mira

TECHNICAL NOTE

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 carrefully the safety instructions before use.

RB9002 10/2018

UNIC

Contents list

1. SAFETY ADVICES

This device is intended to be used only for its specific use.
The manufacturer disclaims any liability for damage caused by abnormal use or abuse.

Children 8 years of age or older and persons with reduced physical, mental or sensory abilities, or lack of experience and skill may use this device, if supervised by a qualified person, or they have received the instructions for use and security necessary to understand the risks involved.

Supervise children to make sure they do not play with the appliance and they can't make the cleaning & maintenance of the machine.
Do not leave the packaging elements within reach of children. These elements are potentially a source of danger.

The installation must be done by a qualified technician and following local and national regulations. He is the only one to be authorized to access the internal parts of the device for maintenance and repair.
Use only the technical and spare parts manuals for proper functioning of the machine, and avoid compromising safety.
Access to the service area is limited to persons with the necessary knowledge of safety and hygiene as well as practical experience of the device.
Leave enough free space around the machine to facilitate its use and to preform any maintenance operations.

The device **must not be**:
- exposed to the elements of the external environment or placed in damp places,
- exposed to a water jet or splashing.
- installed in areas where the jets or high-pressure cleaners are used.

The device **must be**:
- placed on a stable, level and horizontal surface
- used at an ambient temperature of 5°C to 35°C (41°F - 95°F), (if it is stored at an ambient temperature below 5°C (41°F) the water circuit (boiler-piping) must be drained.)
- if the device freezes, wait 24 hours at a minimum temperature of 10°C (50°F) before restarting the device.

Before connecting the power and water supplies, check that the electrical and water network are in accordance with the technical information plate of the device.

The power supply must be provided with the following safety features: power switch which completely isolates the machine from the mains (gap between contacts of at least 3 mm), efficient earthing and an effective circuit breaker for protection against earthing leaks; section of the conductors appropriate for a power capacity.
Before connecting or disconnecting the power cable, switch the main switch onto position 0. If the power supply cable is damaged, it must be replaced by the manufacturer, by its after-sales service technician or similarly qualified persons, to avoid any danger.
For electrical safety, make sure that the device is properly earthed.

The manufacturer disclaims any liability for damage caused by improper earthing.
The device must be connected to a water network with a pressure of 1 to 8 bar (0.1 to 0.8 MPa) and a tap readily accessible must be fitted in front of the water supply tube. The device is to be installed with adequate backflow protection to comply with applicable federal state and local codes.
In case of emergency (fire, surge, abnormal noise, etc. the first thing to do is to cut off the current and close the water tap.

Be careful not to obstruct the air inlets of the machine with towels or other objects.
Beware of hot surfaces such as cup heaters, the unit heads and the hot water and steam outputs.
Never install containers filled with liquid on the top of the machine.
Beware of jets of hot water or steam.

The machine should be descaled only by a qualified technician.

2. 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.

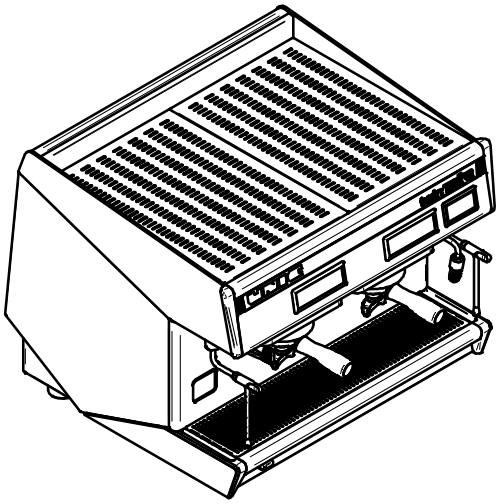
3. HYDRAULIC CONNECTION

A water softener is necessary over 5°KH.

Water Intake
- Pressure ranging from 0 - 8 bars (0.1MPa - 0.8 MPa).
- 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.

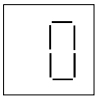
Then connect the other end of the drain tube to a waste water drain by ensuring that no adverse slope interferes with good outflow.



4. 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.

