

Monte-Carlo



TECHNICAL DOCUMENTATION

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1 TECHNICAL DOCUMENTS

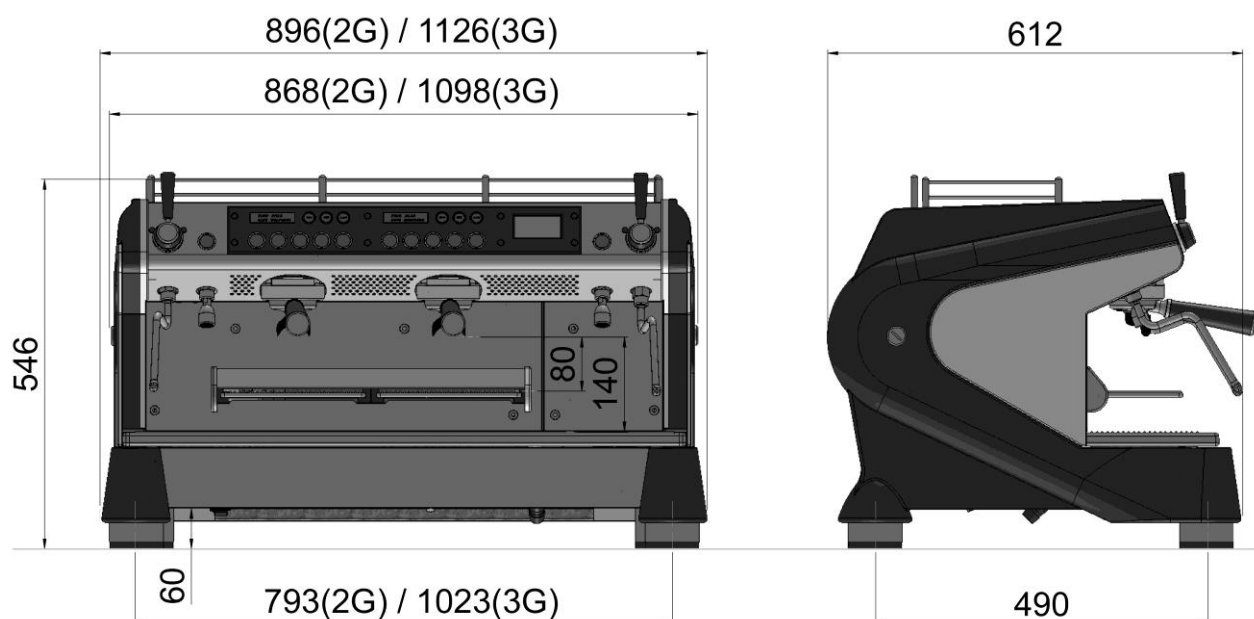
	Steam boiler		Coffee boiler			Group		Outlet	Total power
	Capacity (liter)	Power (W)	Capacity (liter)	Number	Power (W)	Number	Power (W)	Power (W)	(W)
MC 2G	10	4200	0,9	2	1000	2	100	300	6700
MC 3G	14	6000	0,9	3	1000	3	100	300	9600
MC 2G K	10	6000	0,9	2	2500	2	100	300	11500
MC 3G K	14	6000	0,9	3	2500	3	100	300	14100

BOILER CAPACITY (IN LITERS)		
	2 Groups	3 Groups
TOTAL	10	14
Hot water volume	6,5	10
Steam volume	3,5	4
Coffee boiler volume	2 x 0.9	3 x 0.9

	WEIGHT (kg)	
	EMPTY (Kg)	Weight in operation (Kg)
2G	89	97
3G	99	112

2 DIMENSIONS

Cup warmer capacity: (88 espressos cups) or (56 espressos cups + 18 cappucino cups)



3 CAUTION DURING THE USE

3.1 Ambient conditions

- The ambient temperature around the machine had to be between 5°C and 32°C.
- The ambient humidity must not exceed 70 %
- The machine must be placed such as the cup warmer is located more than 1.5 meters from the ground.

3.2 During installation

- The installation (electrical connections, water supply and drainage) must be carried out by a qualified technician approved by CONTI.
- The machine must be connected to a device conforming to the standards of the country where the machine is installed. Potential costs of equipment compliance are the only responsibility of the customer.
- For any technical intervention, the machines must always have the power disconnected from the mains.
- An effective earth connected to the terminal provided for this purpose on the device is mandatory
- A screw located under the bottom base machine, allow if necessary, to connect several machine on an equipotential way.
- Devices for disconnection from the main supply, having a contact separation of at least 3mm in all poles, must be provided in the fixed wiring in accordance with the installation rules.



3.3 During the use

- When the machine is not operating, the water cut-off valve has to be closed and the electrical power supply cut.
- When the machine is not supervised it must be disconnected from the power and water supply.
- Never disconnect the earthing when the machine is connected to the power supply.
- Machines must always be disconnected from the main power, in case of technical interventions.

3.4 Rules relating to the environment

- This device has been designed according to the European Directive No. 2002/95/EC. This refers to the restriction of certain hazardous substances in electrical and electronic equipment (ROHS)
- This device has been designed in compliance with the European Directive No. 2002/96/EC concerning waste electrical equipment (WEEE).
- This picture informs you that this device should not be discarded with household waste.
- At end of life, this product must be returned to a collection point or returned to an authorized dealer. By doing so, you will help to protect the environment and human health.



4 **INSTALLATION**

4.1 **Standby** In case of a standby of the machine (standby = 2 months):

- The first thing to do is to test your machine in a lab.
- If the machine stops running for a long time, you could have sediment in some places.
- More precisely in small area like the spray nozzle.

4.2 **Protections**

- It is necessary to place before the machine:
 - A water shut off valve.
 - An electrical protection standard, suitable for voltage and power consumption.

4.3 **Water supply**

- Recommended operating pressure from 1.5 MPa to 6 MPa
- Water connection pin 3/8"
- The water supply pipes must resist to 145 Psi / 10 MPa

4.4 **Drain**

- Without pressure.
- A tip on the outlet of the machine and a pipe is supplied with the machine
- Ensure a connection that causes no risk of fluid return, and ensure good drainage:
 - The drain pipe must be located lower than the machine.
 - Do not create a bend in the exhaust tube.

4.5 **Supplying voltage**

- To be specify when ordering : 230V – 50/60Hz Monofase
- Or : 400V – 50/60Hz Trifase

4.6 Water softeners

- When the mains water has a high hardness ($>10^{\circ}\text{TH}$ ou $>4^{\circ}\text{KH}$), it is recommended:
 - To use a water treatment
 - To regenerate regularly the filters.

- What is the total Hardness of the water ?
 - This is the amount of calcium and magnesium ions in the water.
 - These ions are partly responsible for limestone formation.
 - It is measured with the test strip provided with the machine.
 - The unit of measurement is the $^{\circ}$ French ($^{\circ}\text{TH}$) or the $^{\circ}$ German ($^{\circ}\text{dH}$).

- What is the Karbonat Hardness of the water?
 - This is the amount of Carbonate Calcium ions and Carbonate Magnesium ions in the water.
 - These ions are completely responsible for limestone formation.
 - It is measured with chemical dropper testers.
 - The unit of measurement is $^{\circ}$ Carbonate ($^{\circ}\text{KH}$)

There are 2 types of water treatments:

- Salt water softeners
 - They treat the total water hardness ($^{\circ}\text{TH}$)
 - By an exchange of sodium ions with calcium and magnesium ions.
 - They require periodic regeneration of the resins by the user.
 - To use when the water hardness is $> 10^{\circ}\text{TH}$ or $> 5^{\circ}\text{GH}$

- Resins filters :
 - They treat the Carbonat hardness water ($^{\circ}\text{KH}$)
 - By fixing carbonate ions on the resins.
 - Often fitted with microfiltration and carbon filtration.
 - To use when the Carbonat Hardness is $> 6^{\circ}\text{KH}$
 - Highly recommended by the manufacturer :
 - The machines are equipped with suitable protection in accordance with flowrate and the water encountered.
 - The changing cartridges is carried out by the technical service, at intervals to be determined

5 FIRST INSTALLATION

A. Open the water supply tap

B. Switch on the machine using the ON/OFF switch under the drip tray.



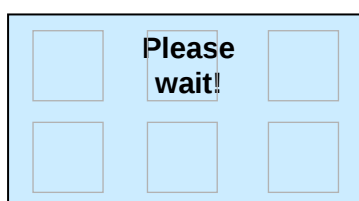
ON/OFF Switch

C. During 1 second

The general display shows the software version "Monte Carlo 2.15".



D. According the situation the display shows:



Push "where you want" on the display during 3 sec until:

The display shows:



E. Enter the password to access the first installation, as follows:

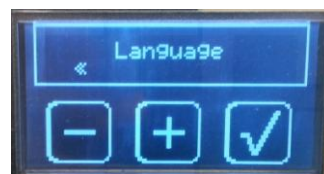
1° step:

Press **MENU** for 6 seconds

The display shows:

2° step:

Press:



3° step:

Press: 



4° step:

Press:     



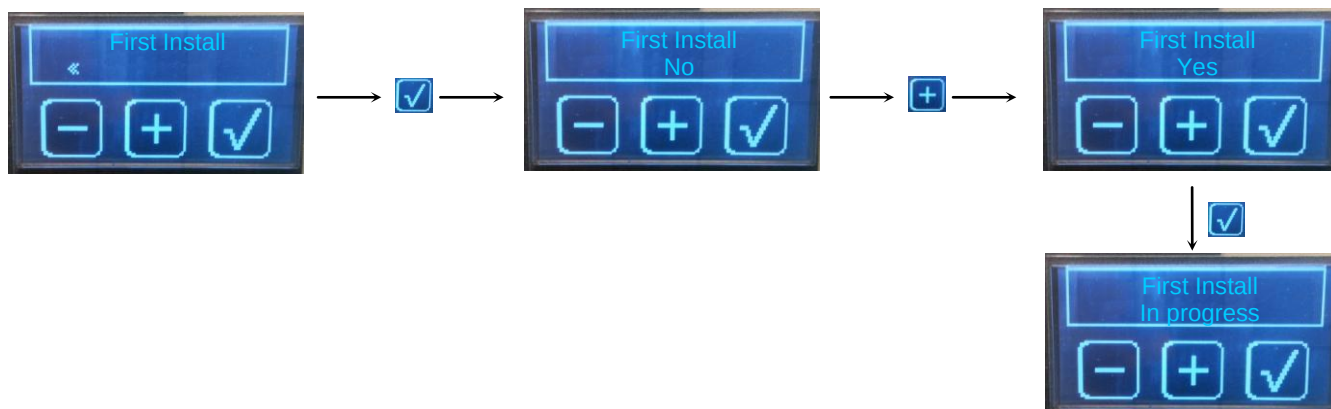
5° step:

The display shows:



Press twice 

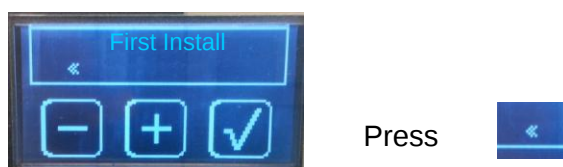
F. The display shows:



Let the machine doing the 1° installation.

During this time, the air inside coffee groups are automatically vacuum by an opening cycle of vacuum valves, pump and groups valves.

G. The process is finished when the display shows:



H. The display shows:



6 STARTING & WARM UP

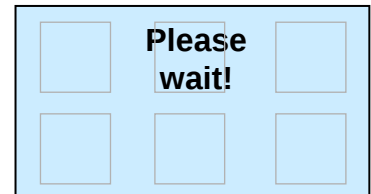
- A. Switch ON the machine by pressing  on the main display.



- B. The key boards are lighting, and shows the coffee boilers temperature settings



Coffee buttons are blinking.

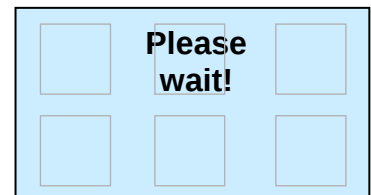


General display blinking

- C. When the setting temperature of coffee boilers is reached (2 or 3 min): an automatic purge goes on.



The leds stay On

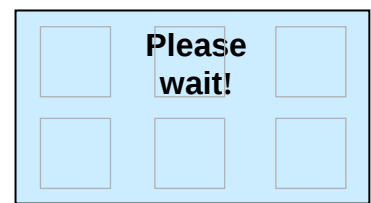
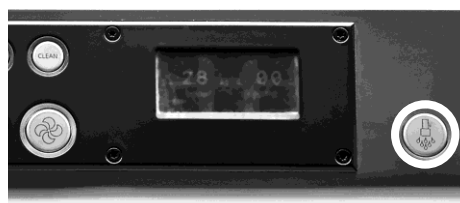


General display blinking

- D. When the steam boiler temperature reaches 105°C: hot water button lights up.



The leds stay On



General display blinking

- E. When the steam boiler temperature setting is reached (ex.125°C).
The machine is ready. All the lights stay On.



General display shows manometers

F. Main display

- When the machine is ready, the general display shows:

Digital manometer M1
Boiler pressure (MPa)

Digital manometer M2
network or pump pressure (MPa)

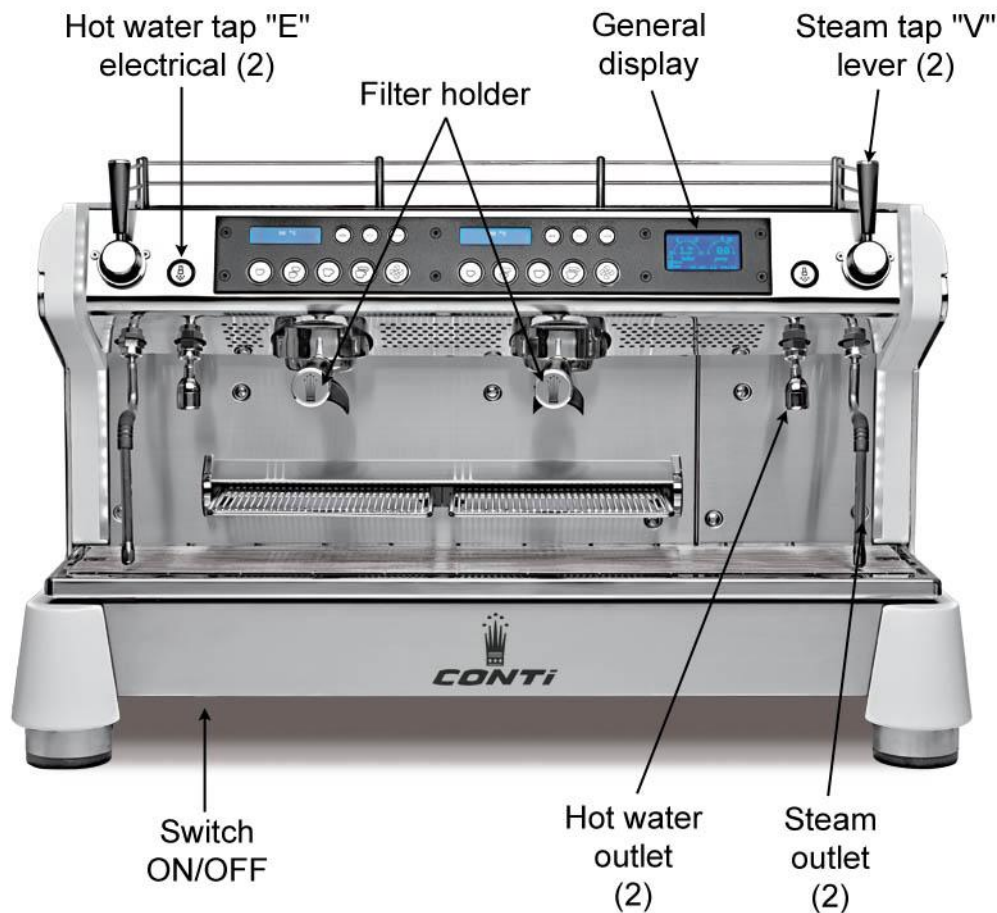
Level information



- Press “where you want” on the display, during 3 sec to switch OFF the machine
- The display shows:



7 HOW TO USE THE MACHINE



7.1 Operating elements

➤ **STEAM FUNCTION**

Two steam taps levers « V » are provided to allow:

- The heating of liquids by spraying steam.
- The milk foam production to create Cappuccino or Macchiato.

The liquid to be heated should preferably be placed in a deep container.

The tip of the steam wand outlet must be immersed in the liquid, without touching the bottom of the container.

The steam may also be used to sterilise and warm glasses.

After each use and absolutely **after heating milk**, always clean the stainless steel steam nozzle and the outlet nozzles with a damp cloth, removing all traces present.

A rinsing of the steam lance inner holes is to be done by a short pulse on the lever downwards to release a jet of steam.

➤ **HOT WATER FUNCTION**

Two electric taps "E" are provided for preparing tea, grog, etc.

Be careful, not to be burnt by the pressure water spray.

For that, the valve is coupled to cold water mixing for adjusting the water T° for tea and avoids spitting hot water.

Each electric tap is controlled with 2 buttons for 2 different times

ADDITIONAL NOTE - Steam purge

there is an automatic purge function on the side that is equipped with steam control all the operator has to do is remove the steam pitcher and wipe down the wand the steam wand will purge itself

➤ **FILTERS**

The machine is equipped with two types of filters: 1 cup (10 G) and 2 cups (18 G)

Each filter is operating with its own holder-filter to produce respectively 1 cup or 2 cups of coffee.

Filters need to be unclogged and clean, so they need to be cleaned almost once a day with hot water, by being removed from the holder filters.

Take care to remove all residual traces of coffee and ensure proper cleanliness of perforations in the bottom of the filter.

➤ **FILTER-HOLDER**

Never remove the filter-holder during operation of the group. The shutdown is controllable with coffee spouts: they no longer have to eject liquid.

Be careful to always keep the filter-holder engaged in the group, emptied of coffee cake, to keep them warm.

In case of an extended stopping period, remove the filter-holder from the group, taking care to eject the used grounds remain in the filter-holder.

Tighten the filter-holder until to be in contact with the seal, exceeding a little bit. The sealing is guaranteed.

Do not unnecessarily try to crush the seal by tightening the filter at the maximum of your possibilities. It may damage the seal prematurely.

To empty the coffee filters used, turn the filter holder upside-down and lightly tap it on the edge of a wooden box. Never strike it against metal or other hard objects.

➤ **DIGITAL MANOMETER M1 : BOILER PRESSURE**

The boiler pressure is adjusted in factory between 0,8 MPa (12 PSI) and 1 MPa (15 PSI). This value varies slightly around its nominal temperature, due to the PID system which controls the heating and limits the current consumption to its minimum.

Factory settings: 1.2 MPa with setting range from 0.8 MPa to 1.4 MPa .

NOTE: An over-heating thermostat cut the power on the general relay, in case of an abnormal high temperature. The machine is not anymore supplied.

➤ **DIGITAL MANOMETER M2 : PUMP PRESSURE**

The pump pressure is adjusted at 9 MPa in the factory. Value which allows the best extraction of coffee flavors. A bypass system evacuates over-pressure.

NOTE: Simultaneous operation of all the groups can impact a little bit the pressure level.

