FAEMA

FAEMINA

MANUALE DEL TECNICO

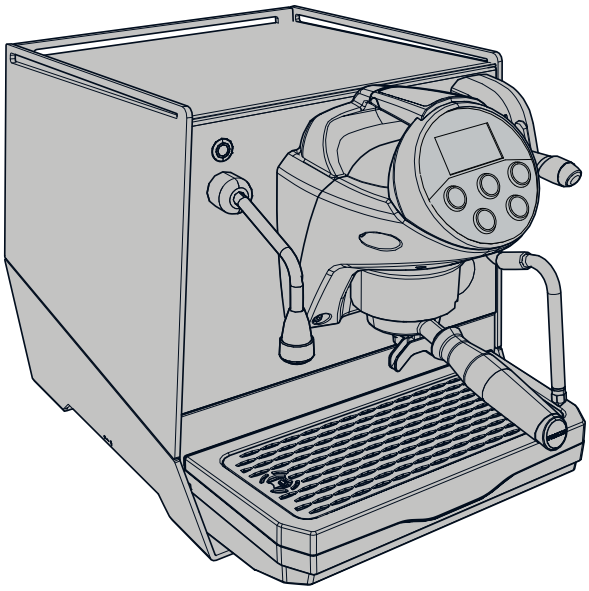
ENGINEER'S MANUAL

MANUEL DU TECHNICIEN

TECHNIKERHANDBUCH

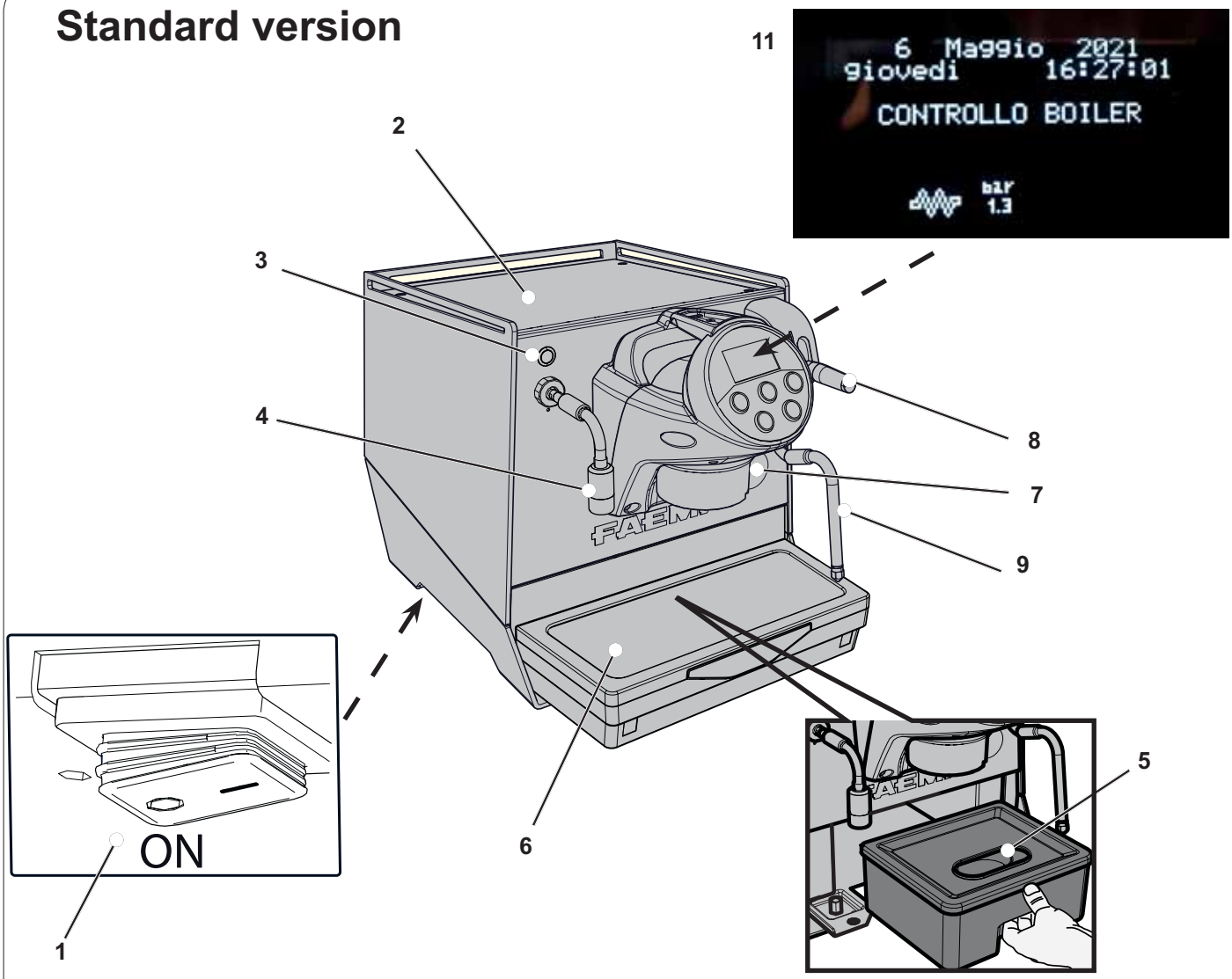
MANUAL DEL TÉCNICO

MANUAL DO TÉCNICO

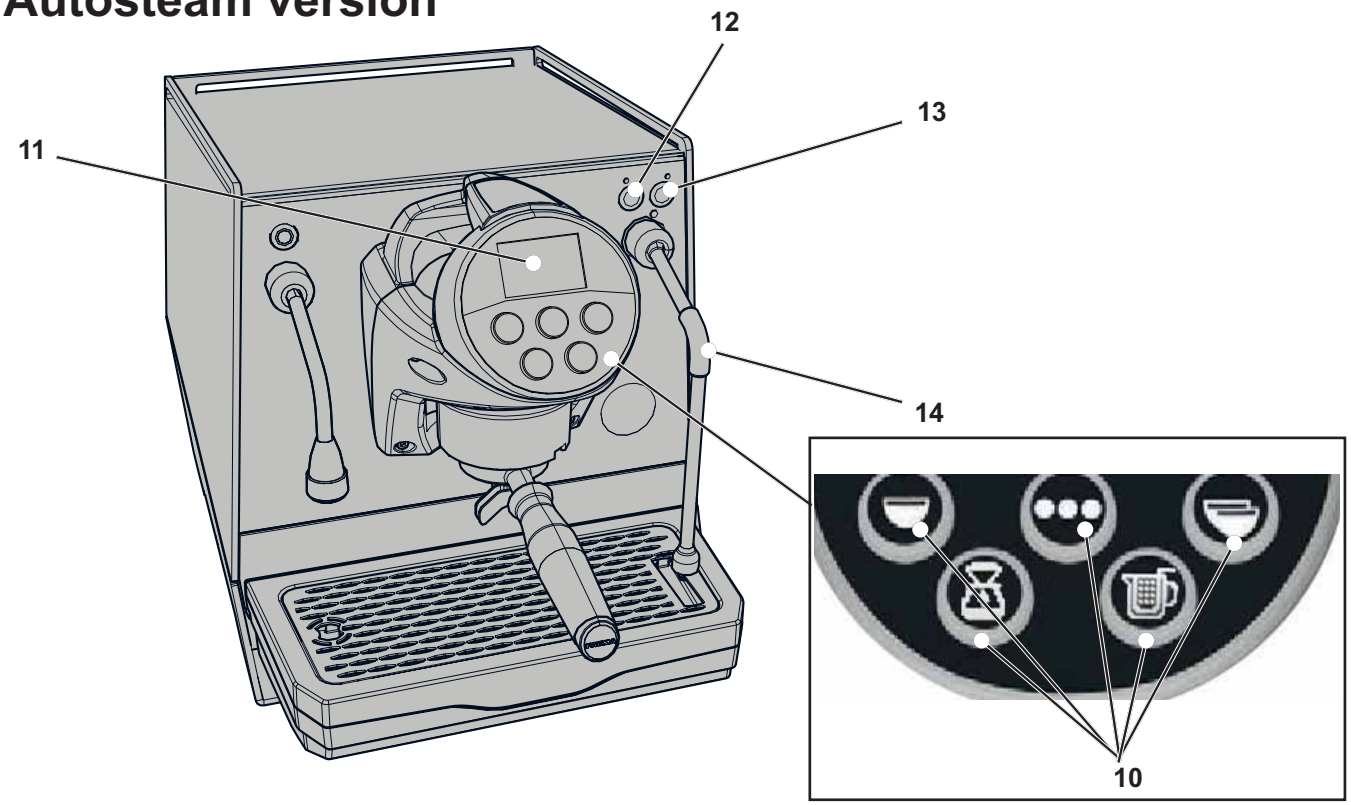


rev. 2242

Standard version



Autosteam version



IT LEGENDA

1 Interruttore generale
2 Piano appoggiatazze
3 Pulsante erogazione acqua calda
4 Tubo (lancia) acqua calda
5 Serbatoio acqua
6 Bacinella
7 Manometro pompa
8 Leva regolazione vapore
9 Tubo (lancia) vapore orientabile
10 Tasti erogazione caffè
11 Display
12 Autosteam: tasto latte "caldo"
13 Autosteam: tasto latte "montato"
14 Tubo (lancia) vapore Autosteam

EN LEGEND

1 Main switch
2 Cup tray
3 Hot-water-dispensing push button
4 Hot-water pipe (nozzle)
5 Water tank
6 Basin
7 Pump pressure gauge
8 Steam adjustment lever
9 Orientable steam pipe (nozzle)
10 Coffee dispensing keys
11 Display
12 Autosteam: "hot" milk key
13 Autosteam: "frothed" milk key
14 Autosteam steam pipe (nozzle)

FR LÉGENDE

1 Interrupteur principal
2 Plateau repose-tasses
3 Bouton distribution eau chaude
4 Buse eau chaude
5 Réservoir eau
6 Bac
7 Manomètre pompe
8 Levier réglages vapeur
9 Buse vapeur orientable
10 Touches distribution café
11 Affichage
12 Autosteam : touche lait « chaud »
13 Autosteam : touche lait « monté »
14 Buse vapeur Autosteam

DE LEGENDE

1 Hauptschalter
2 Tassenabstellfläche
3 Taste Heißwasserabgabe
4 Heißwasserausgaberohr
5 Wasserbehälter
6 Tropfenauffangwanne
7 Manometer Pumpe
8 Dampfeinstellhebel
9 Verstellbares Dampfausgaberohr
10 Kaffee-Abgabetaste
11 Display
12 Autosteam: Taste Warme Milch
13 Autosteam: Taste Aufgeschäumte Milch
14 Verstellbares Autosteam-Rohr

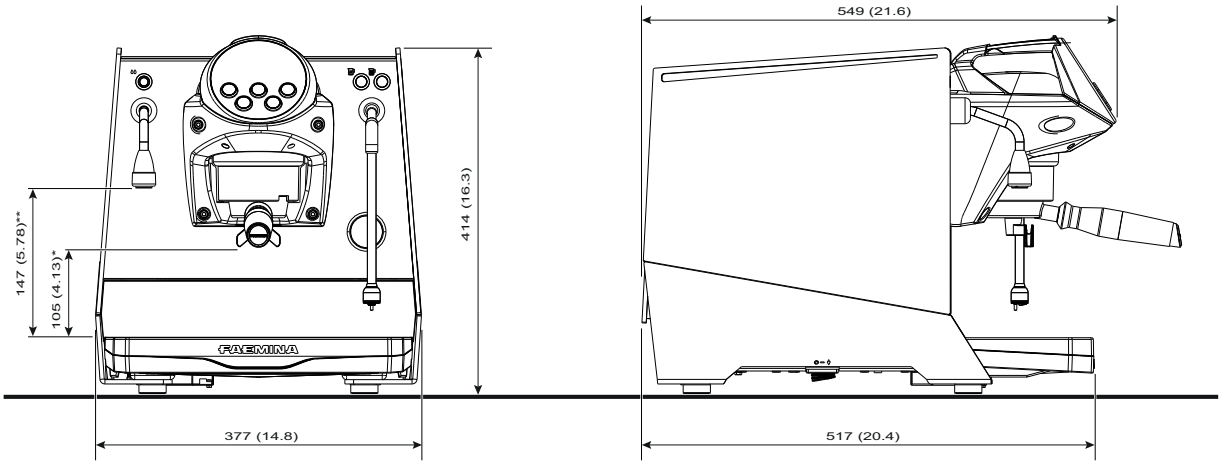
ES LEYENDA

