ESTD 1956

Conti

MONACO

MC

TECHNICAL DOCUMENTATION

Edition 05/2021

1 TECHNICAL DOCUMENTS

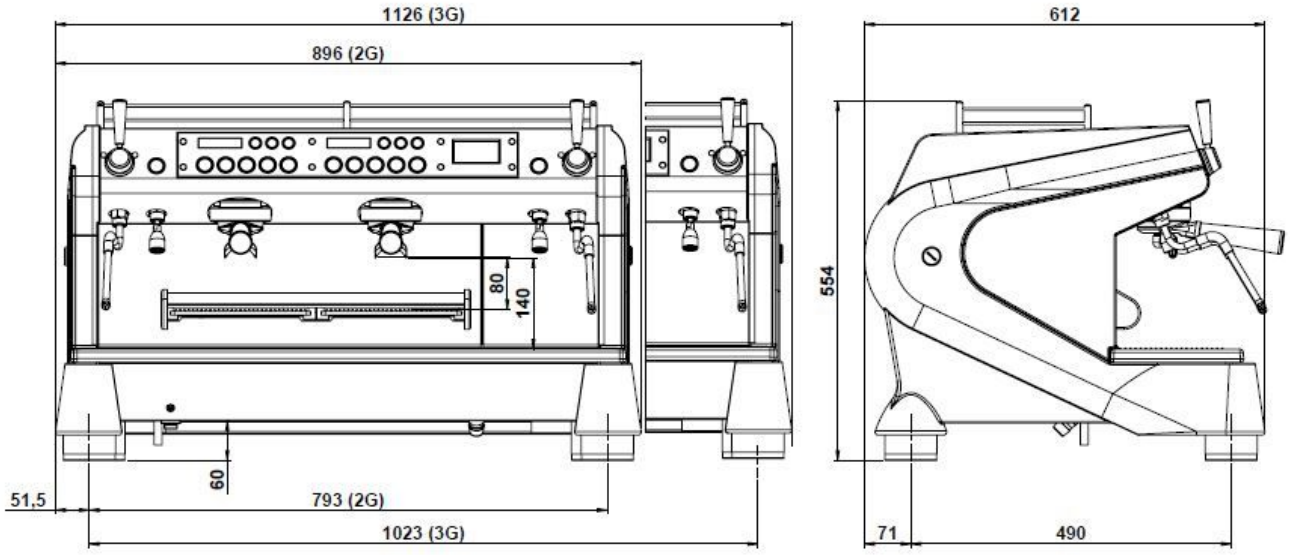
	Steam boiler		Coffee boiler			Group		Outlet	Total power
	Capacity (liter)	Power (W)	Capacity (liter)	Number	Power (W)	Number	Power (W)	Power (W)	(W)
MC 2G	10	4200	0,9	2	1000	2	100	300	6700
MC 3G	14	6000	0,9	3	1000	3	100	300	9600
MC 2G K	10	6000	0,9	2	2500	2	100	300	11500
MC 3G K	14	6000	0,9	3	2500	3	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 EMPTY (Kg)	Weight in operation (Kg)
2G	89	99
3G	103	117

2 DIMENSIONS

Cup warmer capacity: (88 espressos cups) or (56 espressos cups + 18 cappuccino 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 machines 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 must 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.

b) We guarantee our machines subject to a correctly sized water treatment is installed backward and adjusted according to the carbonate hardness of the water network.

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** (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 0,15 MPa to 0,6 MPa
- Water connection pin 3/8"
- The water supply pipes must resist to 145 Psi / 1 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 drainpipe 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°TH ou >4 °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 ° French (° TH) or the ° German (° 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 ° Carbonate (°KH)

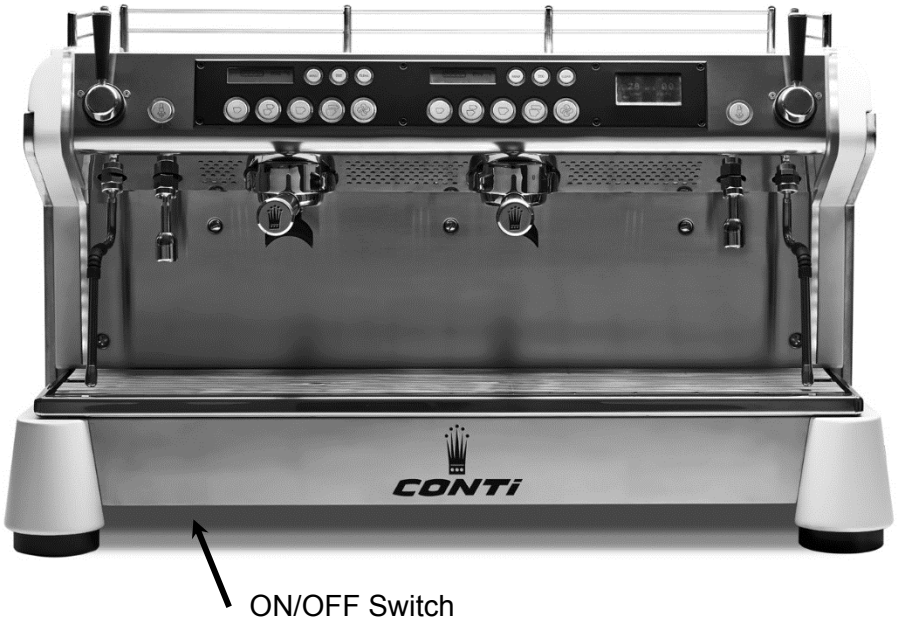
There are 2 types of water treatments:

- Saltwater softeners
  - They treat the total water hardness (°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 > à 10°TH or > 5 °GH
- Resins filters:
  - They treat the Carbonat hardness water (°KH)
  - By fixing carbonate ions on the resins.
  - Often fitted with microfiltration and carbon filtration.
  - To use when the Carbonat Hardness is > à 6°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

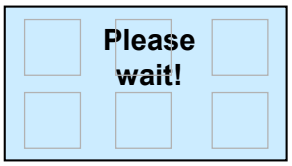
B. Switch on the machine using the ON/OFF switch under the drip tray.



C. During 1 second

The general display shows the software version “Monte Carlo 2.18”.

D. According the situation the display shows:



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

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:

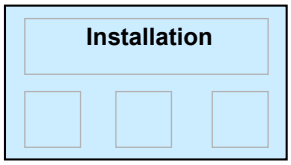
Press 

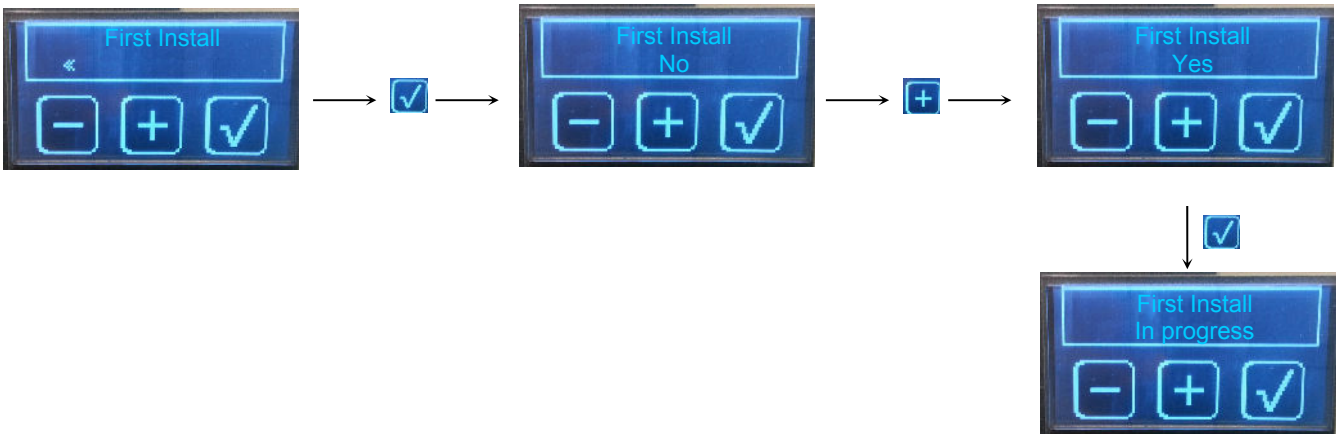
4° step:

The display shows :

Press 3 times: 

F. The display shows:

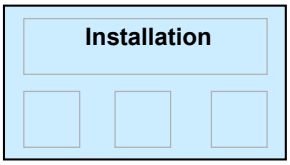




Let the machine doing the 1° installation.
During this time, the air inside coffee groups are automatically vacuum by an opening cycle of vacuum valves, pump and groups valves.

G. The process is finished when the display shows:

Press 



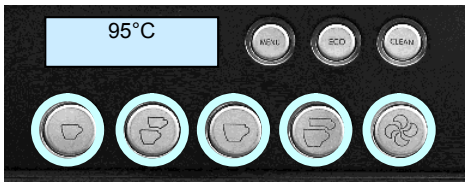
Press 

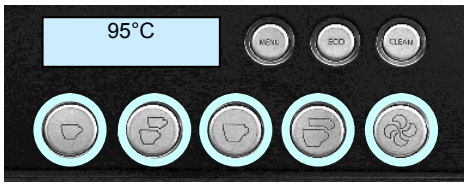
H. The display shows :

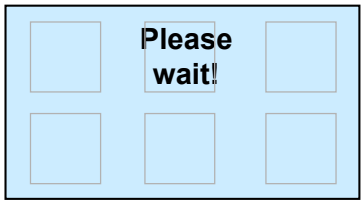
6 STARTING & WARM UP

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

B. The keyboards are lighting, and shows the coffee boilers temperature settings



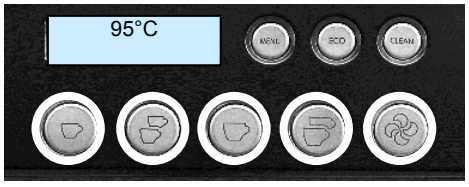


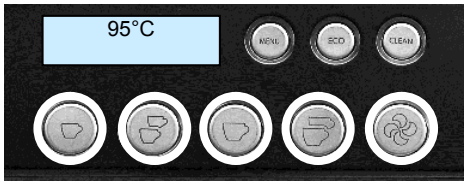


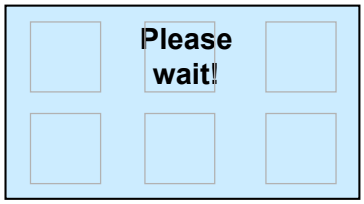
Coffee buttons are blinking.

General display blinking

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



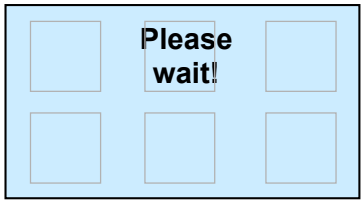




The leds stay On

General display blinking

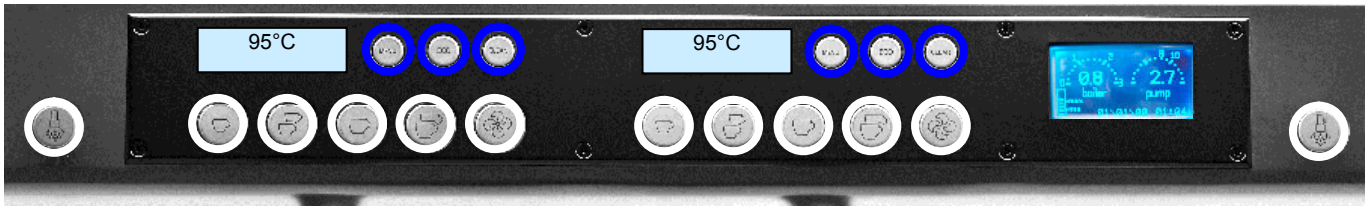
D. When the steam boiler temperature reaches 105°C: hot water button lights up.



The leds stay On

General display blinking

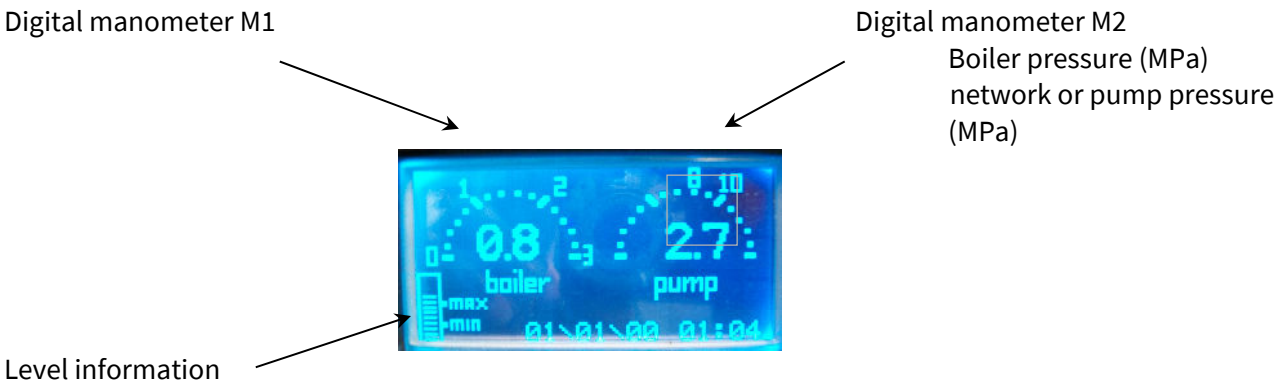
E. When the steam boiler temperature setting is reached (ex.125°C).
The machine is ready. All the lights stay On.



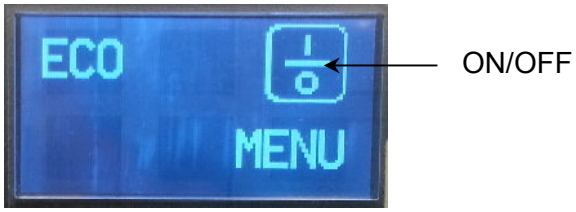
General display shows manometers

F. Main display

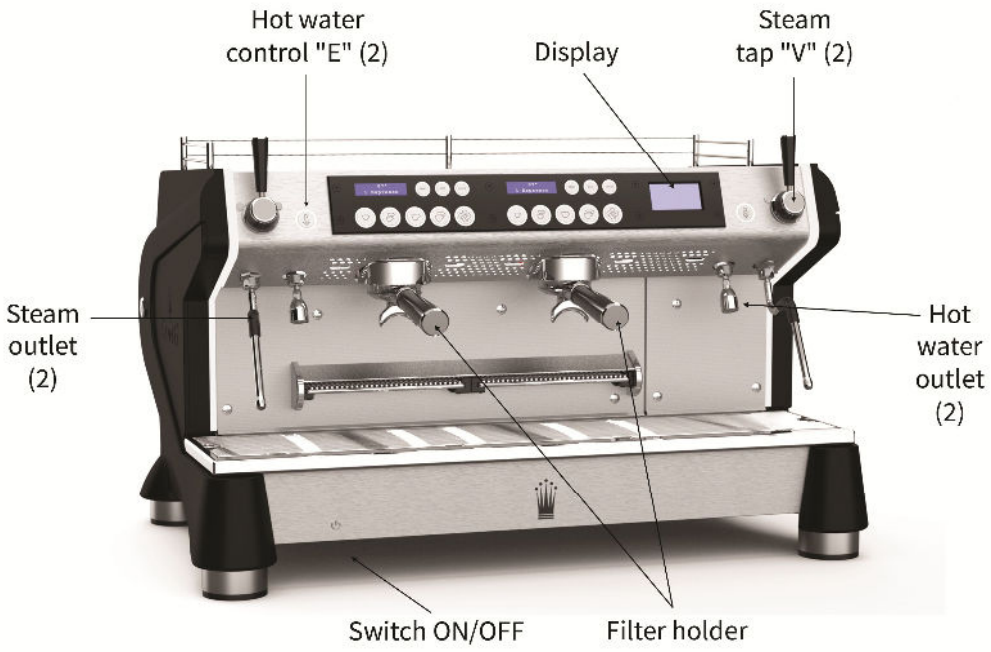
- When the machine is ready, the general display shows:



- 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 steams tap 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 tape is controlled with 2 buttons for 2 different times

- **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 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 0,08 MPa (12 PSI) and 0,1 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 0,08 MPa to 0,14 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 0,9 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.

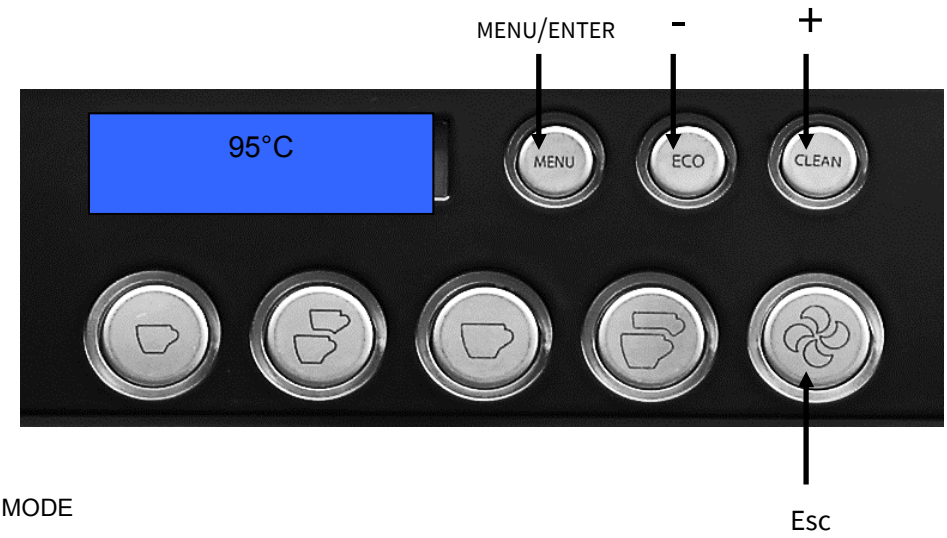
- The flow can be stopped by repressing:
  - The same button or
  - The STOP button (which is also the programming and continuous flow button).

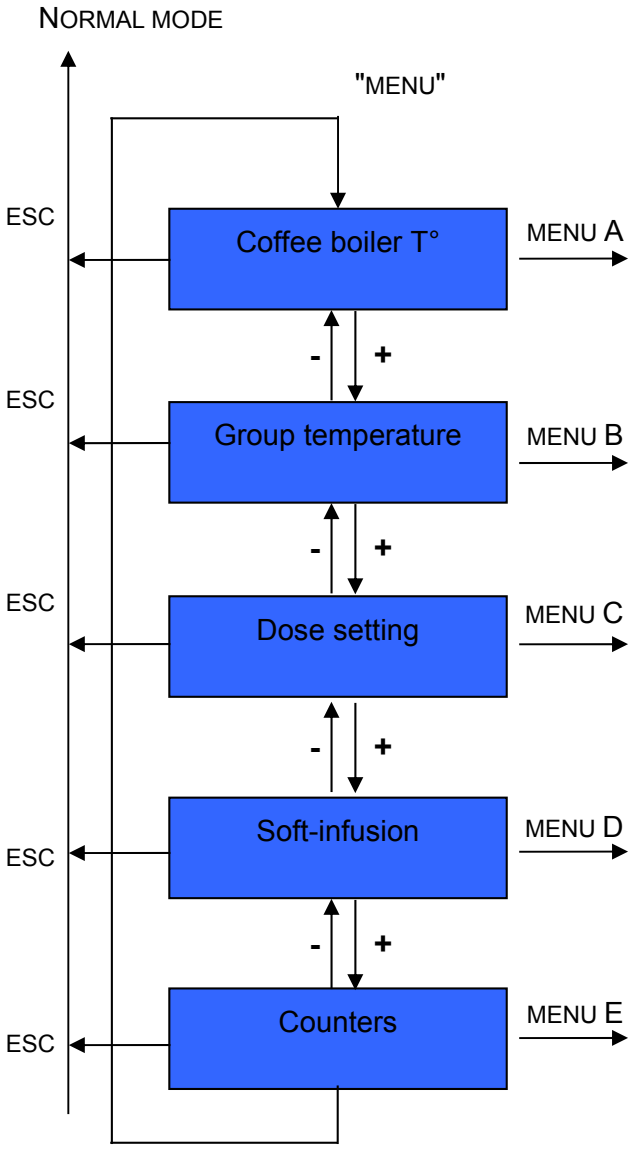
8 COFFEE GROUPS

8.1 Mode menu

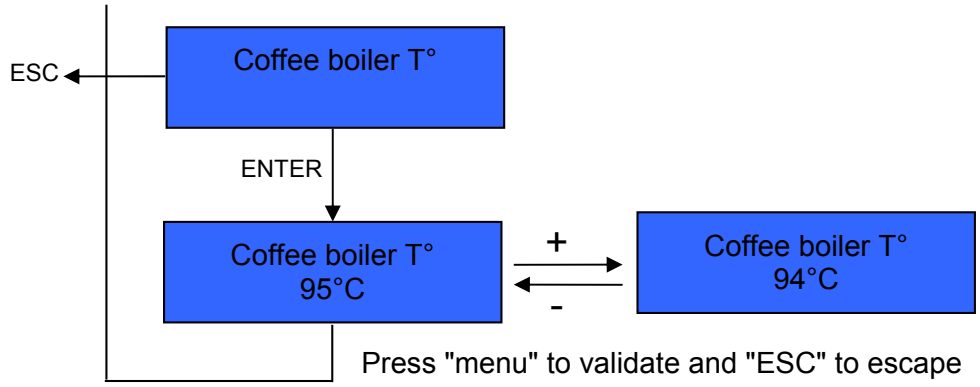
Press the "Menu/Enter" button to enter in the programming mode.