Visualization of the presence of water network is done by consulting the gauge

7.2 How to use the programmed doses

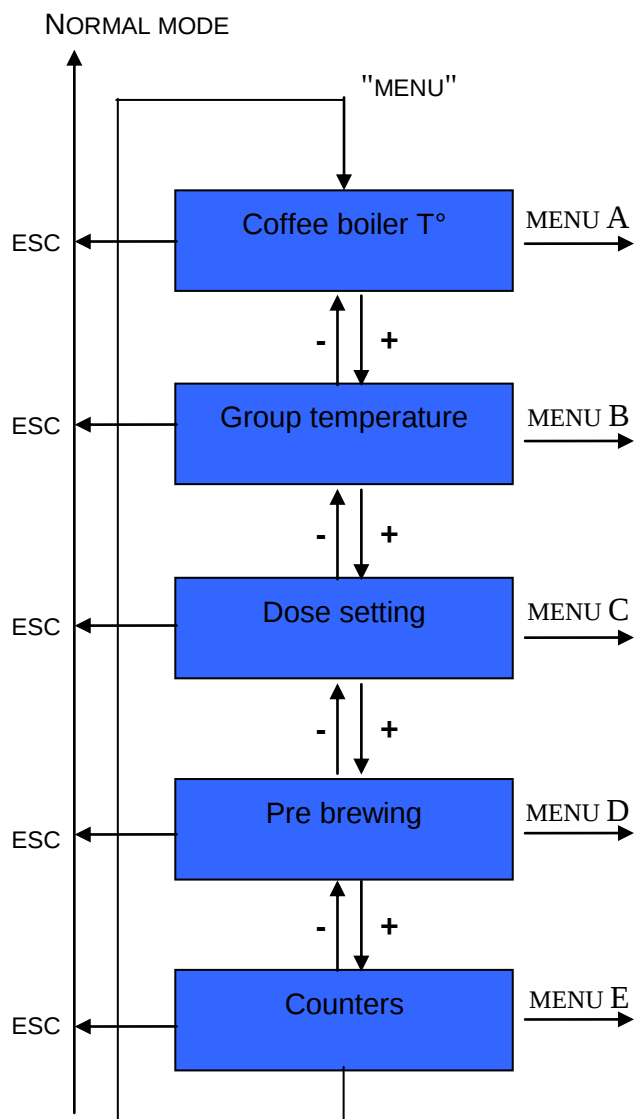
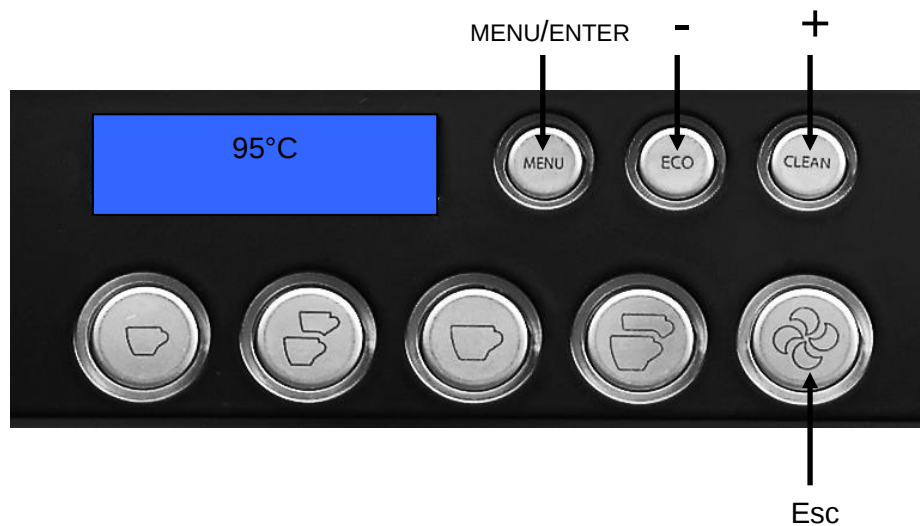
- Simply select one of the buttons available on each keypad to obtain the doses or the programmed drinks.
- The selected dose is shown by a blinking led on the keypad.
- The flow can be stopped by repressing:
 - The same button or
 - The STOP button (which is also the programming and continuous flow button).

8 COFFEE GROUPS

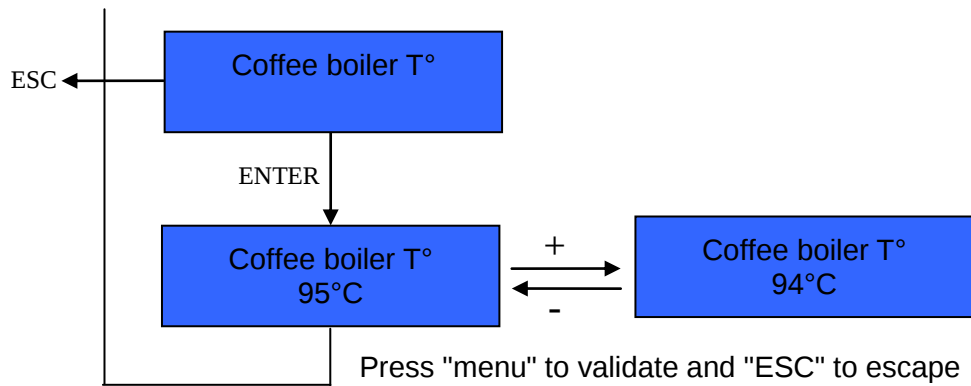
8.1 Mode menu

Press the "Menu/Enter" button to enter in the programming mode.

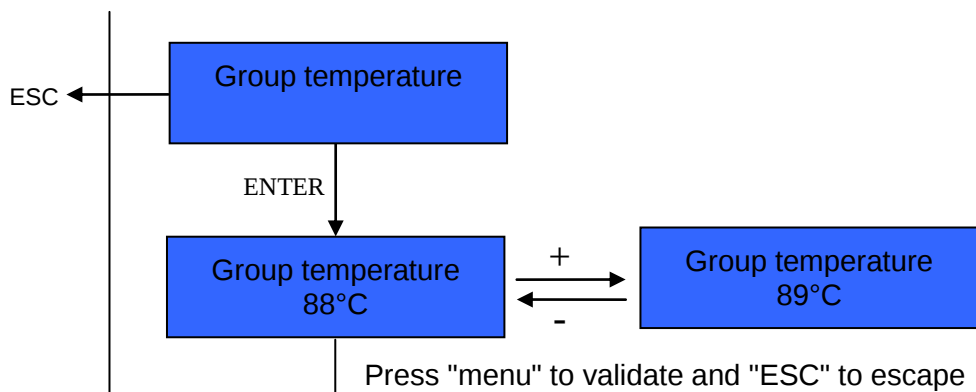
The "Esc" button is used to escape from the programming mode.



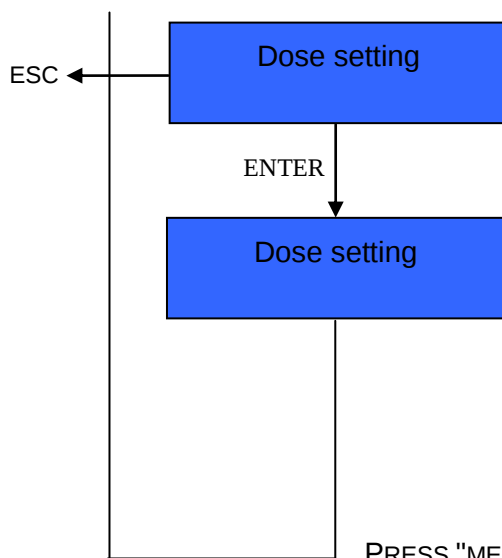
A) COFFEE BOILER TEMPERATURE



B) GROUP TEMPERATURE



C) DOSE SETTING

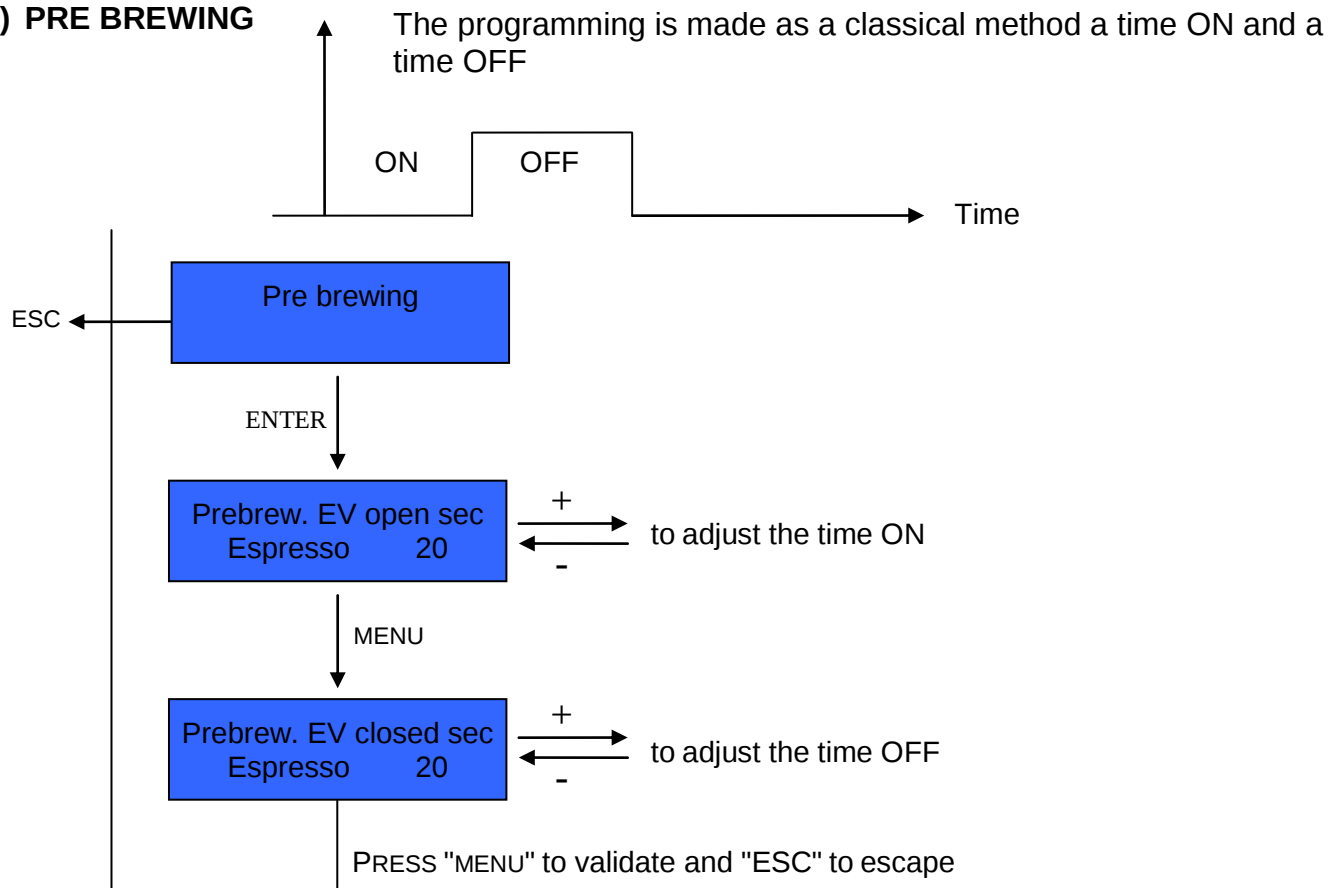


All the leds are OFF

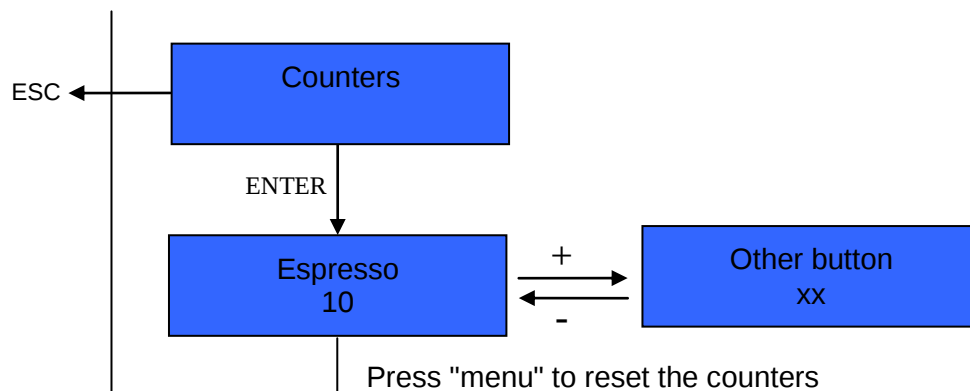
It is enough to program the left group so that both groups are configured in the same way.

- Do the dose and stop at the desired volume.
- When the dose is programmed the led button remain lighting
- Do the same for the others buttons
- The continuous is not programmable.
- The hot water button (close to the keyboard) is programmable like the coffee dose.

D) PRE BREWING



E) COUNTERS



8.2 Group eco mode

If you press on the "ECO" button of one group, you enter in the "ECO" mode: the coffee boiler switches off. The group is disabled but the group head is maintained at temperature. The other groups remain functioning. Press again on the "ECO" button to enable the group.

8.3 Clean button

If you press on the "CLEAN" button of one group, a cleaning cycle starts.

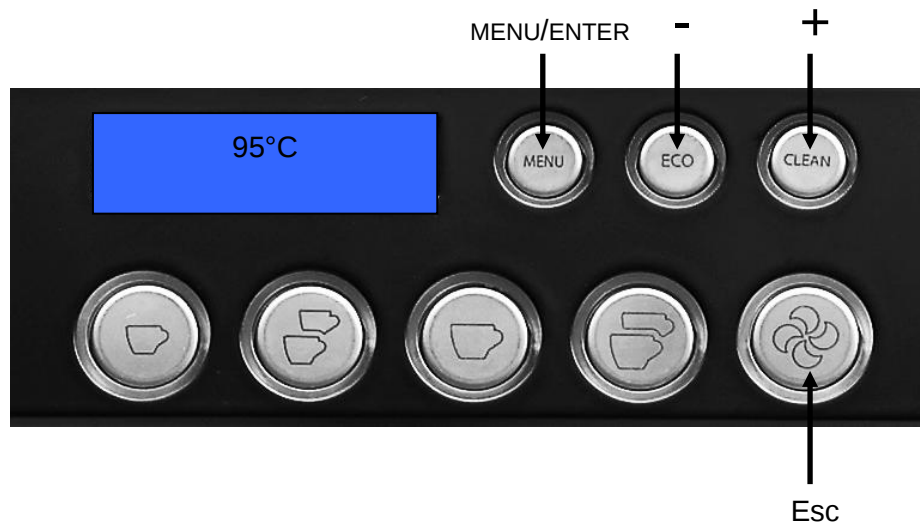
- Prepare the blind filter holder and cleaning tablet
- Put it on the group head
- Press the "CLEAN" button
- The machine starts the cleaning cycle without any special indication.

A bar graph indicates the cleaning progress.



9 PROGRAMMING DOSES METHODOLOGY

9.1 Coffee doses programming:

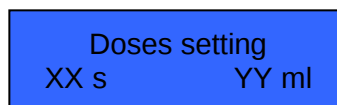


2 ways of programming are possible to set the coffee dose.

- Choose 1st group (on the left when the user is in front of the machine)
 - To program all groups at the same time with the same value.
 - The programmed key will have its equivalent key programmed identically on the others groups
- Choose each group separately, if they the groups need to have different value.

Methodology:

- ☞ Put the ground coffee (1 dose or 2 doses according to the programmed key), in the suitable filter holder.
- ☞ Press the "MENU" key: the display show "Coffee boiler T"
- ☞ Press 2 times the "+" key: the display shows "Doses setting"
- ☞ Press the "MENU" key: the display shows:



- ☞ The button to be programmed are not lighting.
- ☞ Press the key to be programmed to start the flow, and press again when water quantity is correct.
- ☞ The value is directly registered
- ☞ The programmed key remains On
- ☞ Then, keep programming the next key, and so on for the others keys.

Note : On the factory, each machine undergoes a test protocol on which a program has already been completed, according to the following settings:

1 espresso = 2,5 cl / 2 espressos = 5 cl / 1 coffee = 4,5 cl / 2 coffee = 9 cl

9.2 Hot water dose programming:



«Hot water» key

«Hot water» key

Methodology:

One programming dose is available for each outlet:

- Press key the "MENU" from the coffee group nearest the outlet to be programmed.
- The display show "Coffee boiler T"
- Press 2 times the "+" key: the display shows "Doses setting"
- Press the "MENU" key: the display shows:

Doses setting
XX s YY ml

- Push **hot water key** to start the flow, and push again when the water volume is correct.
- The timing key is registered.

10 GENERAL DISPLAY

10.1 ECO MODE (general)

Press the eco button
for eco mode



The entire machine goes in eco mode. The steam boiler is maintained at 60°C.

Products can't be extracted.

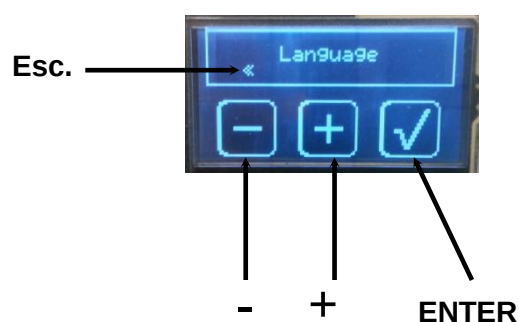
To come back on the main menu, press "where you want" on the display during 3 seconds.

10.2 Programming on general display

Press the menu button
for 5 seconds



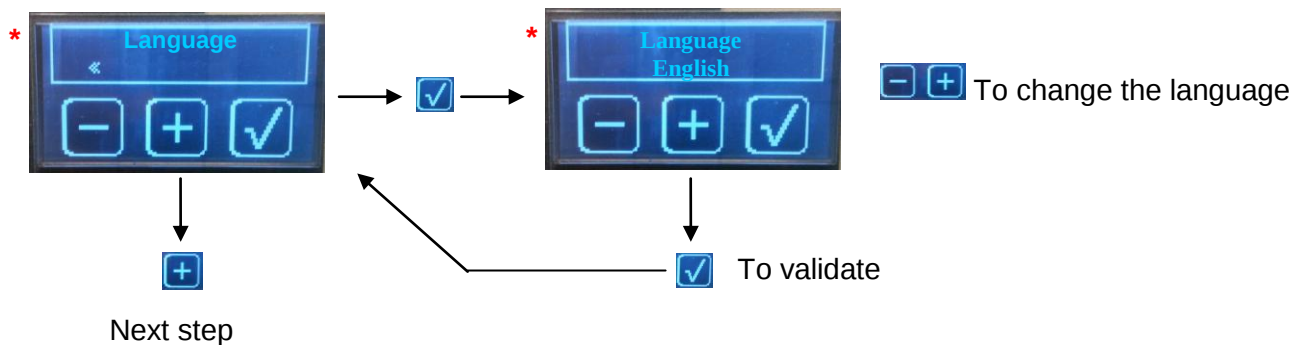
First step



ADDITIONAL NOTE - Menu lock
one only only disable the dosage programming
the temp, pre-infusion etc cannot be locked on the menu
button

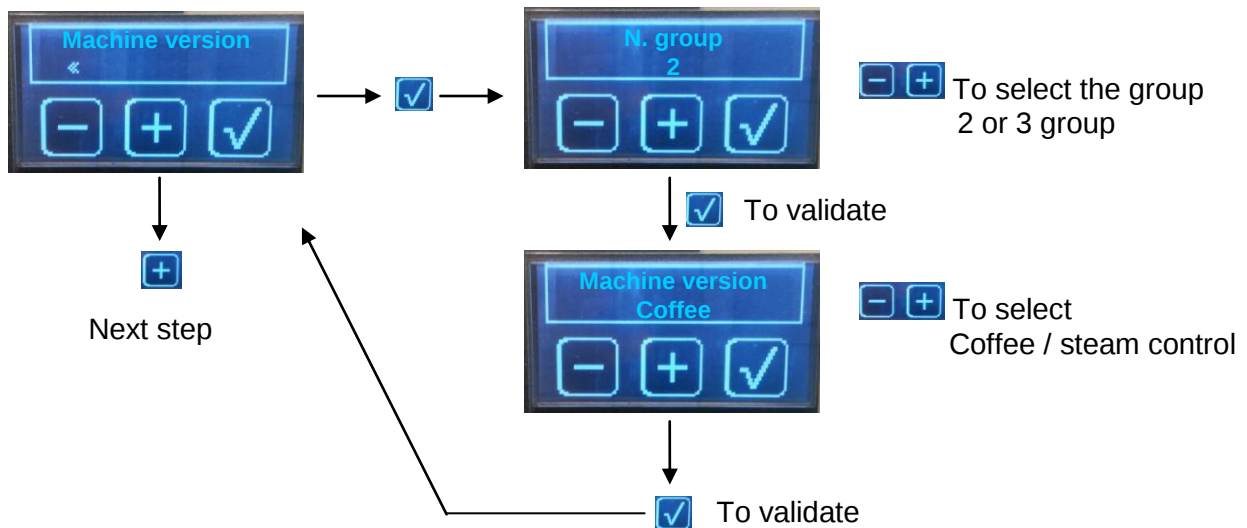
If a password is not entered, the steps available are only those marked with: (*)
To access to the complete menu, go to the last step "Password" and enter the good password

10.2.1 Language (*)



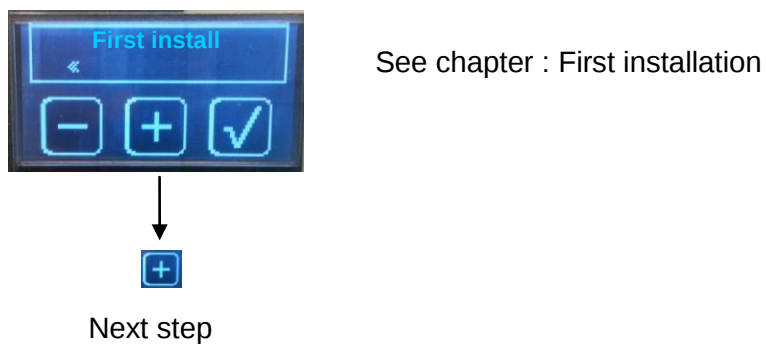
Available languages : French / English / Italian / Spanish / German / Portuguese

10.2.2 Machine Version

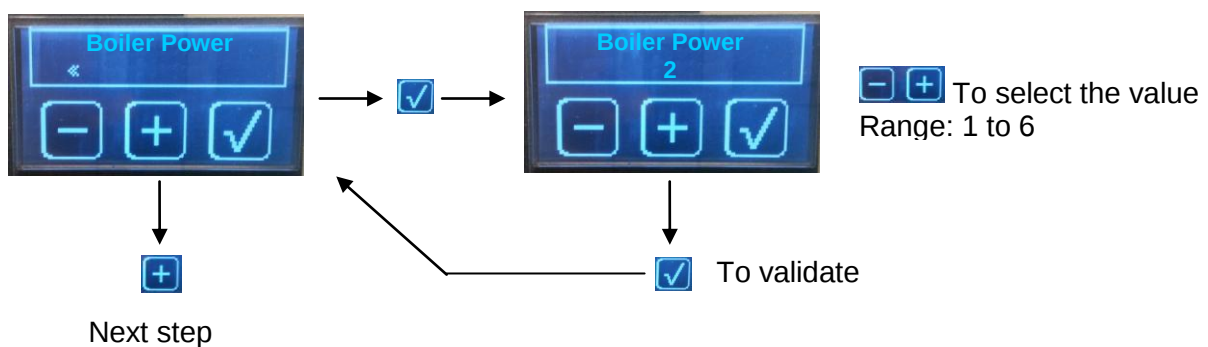


This is to configure the machine in 2 or 3 groups and in coffee or steam control model.