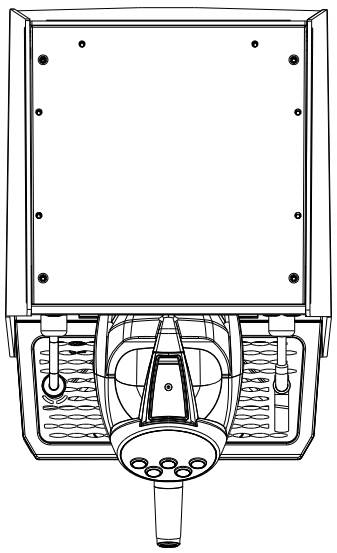
1 Interruptor general
2 Bandeja apoya-tazas
3 Botón suministro agua caliente
4 Tubo (boquilla) agua caliente
5 Depósito de agua
6 Bandeja
7 Manómetro bomba
8 Palanca de regulación de vapor
9 Tubo (boquilla) vapor ajustable
10 Teclas de suministro de café
11 Visualizador
12 Autosteam: tecla leche «caliente»
13 Autosteam: tecla leche «montada»
14 Tubo (boquilla) vapor Autosteam

PT LEGENDA

1 Interruptor principal
2 Superfície de apoio das chávenas
3 Botão de distribuição de água quente
4 Tubo (lança) de água quente
5 Reservatório de água
6 Bacia
7 Manómetro da bomba
8 Alavanca de regulação do vapor
9 Tubo (lança) de vapor orientável
10 Botões de distribuição do café
11 Visor
12 Autosteam: botão leite "quente"
13 Autosteam: botão "espuma" de leite
14 Tubo (lança) de vapor Autosteam

PED / DESP	P_{max} [bar]	T_{max} [°C]	**tipo di macchina** **Type of machine** **type de machine** **Maschinentyp** **modelo de la máquina** **tipo de la màquina**	1 gruppo 1 unit 1 groupe 1 gruppe 1 grupo 1 grupo
			Fluido - Fluid - Fluide **Flüssig - Fluido - Fluido**	**Capacità - Capacity - Capacitè** **Kapazität - Capacidad - Capacidade** [L]
Caldaia Service boiler Chaudière Heizkessel Caldera Caldeira	2	133	acqua/vapore water/steam eau/vapeur wasser/dampf agua/vapor água/vapor	2.5
Boiler Heat exchanger Échangeur de chaleur Wärmeaustauscher Intercambiador de calor Permutador de calor	12	133	acqua water eau wasser agua água	0.60 x 1





Weight	Kg	35
	pounds	77

FAEMA

Contents

Description of the symbols on the display

LEVEL

This symbol indicates the water level in the boiler. During the loading phase, the lower part of the icon flashes.
When the optimum level has been reached, the symbol looks like this  .