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

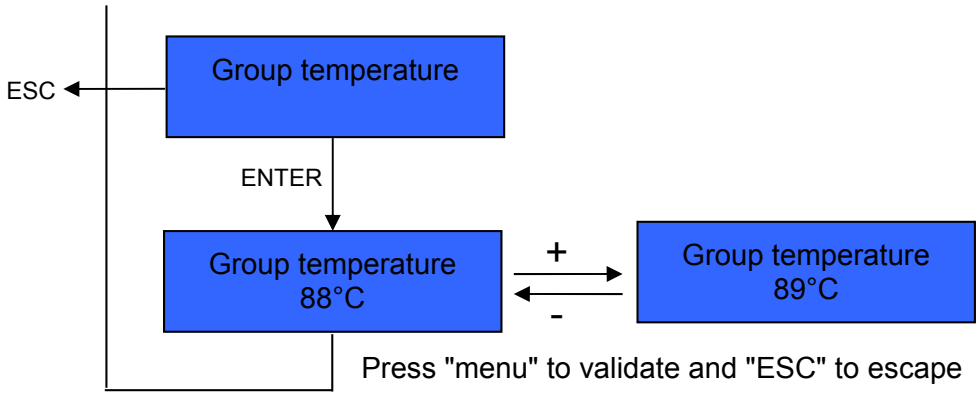




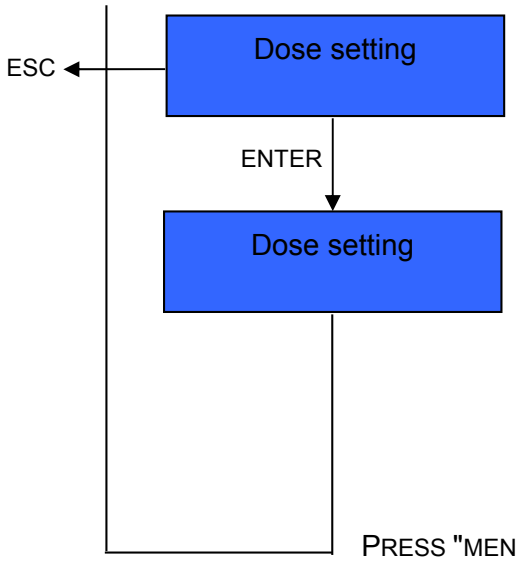
A) COFFEE BOILER TEMPERATURE



B) GROUP TEMPERATURE



C) DOSE SETTING

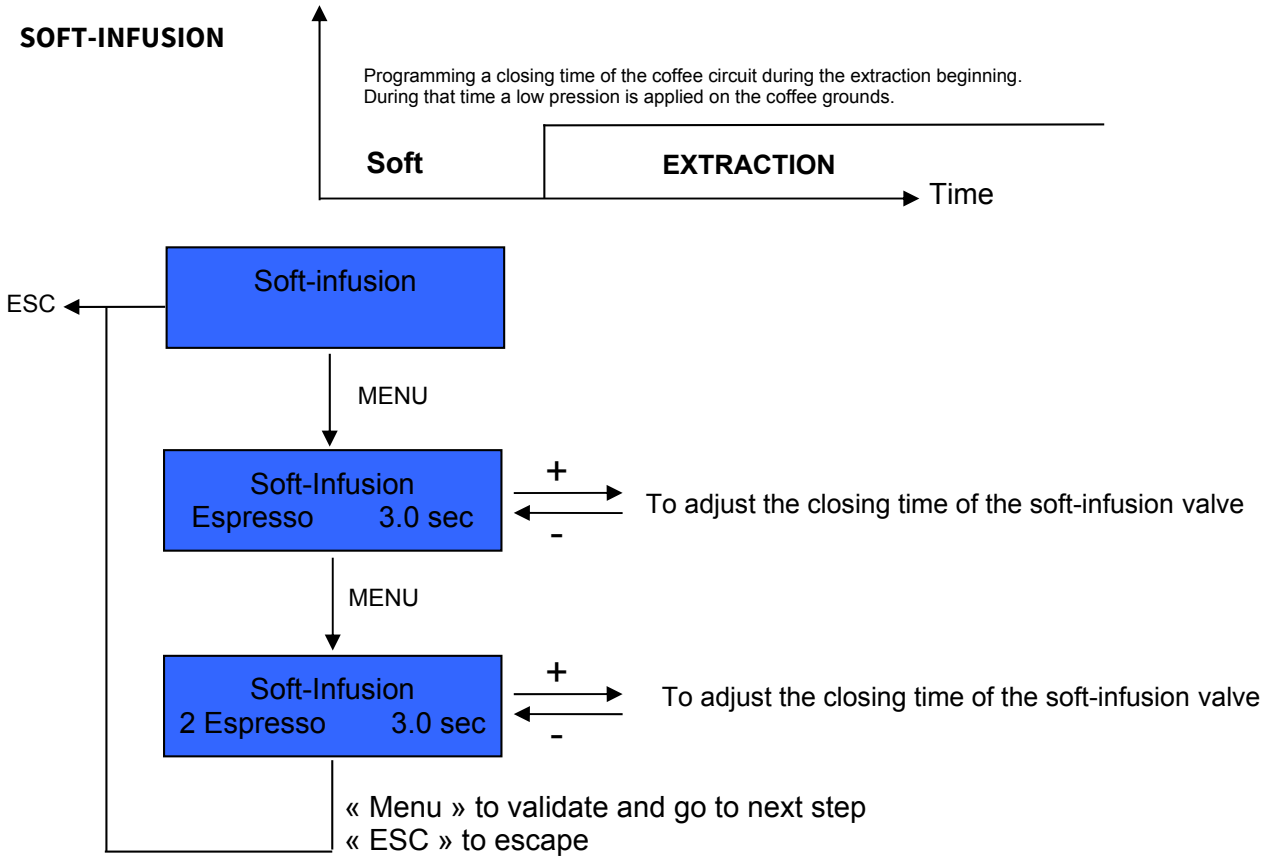


All the leds are OFF

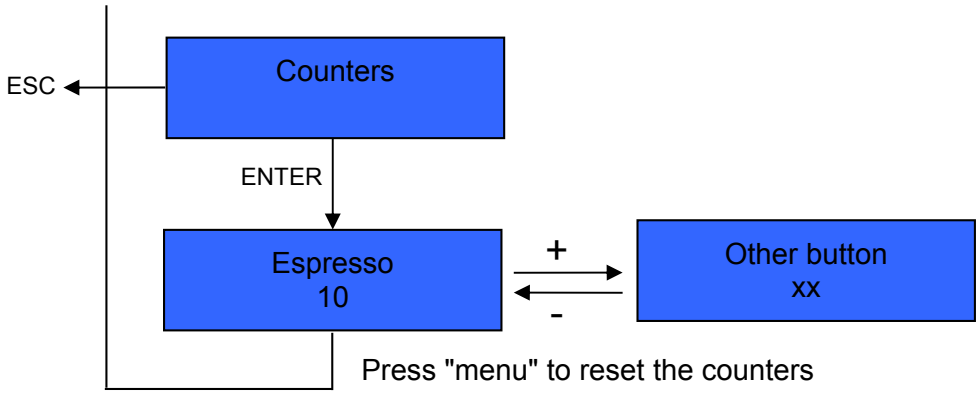
It is enough to program the left group so that both groups are configured in the same way.

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

D) SOFT-INFUSION



E) COUNTERS



8.2 Group eco mode

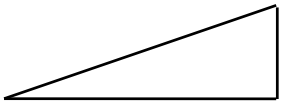
If you press on the "ECO" button of one group, you enter in the "ECO" mode: the coffee boiler switches off. The group is disabled but the group head is maintained at temperature. The other groups remain functioning. Press again on the "ECO" button to enable the group.

8.3 Clean button

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

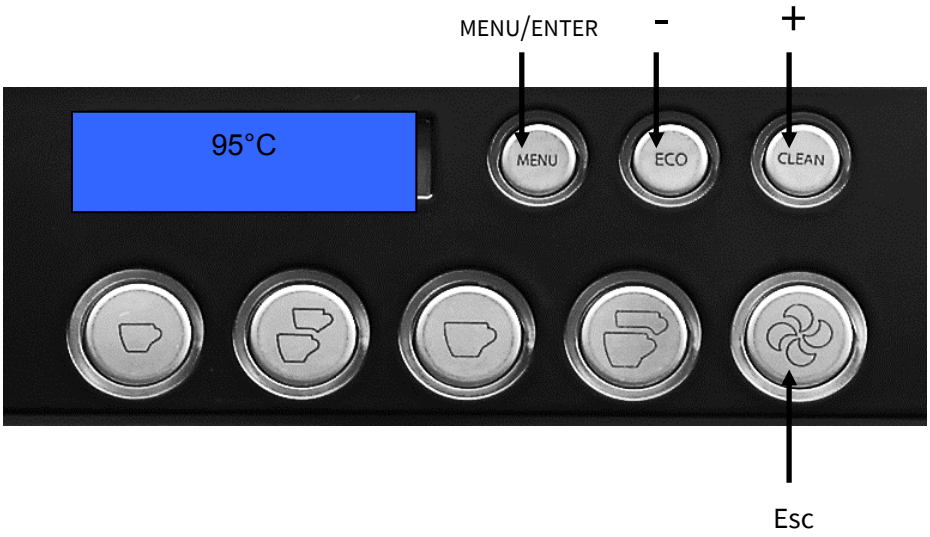
- Prepare the blind filter holder and cleaning tablet
- Put it on the group head
- Press the "CLEAN" button
- The machine starts the cleaning cycle without any special indication.

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 other 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:

Doses setting	
XX s	YY ml

☞ 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 other 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

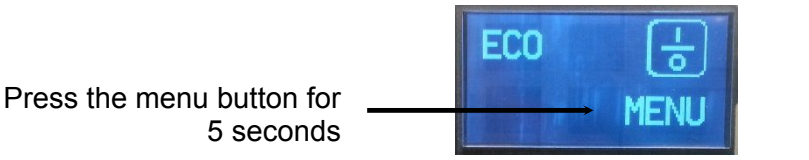
- Push **hot water key** to start the flow and push again when the water volume is correct.
- The timing key is registered.

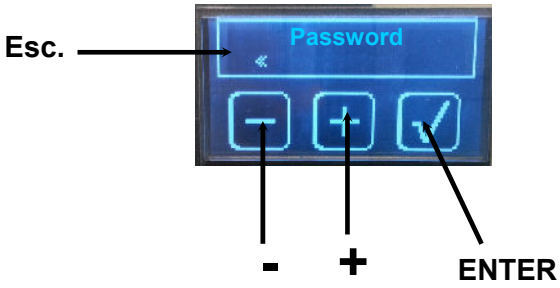
10 GENERAL DISPLAY

10.1 ECO MODE (general)

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 for 3 seconds.

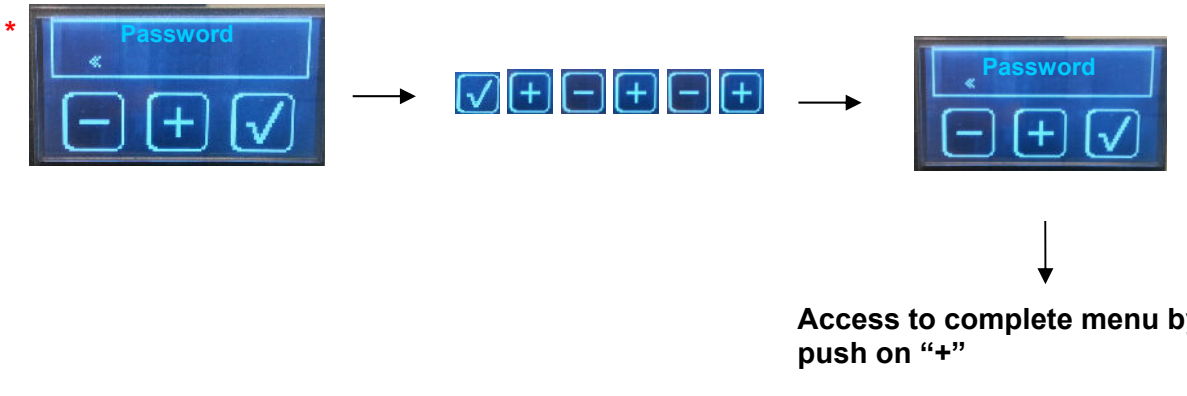
10.2 Programming on general display



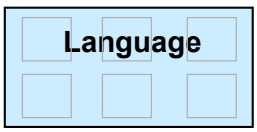


Push ⊞ to navigate in the first level

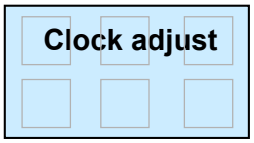
If a password is not entered, the steps available are only those marked with: (*)
To access to the complete menu, go to the last step "Password" and enter the good password



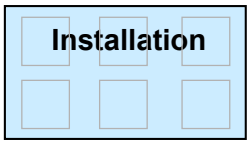
10.3 First level menu



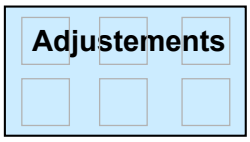
To choose language



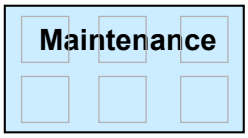
To adjust the clock and the auto on/off



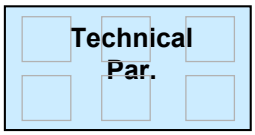
About the machine technical installation



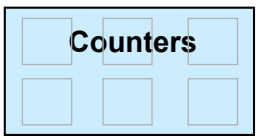
To adjust the extraction settings



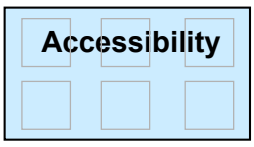
Help for the maintenance



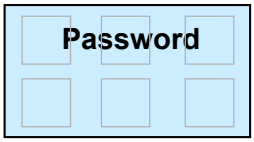
Access to technical parameters



Beverages counters menu

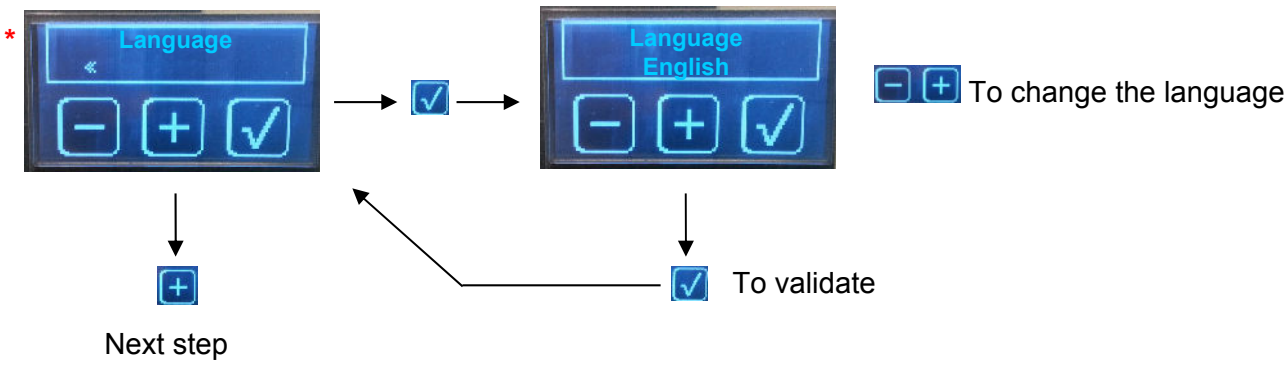


Adjust the menu access



Password to access to the main menu

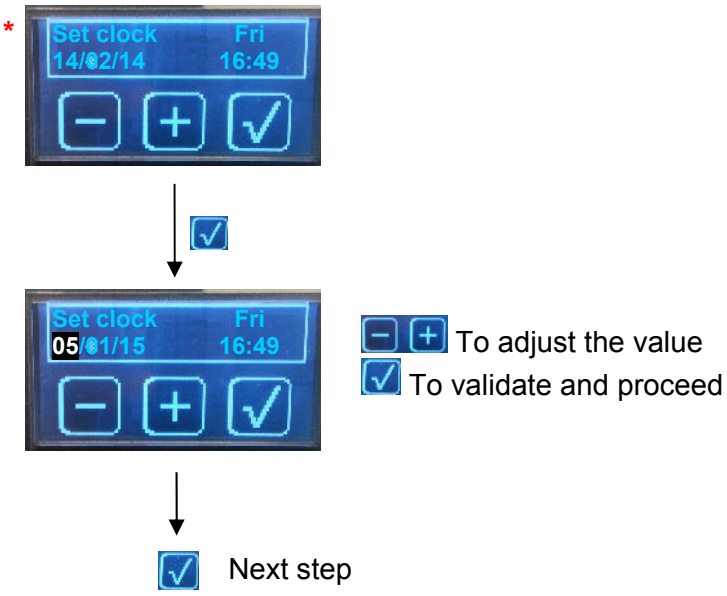
10.4 Language



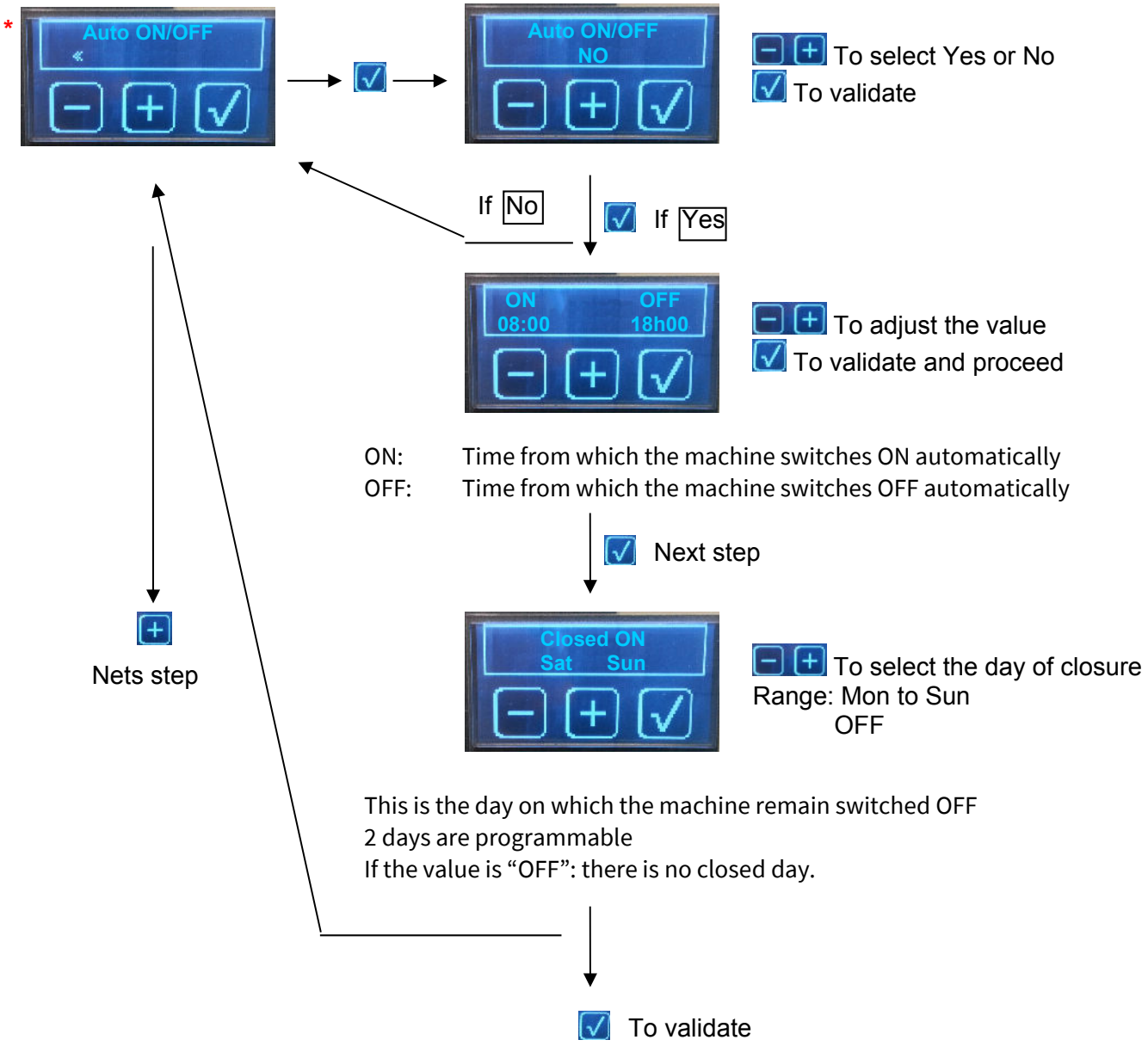
Available languages: French / English / Italian / Spanish / German / Portuguese