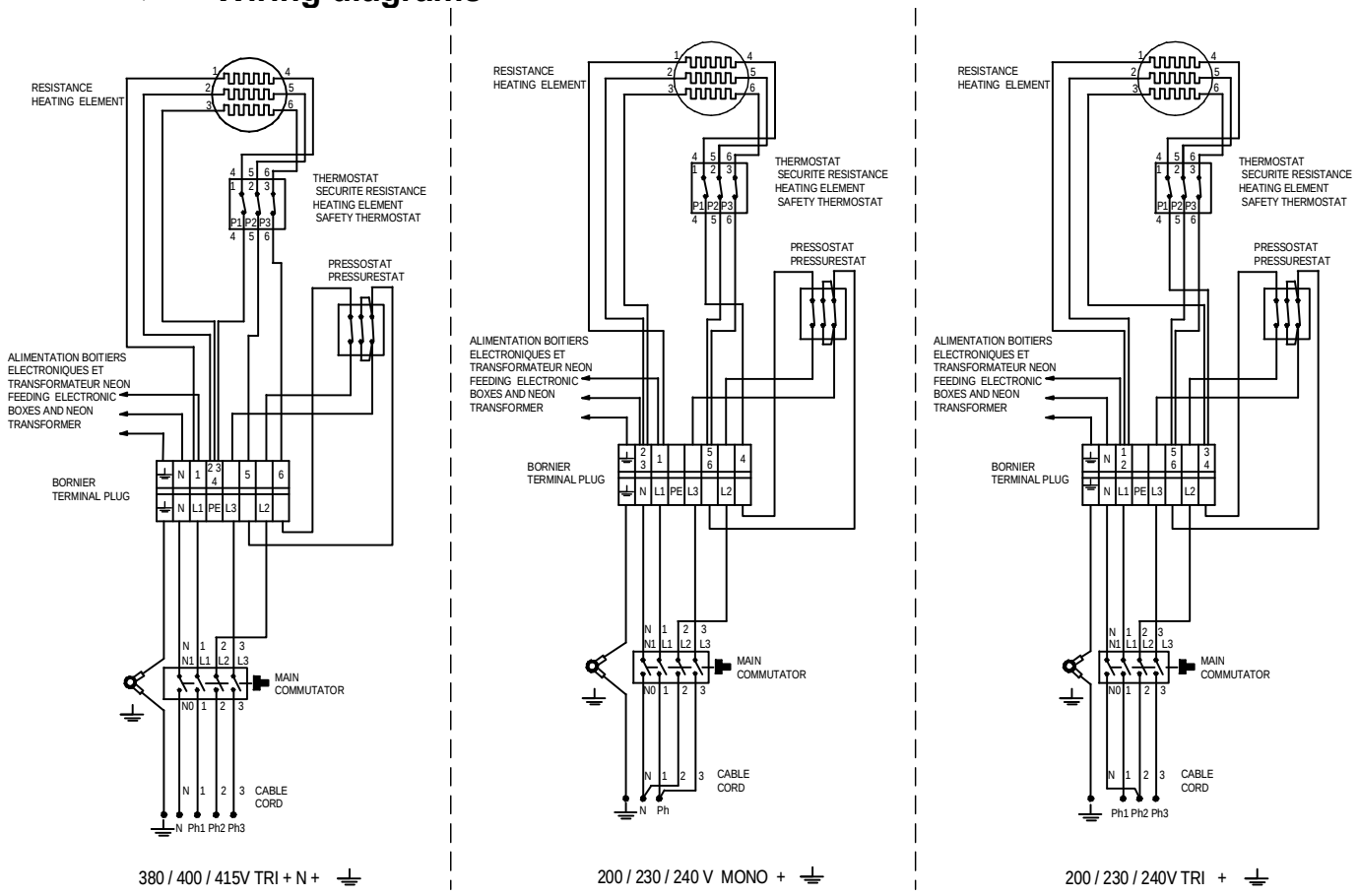
➢ Power connections

Set the machine switch to Position  .

The machine is delivered with a cable consisting of 5 numbered wires (including the earth wire).

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

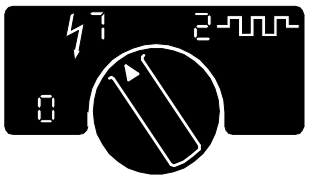
A : Electronic box
B : Switch

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

5. 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 and 1 bar (0.09MPa et 0.1MPa) (red scale).

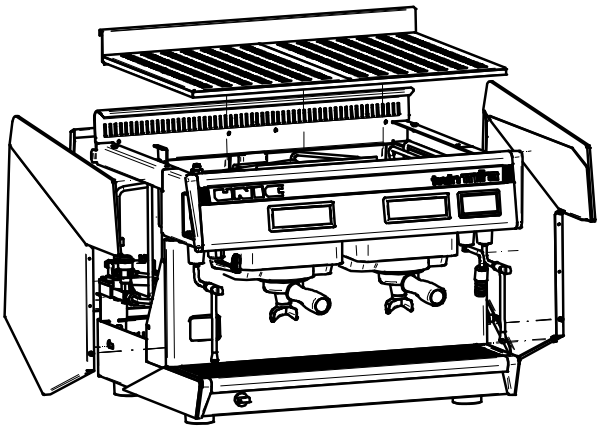
It is better to keep the machine switched on permanently and the filter-holders inserted in machine even when you are not making coffees.

6. 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):

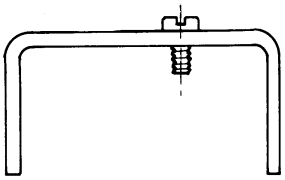
Undo the 2 upper screws located inside the machine at its back (under the cup rack); then make the panel(s) glide vertically outwards.

SIDES:

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

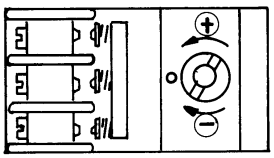
➢ Temperature adjustment by means of the electric pressure controller

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.

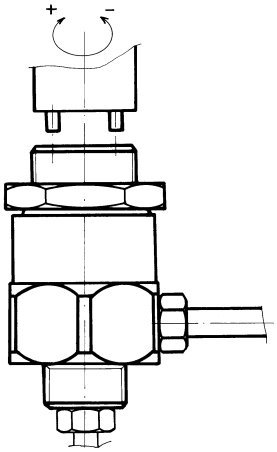
-TIGHTEN to LOWER the temperature
-LOOSEN to RAISE the temperature



The pressure-gauge (red scale) must indicate a pressure of between 0.9 and 1 bar which corresponds to a temperature of 120°C (248°F).

➢ 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 (0.7 to 0.8 MPa) (green scale of the pressure gauge).
- If the valve opens ABOVE 8 bar (0.8 MPa): LOOSEN
- If the valve opens BELOW 7 bar (0.7MPa): 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 (1.3MPa) (green scale of the pressure gauge).

- If the valve opens ABOVE 13 bar (1.3MPa) LOOSEN
- If the valve opens BELOW 13 bar (1.3MPa) TIGHTEN

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

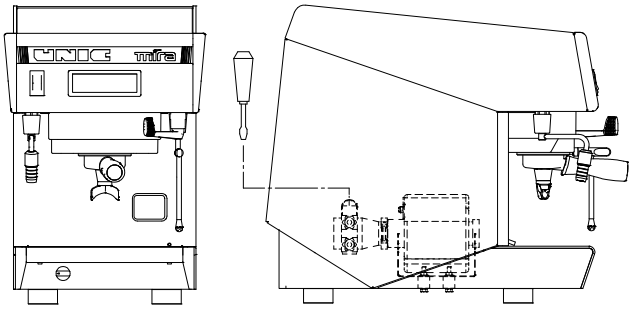
➢ Pump-pressure adjustment

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.

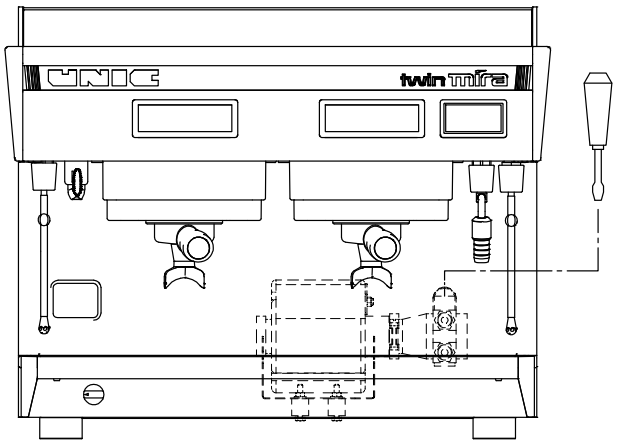
TIGHTEN to INCREASE the pressure.
LOOSEN to DECREASE the pressure.