HEATING ELEMENT

This symbol indicates that the heating element is active and working.

When the boiler pressure reaches the set value, the icon looks like this

As long as the machine is working, one of the two icons   will appear on the display to indicate whether the electric heating element is active or not.

This symbol indicates that the boiler heating element is not active.

N.B.: the user cannot activate/deactivate the electric heating function.

When the on/off function is programmed, electric heating is activated automatically.

BOILER PRESSURE

This symbol indicates the boiler pressure value.

This symbol indicates that the machine is in the pre-heating phase, or that the boiler pressure has fallen below the "cold machine" level.

Throughout this phase, the display alternates this icon and the boiler pressure one.

When the icon  no longer appears on the display, this means the machine has reached the required pressure level and programmed work temperature.

WI-FI

Wi-Fi connection symbols:

- network available, but no connection made

- connected to the network.

BLUETOOTH

These symbols refer to Bluetooth communication:

- the white icon indicates that the Bluetooth module is installed on the machine

- the white icon on a dark background indicates that the machine is communicating with a Bluetooth grinder-doser.

USB

This symbol appears on the display when a USB pen drive is connected.

FLOW CONTROL (ONLY DURING USE)

When this animated icon appears, it means the grinder needs to be tightened or loosened to bring the coffee dose back within the defined parameters.
The icons shown are:

indicating that the grinder needs to be loosened. (coffee flow lower than the reference level).

indicating that the grinder needs to be tightened. (coffee flow greater than the reference level).

Note. the number next to the icon (1 or 2) indicates the grinder-doser that needs to be adjusted.
The icon appears on the display in place of the level symbol.

TECHNICAL PROGRAMMING

This symbol indicates that technical programming can be accessed.

Switching off the boiler

1

Press and hold the button for a few seconds.

2

The coffee group goes into STANDBY.

3

If unused for a further 60 seconds, the coffee group will be deactivated and the display dimmed.

Press any button twice in a row to return to normal operation.

Warning for the user

NB: in the event of a warning, the flashing white icon WILL APPEAR, requesting the user's intervention (e.g. a washing request, etc.).

Coffee group symbols

94.0° Boiler temperature.

4 Pre-infusion phase (shown by the symbol) and relative duration.

25 Dispensing phase (shown by the symbol) and relative duration.

bar indicating the gradual progress of the operation.

This icon appears when the coffee boiler is switched on, and indicates the phase to reach the set temperature.

This icon indicates that the coffee boiler is in the heating phase.

Coffee dispensing

1

Press the button corresponding to the required dose.

2

The infusion phase begins (shown by the symbol on the group display, with the relative duration).

3

Once infusion has been completed, dispensing begins (shown by the symbol , with the relative duration).

4

When the set dose has been reached, dispensing stops automatically.
Before returning to standby, the touch screen shows the following parameters for a few seconds: total dispensing duration and infusion phase duration.

5

Press for continuous dispensing.

Both measured and continuous dispensing can be interrupted at any time by pressing or any other dose button.

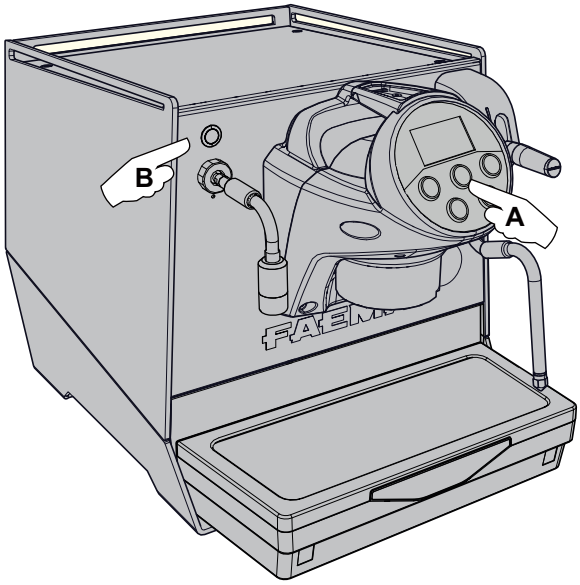
NB: if customer programming is enabled, the button can be programmed as a dose.

TECHNICAL PROGRAMMING

Technical programming flow

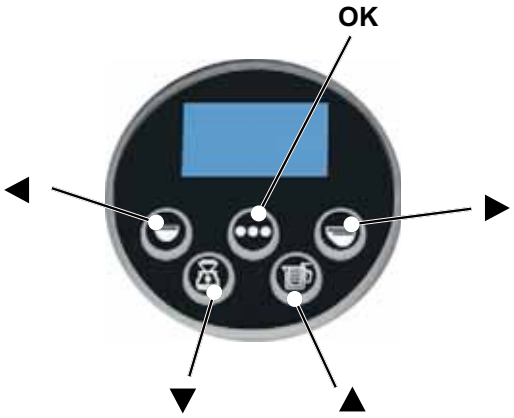
1

PROGRAMMING MENU
"TECHNICAL" programming is accessed by pressing the **OK** button (**A**) for 5 seconds, then pressing the water button (**B**) and then immediately **OK** for a further 5 seconds. The machine will go into standby, the heating elements will be switched off and the water button LED will flash. To return to normal operation, press the water button for 5 seconds.



2

- Use the 5 buttons to navigate



Position the cursor (white line) on the required row, using the ▲ and ▼ buttons, then press ▶.

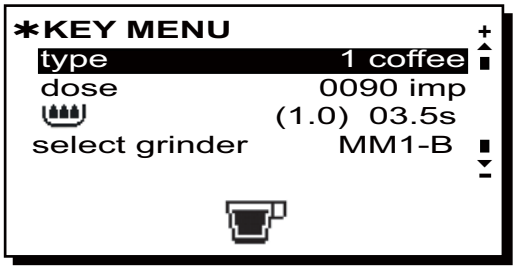
Use the ▲ and ▼ buttons to alter the values. There are then 2 options:

1) confirm the modifications by pressing **OK**
2) quit the menu (leaving the values unchanged) by pressing. ◀

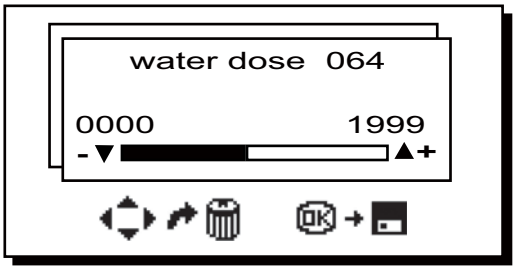
3

Displaying the menus available: use the ▲ and ▼ buttons, then press ▶
Accessing the menus: position the cursor on the required row using the ▲ and ▼ buttons, then press ▶ (or, in the case of the ”SELECT KEY” menu, press a selection button)

Modifying the menus and sub-menus: position the cursor on the required row, using the ▲ and ▼ buttons, then press ▶