10.2.3 First install

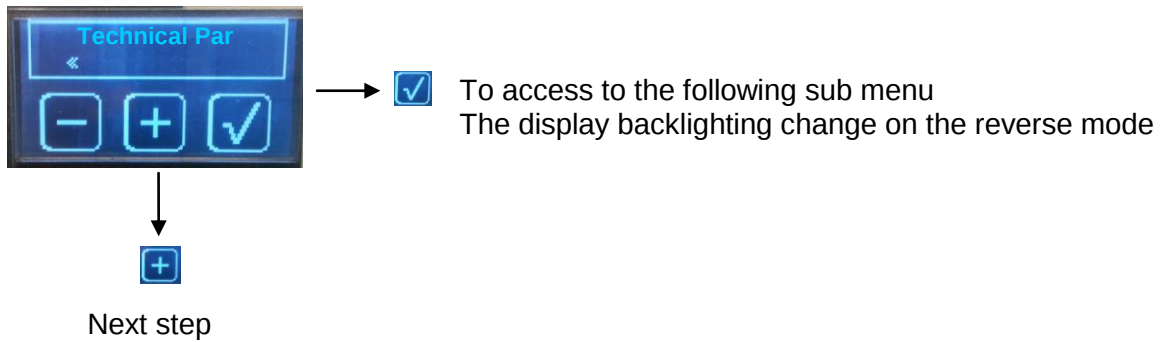


10.2.4 Power boiler

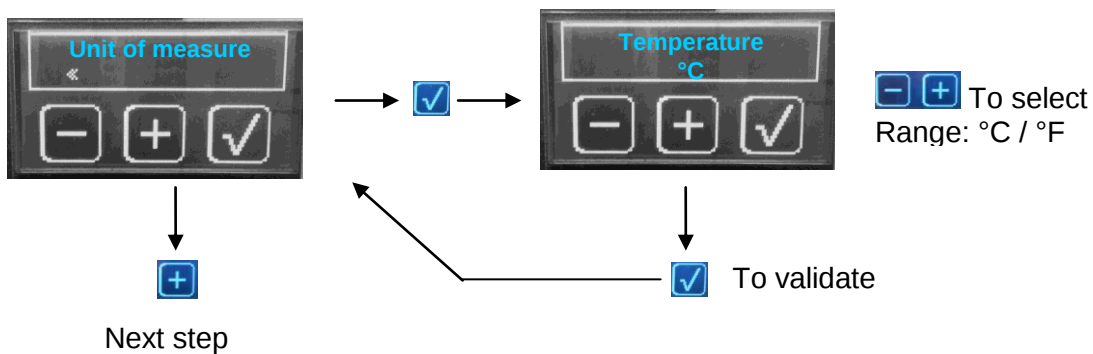


This step is to define the maximum power supply available for the machine.
Example: 2 → Max 22 Amp.(see chapter power management)

10.2.5 Technical parameters

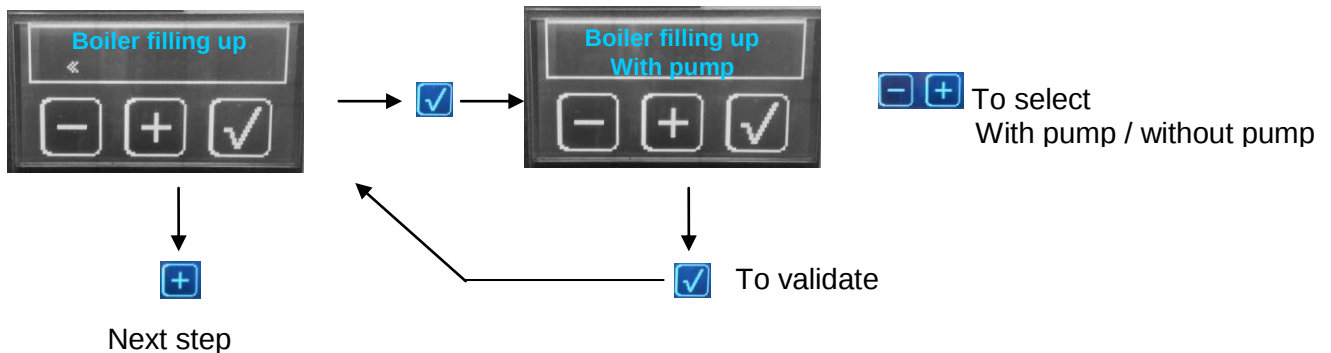


10.2.5.1 Unit of measurment



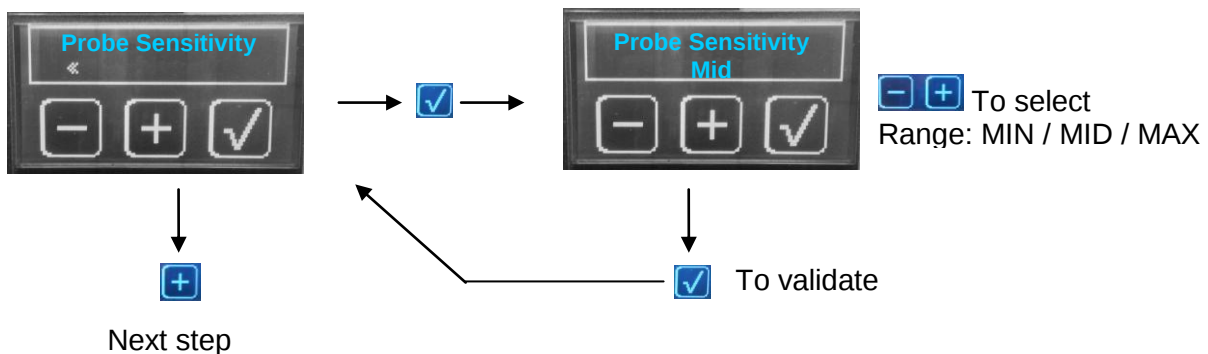
This step allows choosing the unit of temperature °C / °F for the machine.

10.2.5.2 Filling up with pump

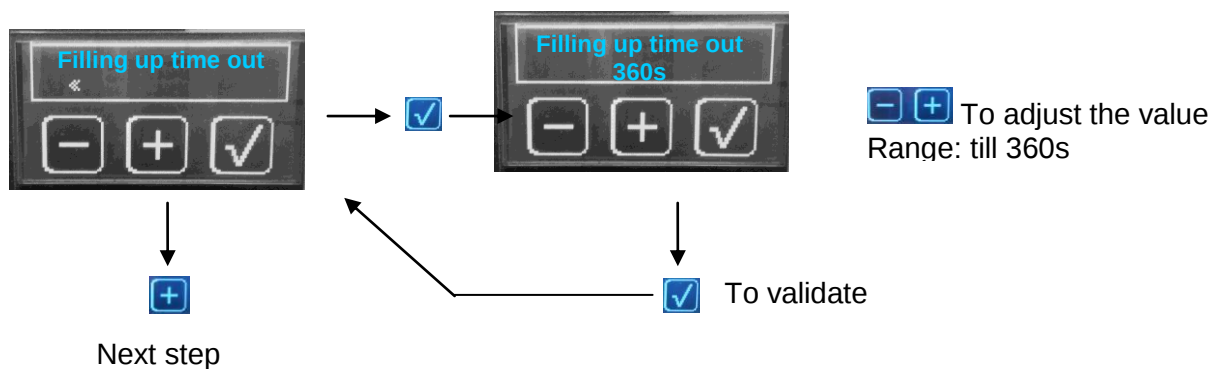


This step allows the machine to fill the tanker with or without the pump.
In case of "kit solo" system the machine need to be adjusted with a filling up with pump.

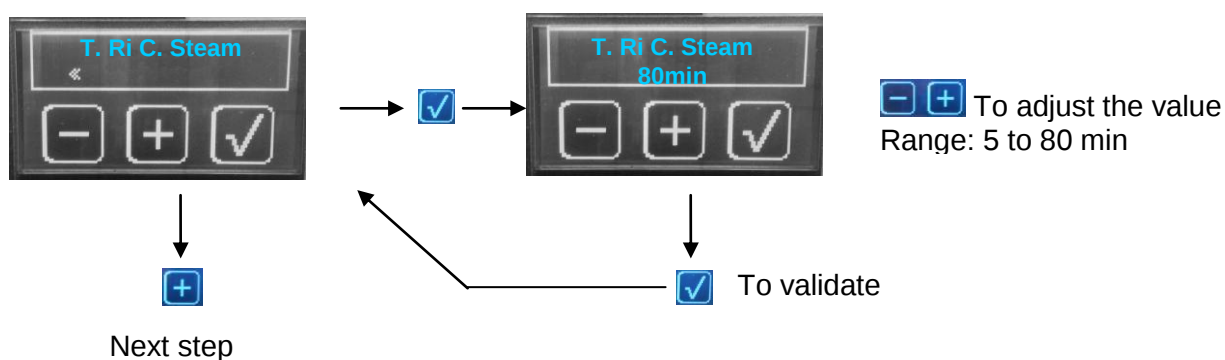
10.2.5.3 Probe sensitivity



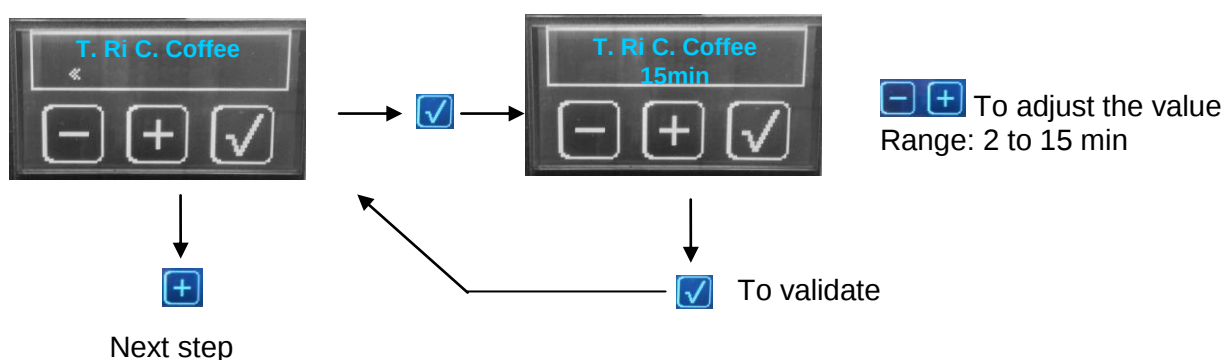
10.2.5.4 Filling up time out



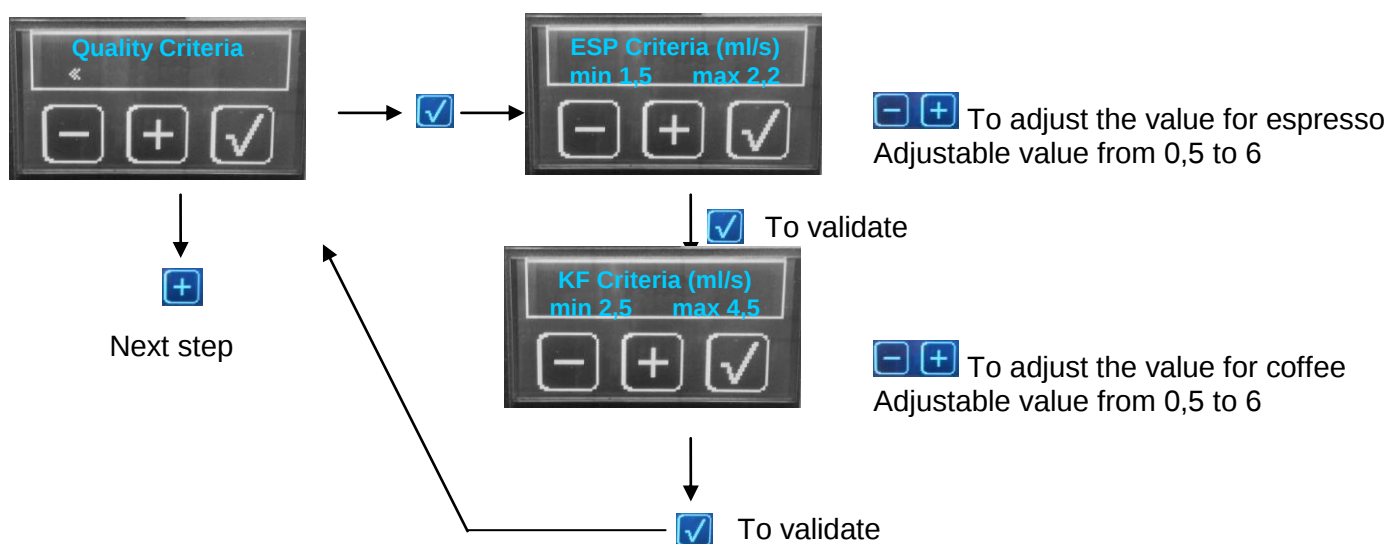
10.2.5.5 Time out steam boiler heating



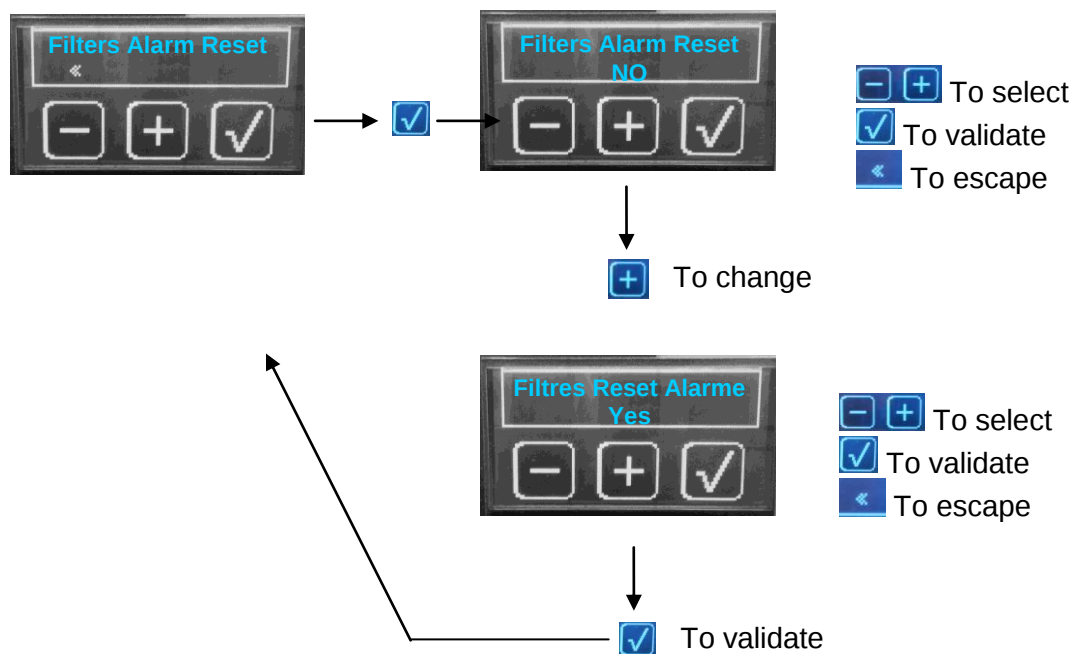
10.2.5.6 Time out Coffee Boiler Heating



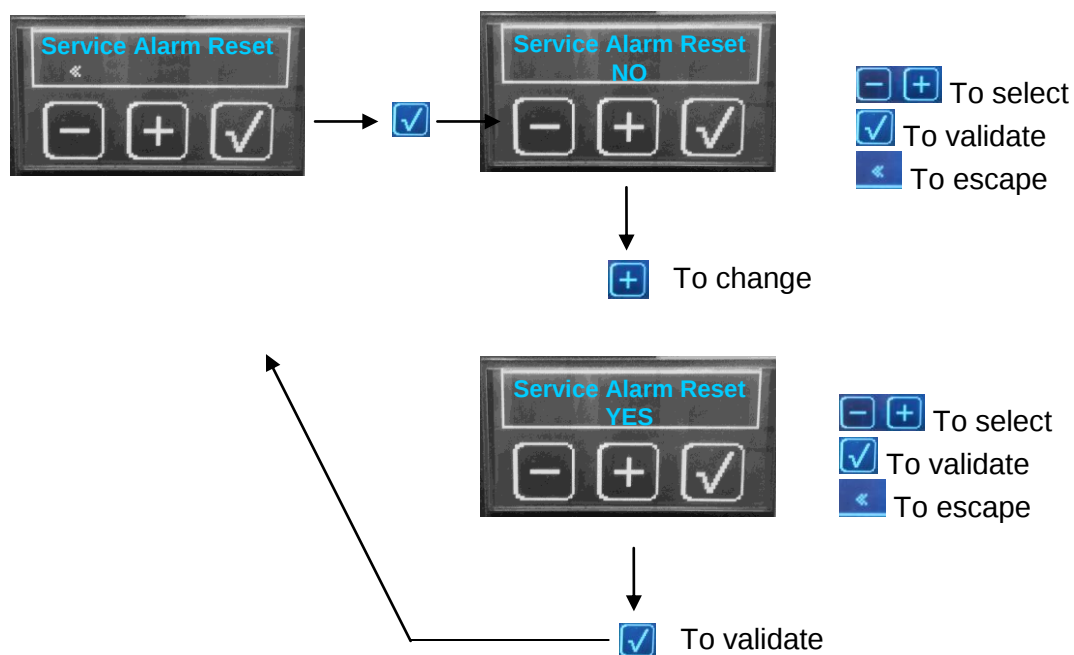
10.2.5.7 Quality Criteria



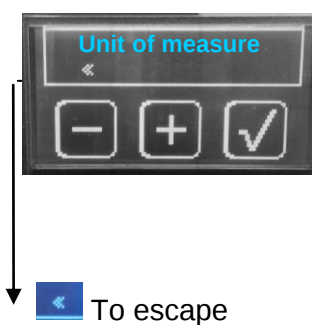
10.2.5.10 Filters Alarm Reset



10.2.5.11 Service Alarm Reset



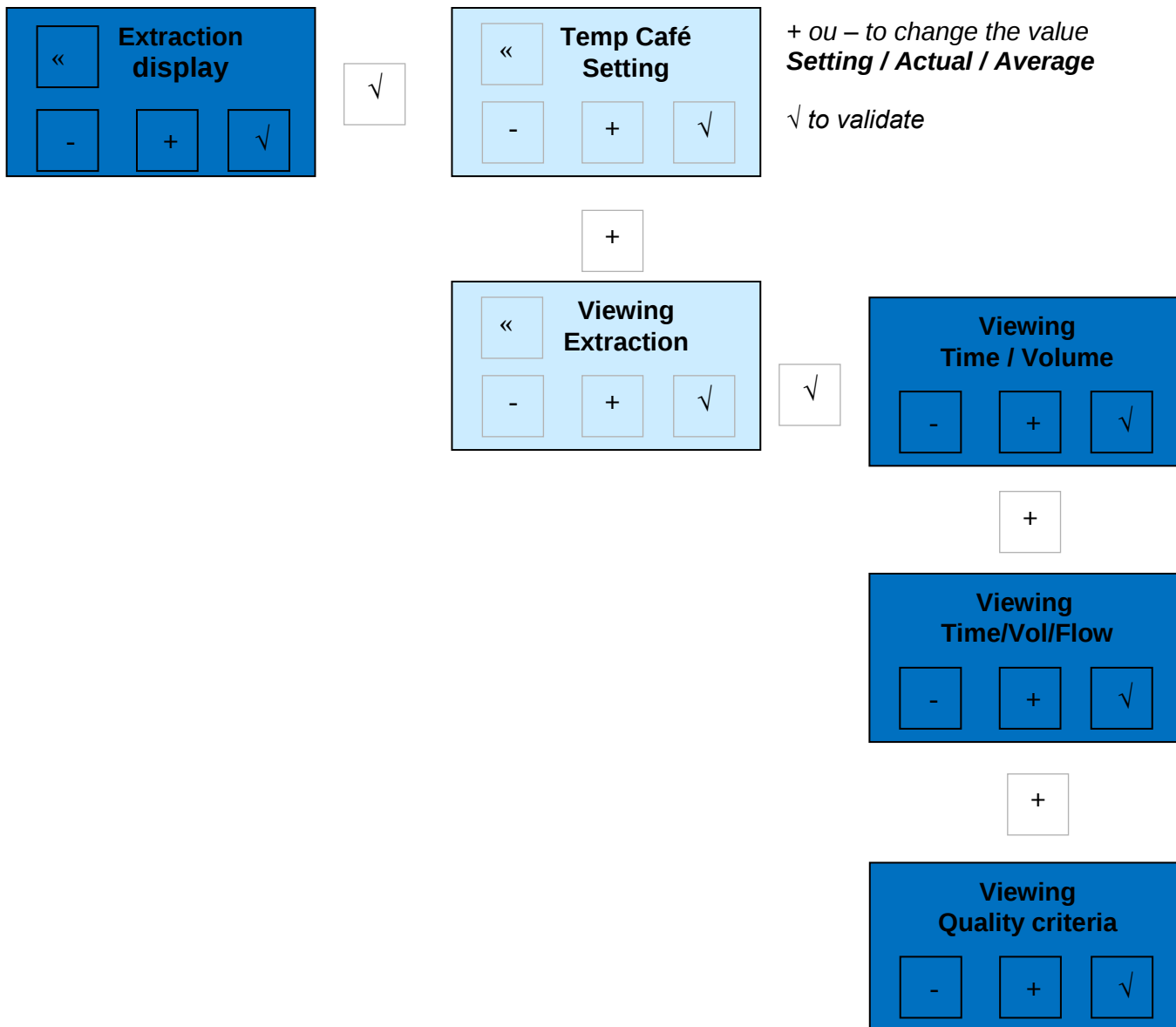
10.2.5.12 Unit of measurments



10.2.6 Viewing

This menu allow to define:

- The type of coffee temperature to be displayed
- The informations to be displayed during extraction



- Choice of the temperature coffee displayed :
 - If the value is « setting »
 - The temperature shown on each coffee group displays will be the Setting T° value
 - If the value is « Actual»
 - The temperature shown on each coffee group displays will be the real temperature inside the coffee boilers.
 - If the value is « Average»
 - The temperature shown on each coffee group displays will be an average of the real temperature inside the coffee boilers.