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.

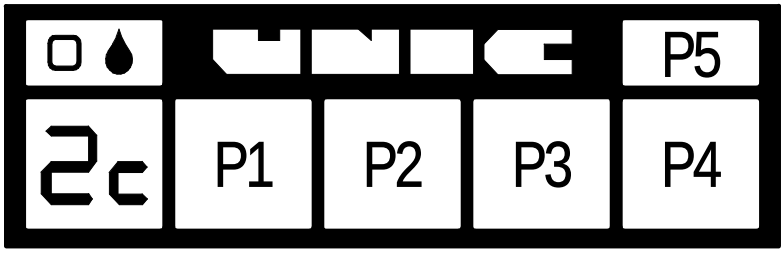
TIGHTEN to INCREASE the pressure.
LOOSEN to DECREASE the pressure.



➢ Coffee grinding adjustment

- Wait until the machine has reached the proper temperature 0.9 to 1 bar (0.09MPa à 0.1MPa).
- 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.

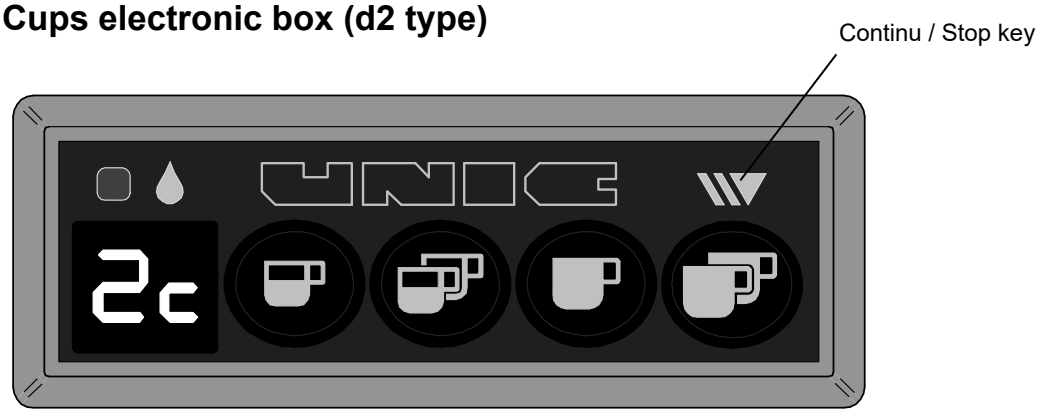
7. PROGRAMING OF THE DIFFERENT COFFEE QUANTITIES IN THE CUP



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.
- Programing: The multiple doses being computed, only two programing 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

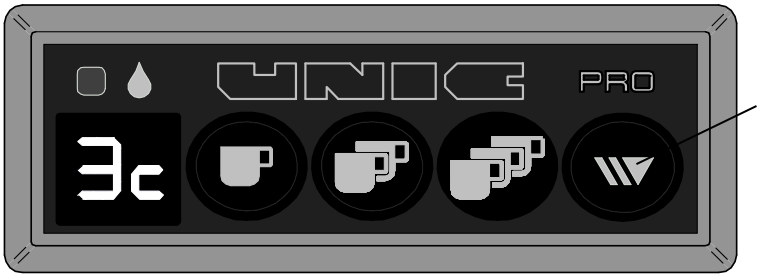
* A0 / A1 Authorization to program
  A0 = prohibited programing
  A1 = authorized programing

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)



- 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)
- Programing: 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 programed.

- 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

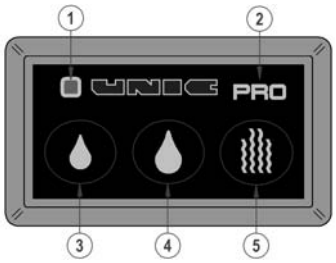
- Modification of the configuration parameters

- 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.

8. 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

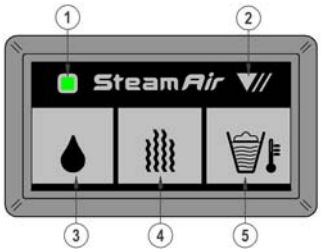
o An impulse on the keys 3 to 5 makes the corresponding dose flow:
Hot water keys 3 and 4 – Steam key 5.
The led lights in green during an hot water dose delivery, in red for a steam dose.
o You can stop before the end of the dose by pushing again the same key.
Note: a safety cuts the flow after 105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

- Programming

The programming mode allows the delivery time adjusting for steam and hot water
o Keep the key PRO (2) pressed on until the led lights in orange.
o Place a container under the appropriate outlet and press the key (3 to 5) to set.
o When the level in the container is convenient press again on the same key.
o 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



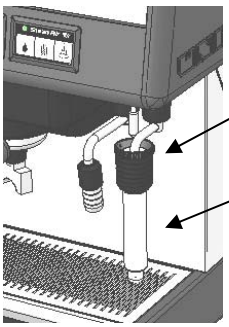
The **steamair** option allows, particularly when making cappuccino, to foam the milk very easily and automatically: the supply of air mixed with steam brings milk to a programmed temperature (60° to 70°) and foams it.

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.

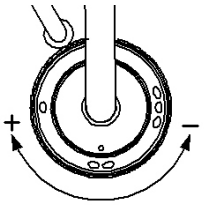
The **steamair** box also controls a timed steam and hot water outlet.

- Components

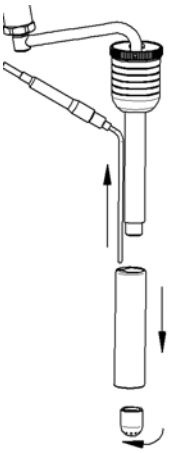


Air/steam adjust

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° - 2x 2°)
3 red blinks means that the temperature is set to 68°C (62° + 3x 2°)

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 (122°F 194°F). The default is 62°C (143.6°F).

9. CLEANING AND MAINTENANCE

REMEMBER TO CHECK THE WATER TREATMENT SYSTEM PERIODICALLY.

DO NOT USE ABRASIVE CLEANERS SCOURING PADS.
DO NOT USE CLEANERS CONTAINING BLEACH.