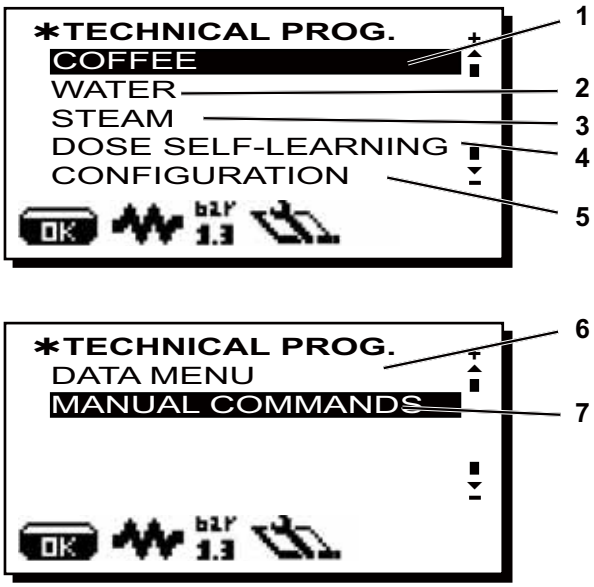
Modify the indication or alter the value with ▲ and ▼
N.B.: when the data are being modified, the cursor becomes “ →" or a slide bar appears with the minimum and maximum values that can be set:



Quitting the programming panels. There are 2 options:
1) confirm the modifications by pressing ***OK***
2) quit the menu (leaving the values unchanged) by pressing ◀

4

After entering TECHNICAL programming mode, press ▶. The display will show the following message and then the next page (scroll down).

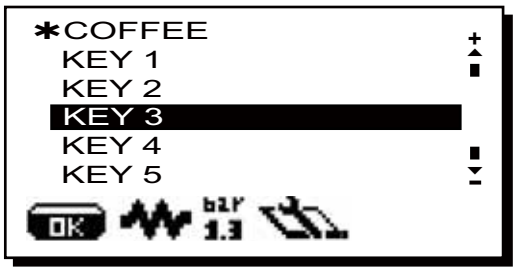


The individual items are detailed below.

1. COFFEE MENU

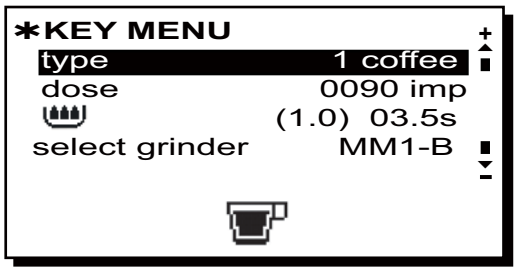
1

Position the cursor (white line) on the required row, using the ▲ and ▼ buttons, then press ▶.



2

Press one of the coffee dispensing buttons on the selection panel (the associated LED will remain lit up). The display will show:



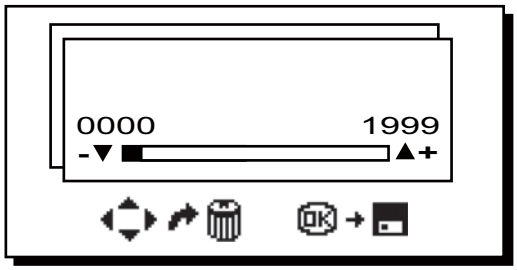
3

The button pad can be used to memorise the required dose for each button.
The coffee selection parameter that can be modified is:

- ***dose*** (volumetric dispensing device pulses)
- (wetting and pre-infusion time).

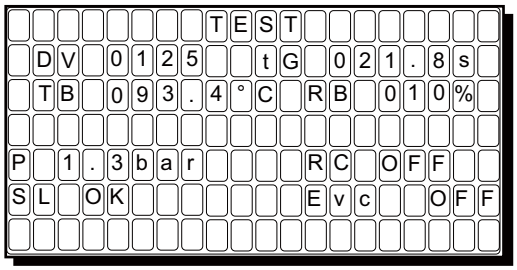
(1.0) is the duration of the wetting phase, in seconds.
03.5s is the duration of the pre-infusion phase, in seconds.

Modify the dose:



4

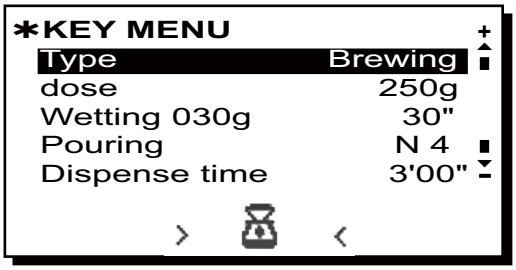
Press **OK** to start dispensing and to see the relative parameters on the display:



The parameters visualised are:
Dv: *incremental count of volumetric dispensing devices*
tG: *dispensing time*
TB: *instantaneous coffee boiler temperature*
RB: *% activation of coffee boiler heating element*
P: *boiler pressure*
Rc: *boiler heating element*
SL: *water level in the boiler*
Evc: *boiler filling solenoid valve*

Apart from coffee, other types of beverage can be selected too.

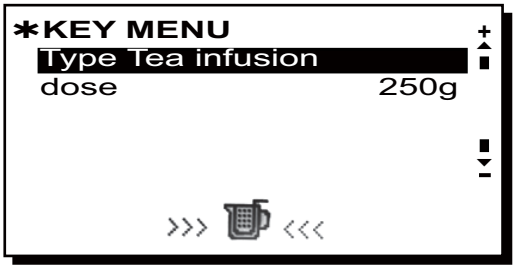
A - "Brewing", with the various adjustments of the specific parameters.



- ***dose*** (total grammes of water to make the beverage).
- ***Wetting*** (grammes of water to be dispensed, in the set time, for the wetting phase.
  In the example, 30 grammes of water will be dispensed in 30 seconds).
- ***Pouring*** (number of water dispensing phases - excluding the wetting phase - to make the beverage.
  In the example, 4 dispensing phases).
- ***Dispensing time*** (the time taken to make the beverage.
  In the example, 3 minutes and 00 seconds).

This example refers to the configuration pre-set in the factory:
beverage of 250 grammes **(250g)** dispensed in 3 minutes **(3'00")**.
Of the total 250 grammes, 30 grammes **(030g)** are dispensed in 30 seconds **(30")** during the wetting phase.
The other 220 grammes are added in 4 phases **(N 4)** in the remaining time of 2 minutes and 30 seconds:
total of 3 minutes **(3'00")** - minus 30 seconds for wetting **(30")**.

B - "Tea infusion", selecting the required dose.



- dose (total grammes of water to make the beverage).

The buttons can also be set with the following functions:

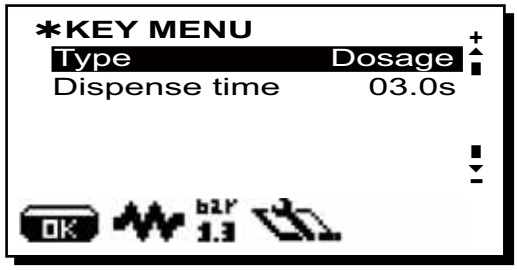
- Stop, to end a dispensing phase
- Flush, for a brief group rinsing phase (1-5 seconds) before inserting the filter-holder
- Disabled - no function.

2. WATER

1

Position the cursor (white line) on the required row, using the ▲ and ▼ buttons, then press ▶.

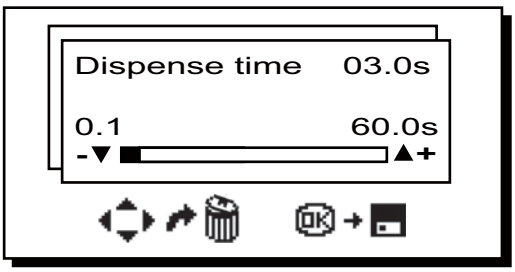
The modification menu appears on the display.