- Choice of the viewing type during the extraction :
 - If the user chooses “**Time / Volume**” (default value) :
 - The viewing during the extraction is this one (@ represents cups logos)

2Cafés @ @ XXs YYYml

- If the user chooses “**Time / Volume / Flow**”
 - The viewing during the extraction is this one :

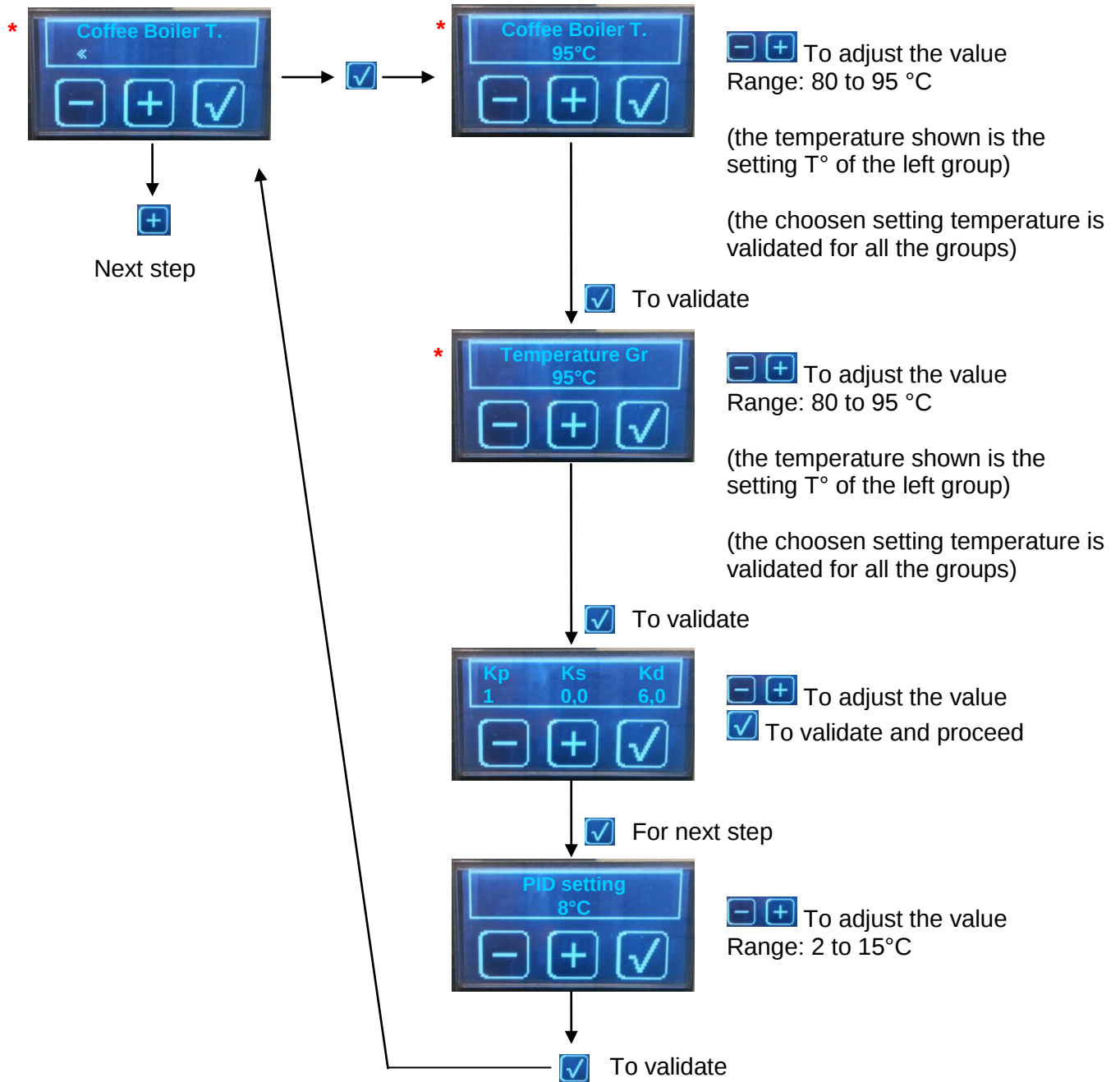
2Cafés @ @ XX s_ YYYml_ ZZml/s

- ZZ ml/s is the flow in ml/s. **It's YYY on XX (on 2 digits)**
- If the user chooses “**Quality criteria**”
- The viewing during the extraction is this one:

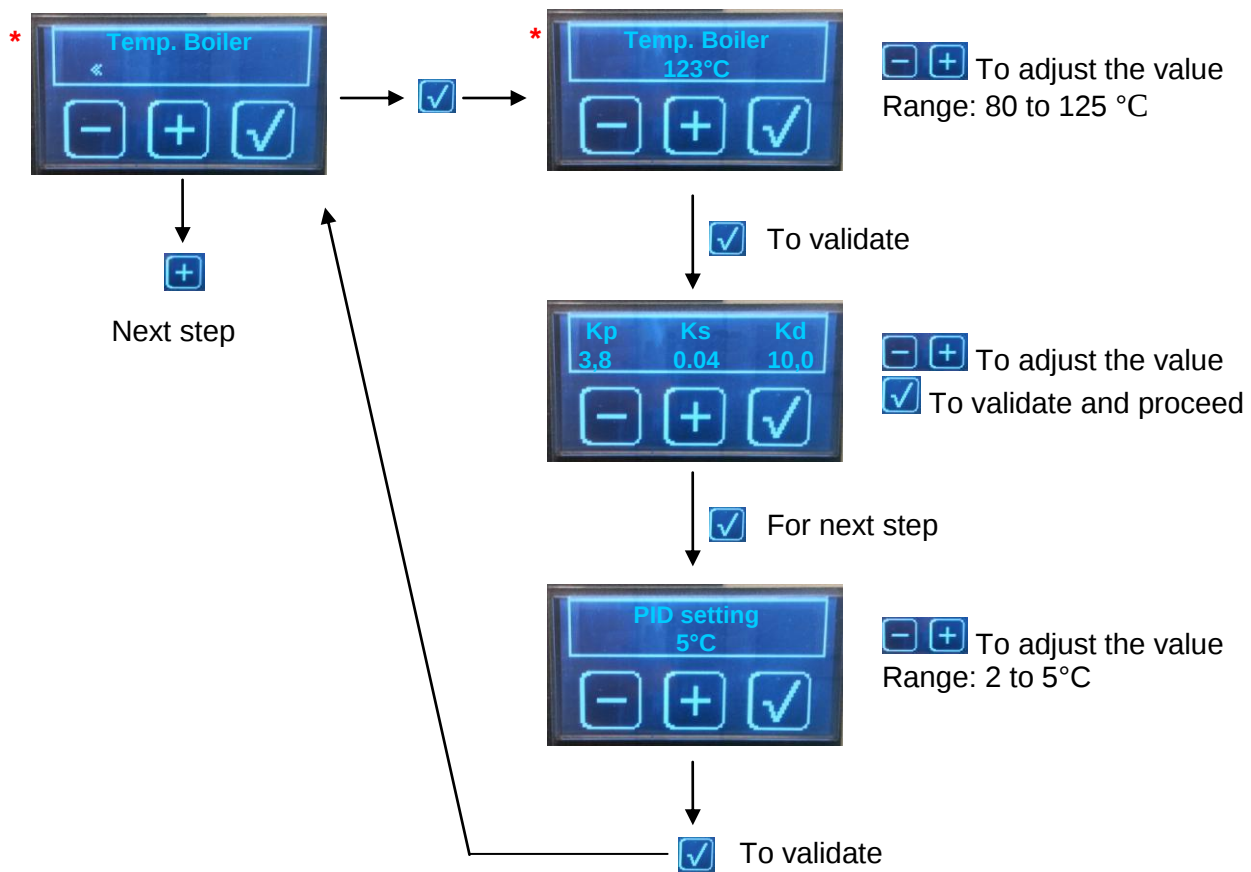
☉ --- ■ --- ☉ XXs YYYml

(See more explanations in chapter : coffee quality criteria displayed)

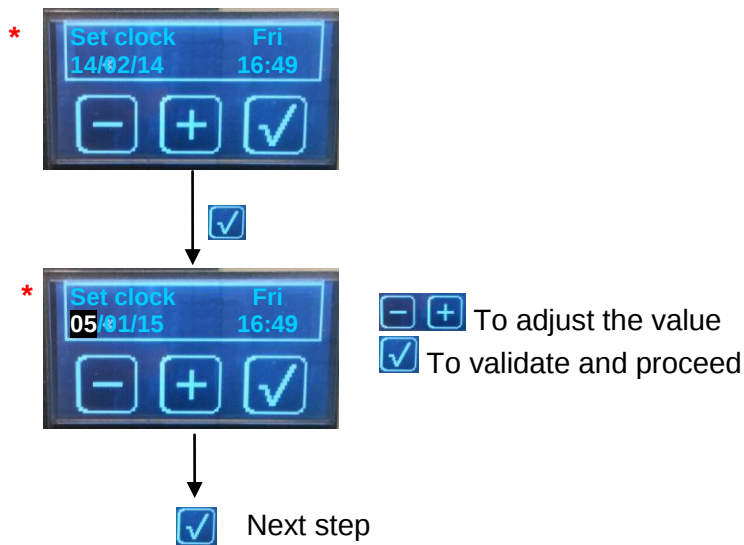
10.2.7 Coffee boiler temperature



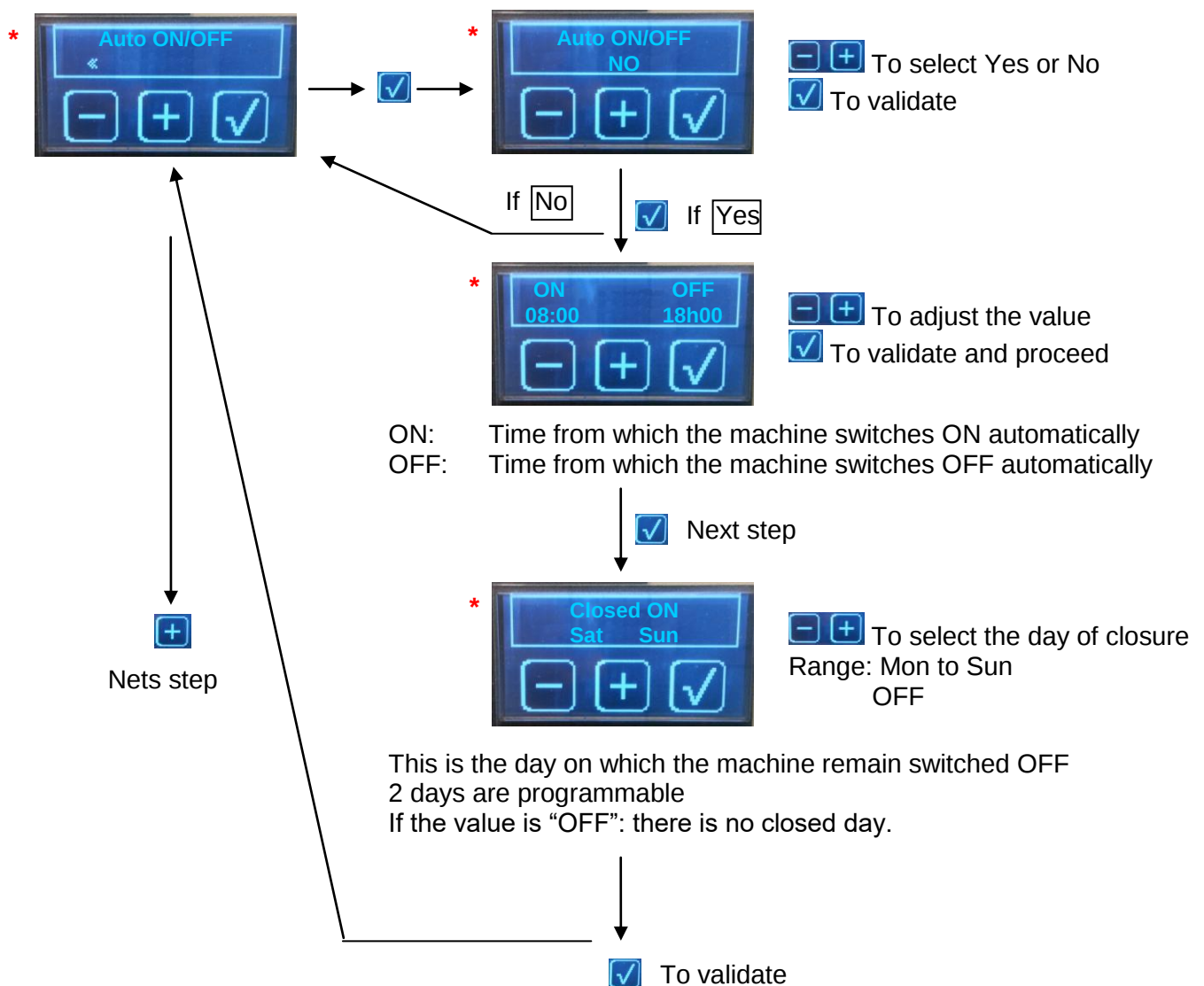
10.2.8 Steam boiler temperature



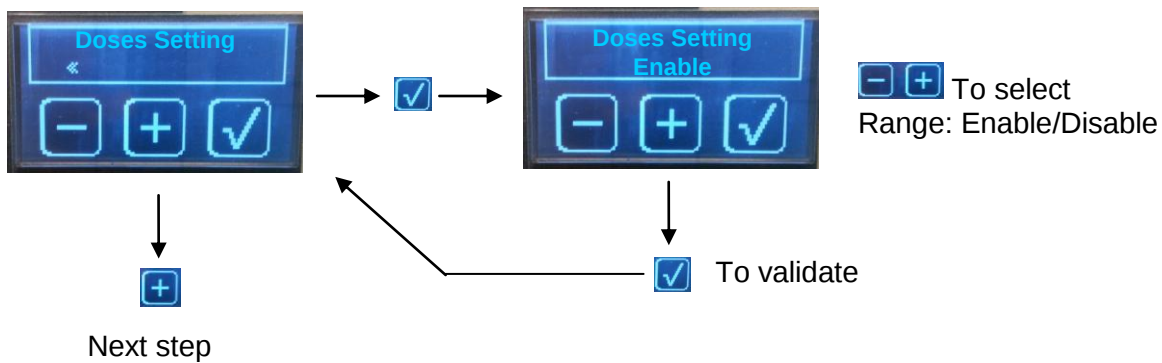
10.2.9 Clock adjust (*)



10.2.10 Automatic switch ON or switch OFF (*)

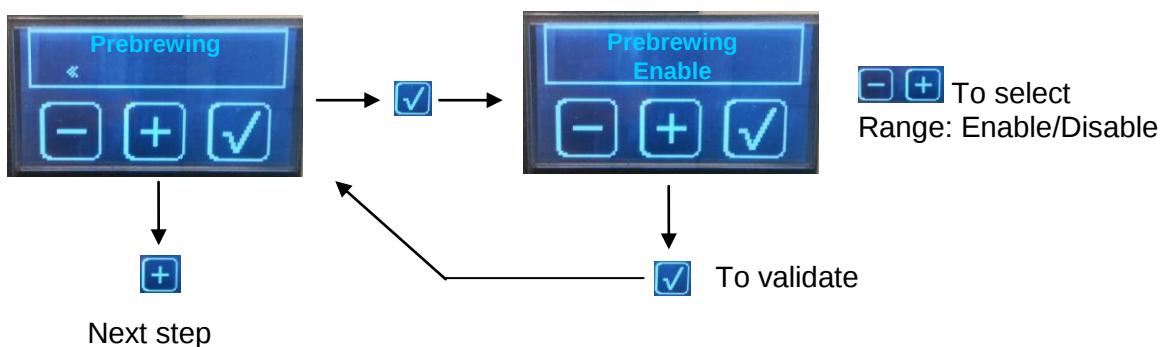


10.2.11 Doses setting disability



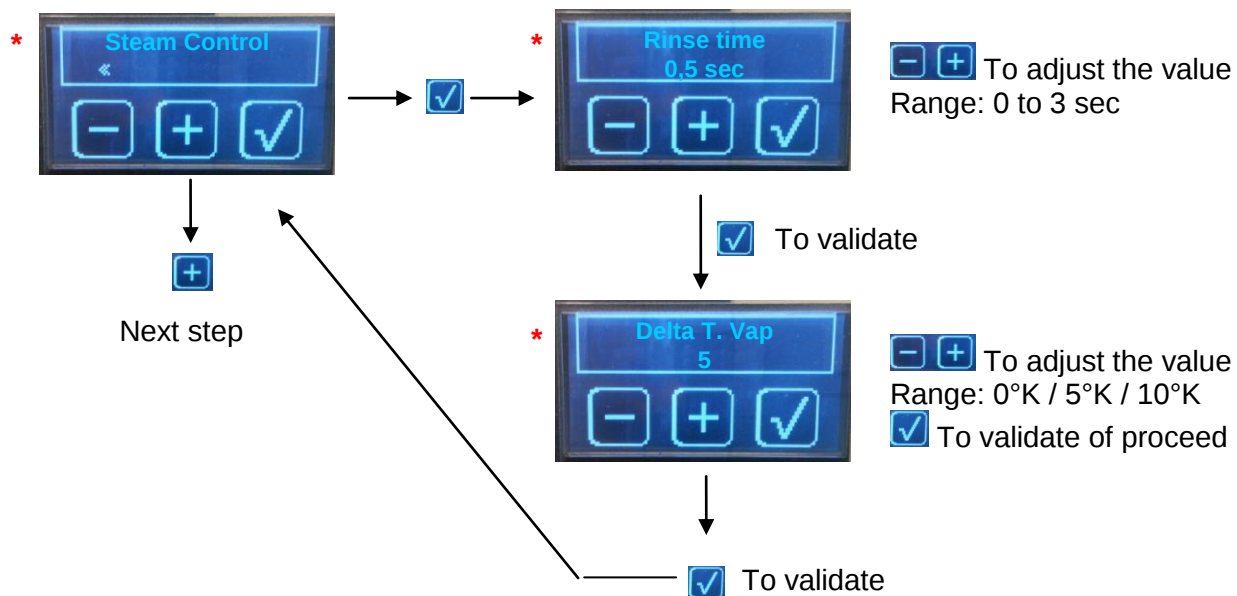
If Disable: there is no possibility for the user to adjust the doses

10.2.12 Pre-brewing disability



If Disable: there is no possibility for the user to adjust the pre-brewing

10.2.13 Steam Control (*)



See chapter: Steam control adjustments

10.2.14 Calibration

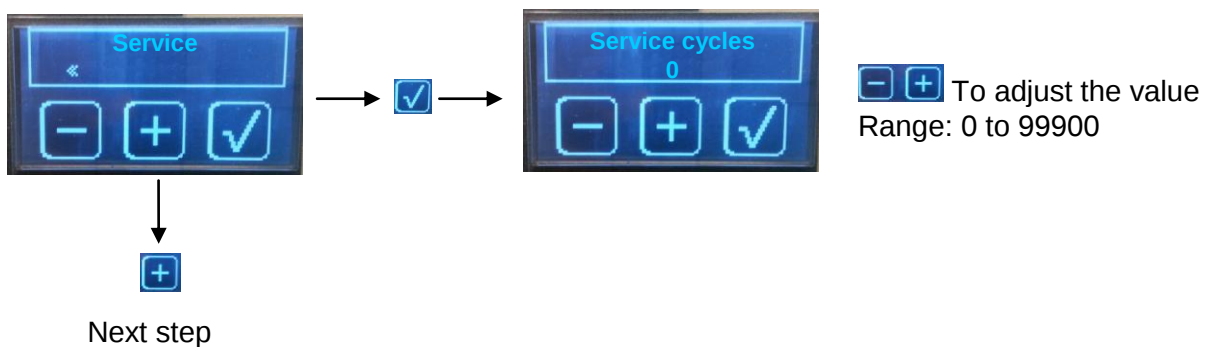


This menu allow to adjust the value shown by digital manometer according the value shown by the mechanical manometer

Adjusting method:

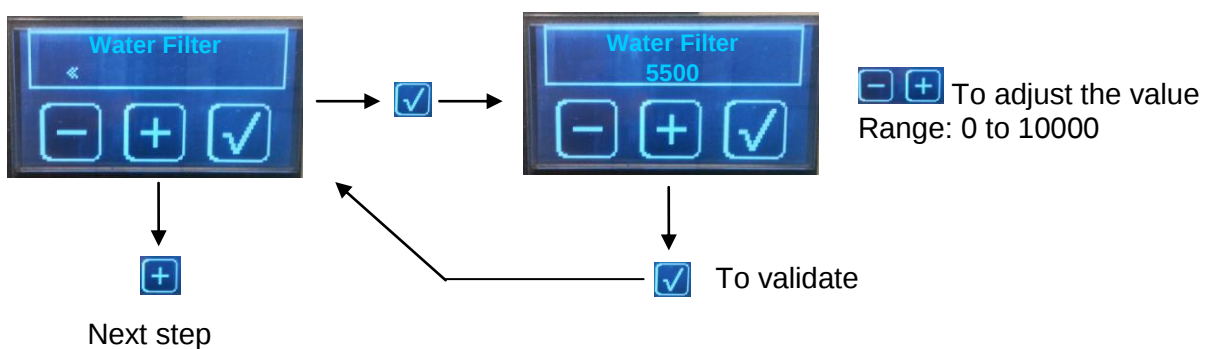
- Press [✓]. The pump goes ON
- The users read the value shown by the mechanical manometer (ex:9,5bars)
- The display shows: V.TH = Theorical value (should be on the display)
V.Cor = Corrected value (the one shown on the display)
- The users adjust "V.Cor"with [-] and [+] to display the same value as the mechanical value one
- The displayed value will be V.Cor always the same as the mechanical one.