10.5 Clock adjustement

10.5.1 Date/time

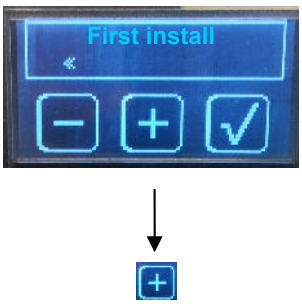


10.5.2 Auto on/off



10.6 Installation

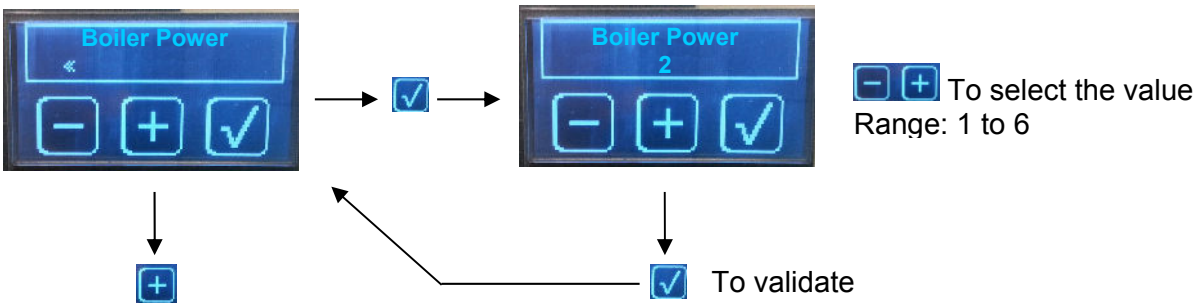
10.6.1 First install



See chapter: First installation

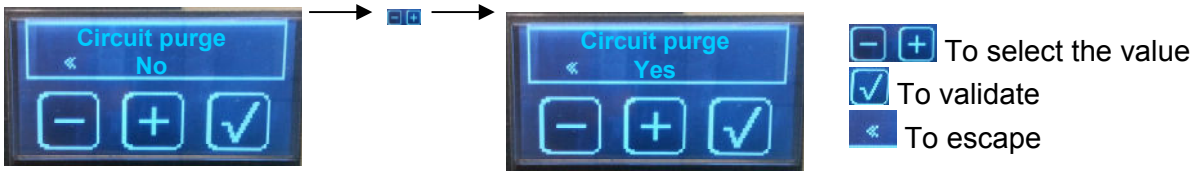
Next step

10.6.2 Power boiler



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

10.6.3 Circuit purge



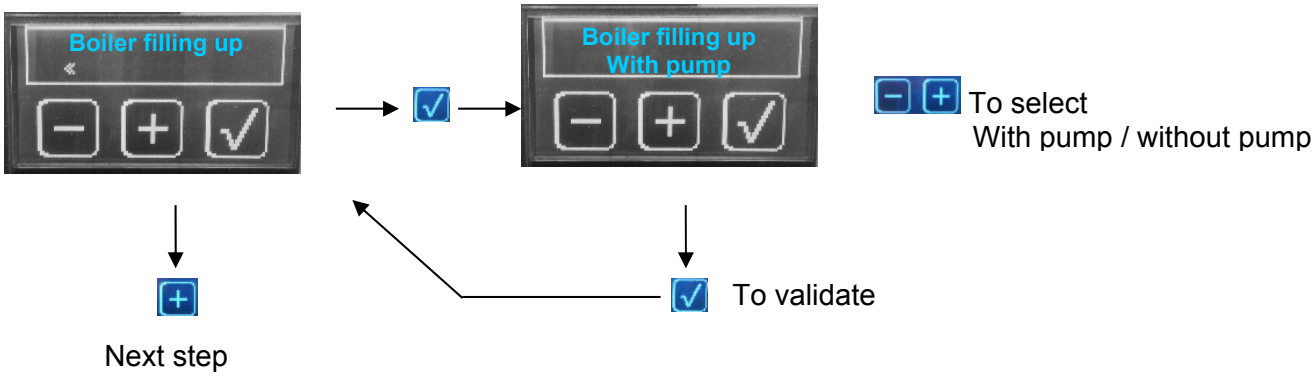
10.6.4 Pressure calibration

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

Adjusting method:

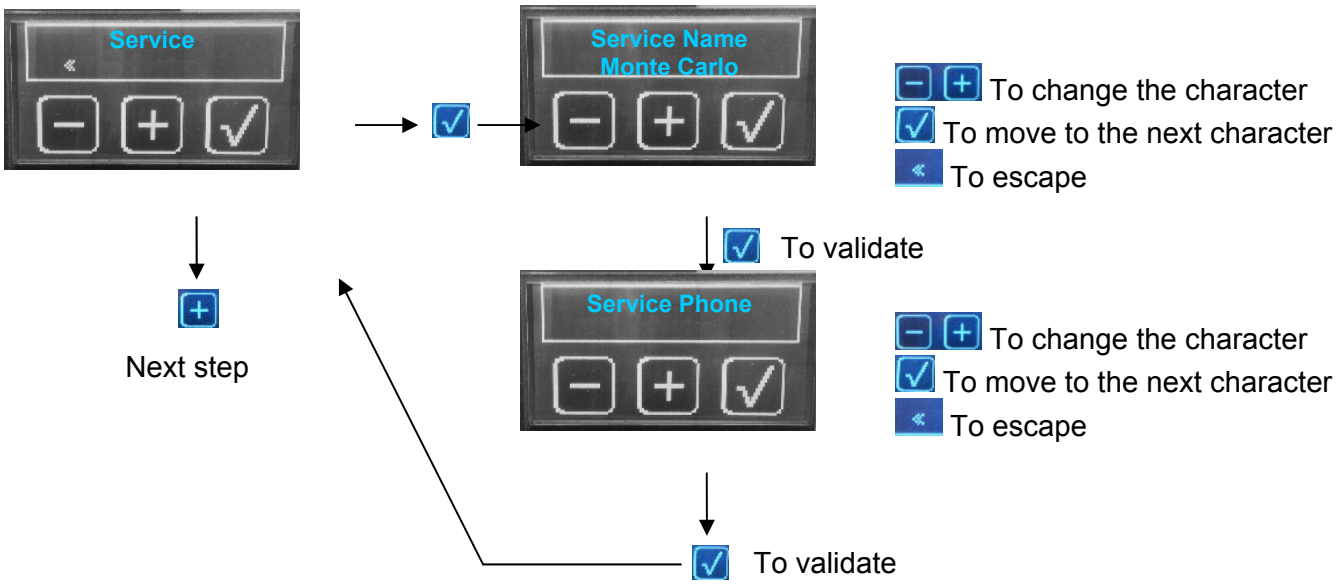
- Press ☑. The pump goes ON
- The users read the value shown by the mechanical manometer (ex:9,5bars)
- The display shows: V.TH = Theorical value (should be on the display)
  V.Cor = Corrected value (the one shown on the display)
- The users adjust "V.Cor"with ⊖ and ⊕ to display the same value as the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

10.6.5 Filling up with pump

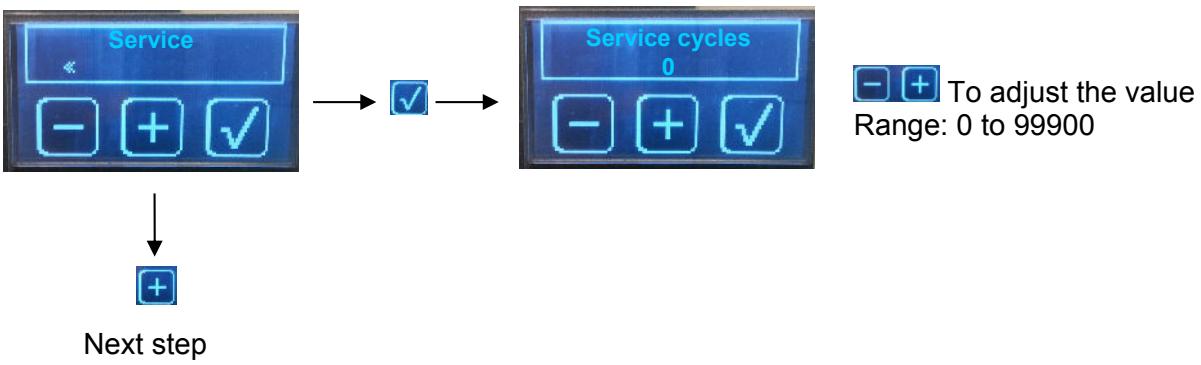


This step allows the machine to fill the tanker with or without the pump.
In case of "kit solo" system the machine needs to be adjusted with a filling up with pump.

10.6.6 Contact details

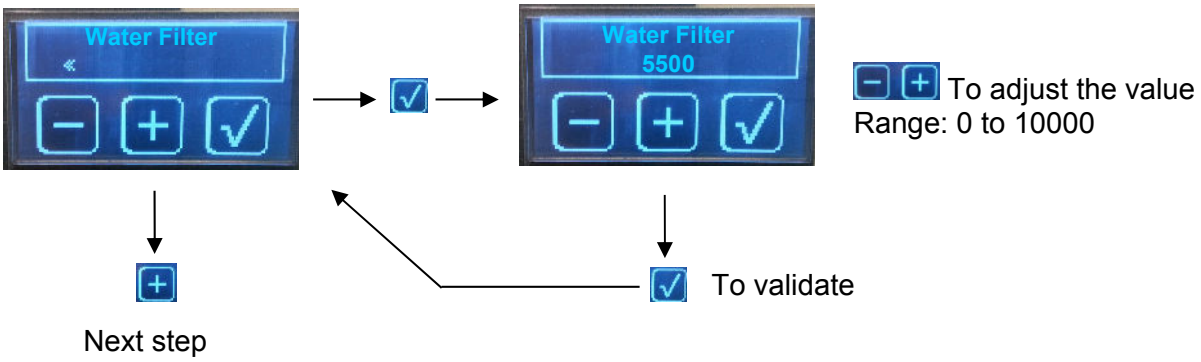


10.6.7 Service



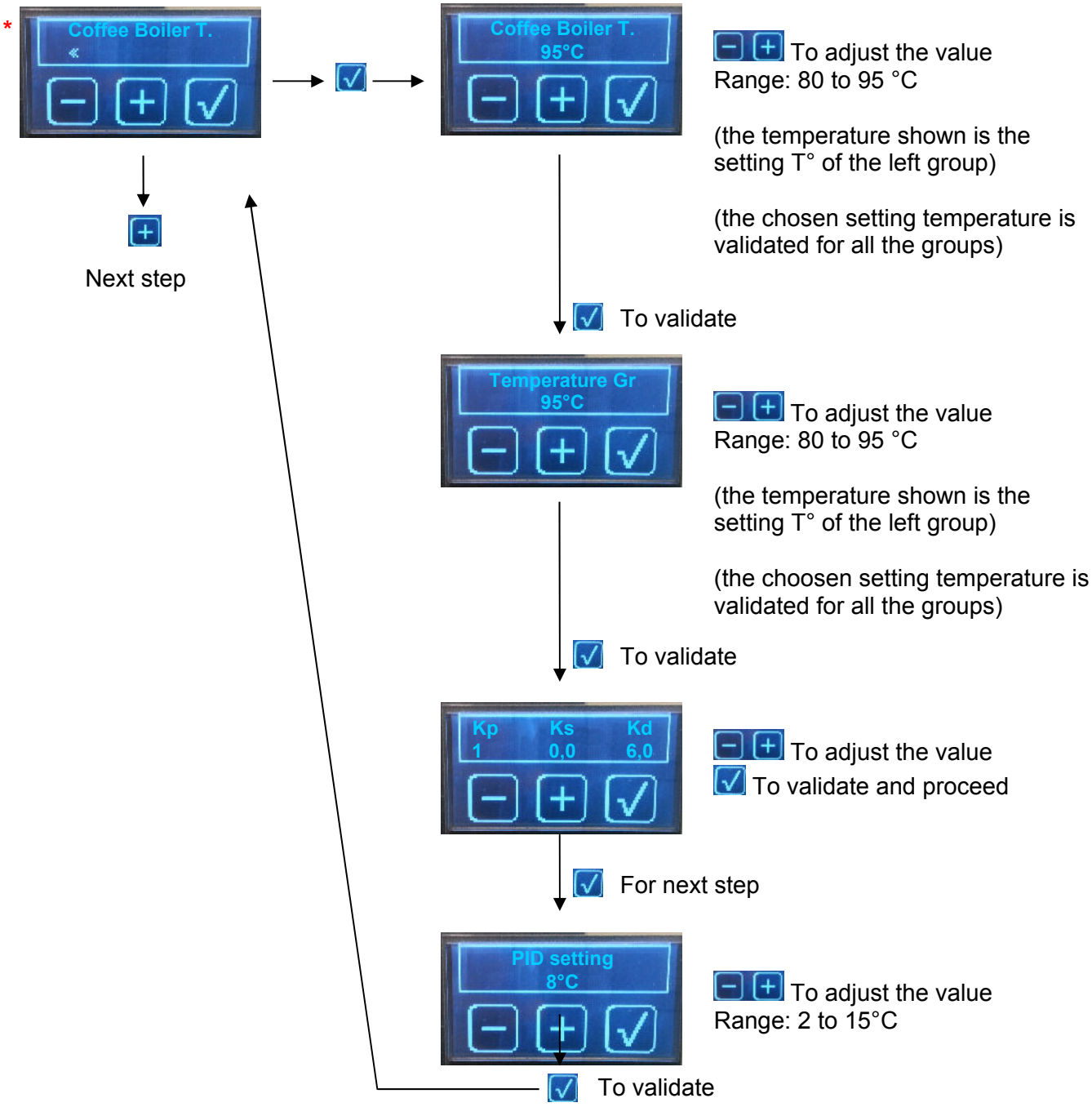
This menu allows the machine to display a message for a service after a programmed number of cycle (example 20000 cycles)
If value = 0 ➔ not used