THE DESCALING OF THE MACHINE MUST BE DONE BY A QUALIFIED TECHNICIAN.

WARNING: The air must circulate freely around

➢ 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).

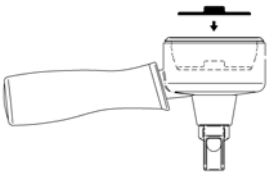
➢ Daily

- 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:

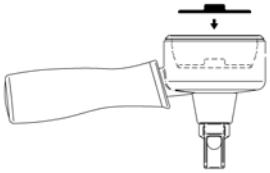
- Insert the filter-holder into the unit without tightening it.
- Press a coffee key then tighten and loosen alternately the filter-holder in order to create a leak at the filter-holder joint to clean it.

➢ 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

Two water softener suppliers are available at UNIC SA.
BRITA ®
BESTMAX ™

Test the water hardness of the network and refer to the technical documentation of the water softener used for optimum adjustment.

Note: A softener must be changed every 1 year, even if it does not reach the end of its filtering capacity.

10. 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.

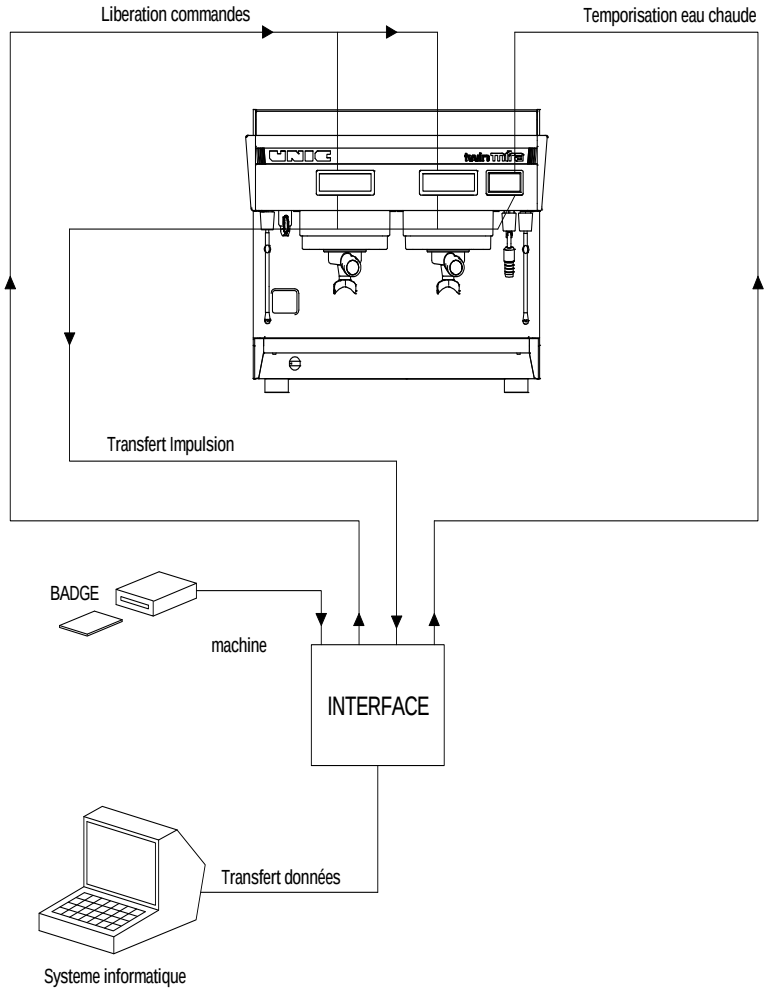
➢ Machine preparation

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)

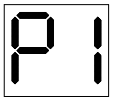
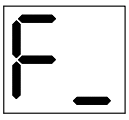
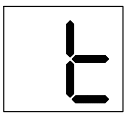
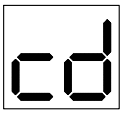
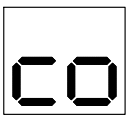
  If the machine "sucks" water directly from an external reservoir, check the water level in the reservoir and the non-return valve and filter fixed at the end of the inlet pipe.

- 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.

11. DISPLAYED FAILURES

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

➢ 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 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 water runs through the spout

↓

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.

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

- Dosing device safety system

Display of **CC**	Display of **CO**
↓	↓
The 9V power supply of the dosing device is short circuited: Terminal 30 (+) is earthed	The 9V power supply circuit of the dosing device is opened: Terminal 30 (+) or earth are disconnected.
↓	↓
To use the unit, press the Continu/Stop key	

Check the cables and the connector of the dosing device

Replace the dosing device, as necessary.

12. OTHER FAILURES

➢ Hydraulic problems of the coffee unit

- Doses lighter than initially set

The obtained doses are lighter than initially set

↓ ↓

There is a leak located just after the dosing device

↓ ↓

The decompression way of the unit valve leaks during the infusion process Check flaps	One of the connections located after the dosing device outlet leaks Check waterproofness Replace gaskets

↓ ↓

Repeat dose programing

- Dripping outside infusion periods

Water goes through the unit or the decompression pipe outside infusion periods

↓ ↓

The 3-way valve is opened as a result of the too highly set expansion pressure (>13 bar)	The valve flaps are faulty
↓	↓
Set the high pressure valve opening at 13 bar The pump pressure must be set at 10 bar	Check the flaps Replace the flap core, as necessary.

- An insufficient infusion pressure

The infusion pressure is lower than 10 bar

↓

Set the pump as indicated on (§ 5.3)

Setting operations are unsuccessful

↓ ↓ ↓

The pump is faulty	The motor-pump is mechanically blocked	The motor-pump is no longer power-supplied
- dirty filter - coil condenser - damaged pallets - broken coupling - faulty by-pass	(the thermal safety system and the circuit-breaker protecting the motor coil)	Check the cable

↘ ↓ ↙

- Disassemble and restore the pump to its initial condition
- Reset pressure

- A wrong decompression process

When the infusion process is over, you remove the filter-holder and you notice the grounds pancake is wet.