10.2.15 Service



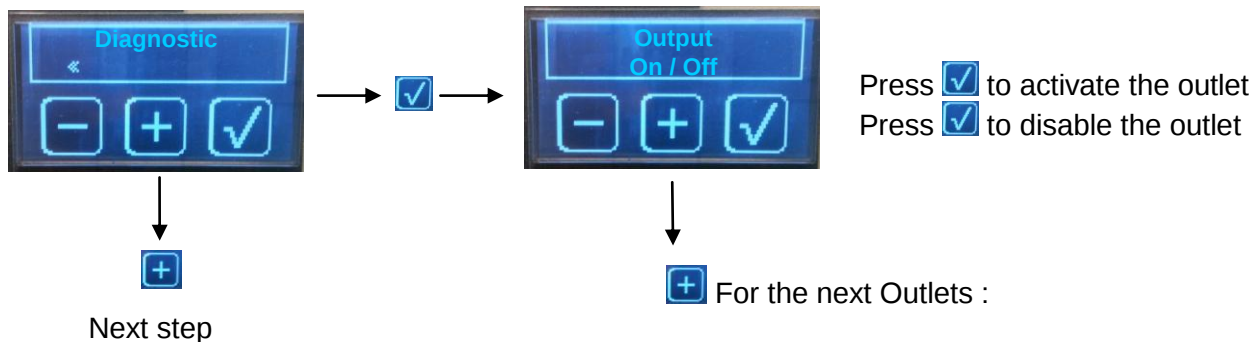
This menu allow the machine to display a message shing for a service after a programmed number of cycle (example 20000 cycles)
If value = 0 → not used

10.2.16 Water Filter



10.2.17 Diagnostics

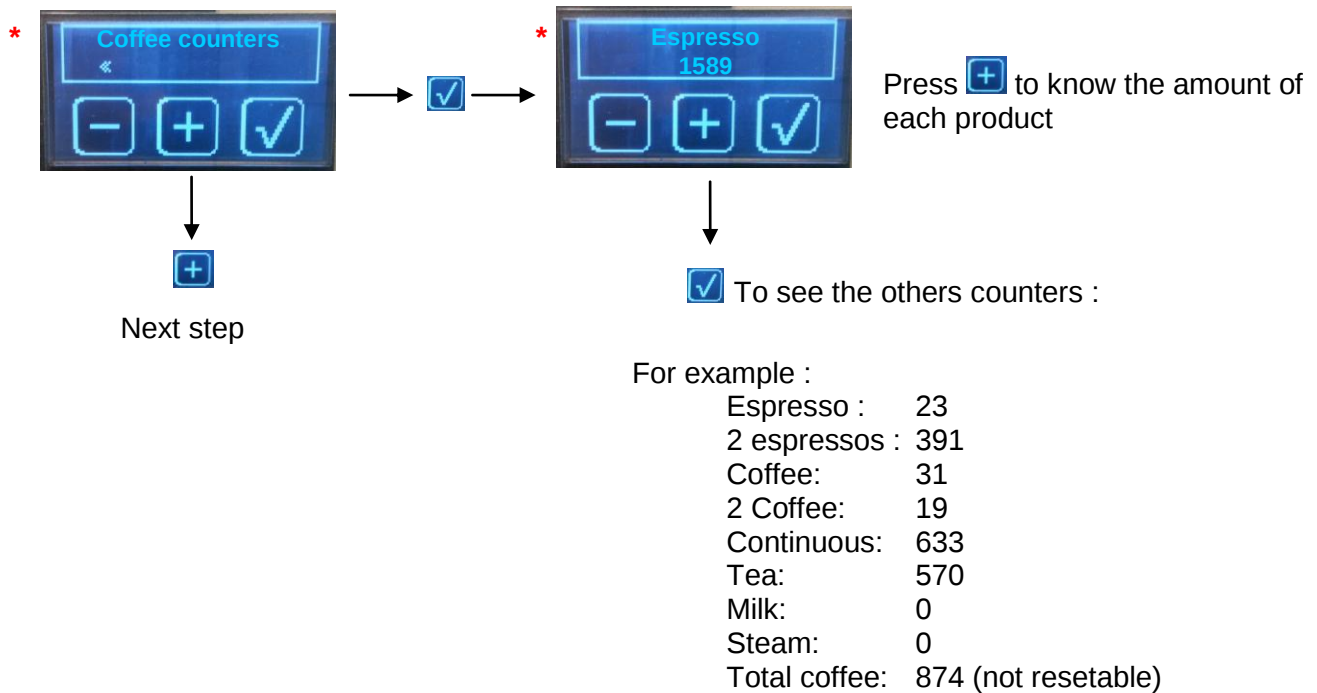
The menu allows supplying and testing separately all the outlets:



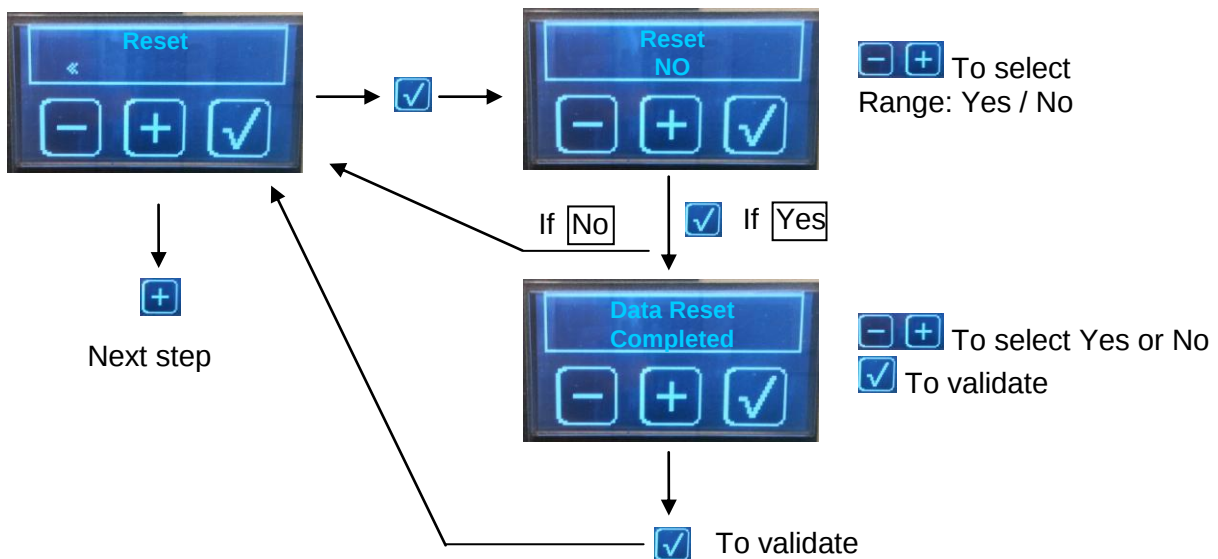
Steam 1: XXX °C	(Real temperature read in the steam boiler)
Steam 2: XXX °C	(Real temperature read in the steam boiler)
Steam 3: XXX °C	(Real temperature read in the steam boiler)
Coffee 1: YY °C	(Real temperature read in the 1° coffee boiler)
Coffee 2: YY °C	(Real temperature read in the 2° coffee boiler)
Coffee 3: YY °C	(Real temperature read in the 3° coffee boiler)
R grp 1:ZZ °C	(Real temperature read in the 1° head group)
R grp 2:ZZ °C	(Real temperature read in the 2° head group)
R grp 3:ZZ °C	(Real temperature read in the 3° head group)
Pump:	Pump motor
Filling up valve:	Filling up valve for steam boiler
Coffee 1 valve:	Coffee valve for group n° 1
Coffee 2 valve:	Coffee valve for group n° 2
Coffee 3 valve:	Coffee valve for group n° 3
Pre-Inf valve Grp 1:	Pre-Brewing valve for group n° 1
Pre-Inf valve Grp 2:	Pre-Brewing valve for group n° 2
Pre-Inf valve Grp 3:	Pre-Brewing valve for group n° 3
Hot water 1 valve:	Left hot water valve + Left cold water valve
Hot water 2 valve:	Right hot water valve + Right cold water valve
Steam C. Valve:	Steam valve for steam control
Vaccum valve grp 1:	
Vaccum valve grp 2:	
Vaccum valve grp 3:	
Air valve:	Air valve for steam control
On / Off:	Relay dedicated to supply the light transformer



10.2.18 Coffee Counters (*)



10.2.19 Reset



Switch OFF and switch ON the machine. The machine is reseted.

The menu allows to set the factory setting inside the machine

Machine version = 2G and coffee model
Power 2

10.2.20 USB interface



See chapter: How to update the software version



Next step

10.2.21 Software version (*)



Next step



To come back

10.2.22 Display



To select
Range: Normal/Reverse

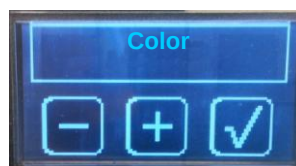


To validate



To select
Range: 0 to 64

On progress



To choose the color

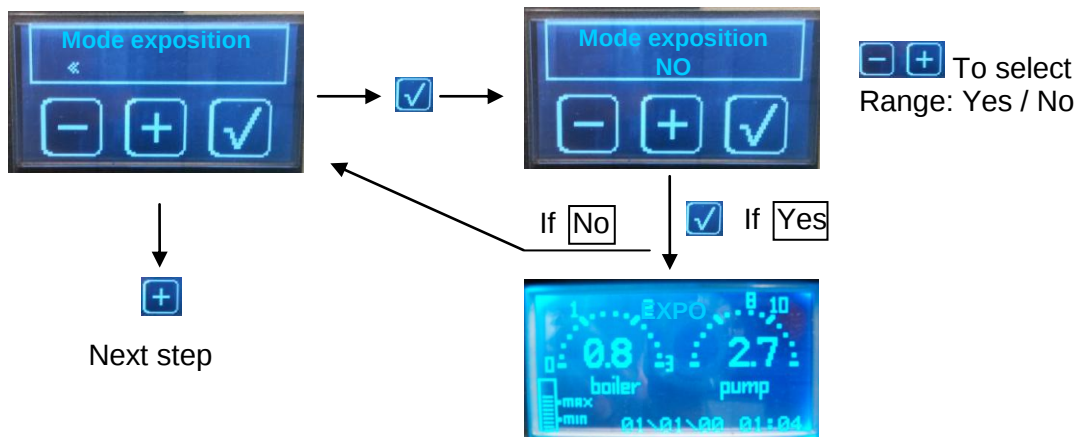


Nets step



To validate

10.2.23 Exposition mode

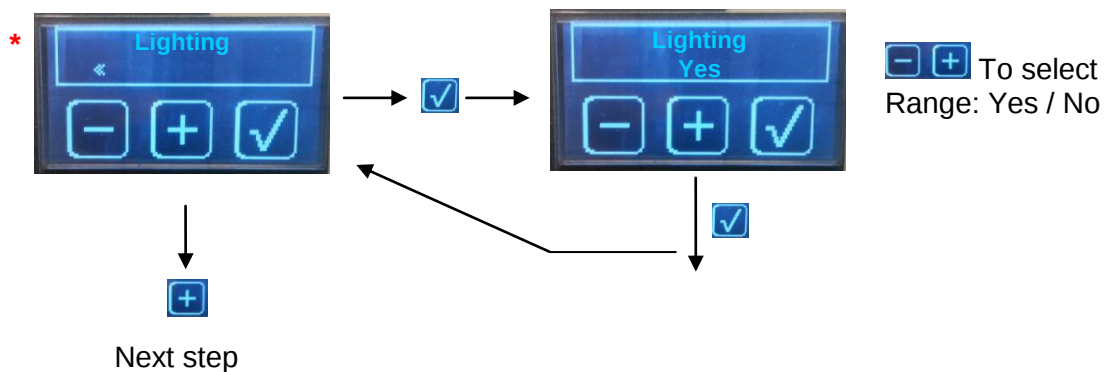


The machine remain in exposition mode: No filling up tanker
No heating up boiler
No doses available

To come back on normal menu: Go into the menu and select “No” in the exposition mode step

10.2.24 Lighting (*)

This step allows choosing if during the functioning of the machine the “side white leds” are “switch off” or “switch on”.

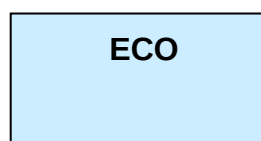


When the machine ON:

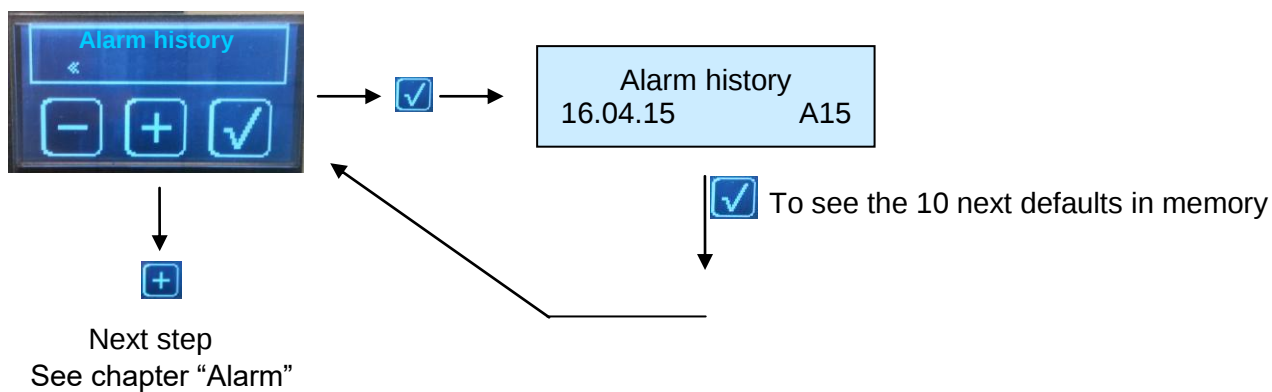


YES : The lights are **ON**
NO: The lights are **OFF**

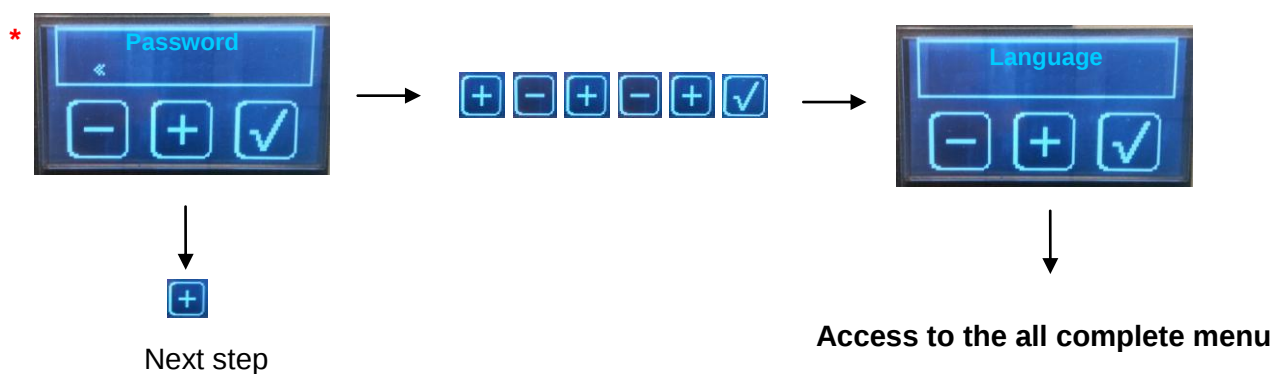
The lights are always “OFF” when the machine is OFF:



10.2.25 Alarm history



10.2.26 Password (*)



(Acces only to steps marked *)

(come back to the
1°step: language

11 COFFEE TEMPERATURE ADJUSTMENTS

- Factory adjustment:
 - Steam boiler temperature: 123°C
 - Coffee boiler temperature: 90°C
 - Group temperature: 90°C

⇒ Coffee temperature: 89°C

- On the one hand, you can choose the steam boiler temperature between 117°C (0.8b) and 125°C (1.4b).
- On the other hand, you can choose the coffee boiler temperature and the group temperature to have the desire temperature.

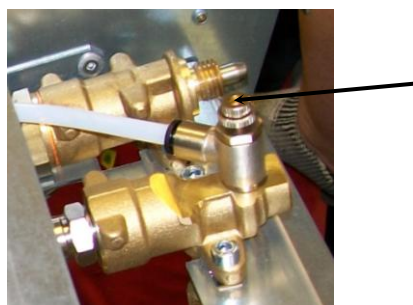
Steam boiler Temperature (°C)	Coffee boiler and Group Temperature (°C)	Coffee Temperature (°C)
117	87	78
	90	81
	93	85
120	87	78
	90	81
	93	85
123	87	79
	90	82
	93	85
125	87	79
	90	82
	93	85

To adjust the coffee temperature, you can change the coffee boiler and group temperature.
1°C on coffee boiler and group temperature -> 1°C on coffee temperature

- Concerning the abacus above, these values are given in an indicative way, following the regulation and the especial protocol of the CONTI company. These can change according to the type of coffee used, as well as the environment of the machine.

11.1.1 Hot water temperature adjustment

The factory setting is a hot water temperature at 92°C.
You can change this temperature by adjusting the screw above the tap.