10.6.8 Water Filter

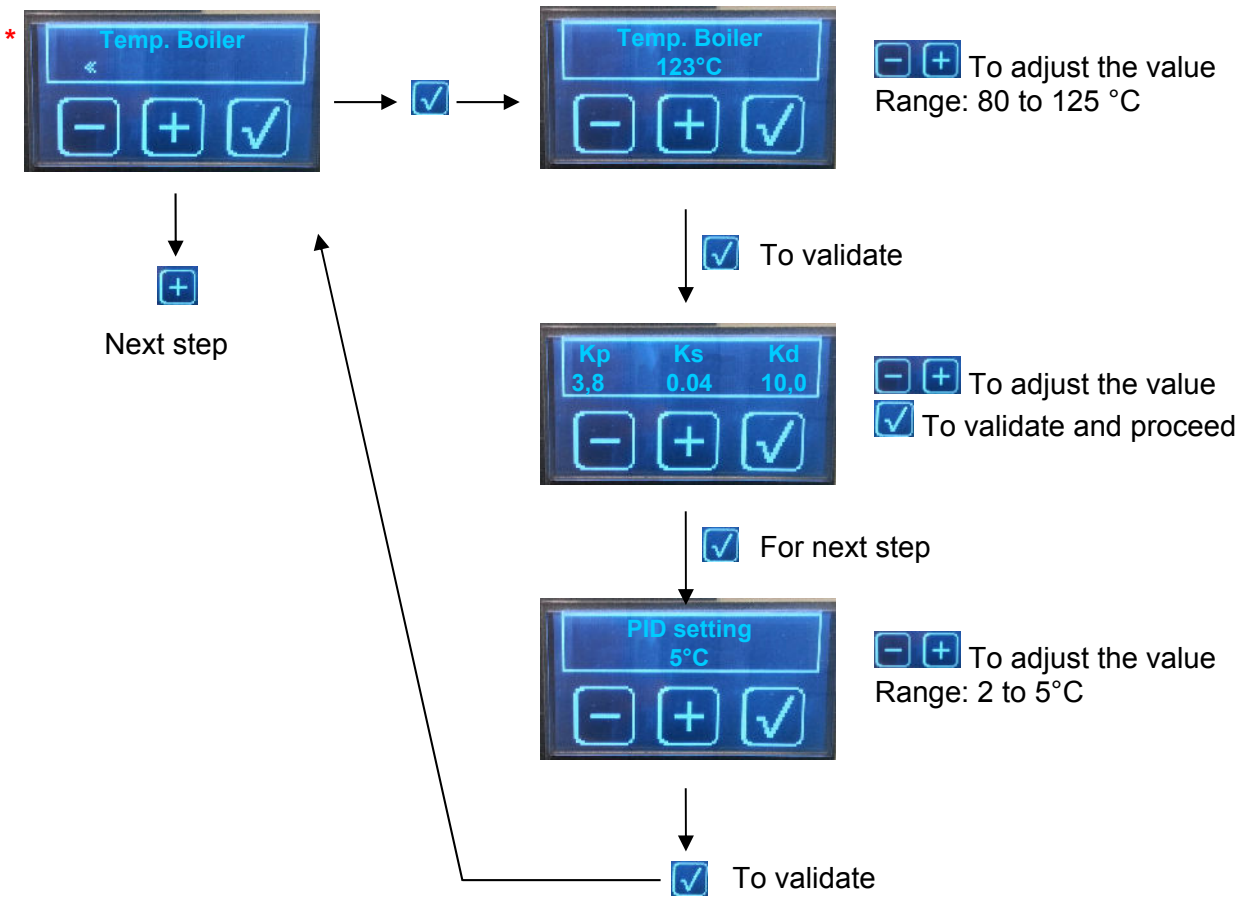


10.7 Adjustements

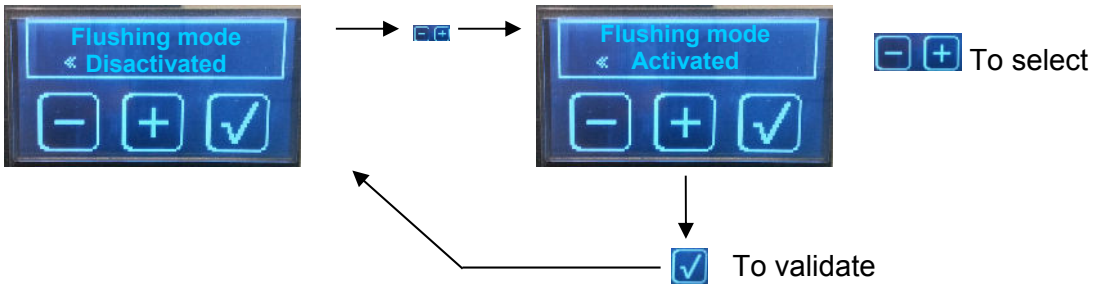
10.7.1 Coffee boiler temperature



10.7.2 Steam boiler temperature

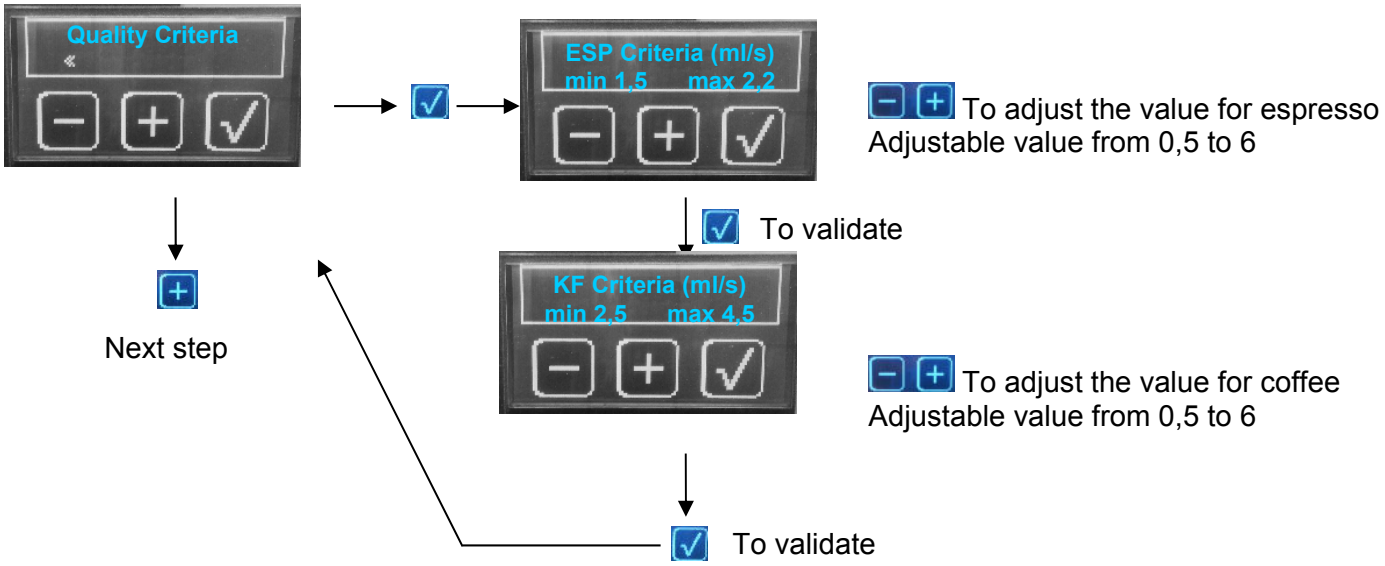


10.7.3 Flushing mode

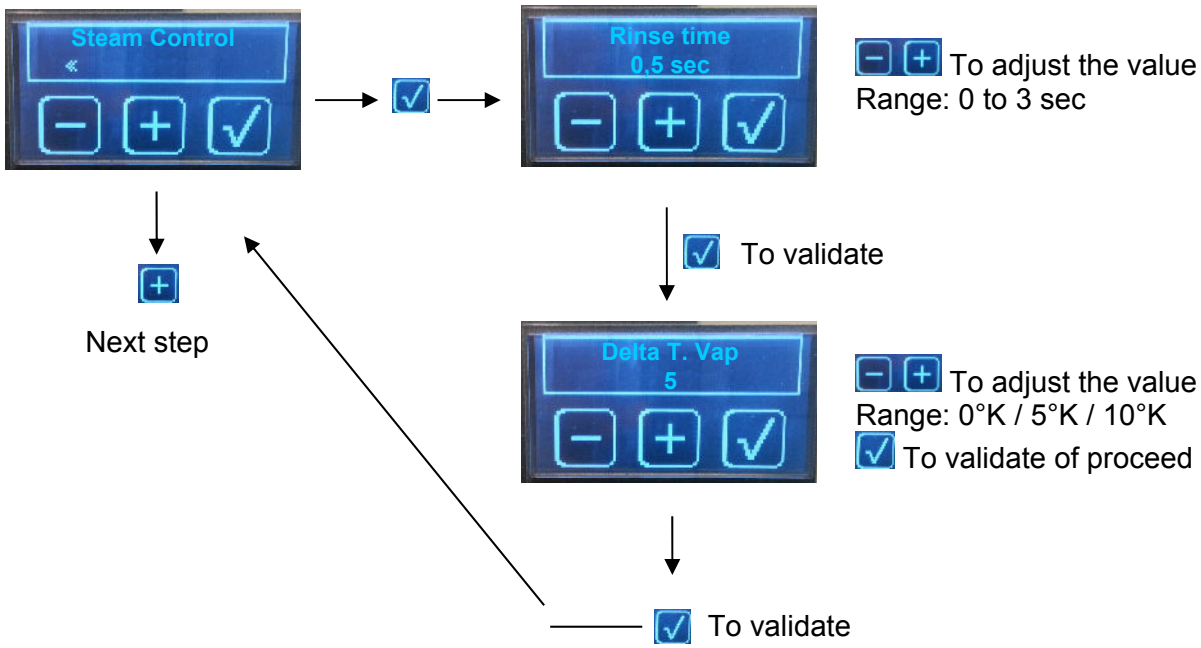


Allows to use every group first key (1 espresso) as a flushing key.

10.7.4 Quality Criteria



10.7.5 Steam Control

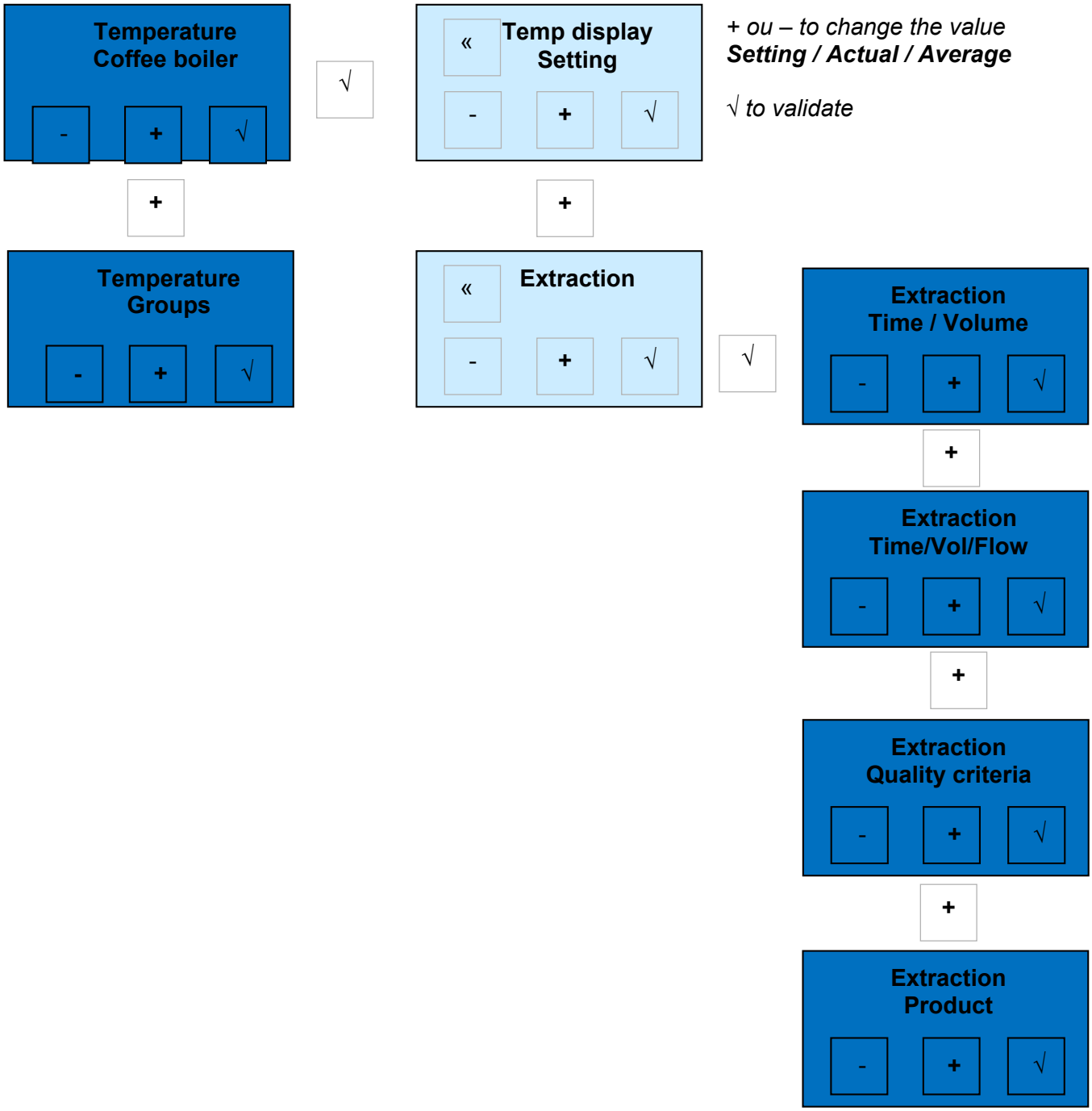


See chapter: Steam control adjustments

10.7.6 Viewing

This menu allows to define:

- The type of coffee or group temperatures to be displayed
- The information 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
```

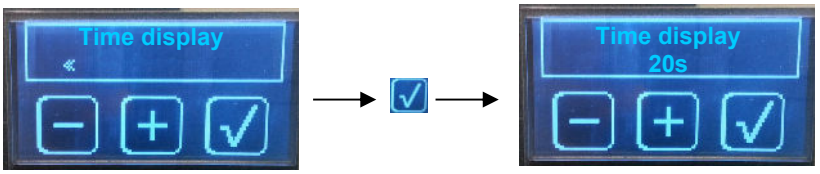
    - ZZ ml/s is the flow in ml/s. **It's YYY on XX (on 2 digits)**

    - 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)

10.7.7 Time display

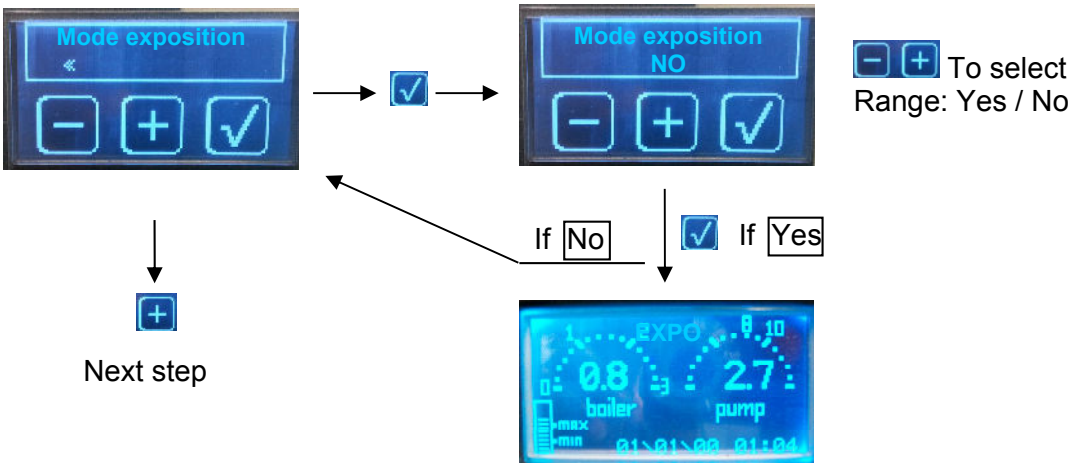


Pour ajuster la valeur
Valeur : de 0 à 60 sec

Allows to adjust the extraction displaying time.

10.8 Maintenance

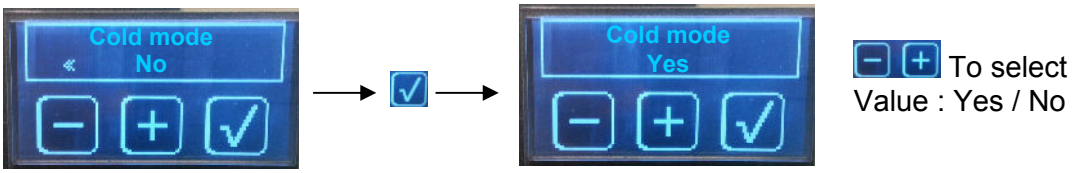
10.8.1 Exhibition mode



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

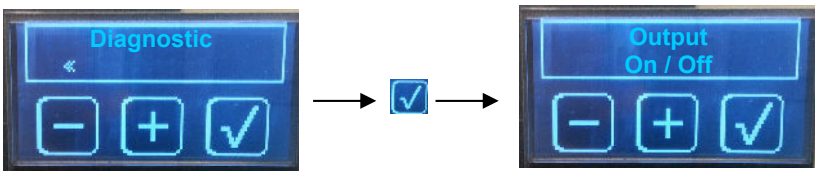
To come back on normal menu: Go into the menu and select “No” in the exposition mode step

10.8.2 Cold Mode



10.8.3 Diagnostics

The menu allows supplying and testing separately all the outlets:

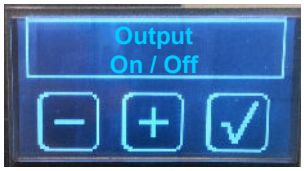


Press ☑ to activate the outlet
Press ☑ to disable the outlet

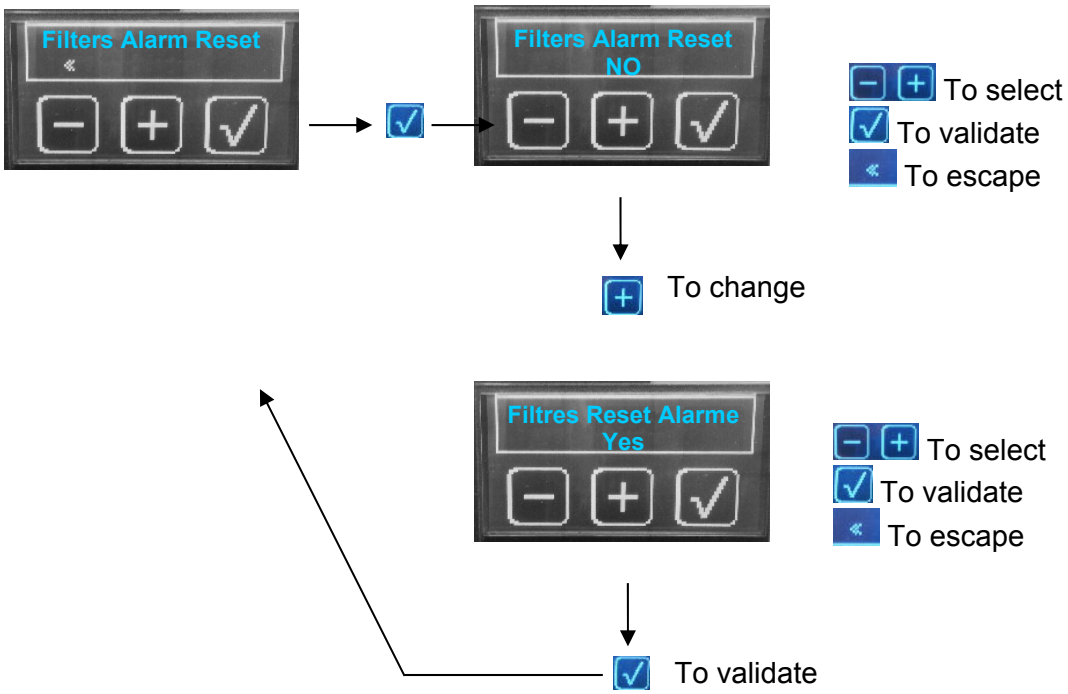
Next step

For the next Outlets :

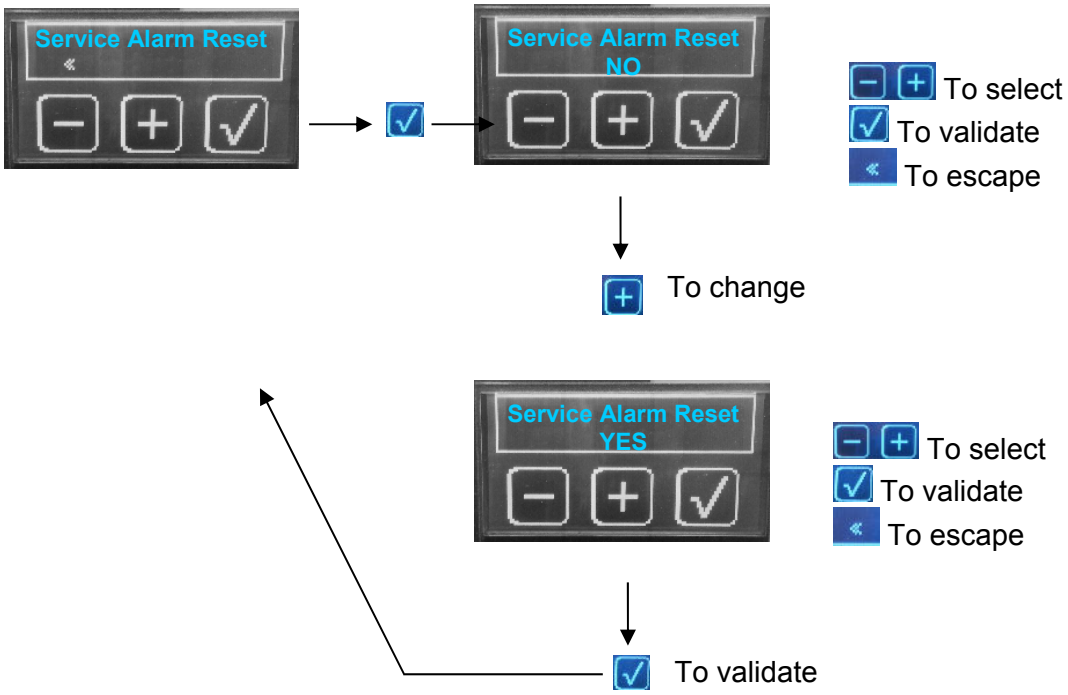
Steam 1: XXX °C	(Real temperature read in the steam boiler)
Steam 2: XXX °C	(Real temperature read in the steam boiler)
Steam 3: XXX °C	(Real temperature read in the steam boiler)
Coffee 1: YY °C	(Real temperature read in the 1° coffee boiler)
Coffee 2: YY °C	(Real temperature read in the 2° coffee boiler)
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
Vacuum valve grp 1:	
Vacuum valve grp 2:	
Vacuum valve grp 3:	
Air valve:	Air valve for steam control
On / Off:	Relay dedicated to supply the light transformer



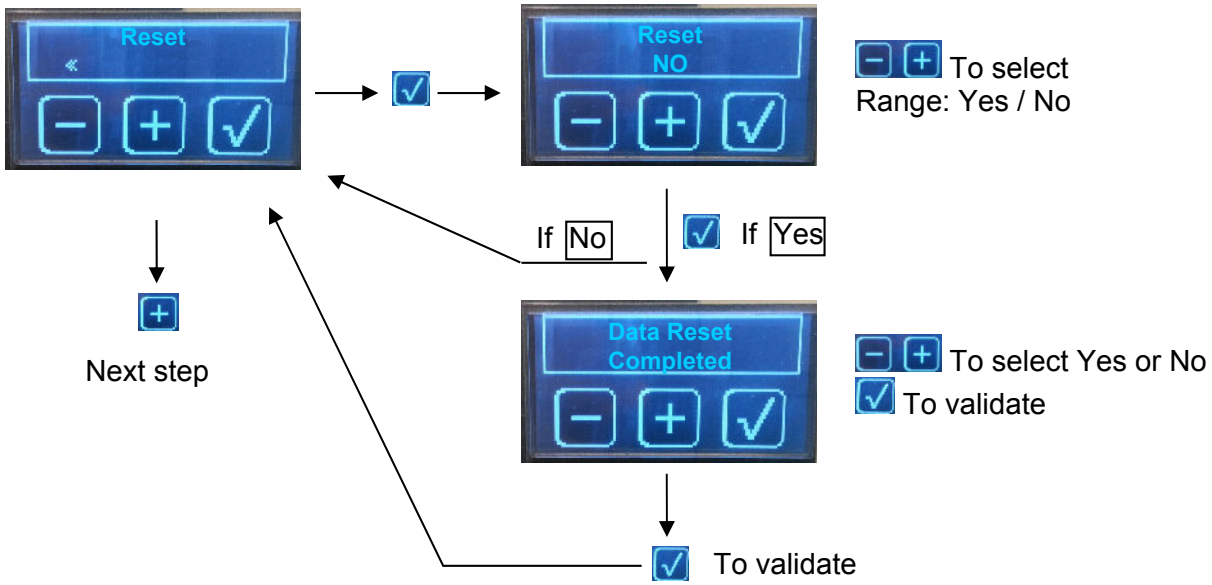
10.8.4 Filters Alarm Reset



10.8.5 Service Alarm Reset



10.8.6 Reset

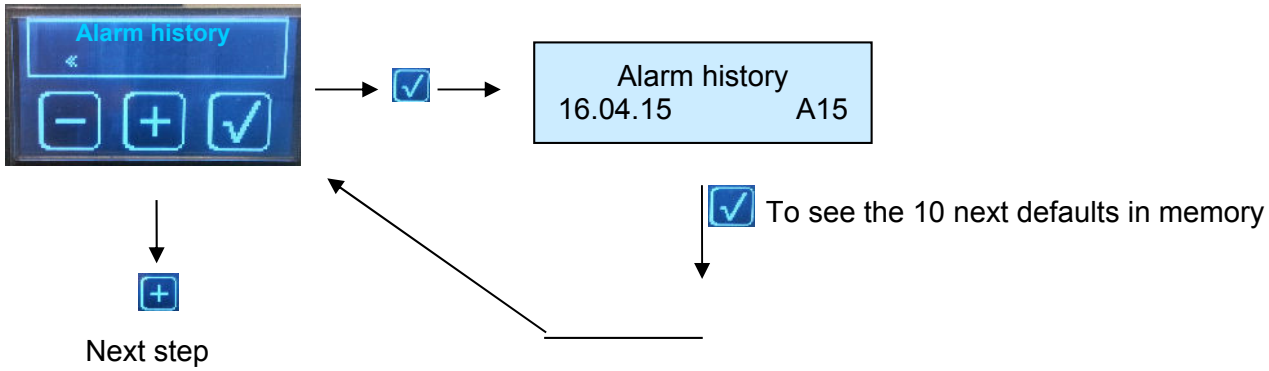


Switch OFF and switch ON the machine. The machine is reset.

The menu allows to set the factory setting inside the machine

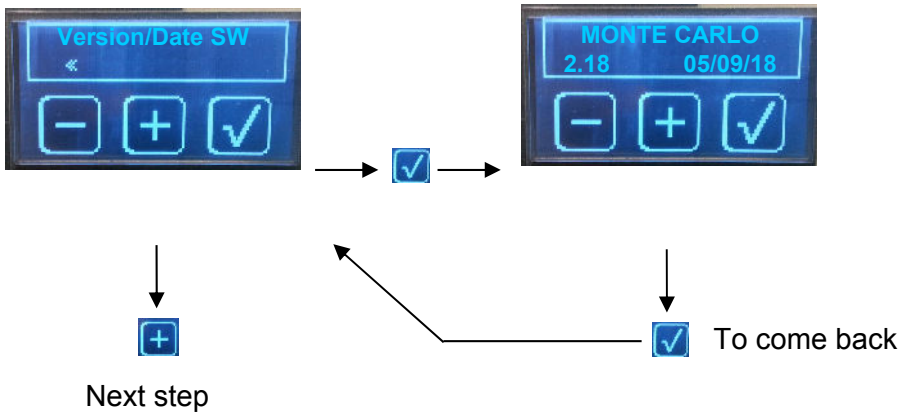
Machine version = 2G and coffee model
Power 2

10.8.7 Alarm history



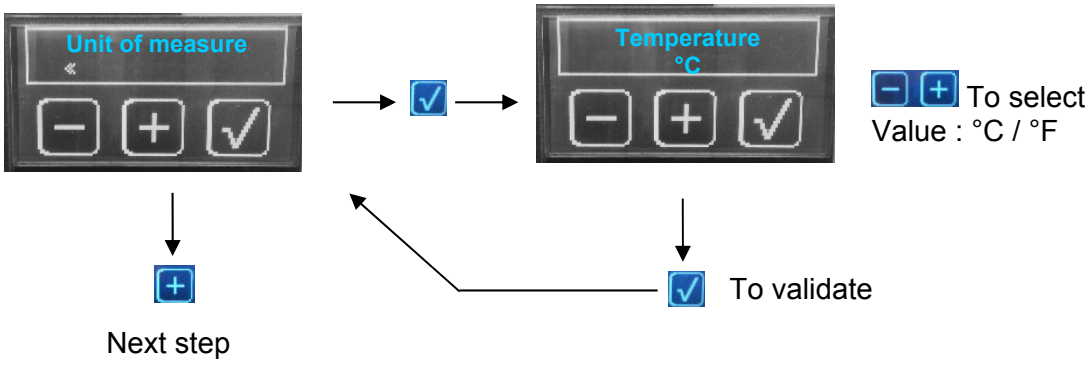
See chapter “Alarm”

10.8.8 Software version

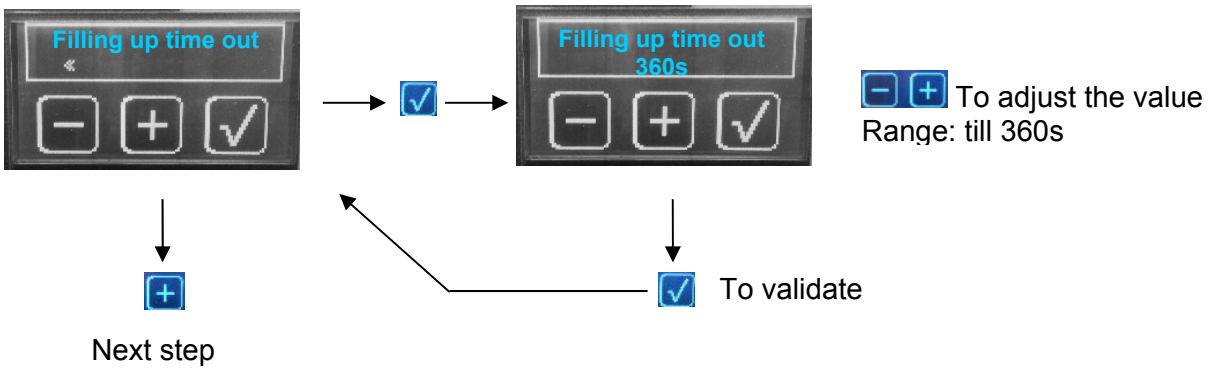


10.9 Technical parameters

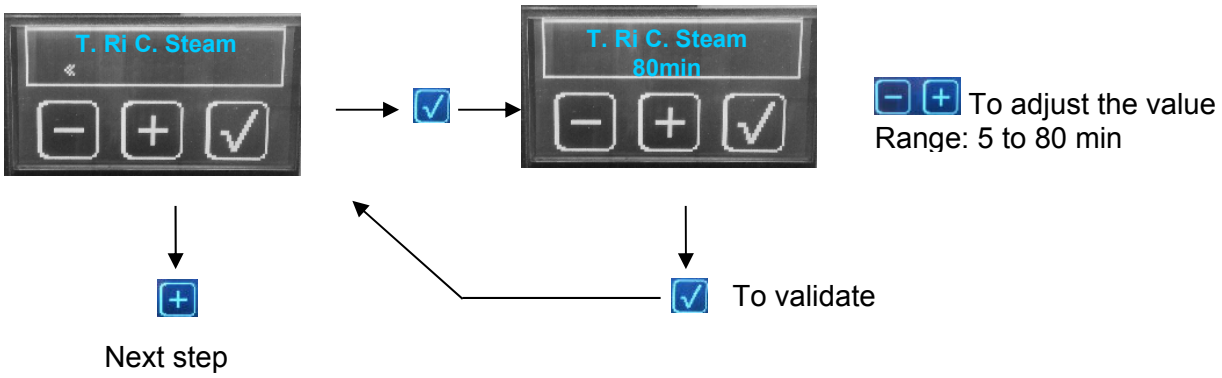
10.9.1 Unit of measurements



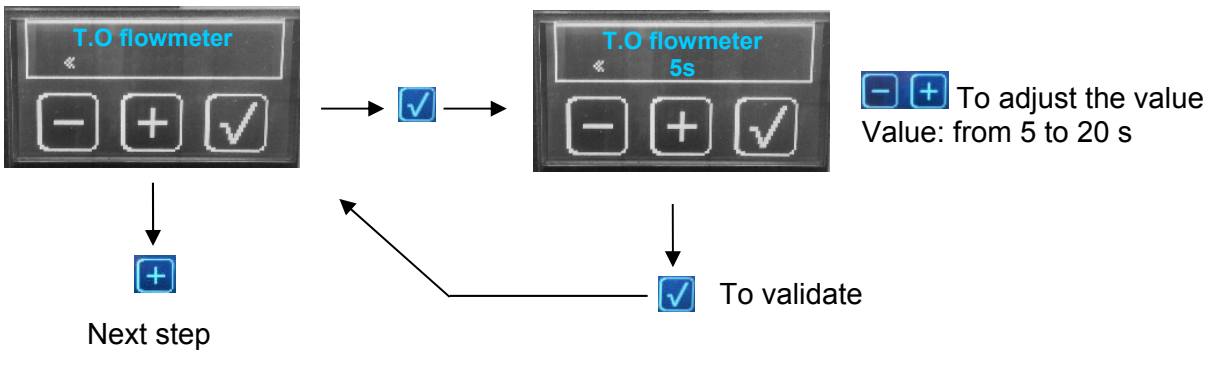
10.9.2 Filling up time out



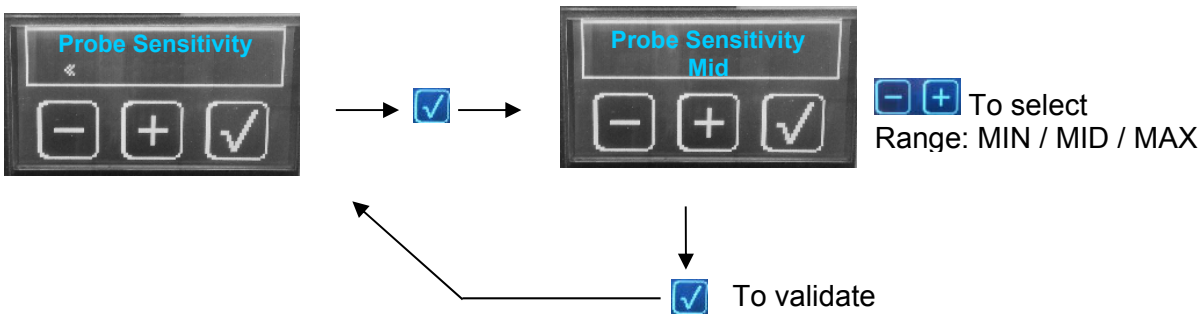
10.9.3 Time out steam boiler heating



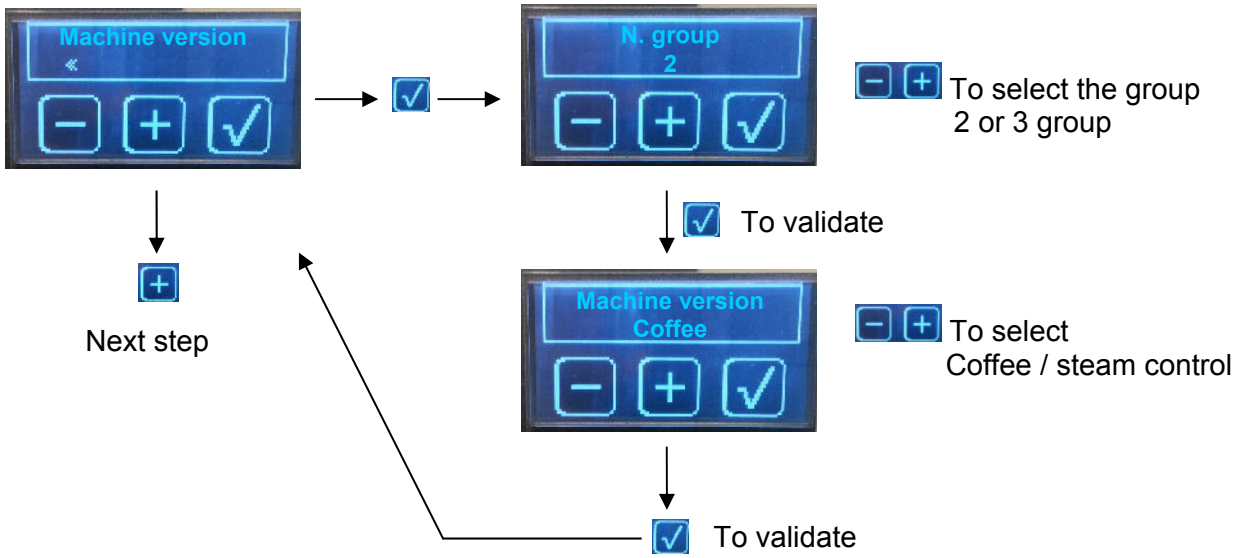