↓

		Check:
- The temperature is too low	➔	- Steam pressure
- The infusion time is too short (A too coarse grind - a too light dose - a too low pressure)	➔	- Grind - Ground coffee dose - Pump pressure
- The decompression circuit is blocked	➔	- Spray - Filter - Solenoid valve

➢ Problems in connections with the level regulation

- The steam boiler is flooded

The steam boiler is flooded

Problem generated by the filling valve	Problem generated by the water level probe
* The filling valve flap is no longer in place and generates leaks: fur or any other obstacle... * The filling valve relay got stuck	The probe is covered with an insulating agent (scale) or the probe wire is cut out
* Replace gaskets and clean the filling valve surface * Replace the electric valve or the leval box, as necessary.	Clean probes and check cables

- The boiler is empty

RISK TO RUIN THE HEATING ELEMENT

The probe is directly earthed	The filling valve is not ON or its coil is burnt out

Check:
- the probe wire
- the valve cable
- the electronic box functioning
- the valve

Replace as necessary

Check the state of 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

IMPOSSIBLE PROGRAMING

↙ ↘

Check the configuration of the box
A0 : Prohibited programing
A1 : Authorized programing
See on pages 28 and 29

Display of one safety signal

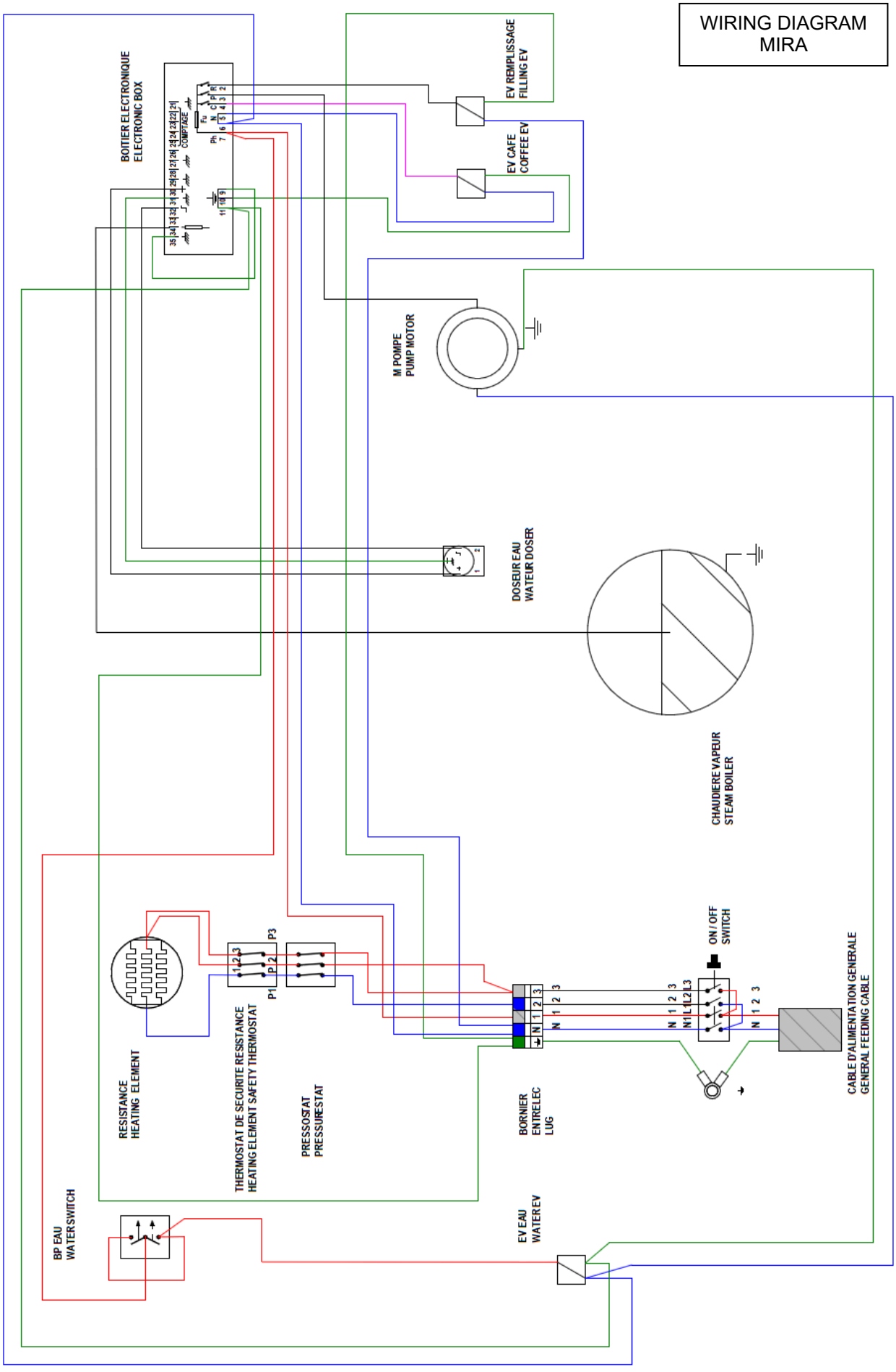
P1 to P5: Safety key
F- : Fuse
t : Time
co/cc : Dosing device