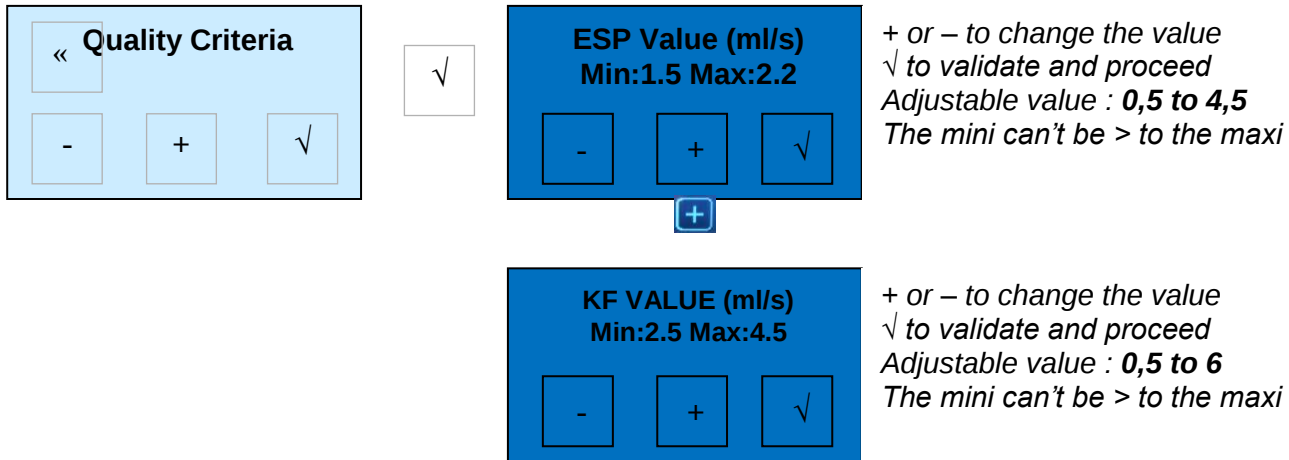


12 QUALITY CRITERIA

- Quality criteria programming :

First, the user has to choose his own quality criteria.

These are the acceptable minimum and maximum flow rates for the estimated product.



- The user need to choose the type of display « Quality criteria » :
- The display during the extraction becomes :



- The cursor ■ moves (7 positions) depending of the measured flow (ml/s).
- There are minimum and maximum values for espresso.
- There are minimum and maximum values for coffee.
- The cursor shows 7 positions matching to 7 values included between the programmed mini and max.
- For example : programmed value : Min = **0.80 ml/s** / Max = **1,20 ml/s**
 - Position 1 = flow between 0.80 ml/s and 0.86 ml/s
 - Position 2 = flow between 0.86 ml/s and 0.91 ml/s
 - Position 3 = flow between 0.91 ml/s and 0.97 ml/s
 - Position 4 = flow between 0,97 ml/s and 1,02 ml/s (**median position**)
 - Position 5 = flow between 1,02 ml/s and 1,08 ml/s
 - Position 6 = flow between 1,08 ml/s and 1,14 ml/s
 - Position 7 = flow between 1,14 ml/s and 1,20 ml/s

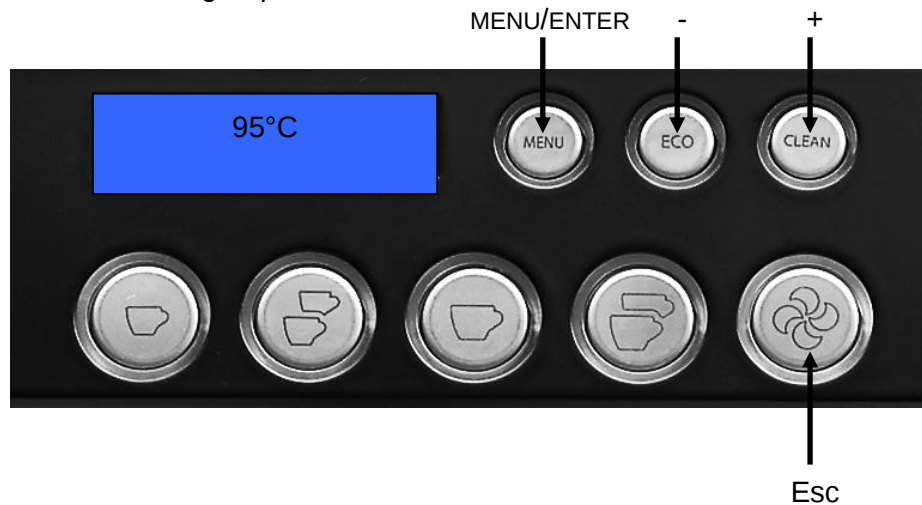
13 STEAM CONTROL PRODUCTS ADJUSTMENTS

How to adjust “**hot milk**” or “**milk foam**” product: By “**auto learning**”

Using the nearest coffee key pad menu from the steam control:

Use keypad n° 2 on a 2 groups machine

Use keypad n° 3 on a 3 groups machine



The user prepare the product to be heated, and put the pot above the steam control outlet.

Press the coffee “MENU” button

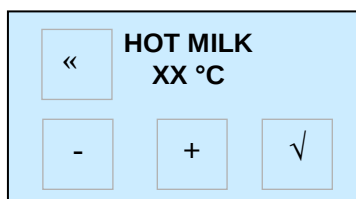
Press “+” until the display shows “dose setting”

Press “MENU” again (for ENTER)

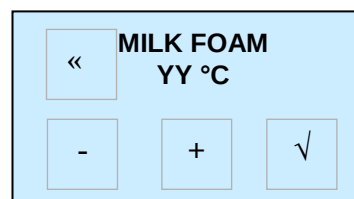


Press the product button “hot milk” or “milk foam” :

The machine starts to heat the product. At the same time the display shows the T° value read inside the milk.



or



XX or YY is the temperature read by the probe

When the temperature displayed or the made product is OK. Then, push again on the button. The making of the product is stopped. The temperature is stored in the memory. Push on the “MENU” button to escape from the programming.

Dose setting

Press the coffee « ESC » button.

That's the same procedure for the « hot milk » and the “milk foam »

14 SOFTWARE VERSION UPDATE

The step "USB interface" allows the updating of the machine's software.

- Prepare the USB key with a file named "update.bin" (this file is the new software version)



Please make sure the USB stick does not contain any other file. It must be empty.

- Put the machine on stand by; the display shows:



- Insert the USB key in the mainboard



- Press the Menu button for 5 seconds and go to step:



- Press on



- Press

- The machine shows:



- Then press
- The machine start upgrading software
- The display show a decreasing scrollbar:



The operation takes about 70 min.

- After this time the display shows a blinking red screen during 5 min.



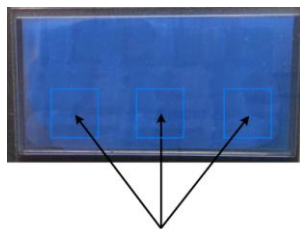
- When the upgrade is finished the display shows:



- Switch OFF the machine
- Remove the USB key
- Switch ON the machine, as soon as the graphic display shows:



- Press the 3 following keys for 3 seconds



- When the display shows:
- Switch OFF and switch ON the machine
- The machine is ready.

15 MAINTENANCE OF MACHINES

➤ DAILY MAINTENANCE

- ☞ Clean the hot water outlet and the steam outlets with a scouring pad:
 - Use a needle to keep the diffuser outlets unclogged.
 - Then purge by opening the tap a few seconds.
- ☞ Clean the drip tray and the basin, removing them from the machine.
- ☞ Remove the filter-holder and clean the seal injection filter-holder with the brush.
- ☞ Use the automatic process cleaning:
 - Push on the « clean » button
 - The automatic cleaning process of the group is started in 3 steps:
 - The process is shown on the display.
 - The machine asks for blind hold filter and the CONTI cleaning pill code n°466662
 - Follow the instructions on the display.
 - Repeat this procedure on each group.
- ☞ Brush the filters in water containing detergent:
 - In order to unclog the holes
 - Never use a needle or a flame.

➤ HALF YEAR MAINTENANCE:

- ☞ A kit n° 450200, for the following operation is available for sale.
- ☞ For each group:
 - Remove the sprinkler, diffuser, and seal gasket.
 - Scrub the gasket groove and the supplying hole on the group head.
 - Clean the two parts of the diffuser. Clear all the holes with a needle.
 - Reassemble the 2 parts of the diffuser on the group head
 - Place NEW Filter gasket (No. 002711), and NEW sprinkler (No. 415684)
- ☞ Remove and clean the level sensor and the safety sensor (limestone deposit).

➤ **ANNUAL MAINTENANCE:**

☞ A kit n° 450201, for the following operation is available for sale.

☞ Change the pump inlet filter (No. 411861)

☞ On the steam boiler:

- Change vacuum valve (No. 408898)
- Change the safety valve (No. 411827)

☞ On the coffee boiler:

- Remove and clean the gasket limiter 12 Bars
- Clean the draining valve core

☞ On the inlet bloc valves:

- Change the filter (No. 470199)
- Replace the gasket (No. 219000) of 2 non-return valves
- Remove and clean the gasket limiter 12 Bars
- Clean the nucleus of the solenoid inlet water boiler

☞ On the cold water valve block :

- Clean the both cold water valves cores

☞ On the pre-brewing valve:

- Clean the pre-brewing valve core

☞ On the coffee groups

- Change the O-ring nozzle (No. 403457) and the filter nozzle (No. 403458)
- Clean the 3rd way and the nucleus of the solenoid coffee valve

☞ On the 2 electrical taps

- Clean the nucleus of the solenoid "hot water" valve

☞ On the 2 steam taps:

- Change the 2 O-rings (No. 403457)
- Change the 1 gasket (No. 407502)

☞ On the 2 "steam" output and on the 2 "hot water" output

- Change the O-ring (No. 061200)
- Change the O-ring (No. 055300)

☞ For water quality issues, it is recommended to fully drain the boiler.

➤ BIENNAL MAINTENANCE:

☞ A kit n° 450201, for the following operation is available for sale.

☞ Change the pump inlet filter (No. 411861)

☞ On the steam boiler:

- Change vacuum valve (No. 408898)
- Change the safety valve (No. 411827)
- Dismantle and clean the injectors

☞ On the coffee boiler:

- Change the limiter 12 Bars (No. 409774)
- Change the draining valve (No. 430046)

☞ On the inlet bloc valves:

- Change the filter (No. 470199)
- Replace the gasket (No. 219000) of 2 non-return valves
- Change the limiter 12 Bars (No. 409774)
- Change the inlet boiler valve (No. 470161) + 2 PTFE gasket (No. 407500)

☞ On the cold water valve block :

- Change cold water valve (No. 466273)

☞ On the pre-brewing valve :

- Change the pre-brewing valve (No. 450033)

☞ On the coffee groups

- **Remove all the parts and uncork all the holes in the group head.**
- Change the O-ring nozzle (No. 403457)
- Change the filter nozzle (No. 403458)
- Change the solenoid coffee (No. 4072391) + 2 PTFE gasket (No. 407500)

☞ On the 2 electrical taps

- Change the solenoid "hot water" (No. 470161)
- Change the 2 PTFE gasket (No. 407500)
- Change the O-ring of the adjusting screw (No. 400 039)

☞ On the 2 steam taps:

- Change the 2 O-rings (No. 403457)
- Change the 1 gasket (No. 407502)
- Change the O-ring (No. 356500)

☞ On the 2 "steam" output and on the 2 "hot water" output

- Change the O-ring (No. 061200)
- Change the O-ring (No. 055300)
- Change the washer (No. 401320)
- Change the O-ring of steam nozzles (No. 055400)

☞ On the flowmeter :

- Change the non-return valve (No. 415167)

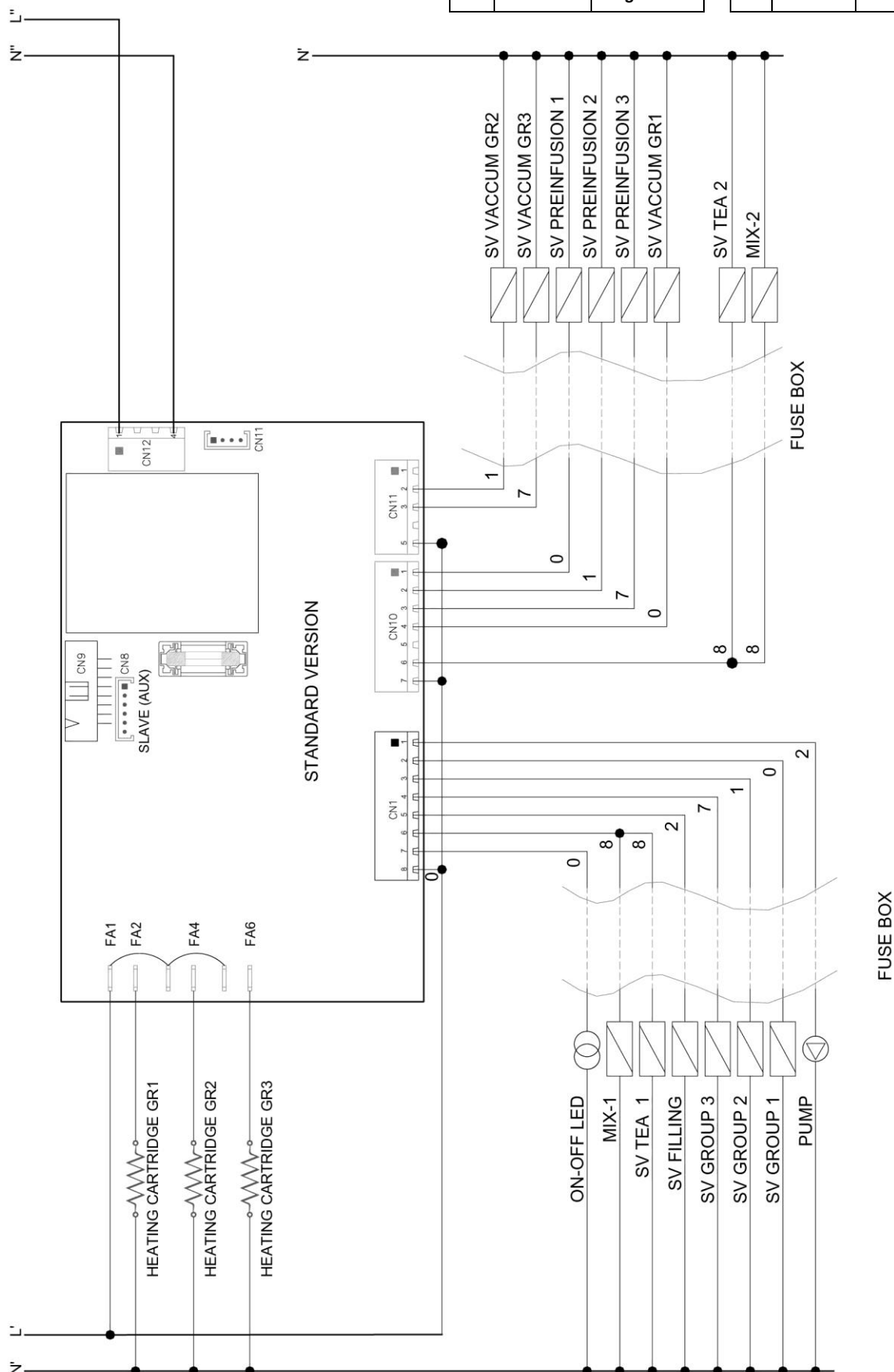
☞ Change the silicone tubes evacuation 3-way valves cafes (No. 405621)

☞ For water quality issues, it is recommended to fully drain the boiler.

16 ELECTRIC DRAWING

16.1 CPU board standard

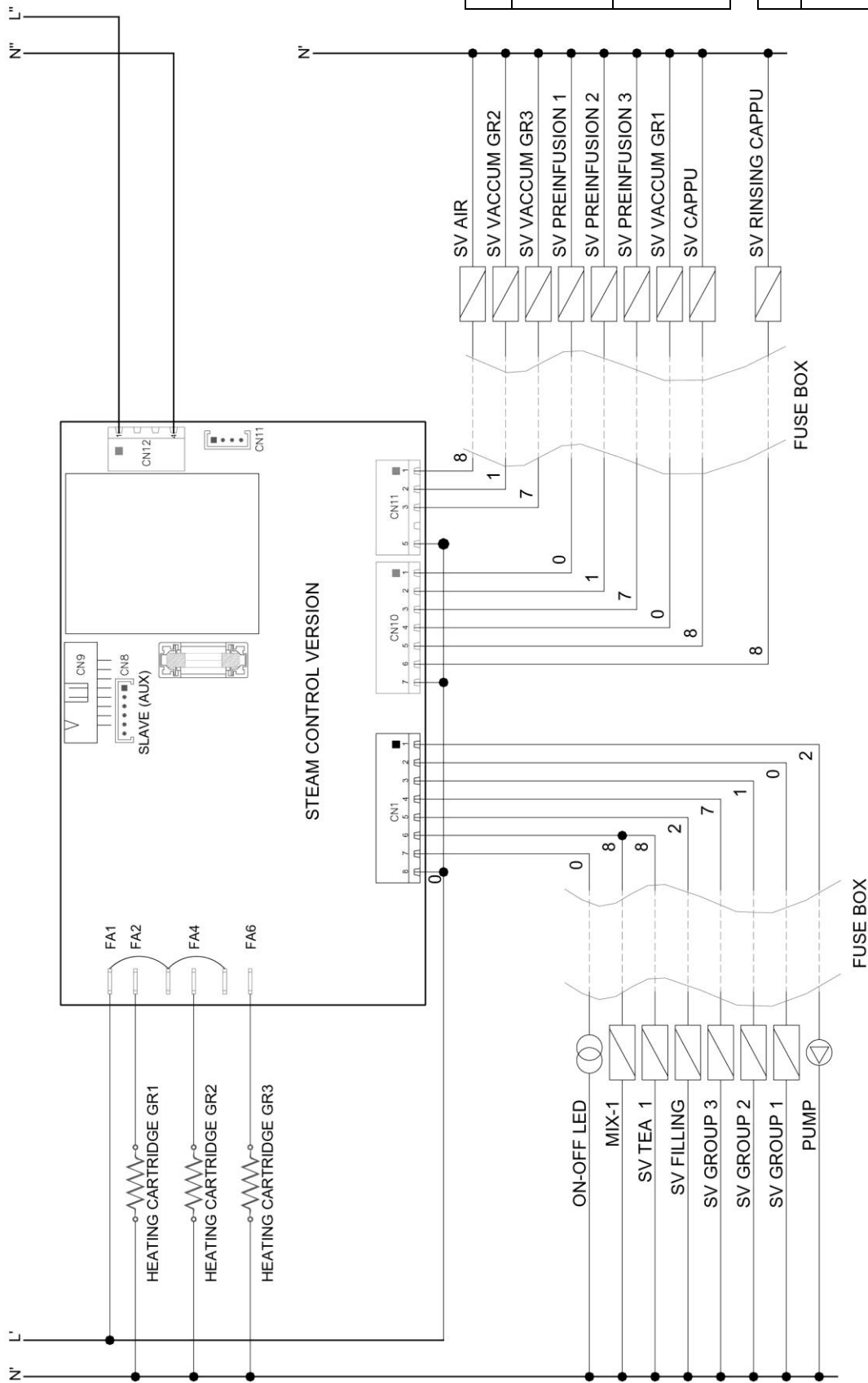
1	marron	brown	6	bleu	blue
2	rouge	red	7	violet	violet
3	orange	orange	8	gris	grey
4	jaune	yellow	9	blanc	white
5	vert	green	0	noir	black



16.2 CPU board Steam Control

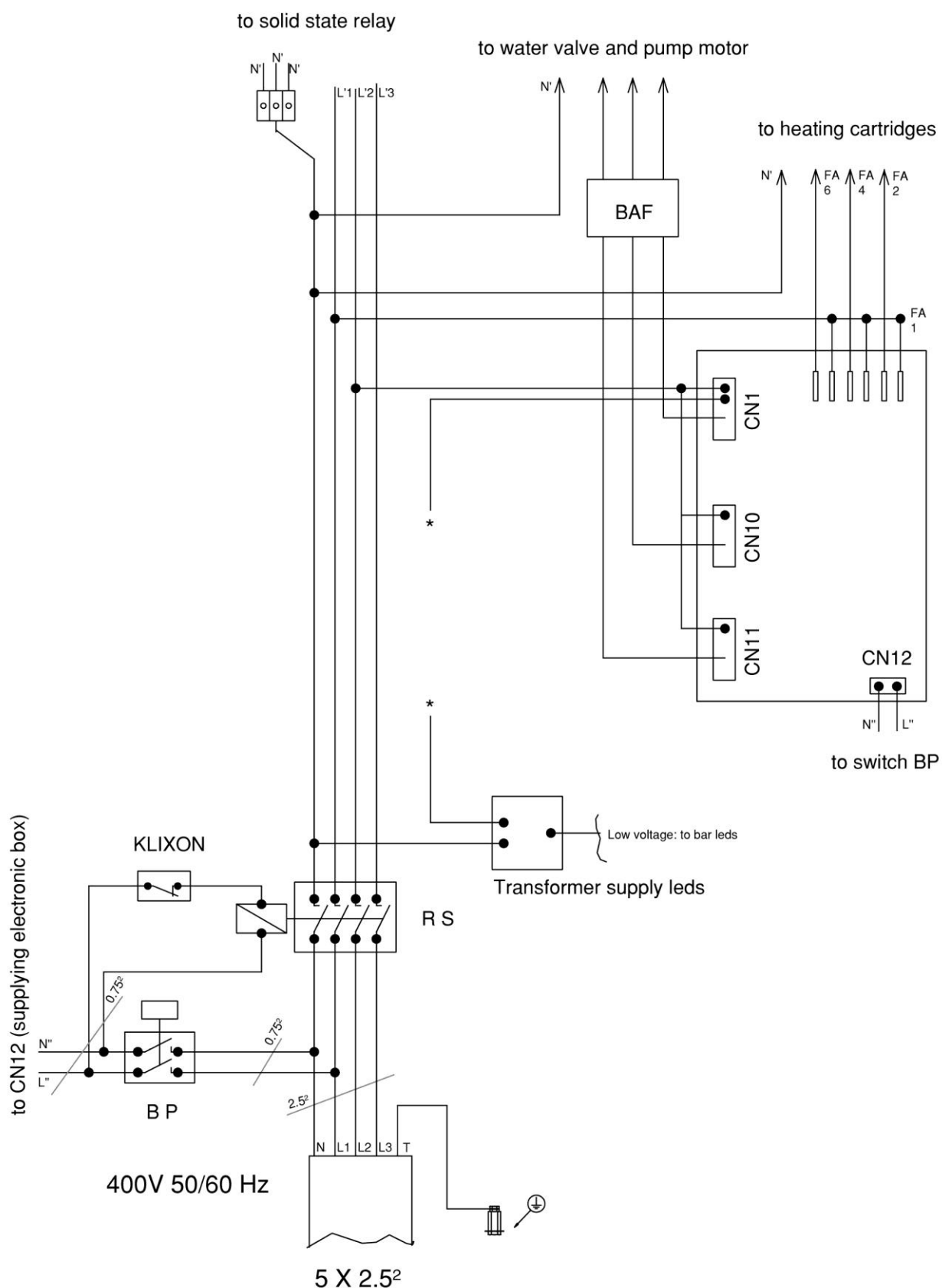
CODE COULEURS FILS
CABLE COLOUR CODE

1	marron	brown	6	bleu	blue
2	rouge	red	7	violet	violet
3	orange	orange	8	gris	grey
4	jaune	yellow	9	blanc	white
5	vert	green	0	noir	black



