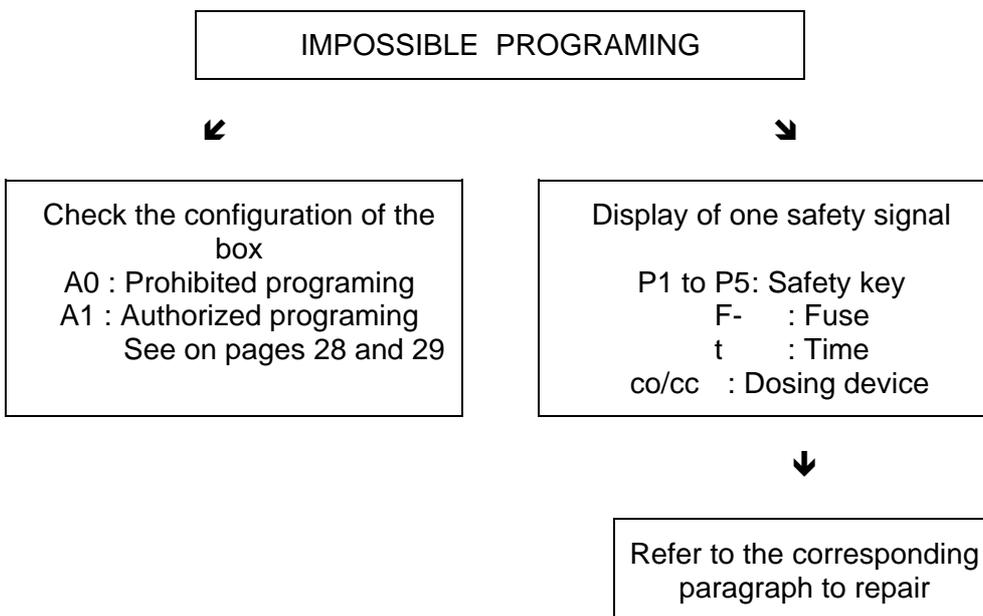
RISK TO RUIN THE HEATING ELEMENT



➤ **Insufficient or no heating process**

- After getting a few cups of coffee, the machine gets "cold".
- Check the infusion time and adjust the grind accordingly.
- Make sure that each pin of the heating element works.

➤ **Impossible programing**



14. TECHNICAL CHARACTERISTICS

DIMENSIONS cm	MIRA	TWIN MIRA	TRI MIRA	QUATTRO MIRA	ADJUSTEMENTS	
<i>Width</i>	34	64	86	108	Temperature	118 à 120°C
<i>Height</i>	51	51	51	51	Steam pressure	0.9 à 1 bar
<i>Depth</i>	57	57	57	57	Pump pressure	9 bar
WEIGHT (kg)	39	55	76	96	HP valve	13 bar (8 bar MIRA)
WATTAGE	<i>mono only</i>				LP valve	3.2 bar
110V mono	1.7 Kw	-	-	-	Dose of ground coffee	7 gr
200V mono	2.3 Kw	3.5 Kw (option 2.3)	3.5 Kw	5.2 Kw	Dose of water	5 à 7 cl
220V mono – 380V tri + N	2.7 Kw	4.3 Kw (option 2.7)	4.3 Kw	6.3 Kw	Infusion time	20 à 25s
230V mono – 400V tri+N	3 Kw	4.7 Kw (option 3)	4.7 Kw	6.8 Kw		
240V mono – 415V tri + N	3.2 Kw	5.1 Kw (option 3.2)	5.1 Kw	7.5 Kw		