↓

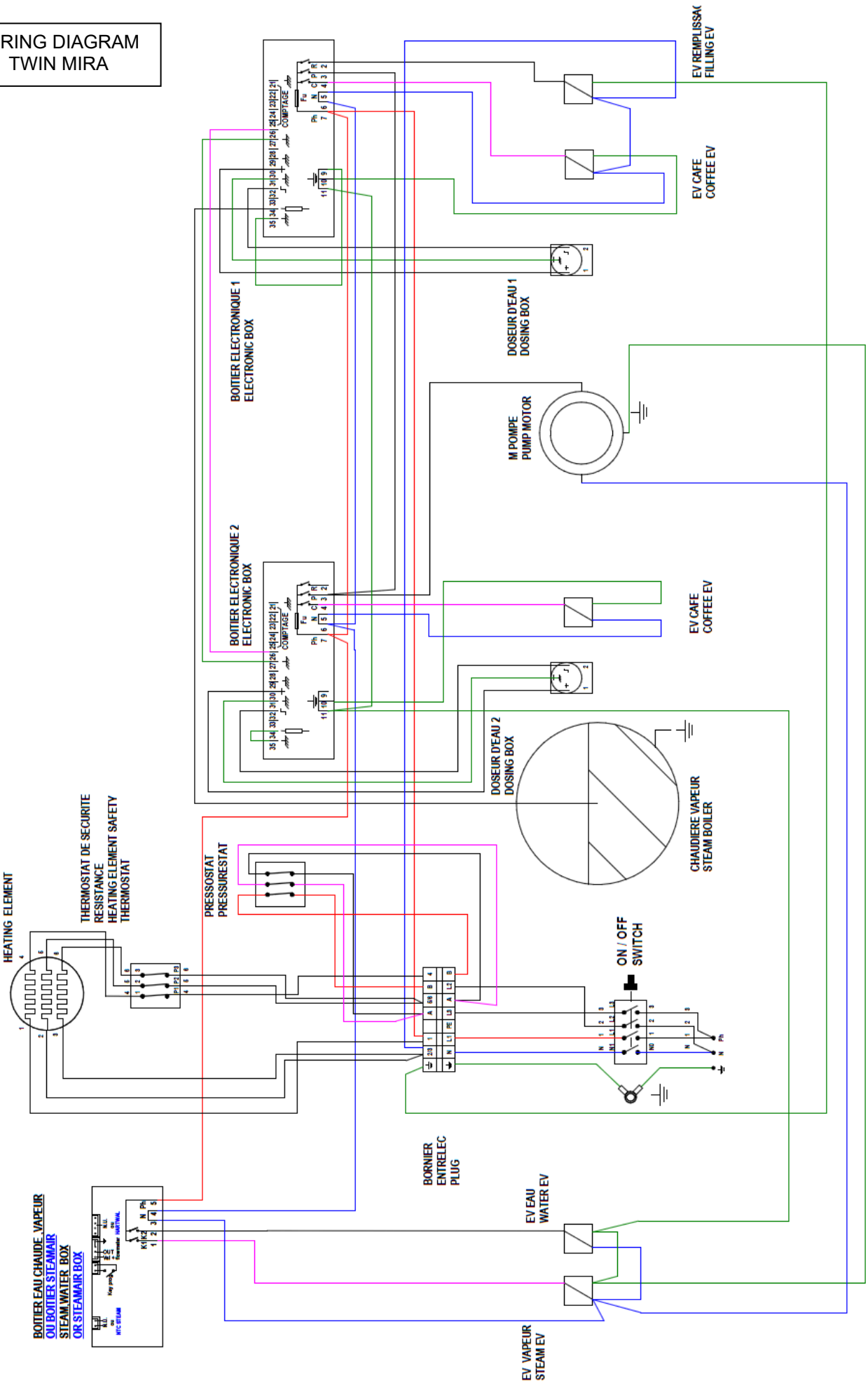
Refer to the corresponding paragraph to repair