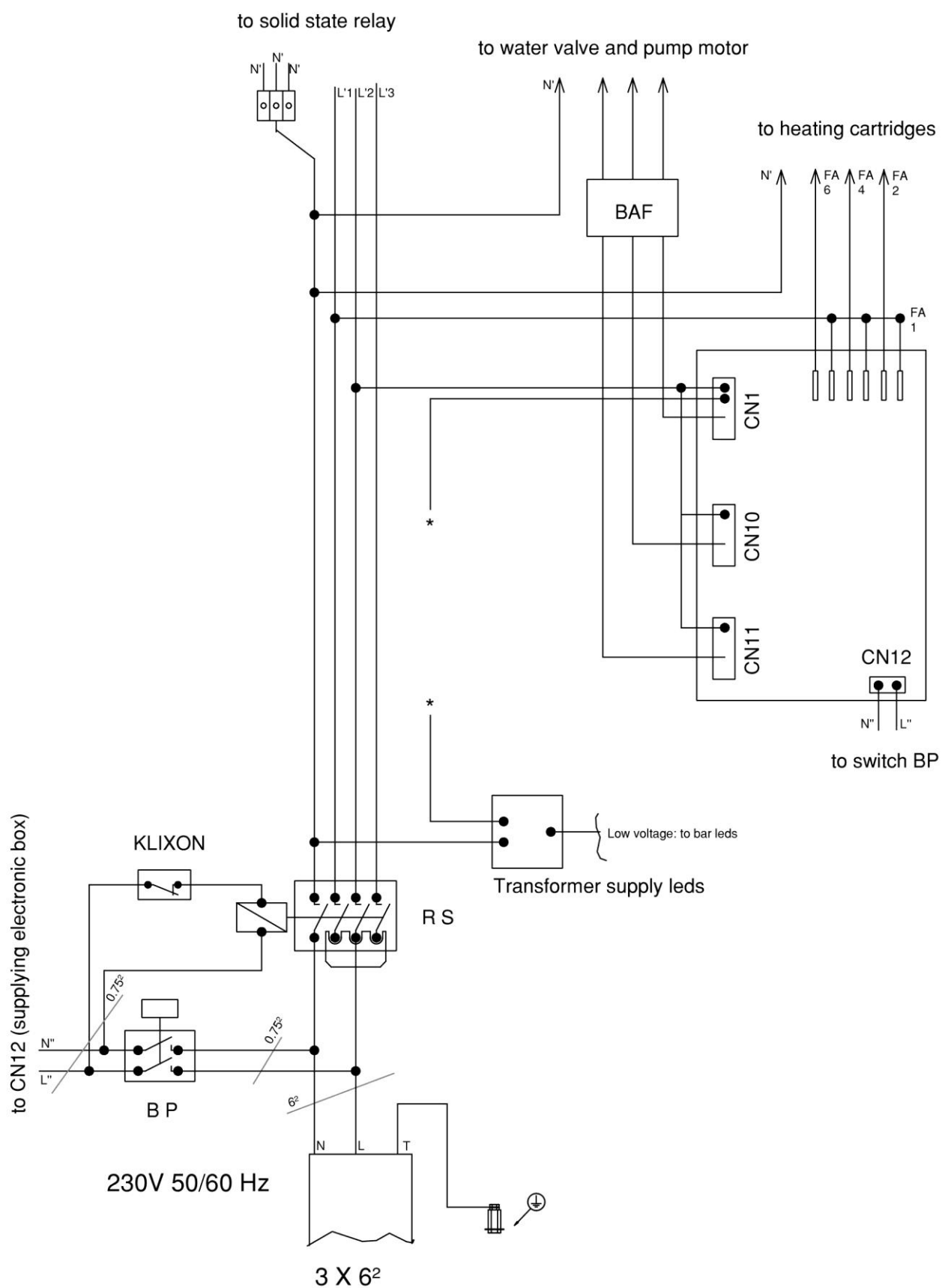
16.3 Electrical power diagram for “400V 3L N PE”

ELECTRICAL CIRCUIT for MontéCarlo
230/400V 50/60Hz 3L N PE



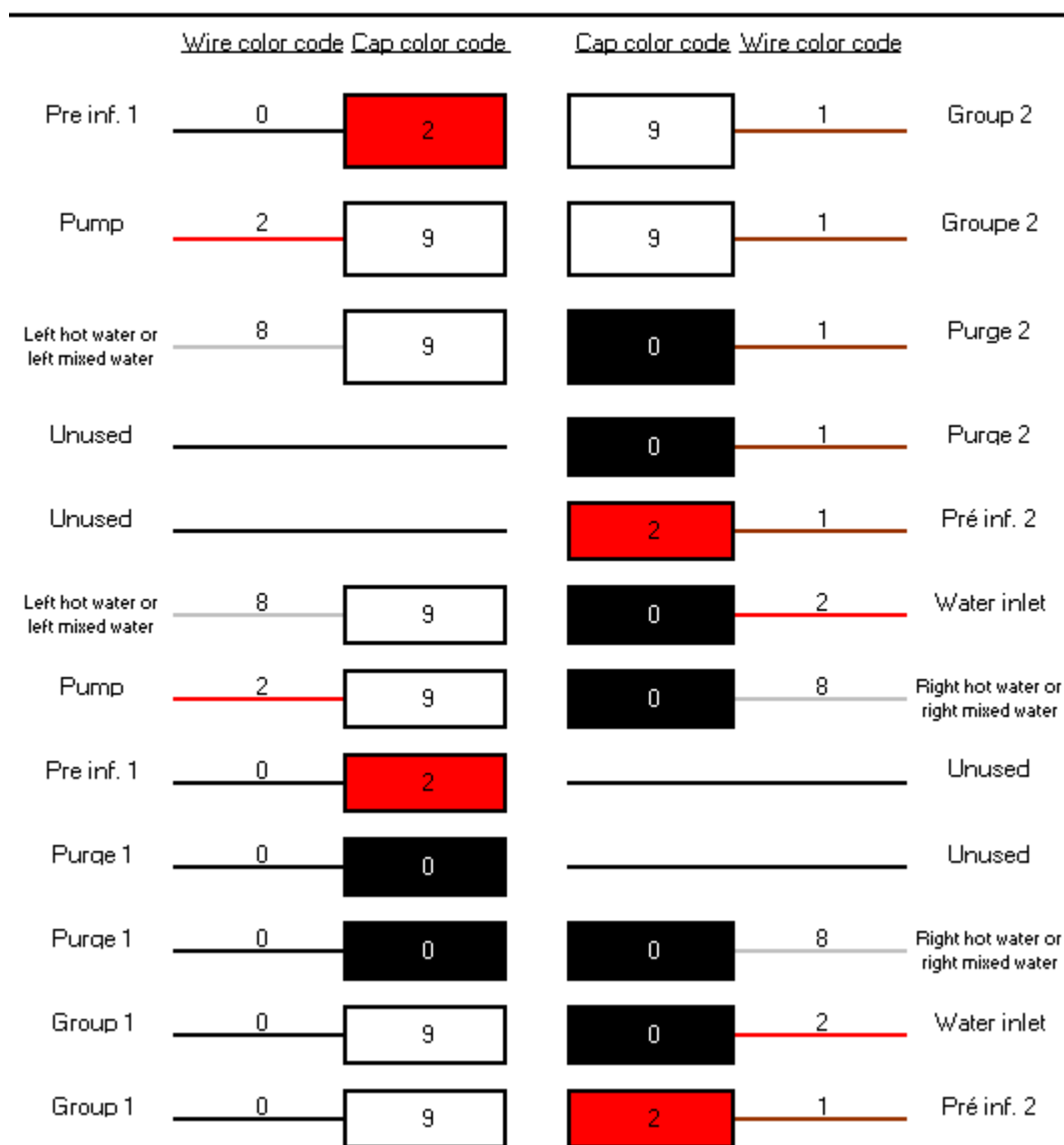
16.4 Electrical power diagram for “230 V 1L N PE”

ELECTRICAL CIRCUIT for MontéCarlo
230V 50/60Hz 1L N PE



16.5 Connecting diagram: 12 fuses box

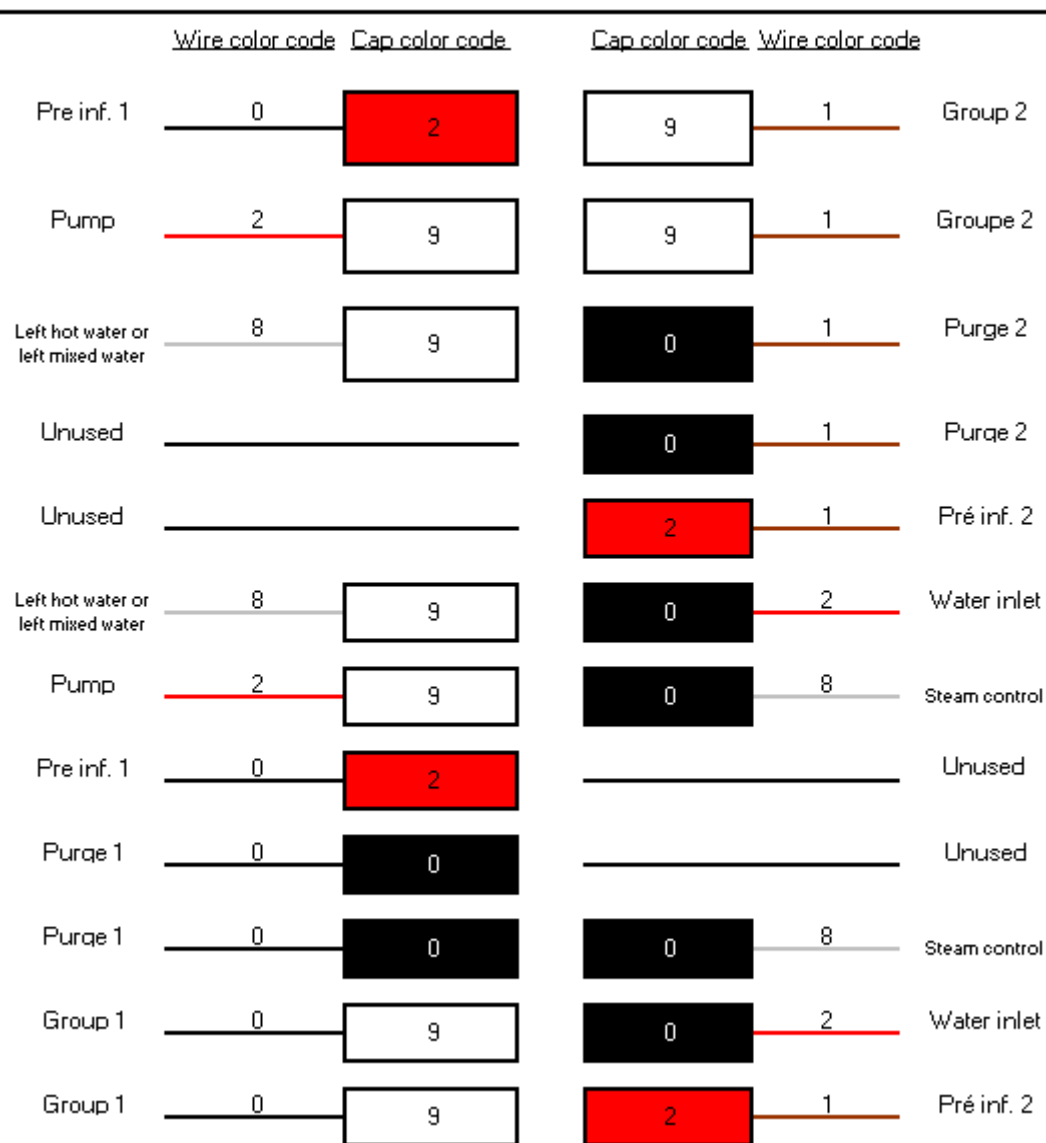
Monte Carlo 2 groups



CODE COULEURS FILS
CABLE COLOUR CODE

1	marron	brown
2	rouge	red
3	orange	orange
4	jaune	yellow
5	vert	green
6	bleu	blue
7	violet	violet
8	gris	grey
9	blanc	white
0	noir	black

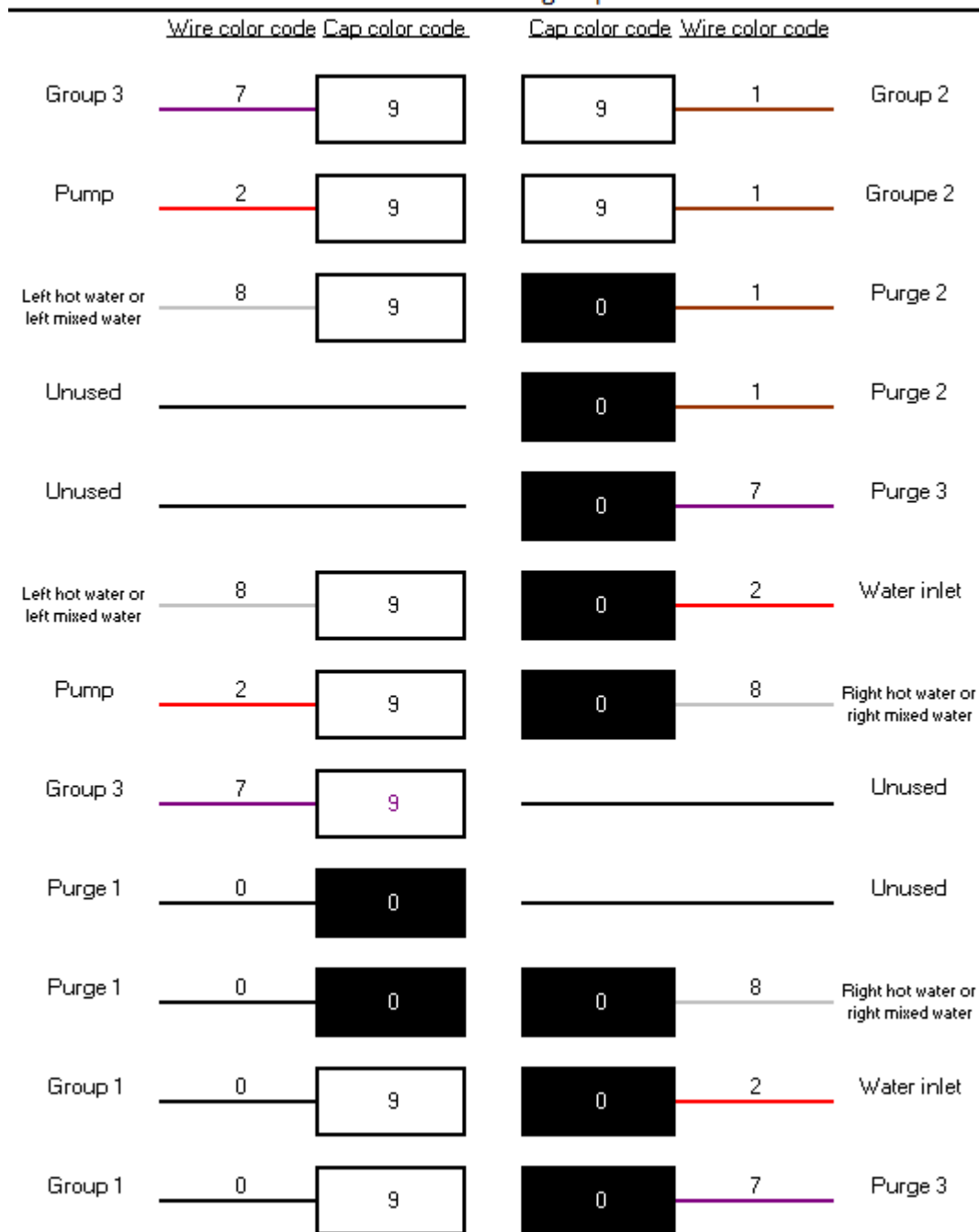
Monte Carlo 2 groups steam control



CODE COULEURS FILS CABLE COLOUR CODE

1	marron	brown
2	rouge	red
3	orange	orange
4	jaune	yellow
5	vert	green
6	bleu	blue
7	violet	violet
8	gris	grey
9	blanc	white
0	noir	black

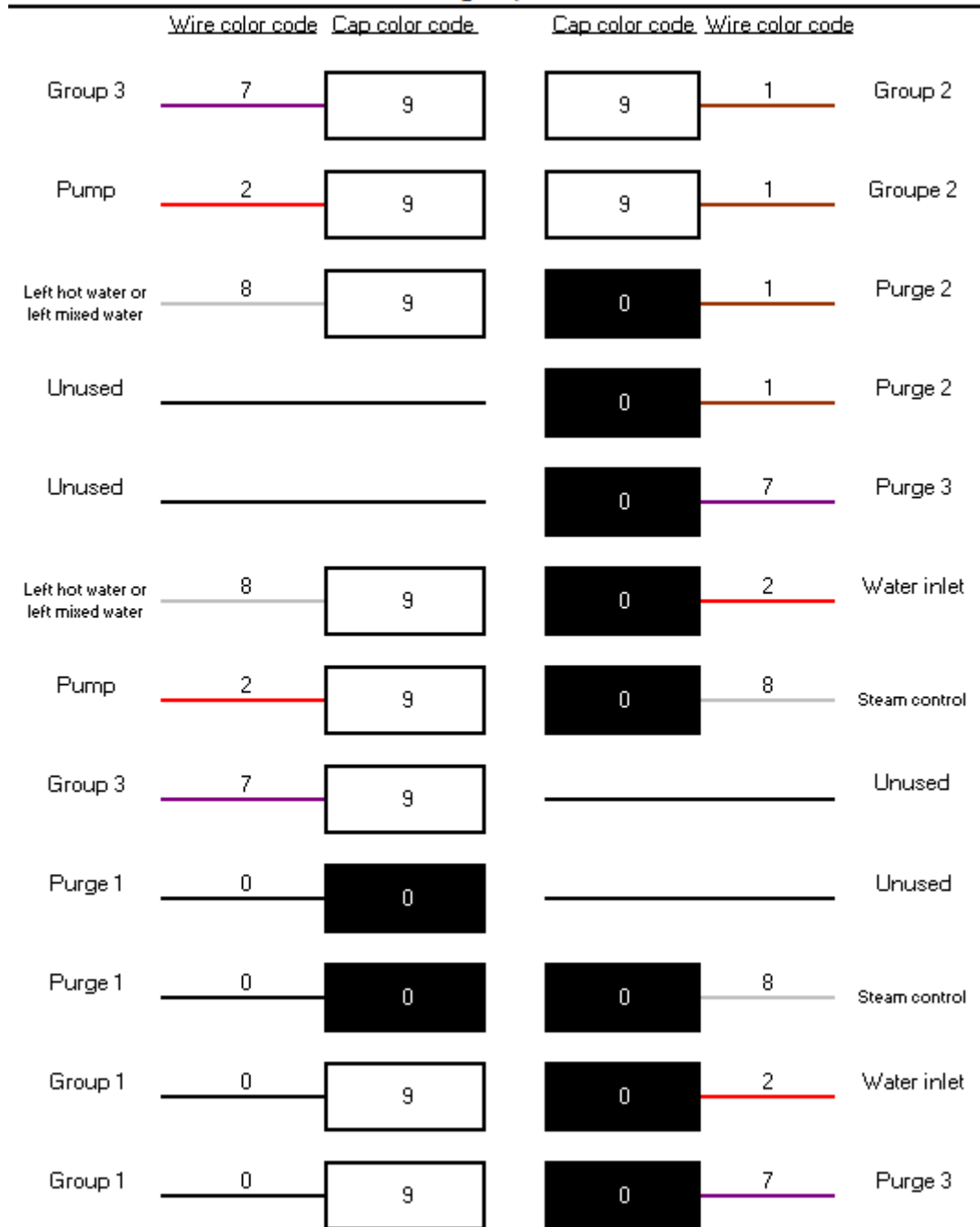
Monte Carlo 3 groups



CODE COULEURS FILS CABLE COLOUR CODE

1	marron	brown
2	rouge	red
3	orange	orange
4	jaune	yellow
5	vert	green
6	bleu	blue
7	violet	violet
8	gris	grey
9	blanc	white
0	noir	black