2

The hot water selection parameter that can be modified is:

- Water dispensing time.



The ***TEST*** phase for the water buttons is the same as that for the coffee buttons.

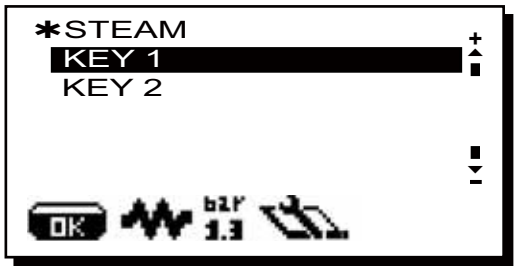
Press **OK** to confirm the data entered.

3. STEAM

1

Position the cursor (white line) on the required row, using the ▲ and ▼ buttons, then press ▶.

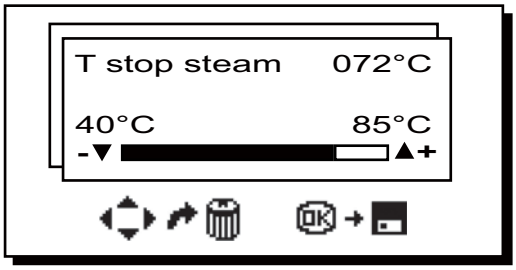
The modification menu appears on the display, to choose the relative buttons.



2

The parameters that can be modified are:

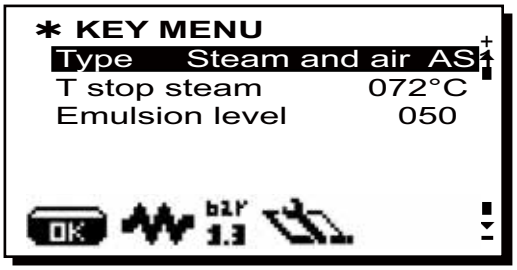
- **T. steam + air** (for AUTOSTEAM only).
- **T stop steam** (temperature value "xxx°C" for hot milk or frothed milk), setting any value between 40° and 85°.



3

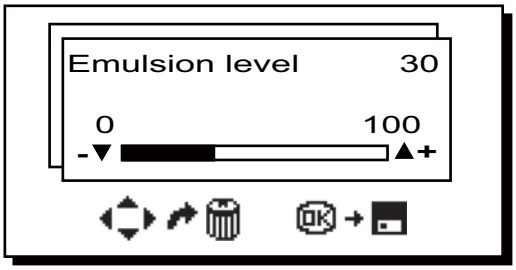
For AUTOSTEAM only:

Press one of the two buttons of the selector. The display will show:



4

- **Emulsion level** (a different emulsion level can be selected for frothed milk.
  The value can be set between 10 and 100: 0 indicates no emulsion, 100 continuous emulsion).



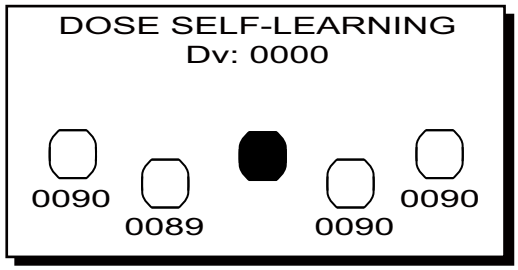
The ***TEST*** phase for the steam buttons is the same as that for the coffee buttons.

Press **OK** to confirm the data entered.

4. PROGRAMMING MEASURES WITH THE "SELF-LEARNING" FUNCTION

The water doses for coffee and the hot water doses can also be programmed with the *"SELF-LEARNING"* function.

Position the cursor (white line) on the required row, using the ▲ and ▼ buttons, then press ▶.
The following message appears on the display:



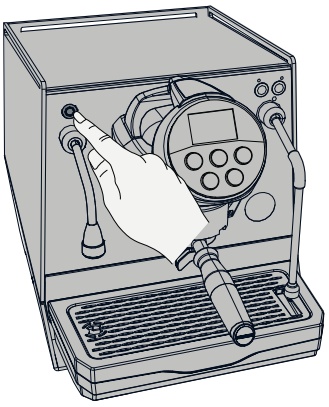
1 -Hook the filter-holder (with the dose of ground coffee) to the group.

2 -Place the cup(s) underneath the filter-holder spouts, then press the button to be programmed. Keep the button pressed until the required level is reached in the cup(s).

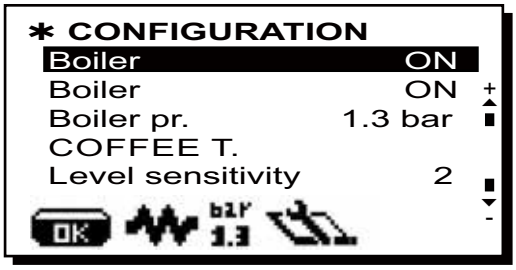
During this phase, the value of the volumetric dispensing device pulses (below the representation of the buttons on the display) is increased. When the required level is reached, release the button; that value will be stored and will appear underneath the programmed button.

3 - Program all the coffee buttons if necessary, repeating the steps from point 1.

At the end, confirm the modifications made and quit the menu by pressing the hot water dispensing button.



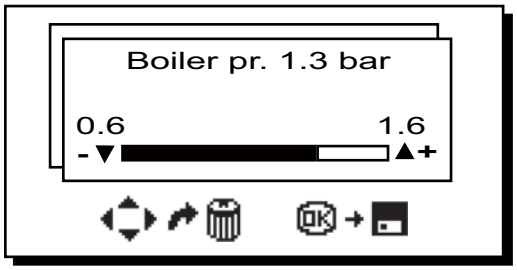
5. CONFIGURATION MENU



Boiler- The heating element and the self-levelling function of the service boiler are activated and deactivated using the "Boiler" ON/OFF parameter.

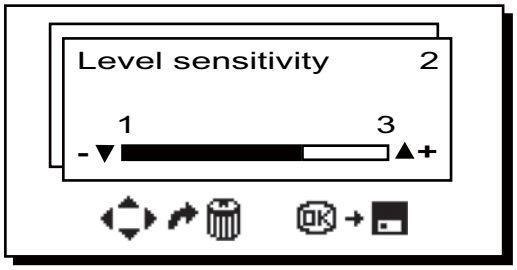
Boiler - The boiler heating element is activated and deactivated using the "Boiler" ON/OFF parameter.

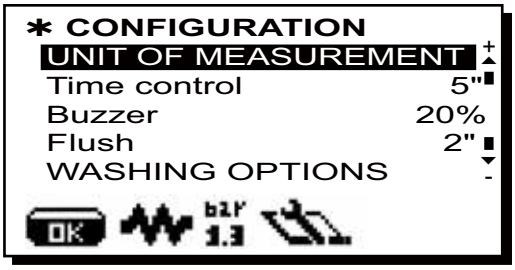
Boiler pressure- Indicates the pressure in the boiler: 0.6 ÷ 1.6 bar (9 ÷ 23 psi).



T. COFFEE - This parameter includes the items for setting the boiler temperature. The value can be set between 60 and 110°C (140÷230°F), in steps of 0.5°C. This menu allows you to program a boiler temperature offset within a range of +/-2°C.