10.9.4 Time out flowmeter



10.9.5 Probe sensitivity

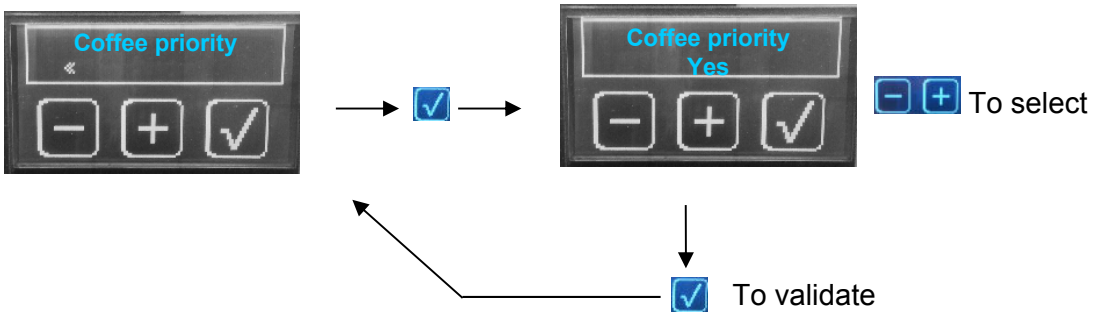


10.9.6 Machine Version



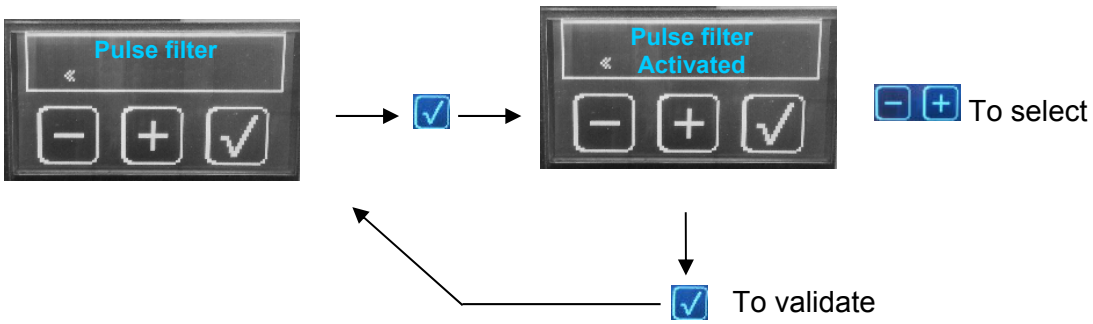
This is to configure the machine in 2 or 3 groups and in coffee or steam control model.

10.9.7 Coffee priority



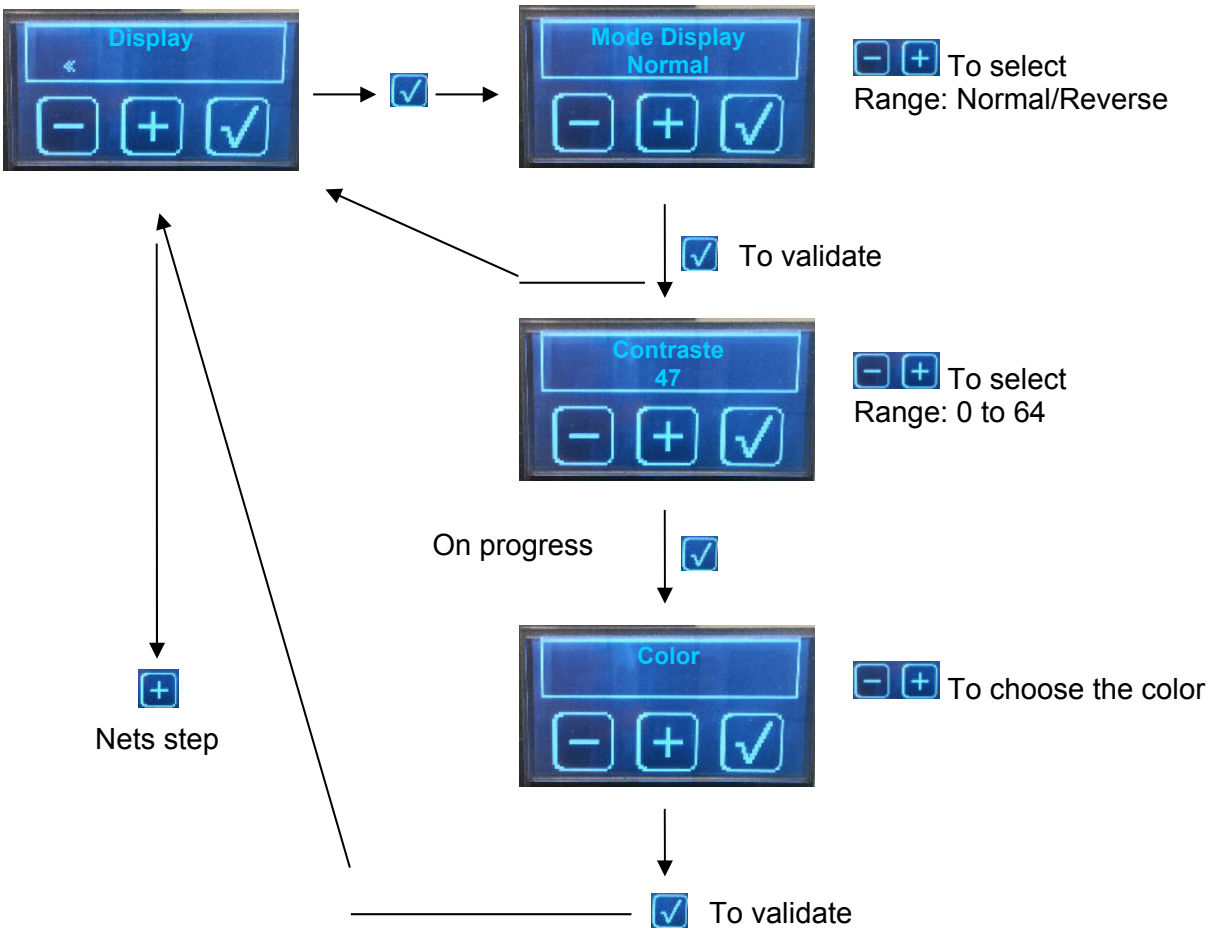
The « coffee priority » won't allow the steam boiler filling up during a coffee extraction

10.9.1 Pulse filter



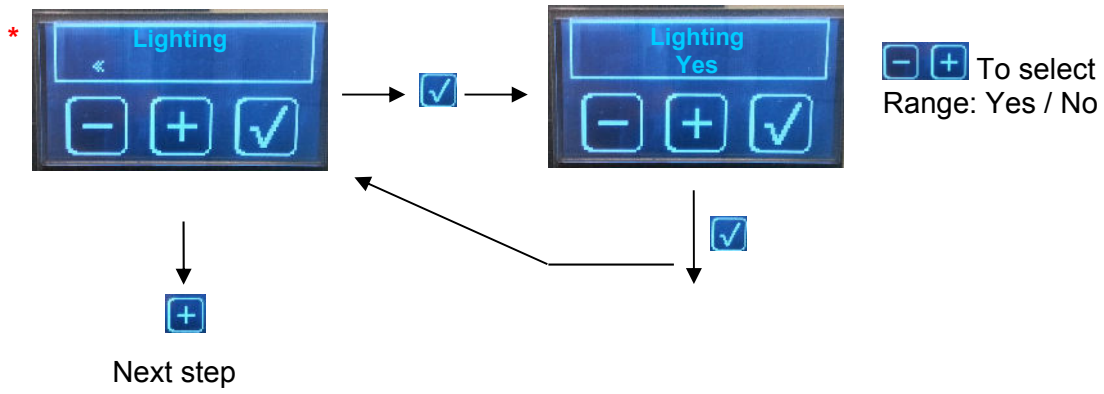
Pulse filter activated: the machine uses the specific Monte Carlo dose counting
Pulse filter disactivated: the machine counts the water goes through the flowmeter for the dose

10.9.2 Display



10.9.1 Lighting

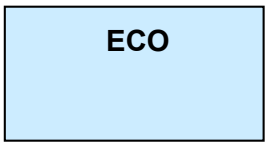
This step allows choosing if during the functioning of the machine the “side white leds” are “switch off” or “switch on”.



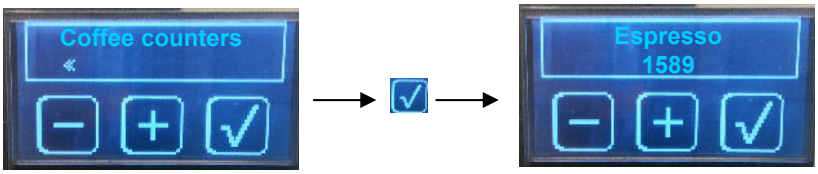
When the machine ON:

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

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



10.10 Coffee Counters

* 

Press ☑ to know the amount of each product

Next step

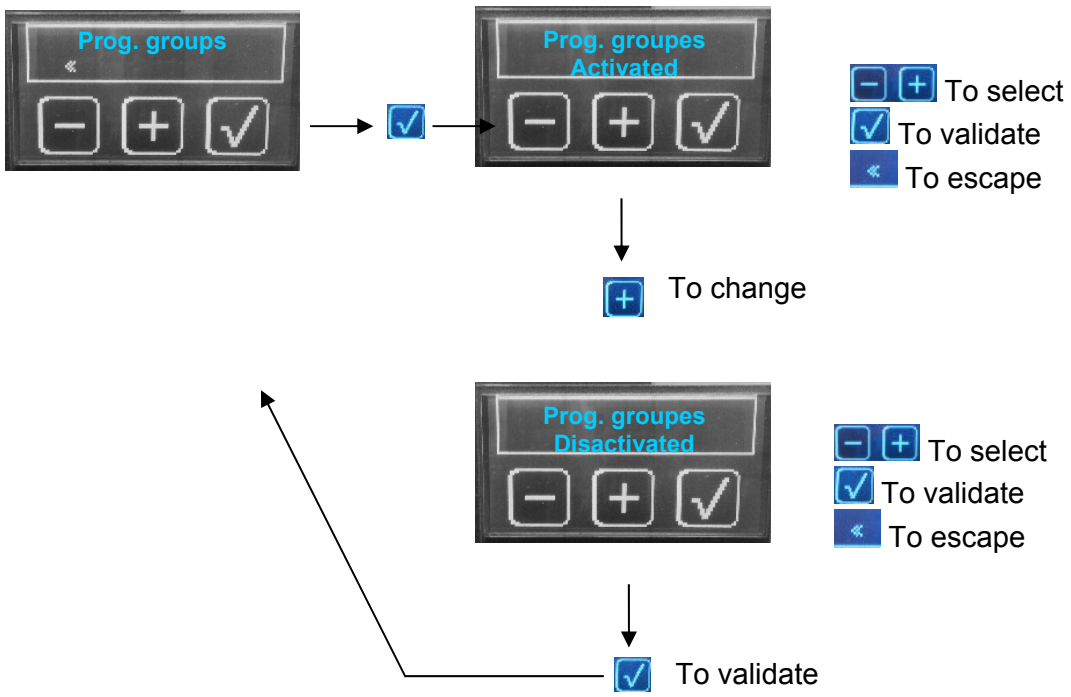
☑ To see the other counters:

For example:

Espresso:	23
2 espressos:	391
Coffee:31	
2 Coffee:	19
Continuous:	633
Tea:	570
Milk:	0
Steam:	0
Total coffee:	874 (not resettable)

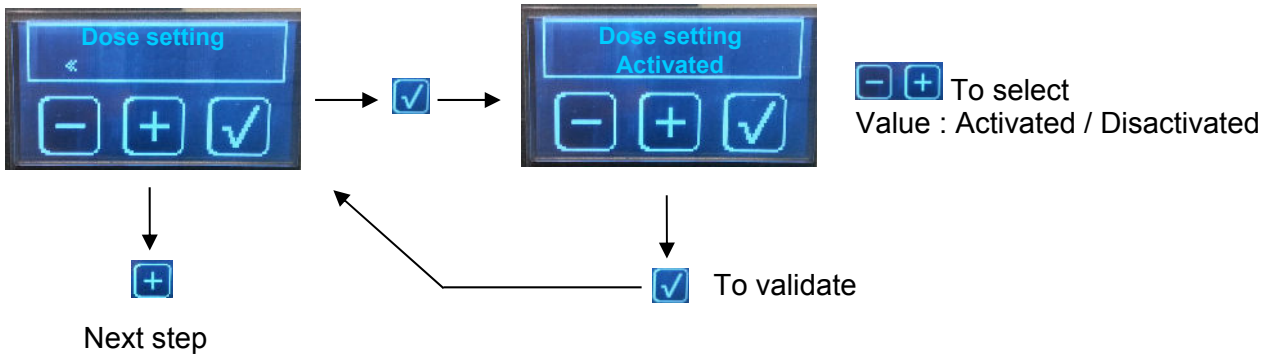
10.11 Accessibility

10.11.1 Programmation groups



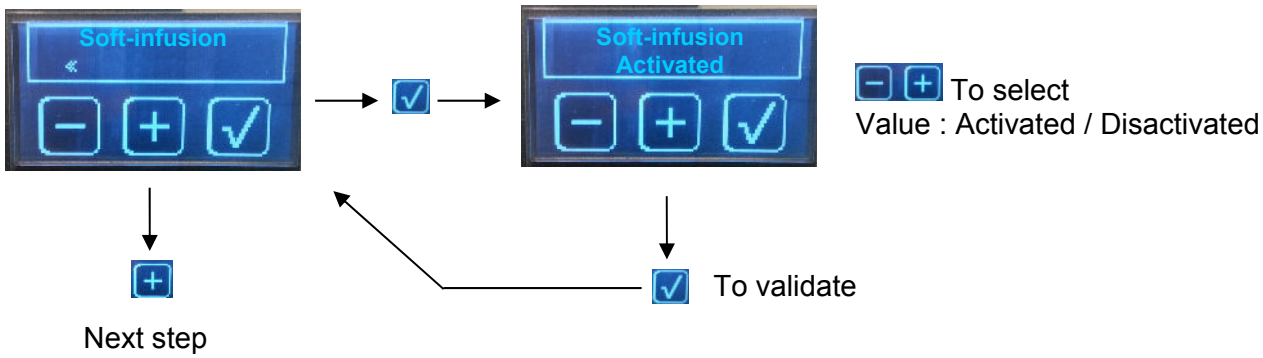
If disabled: there is no possibility for the user to access to the coffee group menu.

10.11.2 Dose setting



If disactivated: no possibility for the user to adjust the doses

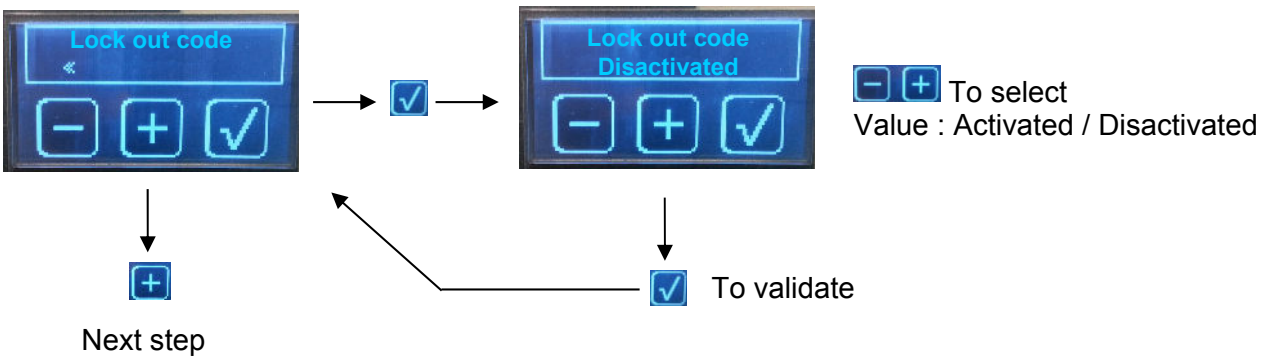
10.11.3 Soft-infusion



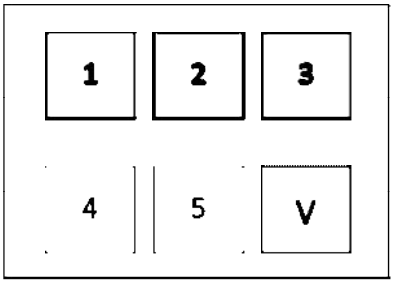
If disactivated: no possibility for the user to adjust the soft-infusion

10.11.1

10.11.1Lock out code



It is possible to lock out completely the menu thanks a lock out code. By default, the lock out code is disactivated.
If you activate the lock out code, the machine will ask you to enter the old lock out password. By default, the lock out password ➔ 1111.
After that, you will enter our own lock out password and enter it again for confirmation. the lock out password is, always, made of 4 figures.
If you enable the lock out code and you push 5 seconds on the touch screen to enter the menu, this screen (see below) appears. Enter the chosen lock out password and push on « V » to validate.