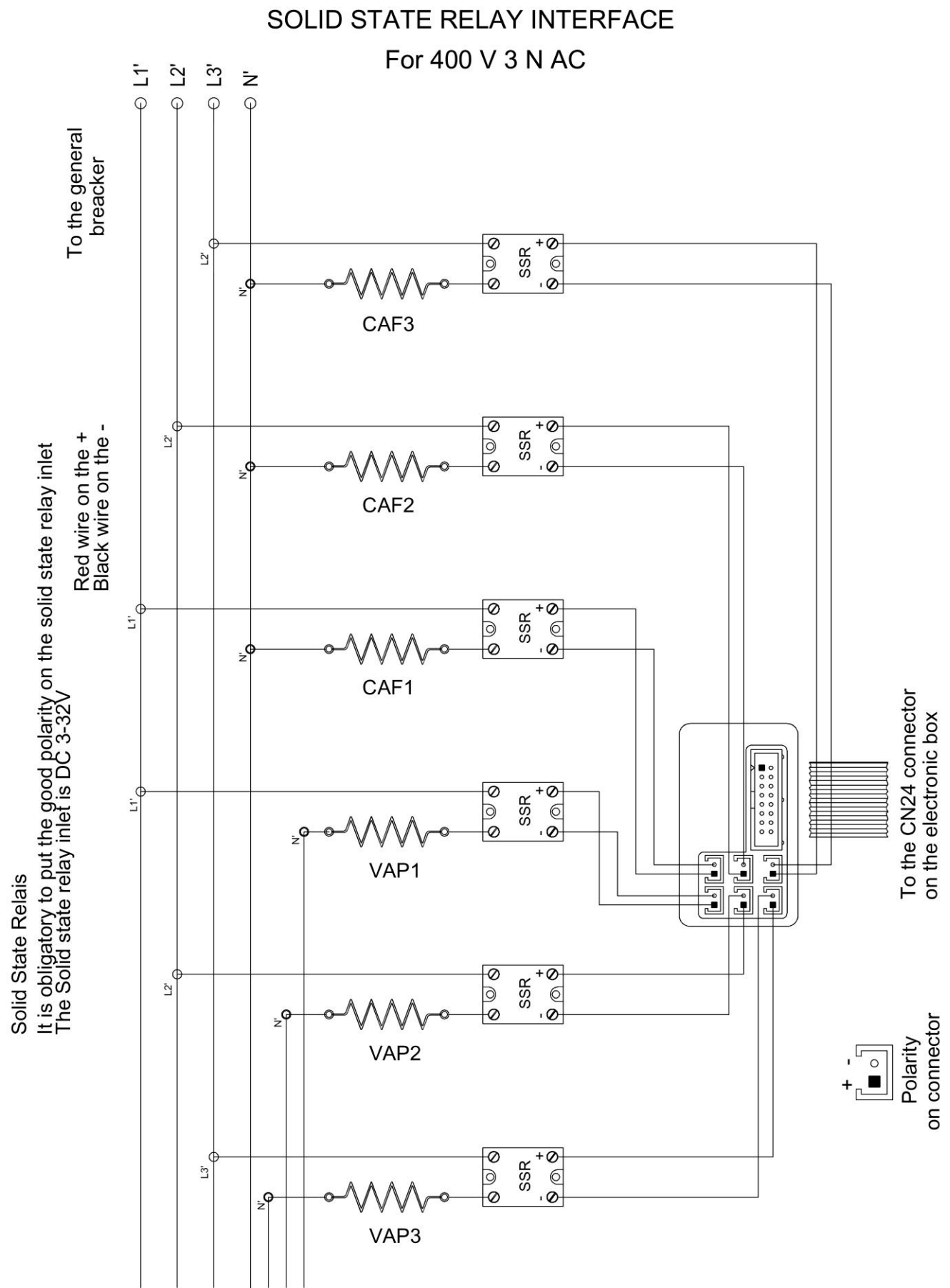
Monte Carlo 3 groups steam control



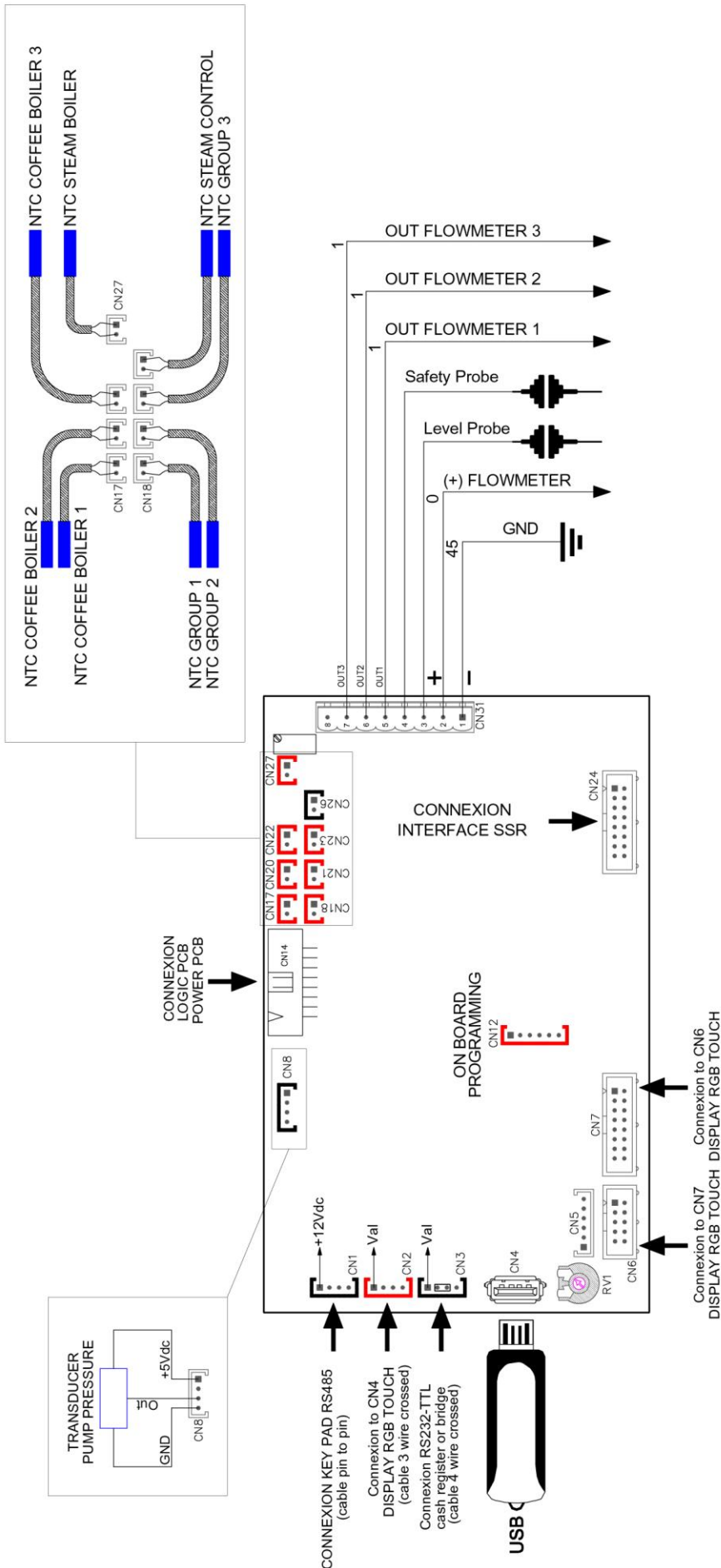
CODE COULEURS FILS CABLE COLOUR CODE

1	marron	brown
2	rouge	red
3	orange	orange
4	jaune	yellow
5	vert	green
6	bleu	blue
7	violet	violet
8	gris	grey
9	blanc	white
0	noir	black

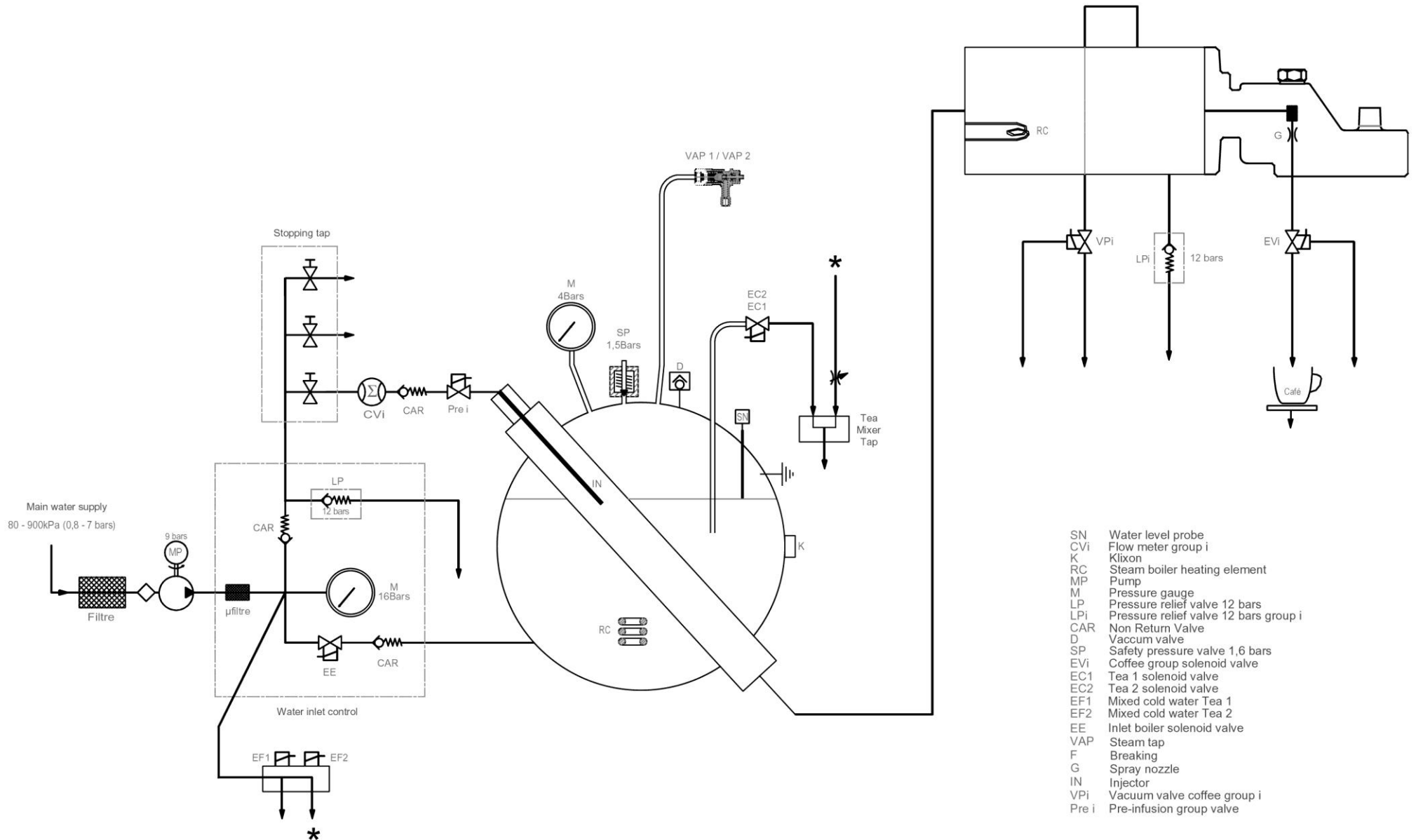
16.6 Solid state relay interface for “400 V 3NAC”

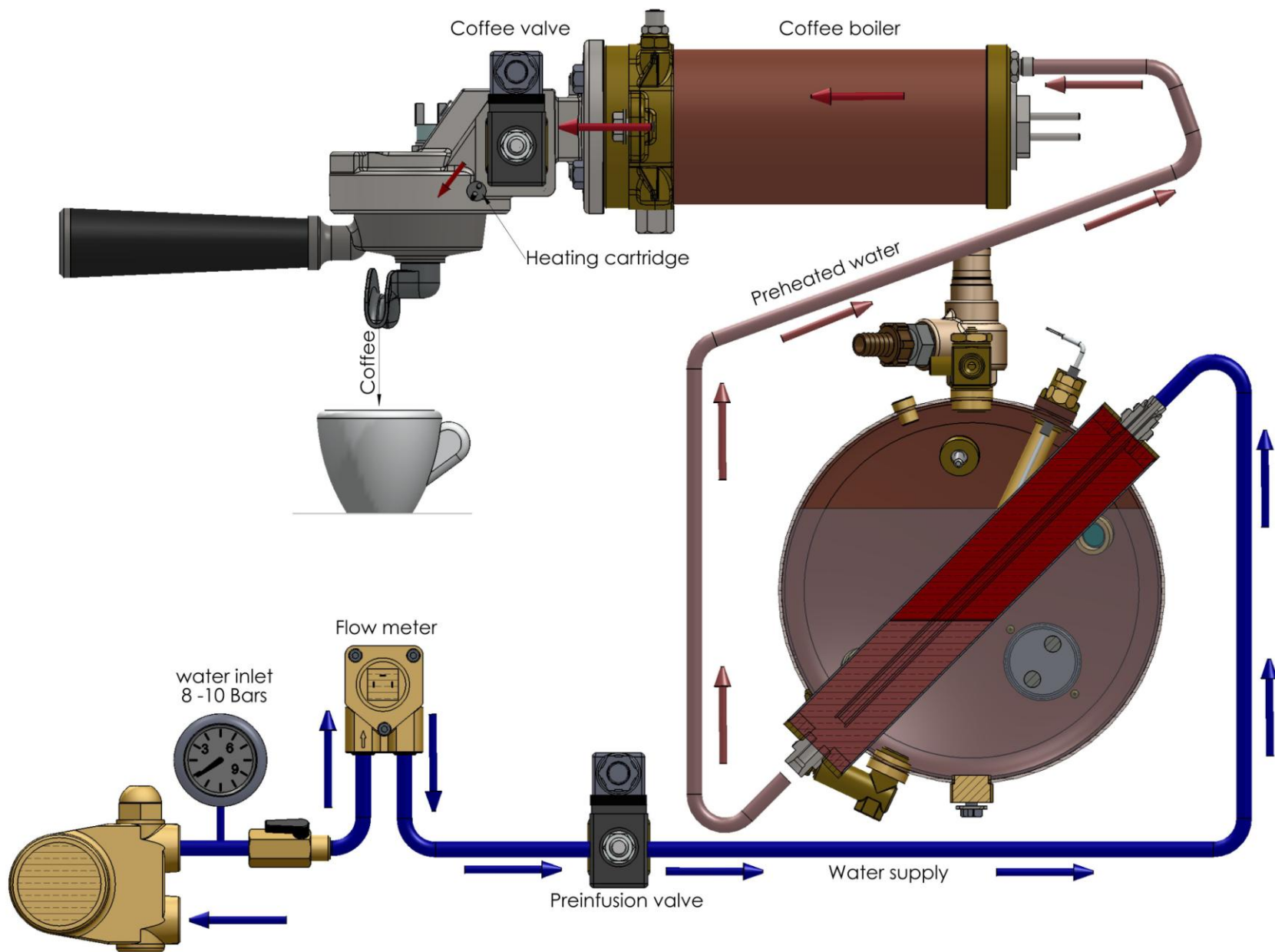


16.7 Low voltage wiring



17 HYDRAULIC SCHEME





18 ALARM

CODE	Description	Faults	Recommandations
A01	Coffee boiler 1 probe alarm	- Coffee boiler 1 t° probe in short-circuit or disconnected.	- Check the probe - Check the probe connection - Check the electronic board
A03	Coffee boiler 2 probe alarm	- Coffee boiler 2 t° probe in short-circuit or disconnected.	- Check the probe - Check the probe connection - Check the electronic board
A05	Coffee boiler 3 probe alarm	- Coffee boiler 3 t° probe in short-circuit or disconnected.	- Check the probe - Check the probe connection - Check the electronic board
A09	Group 1 probe alarm	- Group 1 t° probe in short-circuit or disconnected.	- Check the probe - Check the probe connection - Check the electronic board
A11	Group 2 probe alarm	- Group 2 t° probe in short-circuit or disconnected.	- Check the probe - Check the probe connection - Check the electronic board
A13	Group 3 probe alarm	- Group 3 t° probe in short-circuit or disconnected.	- Check the probe - Check the probe connection - Check the electronic board
A15			
A17	Boiler probe alarm	- Boiler t° probe in short-circuit or disconnected.	- Check the probe - Check the probe connection - Check the electronic board
A19	Steam control probe alarm	- Steam control t° probe in short-circuit or disconnected.	- Check the probe - Check the probe connection - Check the electronic board
A22	Safety probe alarm (low level)	- Low level safety probe didn't detect water for more than 2 seconds => boiler heating stopped	- Check the probe (limestone) - Check the probe connection - Check the electronic board - Check that the boiler fills - Check the water inlet
A23	Boiler time out alarm	- Time allocated to the boiler heating exceeded.	- Check the boiler t° probe - Check the probe connection - Check the electronic board - Check the heaters and the relays - Check the programmed heating time - Check the relay control box
A24	Coffee boiler 1 time out alarm	- Time allocated to the coffee boiler 1 heating exceeded.	- Check the t° probe - Check the probe connection - Check the electronic board - Check the heater and the relay - Check the programmed heating time - Check the relay control box

A25	Coffee boiler 2 time out alarm	- Time allocated to the coffee boiler 2 heating exceeded.	- Check the t° probe - Check the probe connection - Check the electronic board - Check the heater and the relay - Check the programmed heating time - Check the relay control box
A26	Coffee boiler 3 time out alarm	- Time allocated to the coffee boiler 3 heating exceeded.	- Check the t° probe - Check the probe connection - Check the electronic board - Check the heater and the relay - Check the programmed heating time - Check the relay control box
A27	Flow meter 1 time out alarm	- No flowmeter 1 pulse after 5 seconds	- Check the flowmeter (flashings) - Check the flowmeter connection - Check the electronic board - Check for clogged coffee group
A28	Flow meter 2 time out alarm	- No flowmeter 2 pulse after 5 seconds	- Check the flowmeter (flashings) - Check the flowmeter connection - Check the electronic board - Check for clogged coffee group
A29	Flow meter 3 time out alarm	- No flowmeter 3 pulse after 5 seconds	- Check the flowmeter (flashings) - Check the flowmeter connection - Check the electronic board - Check for clogged coffee group

19 POWER MANAGEMENT

The Monte Carlo machines are three phase machines

When the machine is connected to a three phase network, the absorbed power consumption does not need to be flanged.
In this case the Power Management is at its maximum position: 6.

The machine can be connected to a single phase 230V.

In this case:

- 1: Change the power cable with a cable 3x6 ² (Conti reference: 103600)
- 2: Depending on the available amperage on the grid (16A / 20A / 32A):
It is necessary to adjust the power consumption of the machine.
Through the Power management (see table below)
- 3: Here's how to connect the 3x6 ² cable on the general relay machine



Nota Bene:

It is possible to retain the original cable (5x2,5 ²), but in this case:

It is imperative to curb the power management 1 (or 2 maximum if the machine is not used too much)

Power parameters and Current consumption (for 230 volts monophasé)

	Power 1		Power 2		Power 3		Power 4		Power 5		Power 6	
	Max power (W)	Max current (A)	Max power (W)	Max current (A)	Max power (W)	Max current (A)	Max power (W)	Max current (A)	Max power (W)	Max current (A)	Max power (W)	Max current (A)
MC 2G	1900	8	3300	14	4700	20	5700	25	6700	29	6700	29
MC 3G	2600	11	4600	20	6600	29	7600	33	8600	37	9600	42
MC 2G K	3000	13	5500	24	7500	33	9500	41	11500	50	11500	50
MC 3G K	3100	13	5600	24	8100	35	10100	44	12100	53	14100	61

Power 1/2/3/4/5/6:

That's the number of heating element can be supplied at the same time in the machine

The priority is always given to the coffee Boiler



web

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