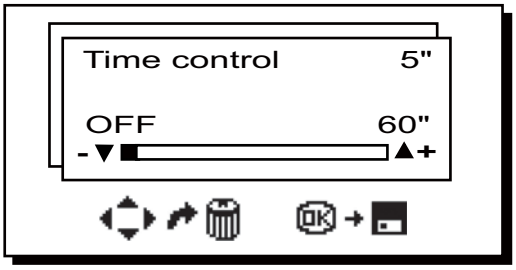
Level sensitivity - Indicates the degree of sensitivity of the level probe, which in turn affects the loading of water in the boiler. For safety reasons, the boiler self-levelling function is disabled when the boiler heating element is turned off.
- NB: set a value of 1 if the machine uses highly conductive water.
Set a value of 3 if the water is not very conductive (very soft).



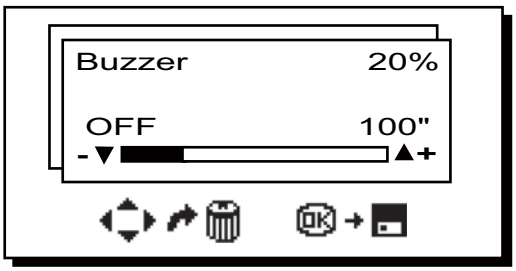


MEASUREMENT UNIT - Includes 2 sub-menus:
temperature - can be set as °C (centigrade - Celsius) or °F (Fahrenheit).
pressure - can be set as bar or psi.

Time control - to see the dispensing time on the display: YES/NO (from 1" to 60').

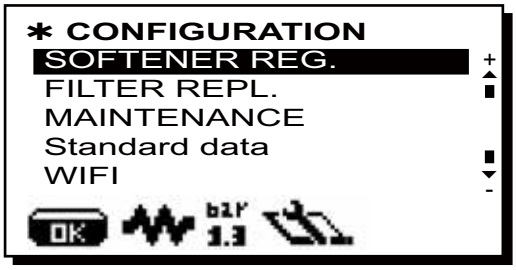


Buzzer - adjusts the volume of the acoustic signals when buttons are pressed or messages are displayed. The level is progressive, from OFF (disabled) to 100% (maximum volume).

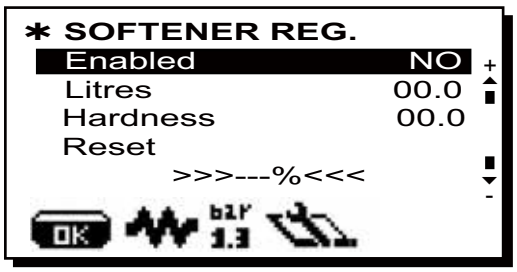


Flush - adjusts the duration of the FLUSH function (can be set between 0 and 3 seconds).

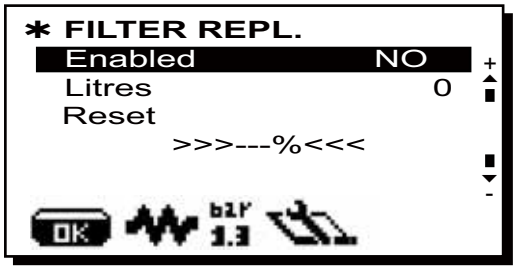
WASHING OPTIONS - to select the stop and start times of the "Wash" and "Water change" functions.



SOFTENER REG. - Includes the softener regeneration parameters: litres of softener (from 0.1 to 25), hardness (from 0 to 45°F). The decreasing softener efficiency level is also shown.
After completing the softener regeneration, go back to the main screen by pressing ◄ for about 8 seconds to delete the message.



FILTER REPLACEMENT - When the litre level on the display is reached, a message indicates that the filter needs to be replaced. For both functions (softener/filter), the efficiency percentage is shown (a decreasing value from 100% to 0%). After replacing the filter, go back to the main screen by pressing ◄ for about 8 seconds to delete the message.



MAINTENANCE - Includes 5 items for setting the maintenance parameters:

Max cycles - the number of cycles initially set: 40000.

Max days - the number of days initially set: 185.

No. cycles - the number of cycles until the next maintenance task.

No. days - the number of days until the next maintenance task.

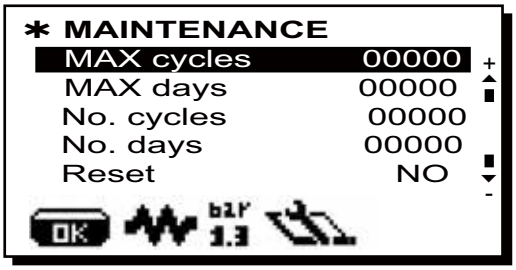
Reset - The options are:

NO - countdown of the cycles and days until the next maintenance task

YES - the values for the remaining cycles (40000) and days (185) are reset

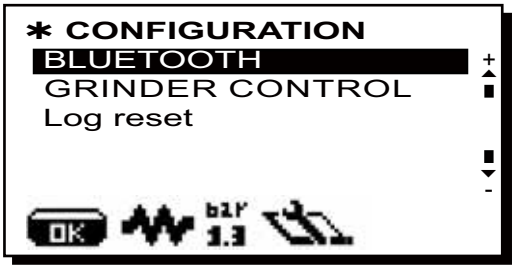
OFF - all controls relating to scheduled maintenance are disabled, and the "No. cycles" and "No. days" counters on the maintenance panel are reset.

Once the maintenance task has been carried out, a reset must be made in technician mode to delete the message.



Standard data - Loading of standard data: YES/NO.

WIFI - See the "*Wi-Fi configuration*" section on the next page.



BLUETOOTH - see the "*Bluetooth connection*" and "Bluetooth communication between machine and grinder-doser" sections on the next pages.

GRINDER CONTROL

The parameters that can be set are:

- Enabled - MM1 - MM2

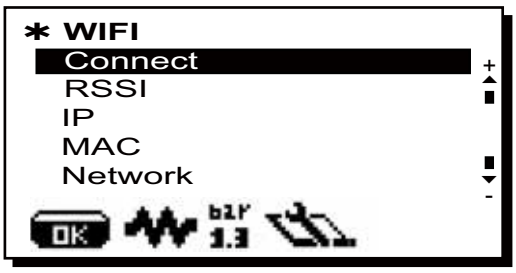
- Adjustment threshold -

Refer to the "Configuring the grinder control parameters" section on the next pages.

Log reset - Used to clear the faults (Wash log, Faults log and Water change) that occurred and were stored by the machine: YES/NO.

Wi-Fi configuration

Wi-Fi menu - Configure the following Wi-Fi parameters as shown below:



- CONNECT - to connect to the access point selected.
- RSSI - signal intensity:
values lower than -70 dB indicate poor coverage, with probable difficulty in transmitting data.
- IP - displays the IP address assigned to the machine by the wireless access point.
- MAC - indicates the Mac address of the Wi-Fi module on the machine. This parameter is read-only, and cannot be modified.
- NETWORK - enter the name of the access point.
- SECURITY - indicate the type of Wi-Fi network protection:
open: no protection
WPA: WPA2-psk protection
WEP: WEP 128 protection.
-KEY - enter the password to access a protected Wi-Fi network (WPA or WEP).
- URL - enter listener.gruppocimbali.com.
- Port - enter 61618.
- fTX - used to reduce data traffic to the remote server:
> **-** transmission of all the data daily upon machine hardware start-up, and faults/washings as they occur
>> **-** as level 1, plus hourly counts
>>> **-** as level 2, plus pings every 10' (default)
>>>> **-** as level 3, plus sending of information relating to coffee dispensing and washing.
- RESET - to reset the standard parameter settings.