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.

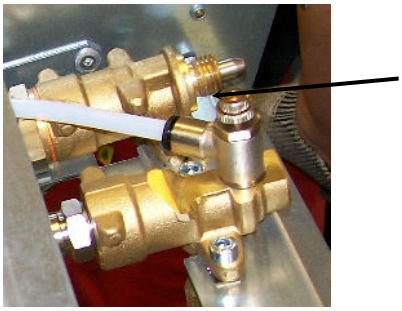
Steam boiler Temperature (°C)	Coffee boiler and Group Temperature (°C)	Coffee Temperature (°C)
117	87	78
	90	81
	93	85
120	87	78
	90	81
	93	85
123	87	79
	90	82
	93	85
125	87	79
	90	82
	93	85

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

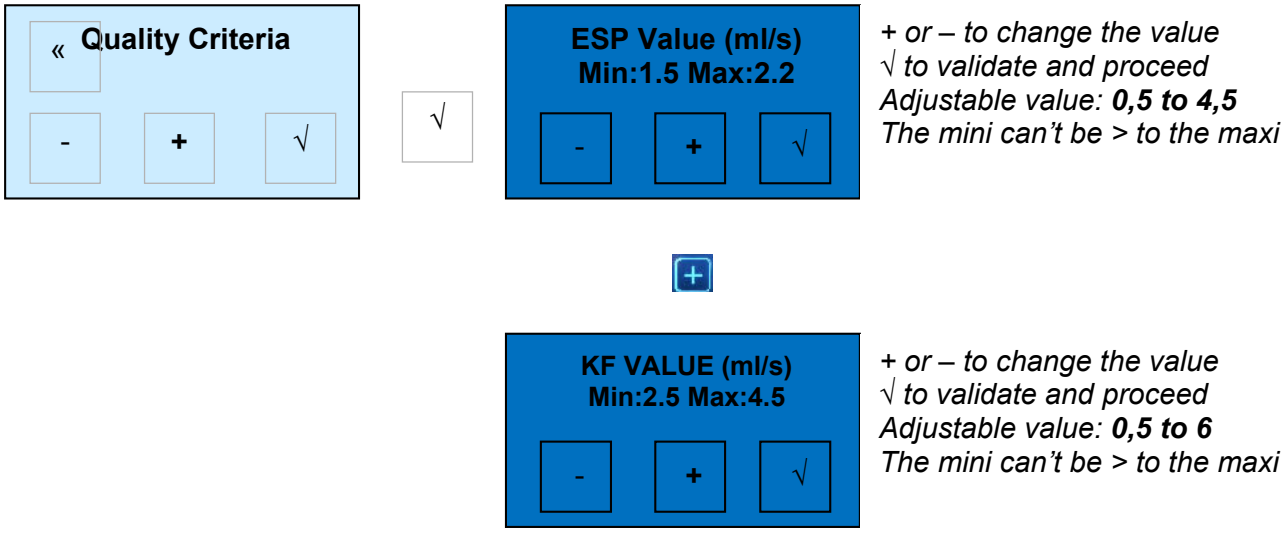
The factory setting is a hot water temperature at 92°C.
You can change this temperature by adjusting the screw above the tap.



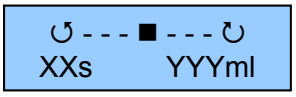
12 QUALITY CRITERIA

- Quality criteria programming:

First, the user may choose his own quality criteria.
These are the acceptable minimum and maximum flow rates for the estimated product.



- The user needs 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

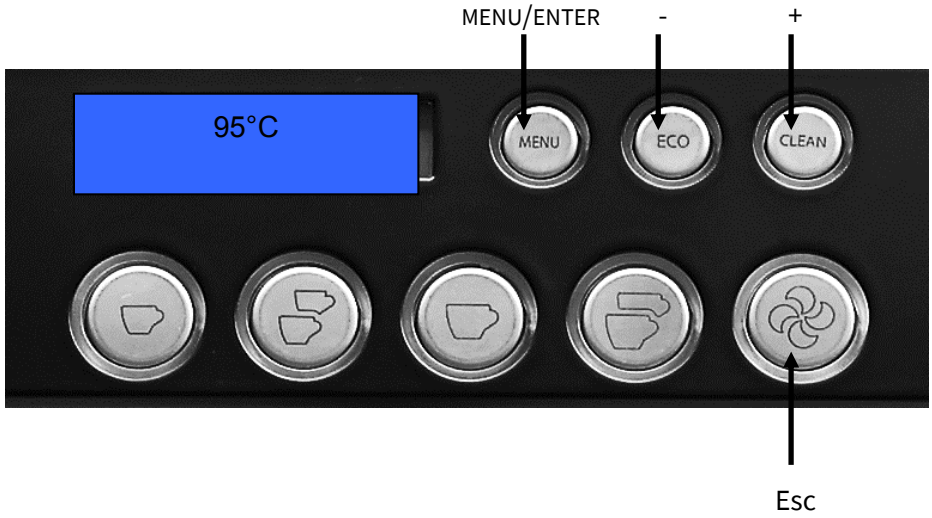
13 STEAM CONTROL PRODUCTS ADJUSTMENTS

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

Using the nearest coffee keypad 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 prepares the product to be heated and put the pot above the steam control outlet.

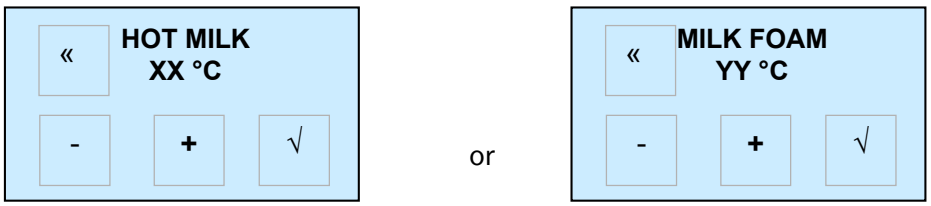
Press the coffee "MENU" button

Press "+" until the display shows "dose setting"

Press "MENU" again (for ENTER)

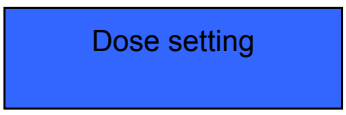
Press the product button "hot milk" or "milk foam":

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



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.



Press the coffee « ESC » button.

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

14 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.

☞ For sanitary reasons, be sure to consume at least 2 liters of hot water per day.

➢ 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 vaccum valve (No. 408898)
    - Change the safety valve (No. 411827)

  - On the coffee boiler:
    - Remove and clean the gasket limiter 12 Bars (1,2 MPa)
    - 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 (1,2 MPa)
    - 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 (1,2 MPa) (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 (1,2 MPa) (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.

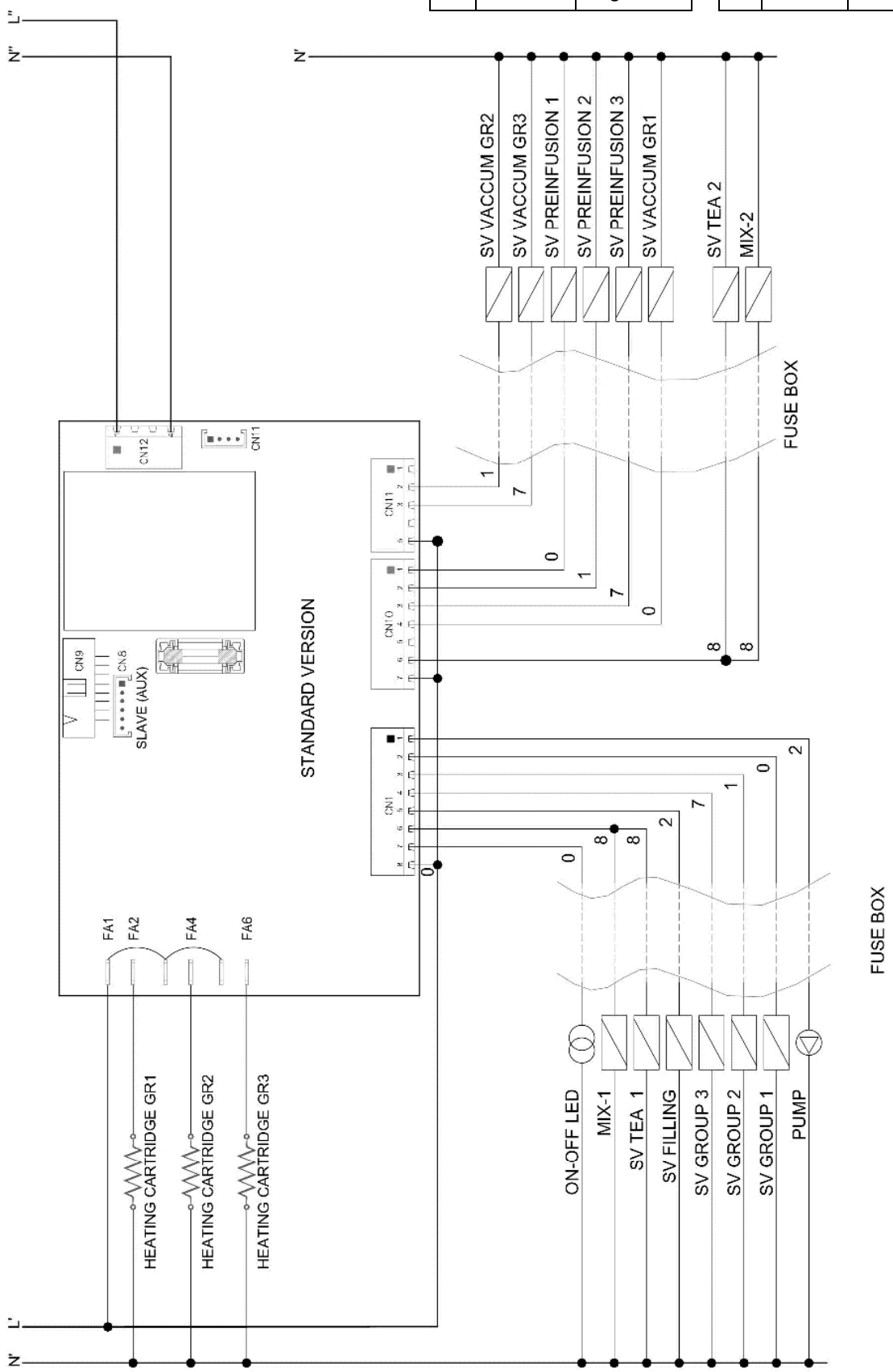
15 ELECTRIC DRAWING

15.1 CPU board standard

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

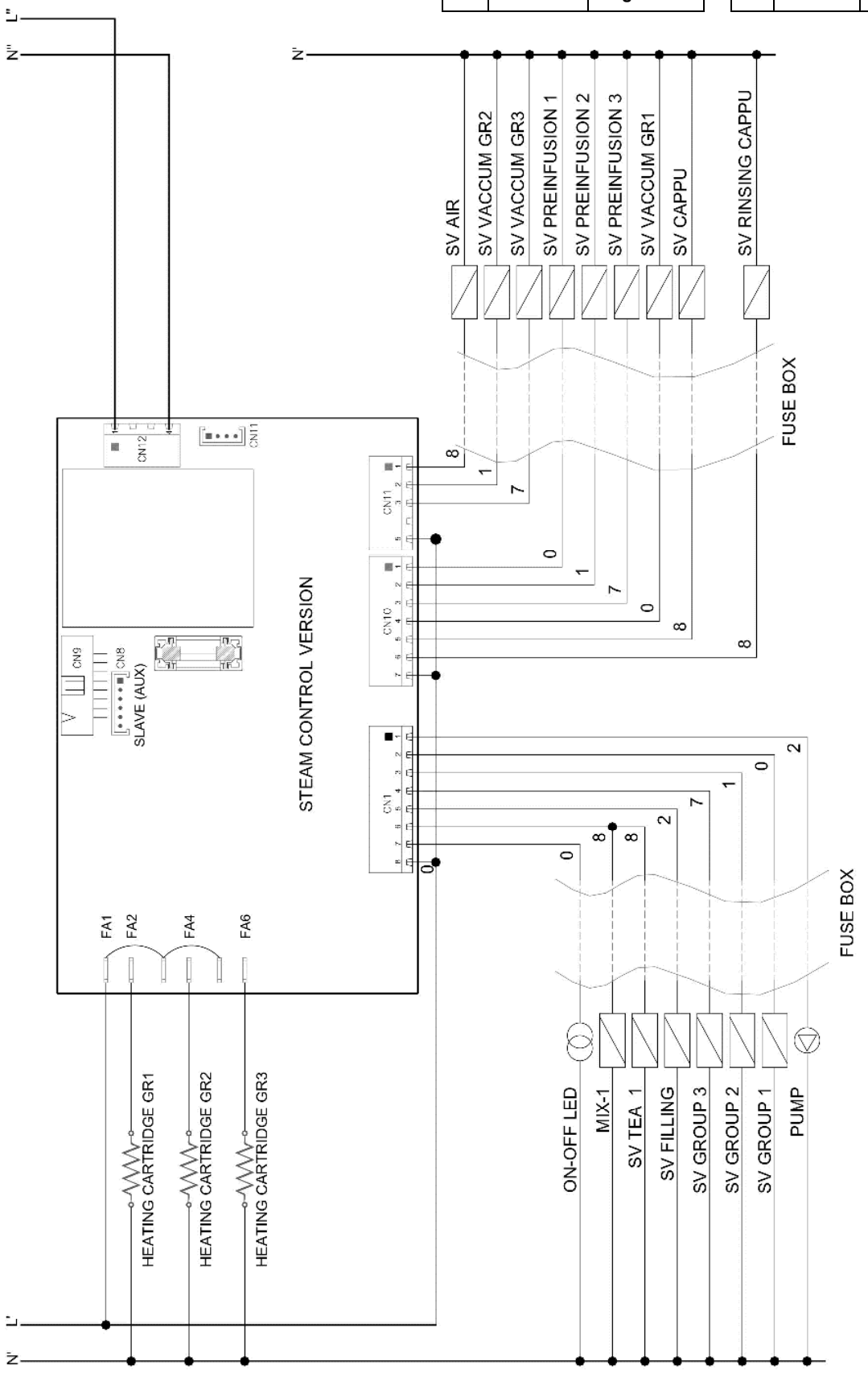


15.2 CPU board Steam Control