13. WIRING DIAGRAMS

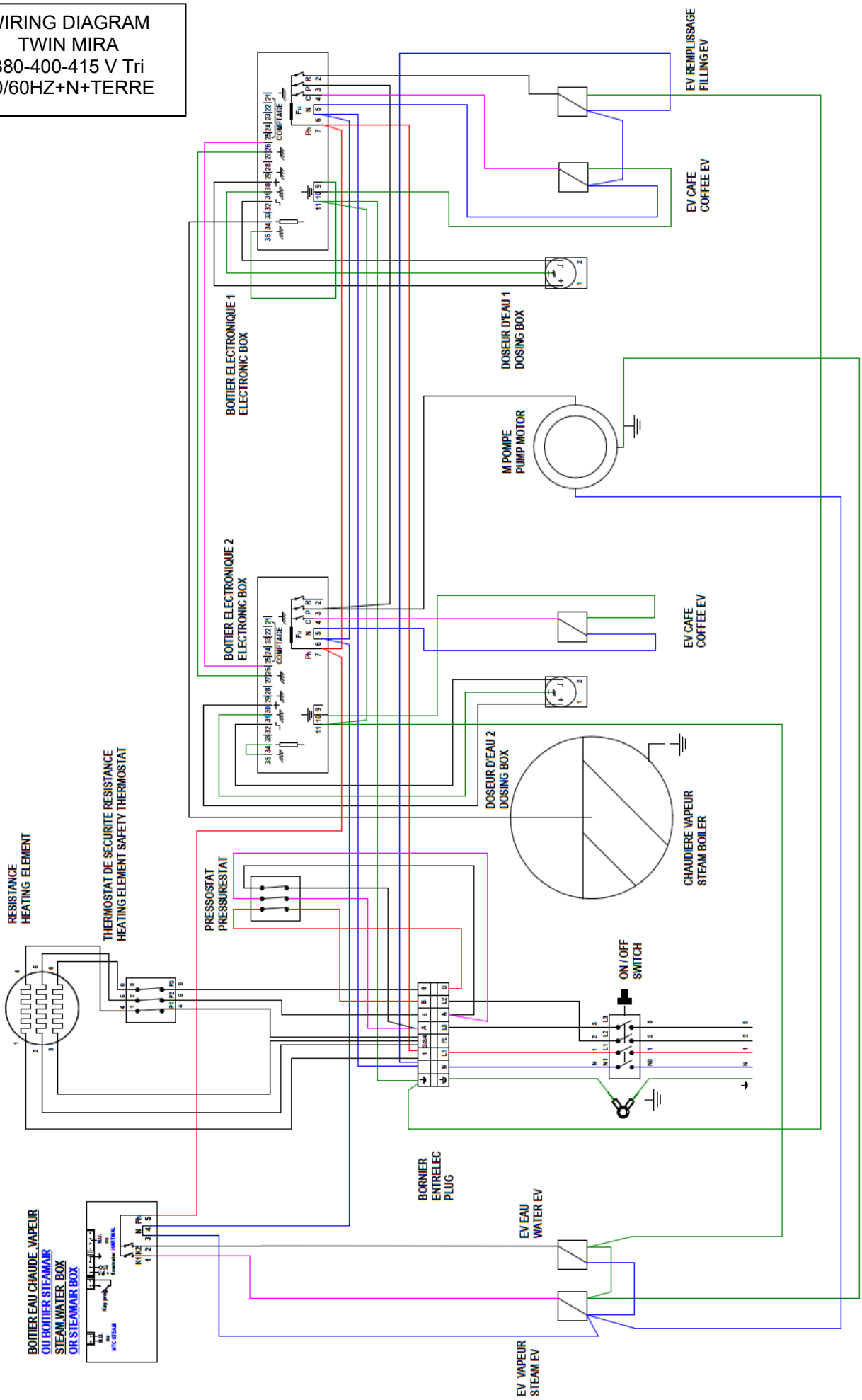
WIRING DIAGRAM
MIRA



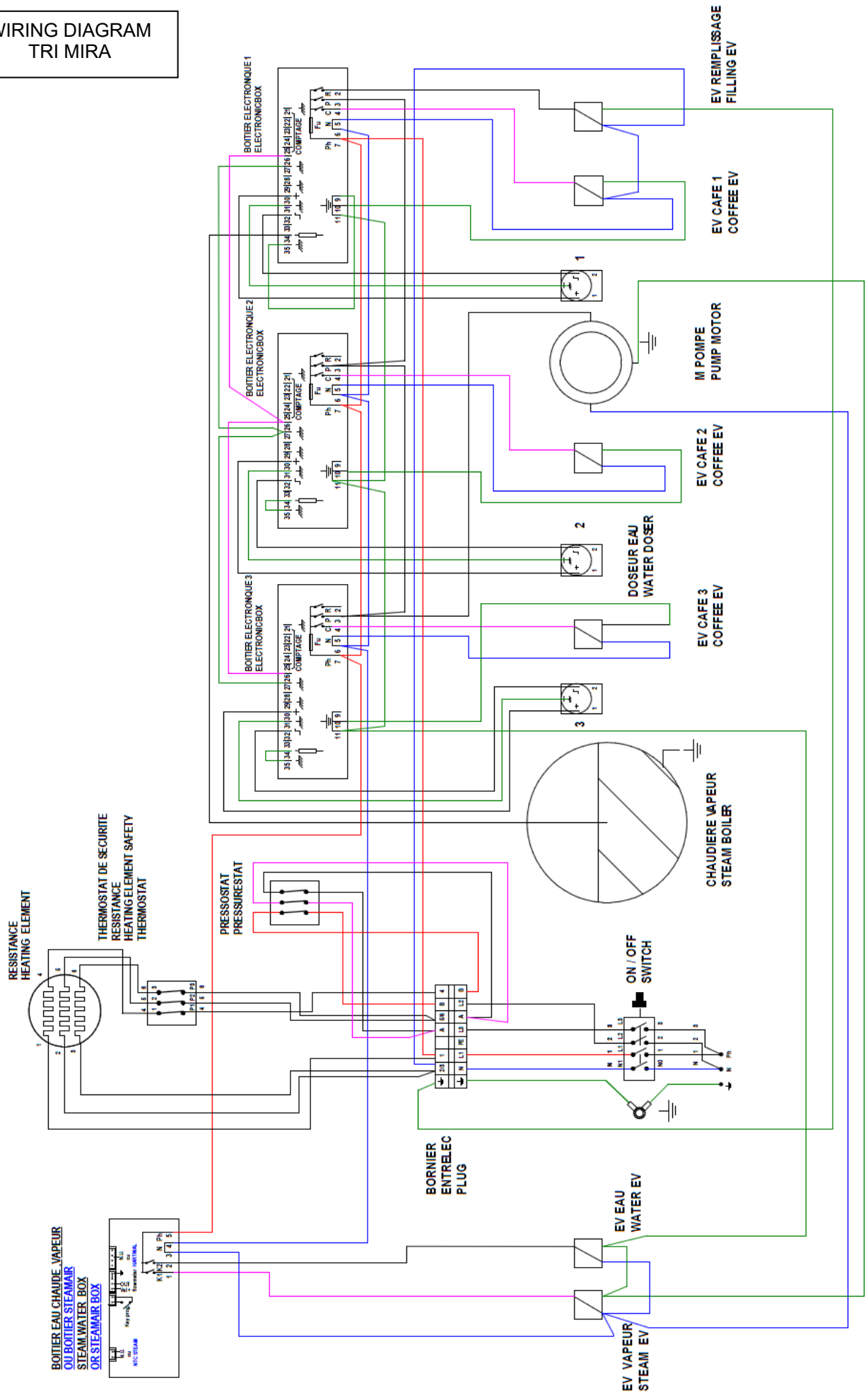
WIRING DIAGRAM TWIN MIRA



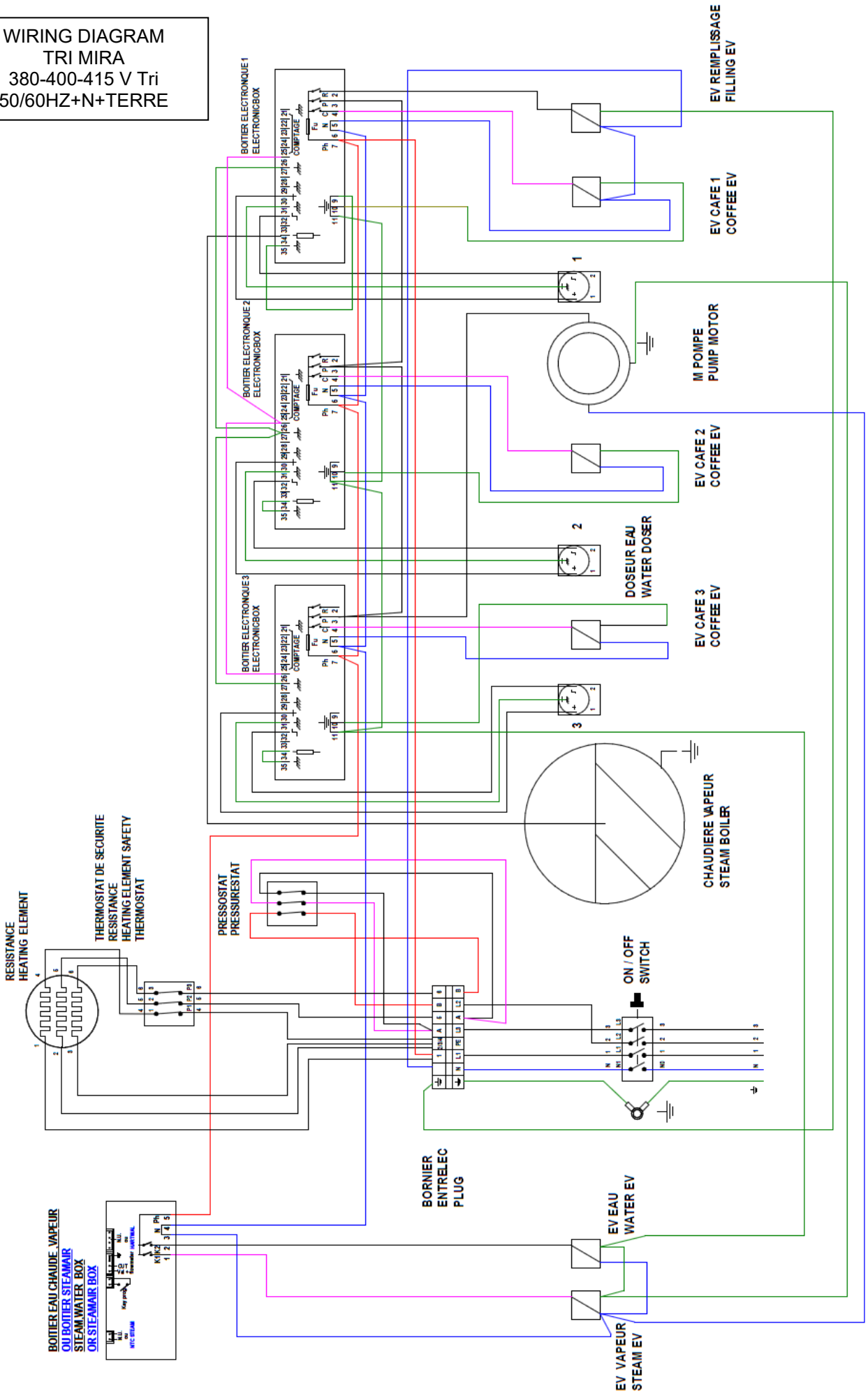
WIRING DIAGRAM
TWIN MIRA
380-400-415 V Tri
50/60HZ+N+TERRE