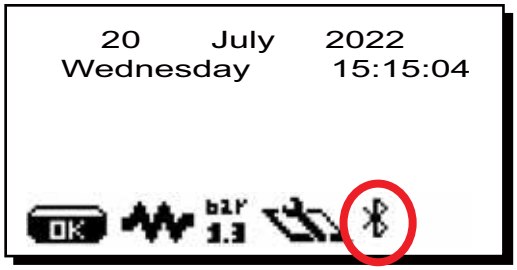
Bluetooth connection

Bluetooth menu - The parameters that can be set are:
- MM1-MM2 - Possibility to connect 1 or 2 grinders.
- *Search* - The machine finds all the Bluetooth devices within a range of 10m.
- *Reset* - The connection with the associated device is annulled.

NB: when the Bluetooth grinder-dosers are being connected, the first one to be associated is set as MM1.

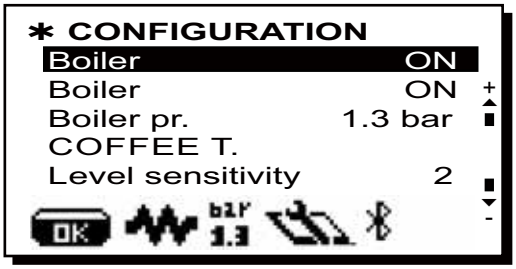
Bluetooth communication between machine and grinder-doser

1 Switch on the machine; the initial menu appears on the display. The ✱ symbol indicates that the machine can be associated with a Bluetooth device.

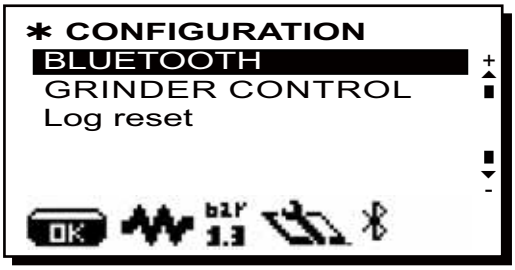


Enter TECHNICAL programming; the message shown in point (2) will appear on the display.

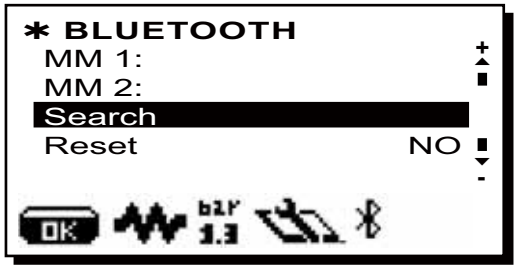
2 Use the ▲ and ▼ buttons to position the cursor on the "*CONFIGURATION*" item in the Technical prog. menu of the machine, then press ▶:



3 Position the cursor on "*BLUETOOTH*" in the machine configuration menu, then press ▶:



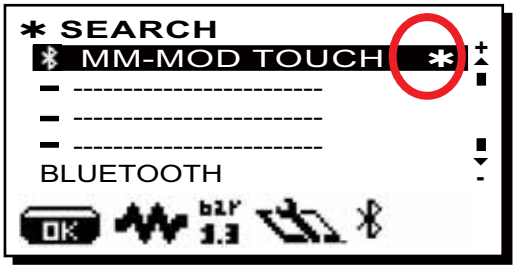
4 Position the cursor on "*SEARCH*", then press ▶:



5

The machine finds all the Bluetooth devices within a range of 10 metres.

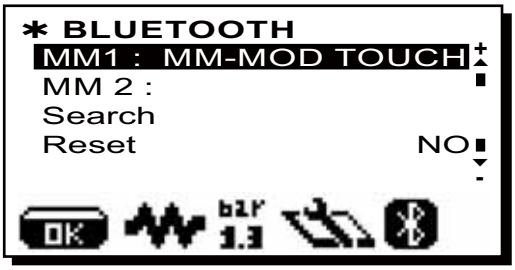
6



1) Scroll through the items by pressing ▲ and ▼

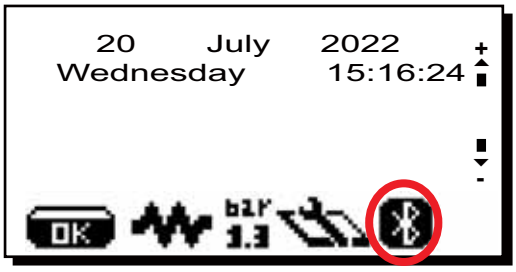
2) Press ***OK*** to confirm the device selected. An asterisk ✱ will appear next to the grinder-doser line, indicating that the Bluetooth connection has been made with the machine.

7



Quit the programming function by pressing ◀.

8

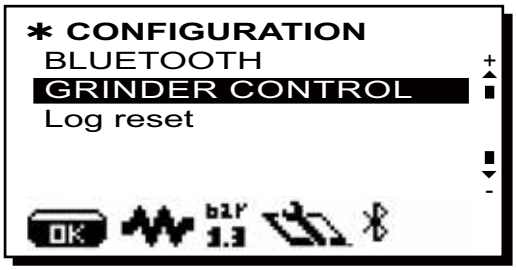


The ✱ icon indicates that the machine and the grinder-doser are communicating.

In the event of communication problems, a "COMMUNICATION FAILURE" message will appear on the machine display, followed by the name of the disconnected grinder-doser. This message disappears automatically when the Bluetooth connection is restored. A common cause of this failure is the grinder-doser being switched off while the machine is switched on.

Configuring the grinder control parameters

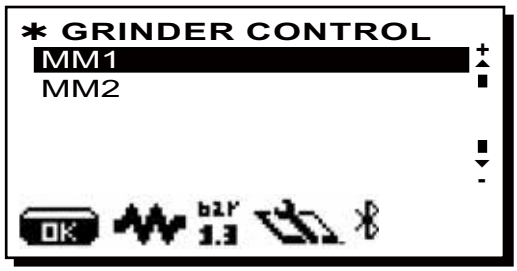
1 Position the cursor on "*GRINDER CONTROL*" in the machine configuration menu, then press ▶:



Grinder control-1
Grinder control-2
The parameters that can be set are:
- Enabled

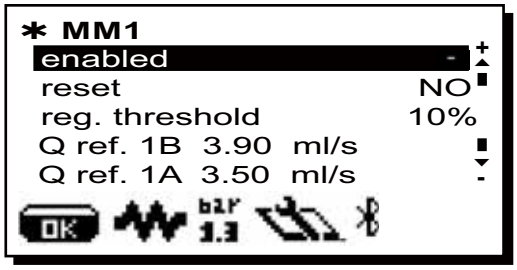
- : not active
- ✓ : manual grinder control (for grinder-dosers with no Bluetooth connection option)
- : automatic grinder control (Bluetooth connection with the grinder-doser)

2



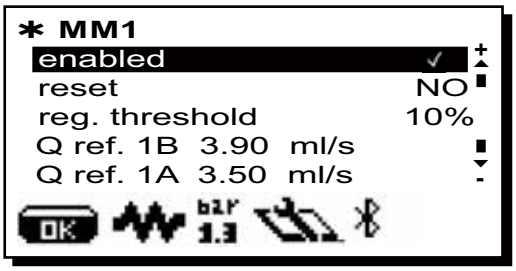
Position the cursor on "*MM1*", then press ▶:

3



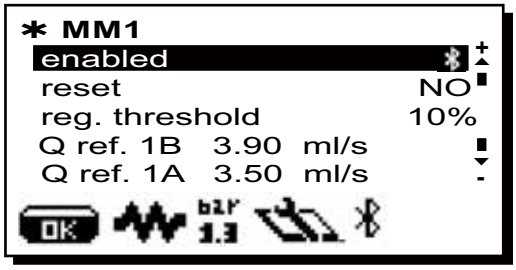
- : not active.