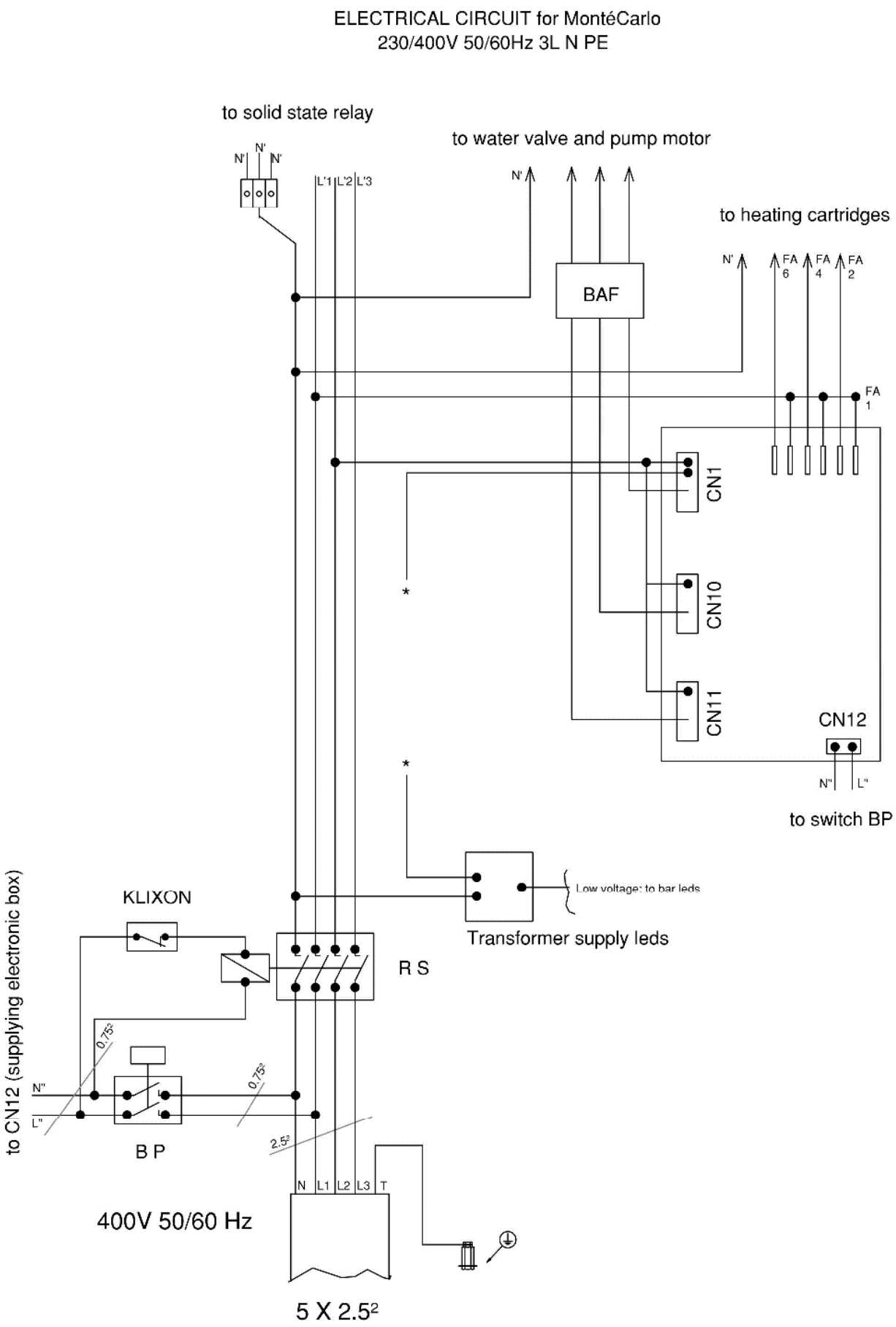
CODE COULEURS FILS
CABLE COLOUR CODE

1	marron	brown
2	rouge	red
3	orange	orange
4	jaune	yellow
5	vert	green

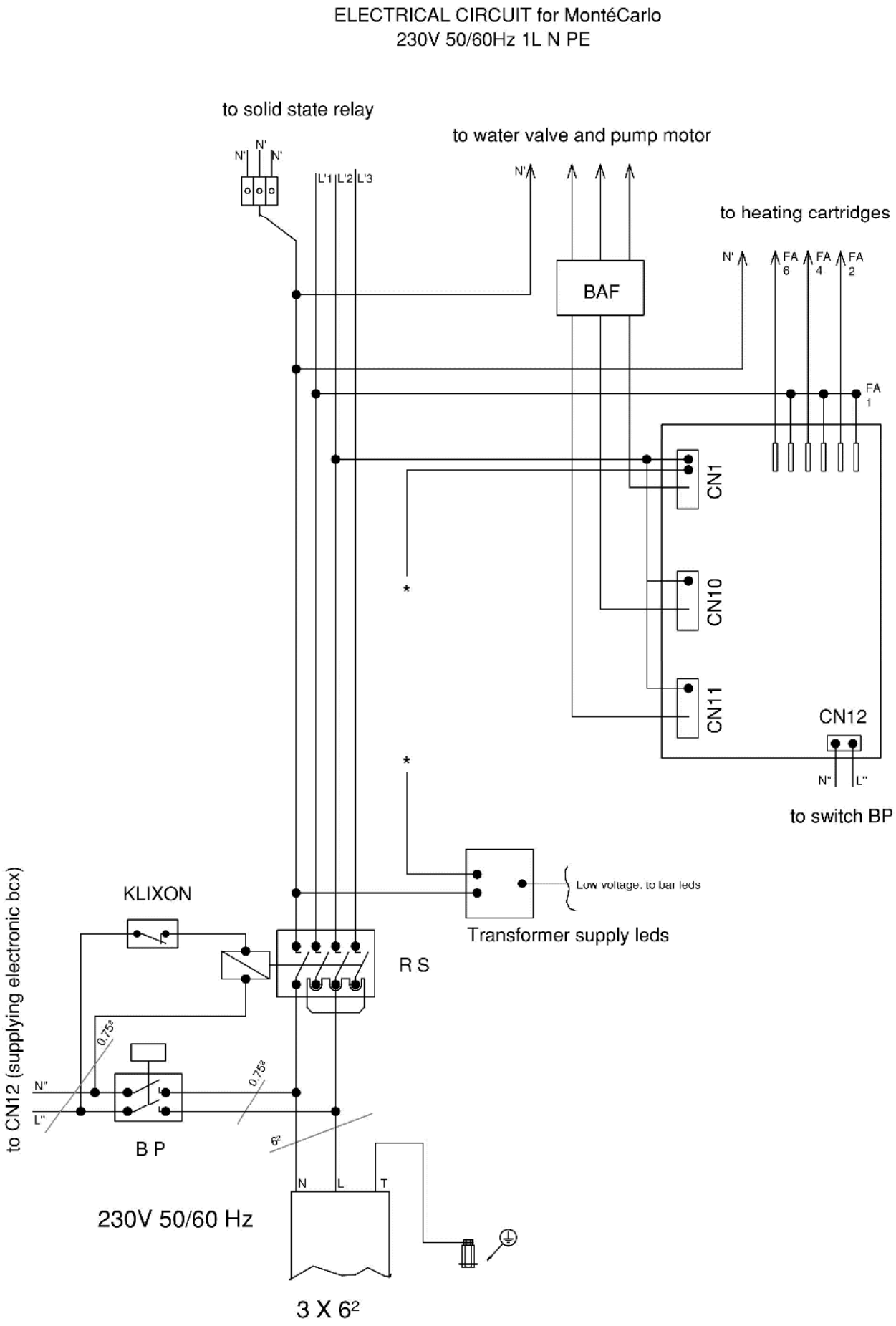
6	bleu	blue
7	violet	violet
8	gris	grey
9	blanc	white
0	noir	black



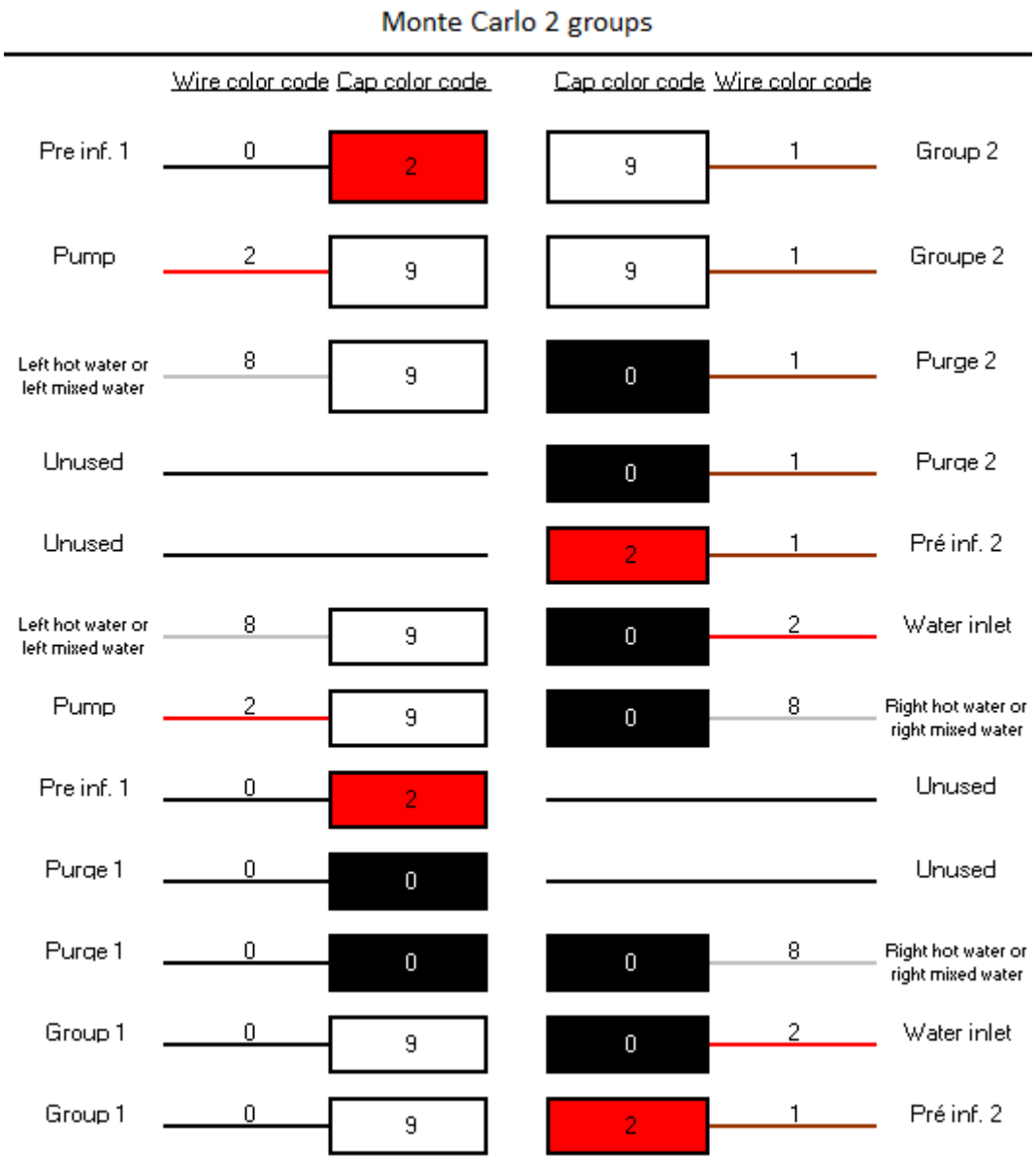
15.3 Electrical power diagram for “400V 3L N PE”



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

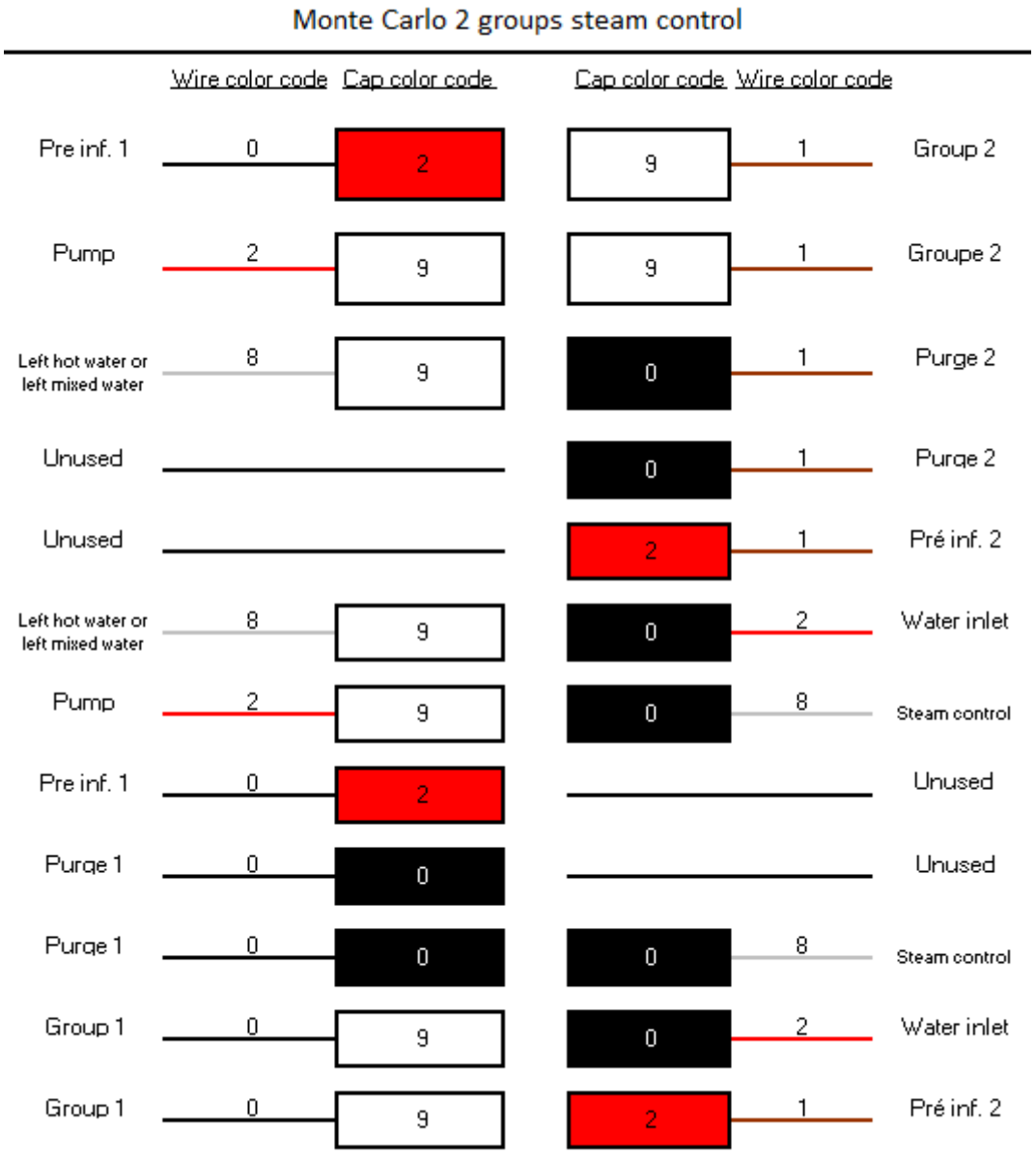


15.5 Connecting diagram: 12 fuses box



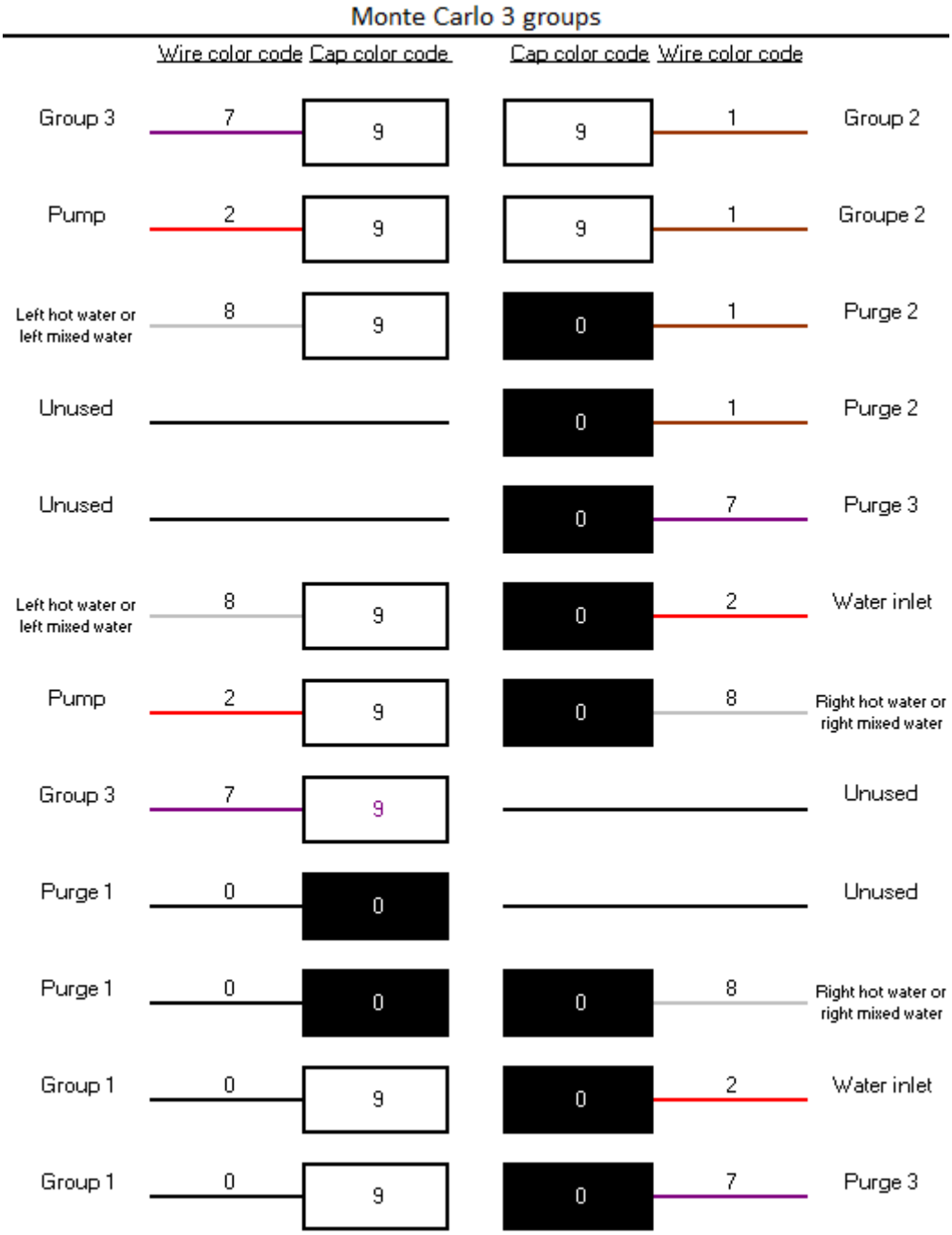
CODE COULEURS FILS
CABLE COLOUR CODE

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**



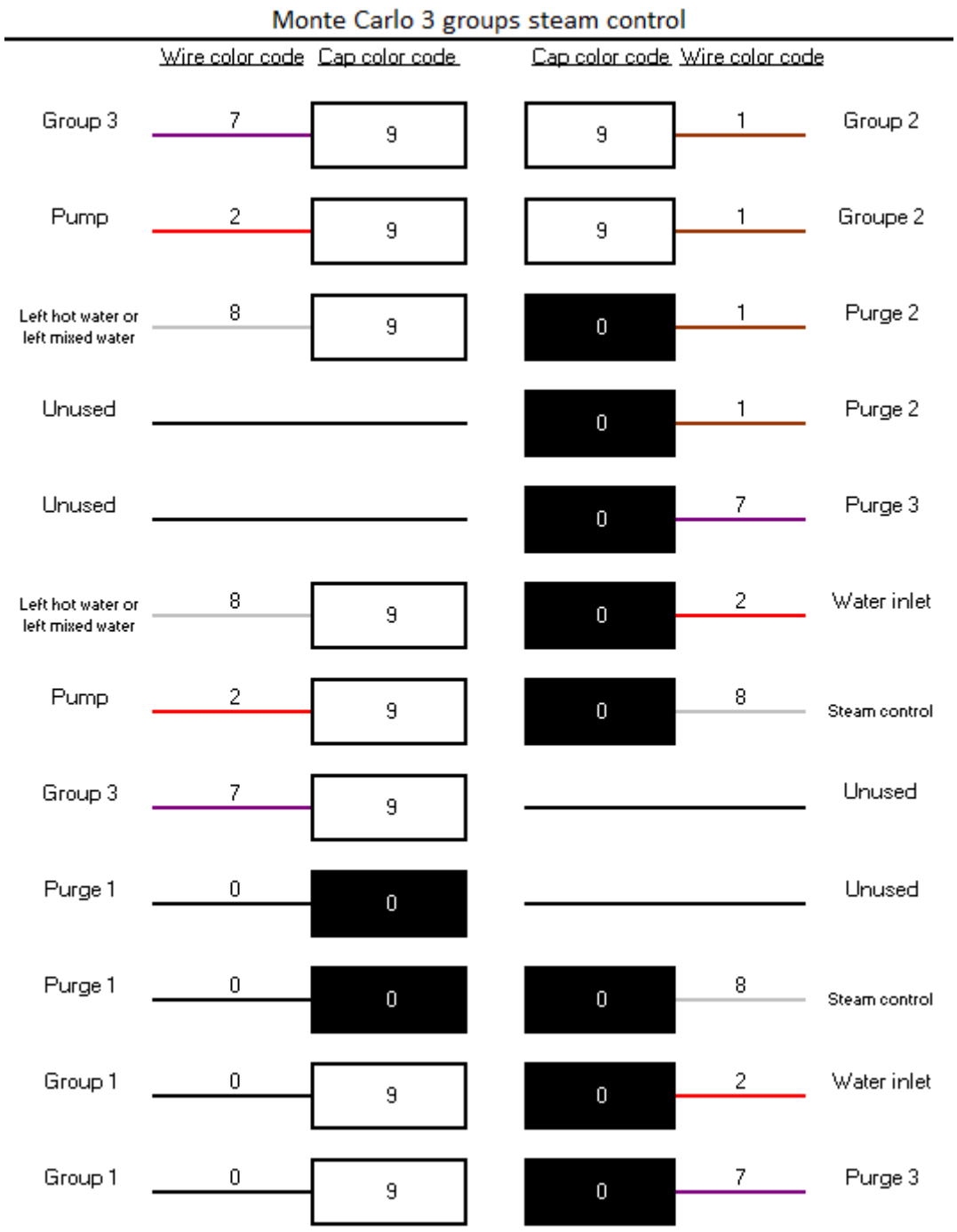
CODE COULEURS FILS
CABLE COLOUR CODE

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**



CODE COULEURS FILS
CABLE COLOUR CODE

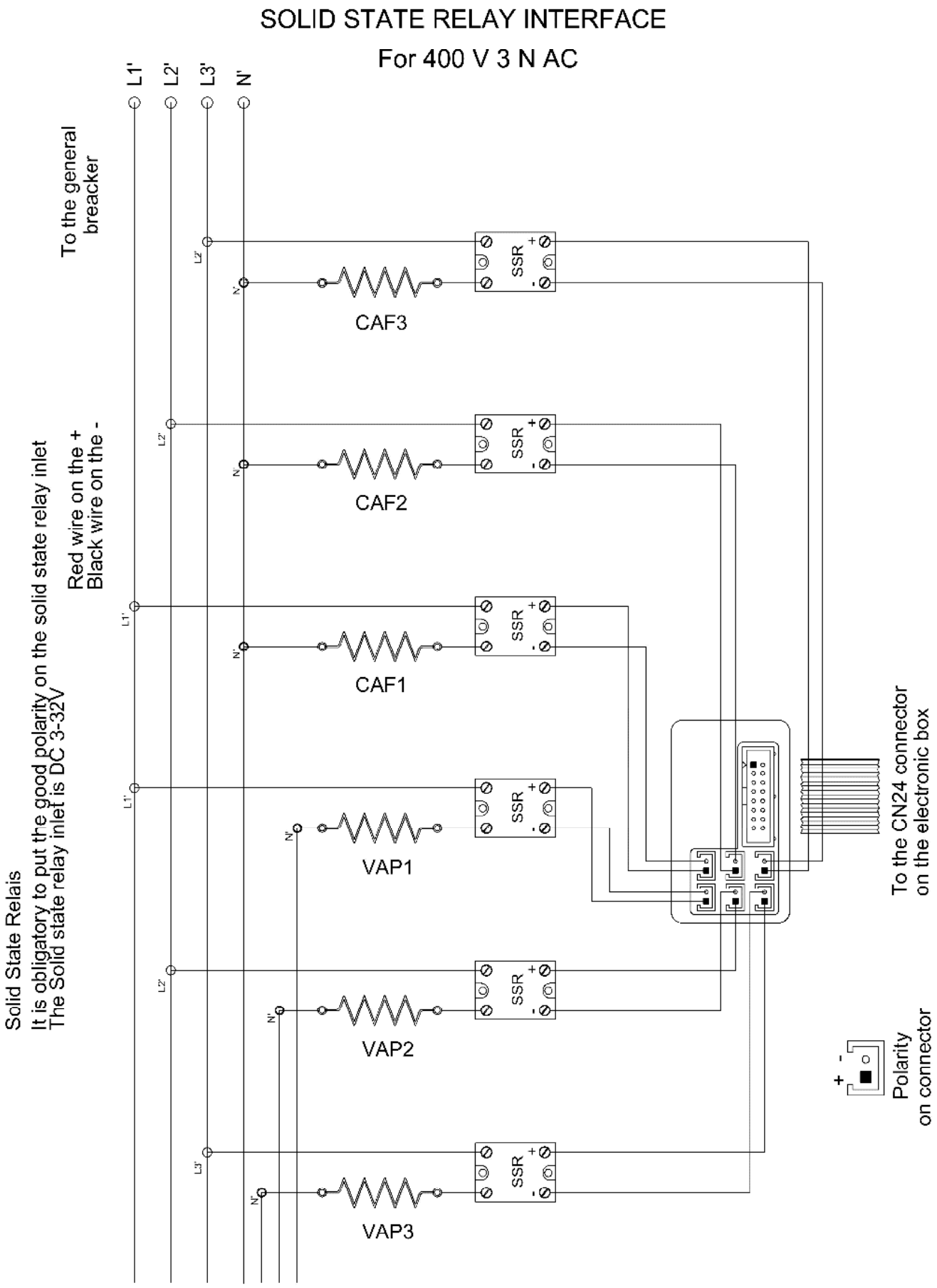
1	**marron**	**brown**
2	**rouge**	**red**
3	**orange**	**orange**
4	**jaune**	**yellow**
5	**vert**	**green**
6	**bleu**	**blue**
7	**violet**	**violet**
8	**gris**	**grey**
9	**blanc**	**white**
0	**noir**	**black**



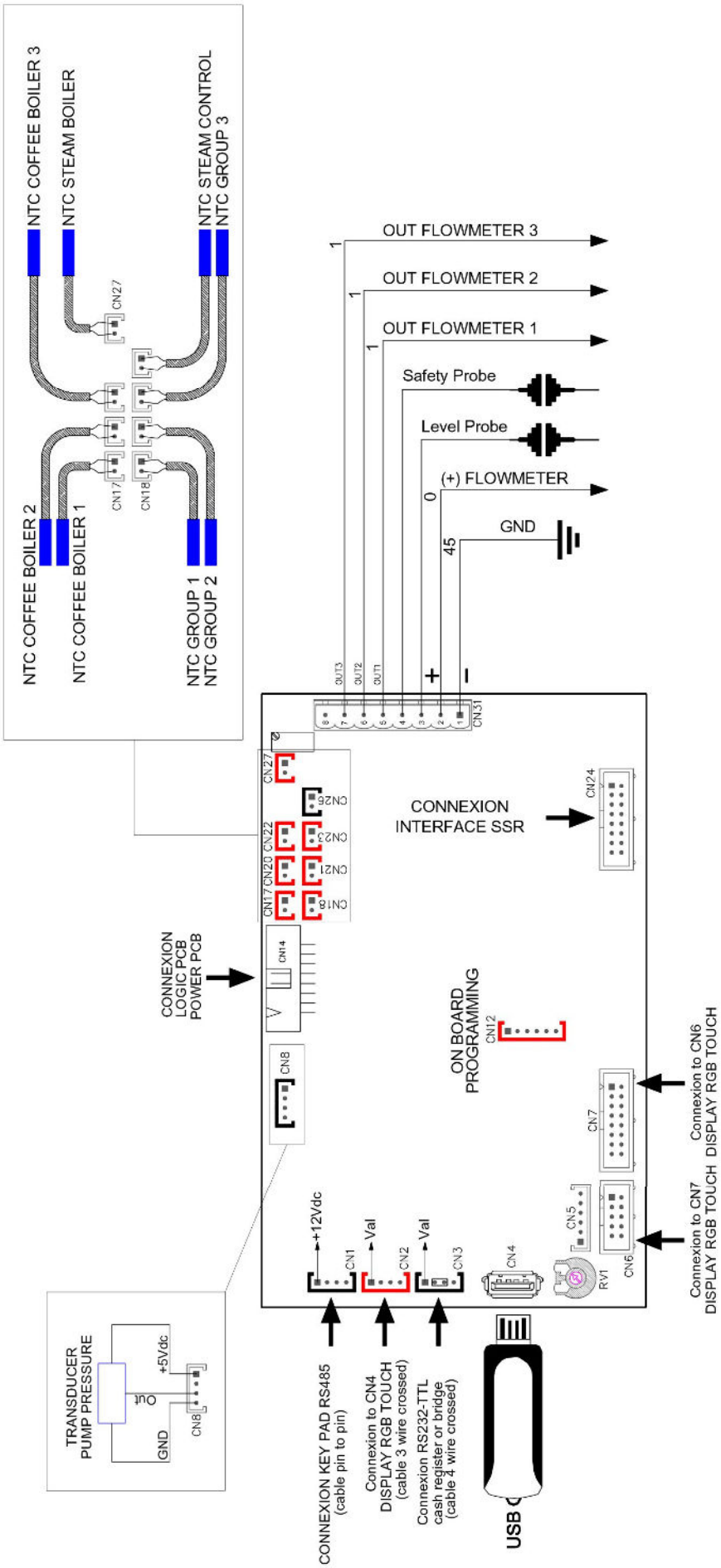
CODE COULEURS FILS
CABLE COLOUR CODE

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**

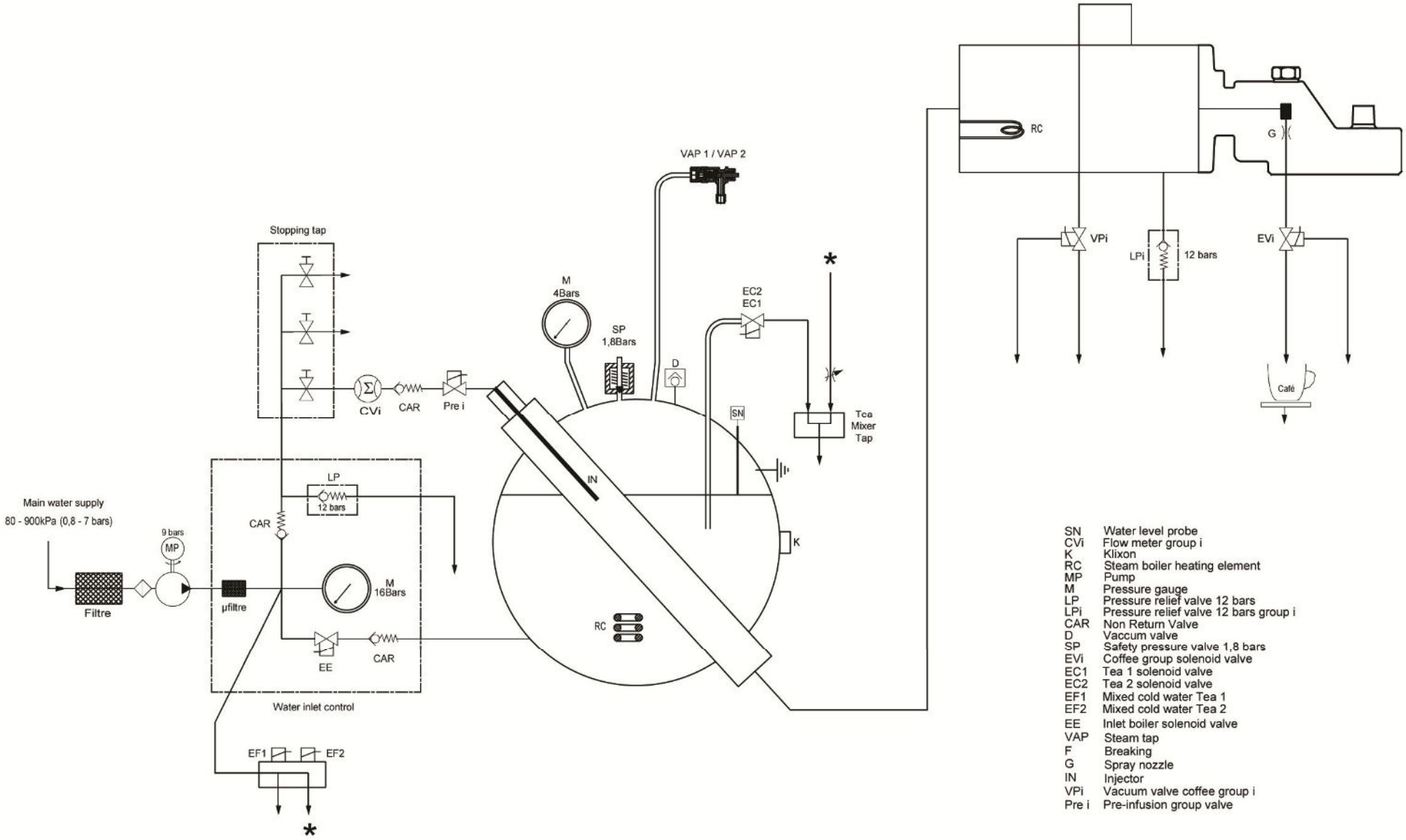
15.6 Solid state relay interface for “400 V 3NAC”



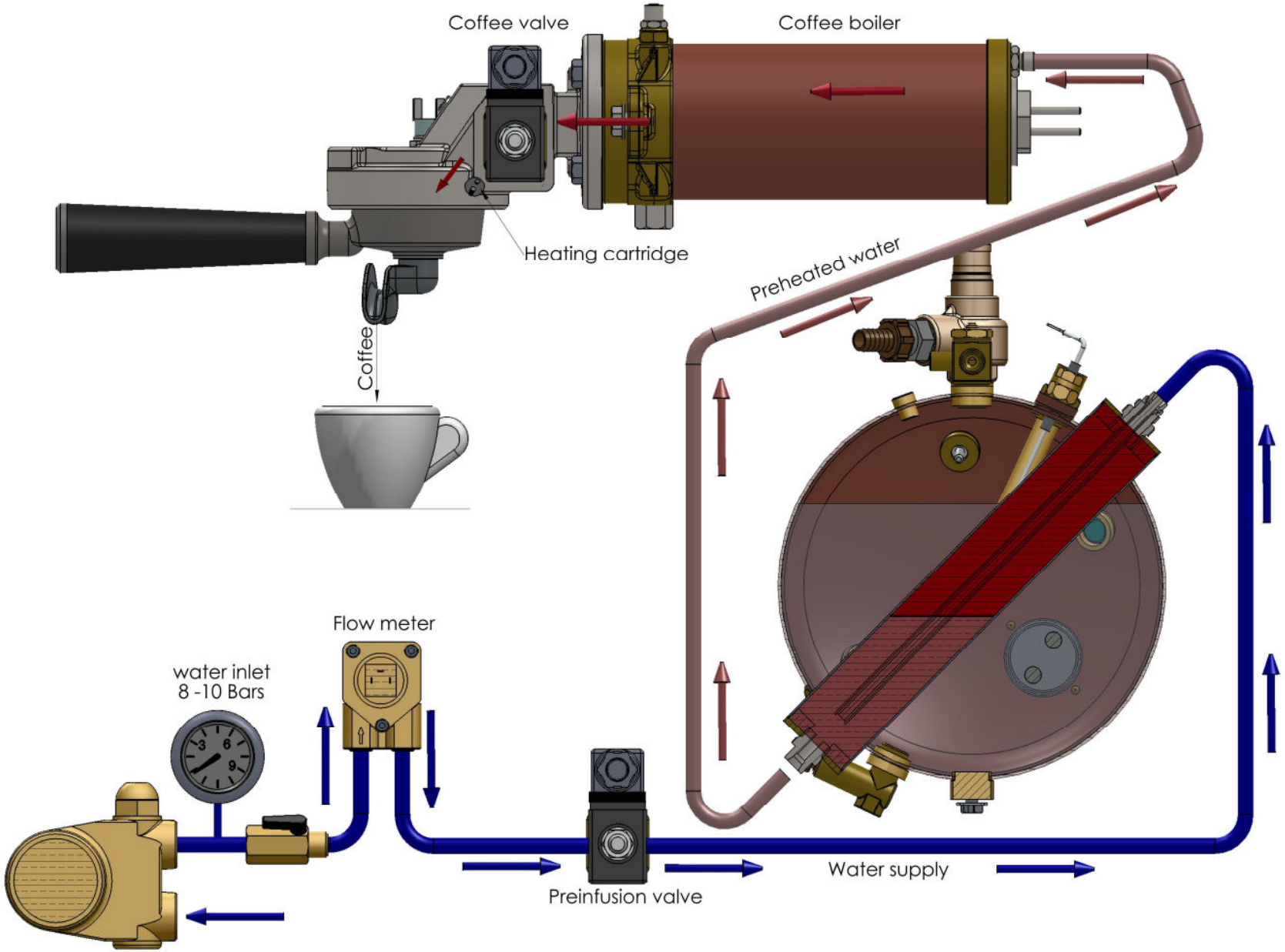
15.7 Low voltage wiring



16 HYDRAULIC SCHEME



SN	Water level probe
CVi	Flow meter group i
K	Klixon
RC	Steam boiler heating element
MP	Pump
M	Pressure gauge
LP	Pressure relief valve 12 bars
LPi	Pressure relief valve 12 bars group i
CAR	Non Return Valve
D	Vaccum valve
SP	Safety pressure valve 1,8 bars
EVi	Coffee group solenoid valve
EC1	Tea 1 solenoid valve
EC2	Tea 2 solenoid valve
EF1	Mixed cold water Tea 1
EF2	Mixed cold water Tea 2
EE	Inlet boiler solenoid valve
VAP	Steam tap
F	Breaking
G	Spray nozzle
IN	Injector
VPi	Vacuum valve coffee group i
Pre i	Pre-infusion group valve



17 ALARM

CODE	Description	Faults	Recommendations
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

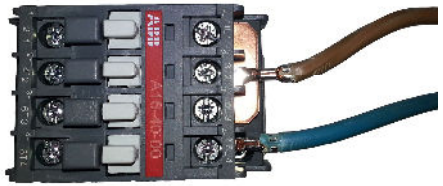
18 POWER MANAGEMENT

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 comsumption (for 230 volts monophase)

	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 supplyied at the same time in the machine
The priority is always given to the coffee Boiler

ESTD 1956

Conti

MONACO

web

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