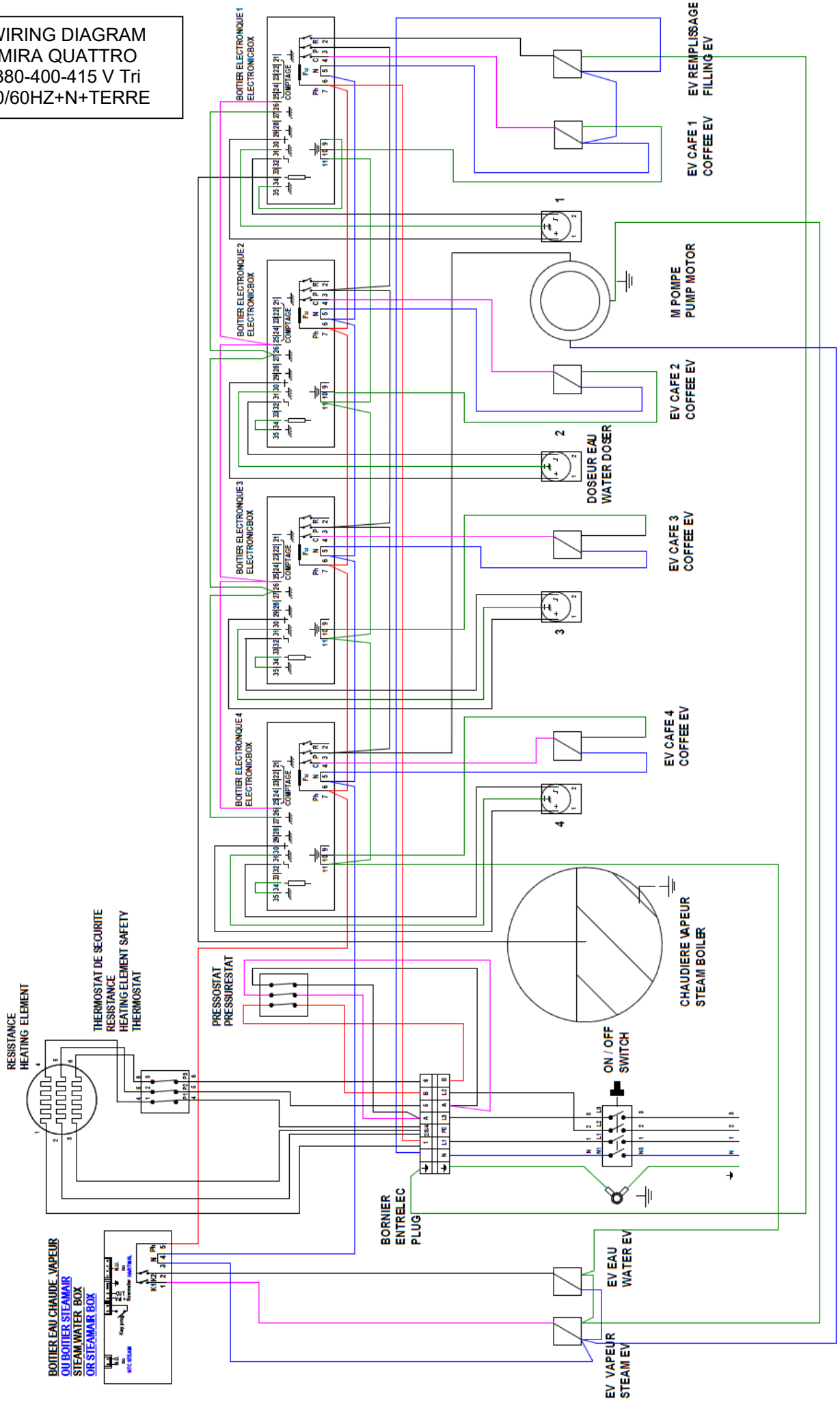
WIRING DIAGRAM
TRI MIRA



WIRING DIAGRAM
TRI MIRA
380-400-415 V Tri
50/60HZ+N+TERRE



WIRING DIAGRAM
MIRA QUATTRO
380-400-415 V Tri
50/60HZ+N+TERRE



14. TECHNICAL CHARACTERISTICS

DIMENSIONS cm	MIRA	TWIN MIRA	TRI MIRA	QUATTRO MIRA	*ADJUSTEMENTS*	
Width	34	64	86	108	Temperature	118 à 120°C
Height	51	51	51	51	*Steam pressure*	0.9 à 1 bar
Depth	57	57	57	57	*Pump pressure*	9 bar
WEIGHT (kg)	39	55	76	96	*HP valve*	13 bar (8 bar MIRA)
WATTAGE	*mono only*				*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		