4



✓ : manual grinder control (for grinder-dosers with no Bluetooth connection option)

5

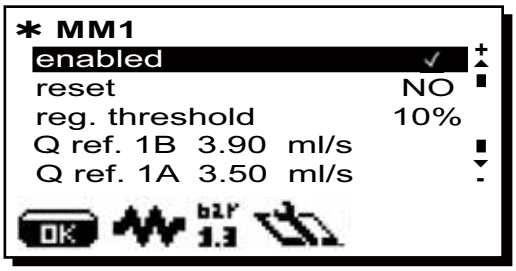


: automatic grinder control (Bluetooth connection with the grinder-doser).

The parameters can be manually modified using the ▲ and ▼ buttons.
At the end, confirm the values by pressing ***OK*** or quit (leaving the previous values) by pressing ◀.

Configuring the grinder control parameters

☑ : manual grinder control (for grinder-dosers with no Bluetooth connection option).



1. Disable grinder control if it is active.
2. Program and calibrate the machine and grinder-doser as required.
3. On the test panel, dispense all the types of beverage to be used (double coffees, single coffees and any special blend - third button).
4. Make a note of the satisfactory coffee flow values for each of the three types of beverage.
5. Go to the grinder control panel and make a reset.
6. Set the flow values for each beverage.
7. Activate grinder control.

NB: to ensure correct grinder control, set the Q.ref of double coffees first.

When this animated icon appears, it means the grinder needs to be tightened or loosened to bring the coffee dose back within the defined parameters.

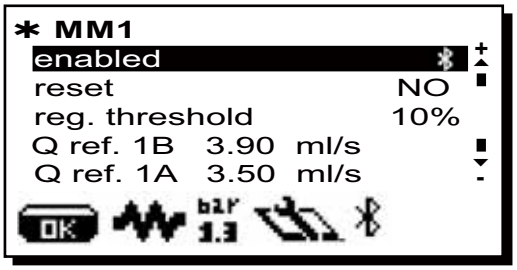
 The icons shown are:
indicating that the grinder needs to be loosened (coffee flow lower than the reference level).

 indicating that the grinder needs to be tightened (coffee flow greater than the reference level).

Note. the number next to the icon (1 or 2) indicates the grinder-doser that needs to be adjusted.
The icon appears on the display in place of the level symbol.

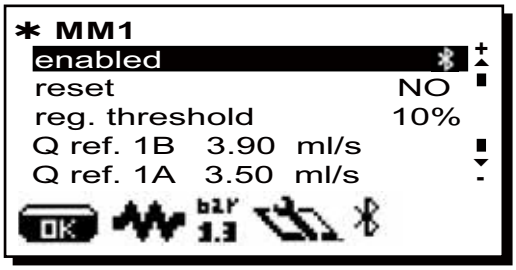
Configuring the grinder control parameters

: Method 1: setting the Q.ref in manual mode.



1. Disable grinder control if it is active.
2. Associate the machine with the grinder-doser via Bluetooth and enable communication as per the method already used.
3. Program and calibrate the machine and grinder-doser as required.
4. On the test panel, dispense all the types of beverage to be used (double coffees, single coffees and any special blend - third button).
5. Make a note of the satisfactory coffee flow values for each of the three types of beverage.
6. Go to the grinder control panel and make a reset.
7. Set the flow values for each beverage.
8. Activate grinder control.

: Method 2: setting the Q.ref in full self-learning mode



1. Disable grinder control if it is active.
2. Associate the machine with the grinder-doser via Bluetooth and enable communication as per the method already used.
3. Program and calibrate the machine and grinder-doser as required, dispensing the beverages until the result in the cup is satisfactory.
4. Go to the grinder control panel and make a reset.
5. Activate grinder control.
6. Quit programming.
7. Dispense double coffees (5 or more) until the message Q.ref OK appears on the service display (with an acoustic signal).
8. Dispense single coffees (5 or more) until the message Q.ref OK appears on the service display (with an acoustic signal).
9. Dispense any special blend coffees (5 or more) until the message Q.ref OK appears on the service display (with an acoustic signal).
10. Enter the programming function and check the set Q.ref values have been stored.

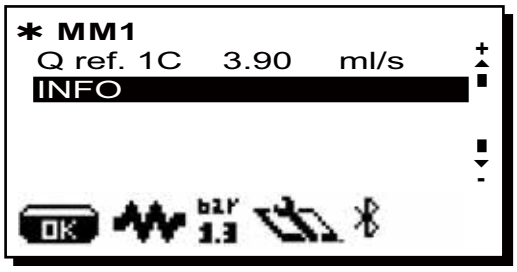
Repeat the procedure for the second grinder-doser (if present).
The machine is now ready to work with grinder control enabled.
In the event of problems, dispense beverages in the test square with grinder control active to see if there is a * symbol next to the flow. Remember that dispensing is only considered valid if it lasts more than 10s.

Other symbols are also used in the test square:
> if the flow is too high compared with the reference (above the upper limit)
< if the flow is too low compared with the reference (below the lower limit)
* the flow is within the acceptable range
- dispensing time too short (at least 8s but less than 10s)
(3) number of remaining coffees, to be deducted

Configuring the grinder control parameters

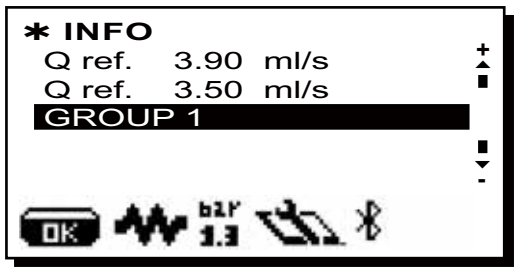
INFO: grinder control.

1



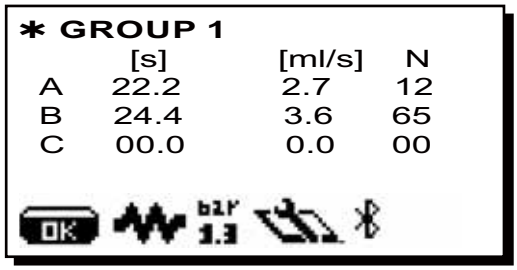
Position the cursor on machine “*INFO*”, then press ▶.

2



Press the ▶ button on “GROUP 1” to see:

3



Example of information about the flow rate of each single dispensing action and sent to the Plat-One platform via Wi-Fi.
(A/B) GR 1 single coffee and one double;
(C) the filter-holder is not used for special coffees.

6. DATA MENU:

6.1. COUNTERS

To enter the data menu, press ▶ . The following message will appear on the display:

By positioning the cursor on “COUNTERS” and then pressing the ▲ or ▼ buttons followed by ▶, the display will show:

The parameters linked to counters are:

- ***coffee*** (number of coffee-based beverages)
- ***brewing*** (number of dispensing actions in "brewing" mode)
- ***tea infusion*** (number of times that tea was dispensed)
- ***water*** (number of times that water was dispensed)
- ***steam*** (number of times that steam was dispensed)
- ***steam+air*** (number of Turbosteam dispensing actions)
- ***total coffee*** (total number of coffee-based beverages)
- ***total operating time*** (time with machine ON)

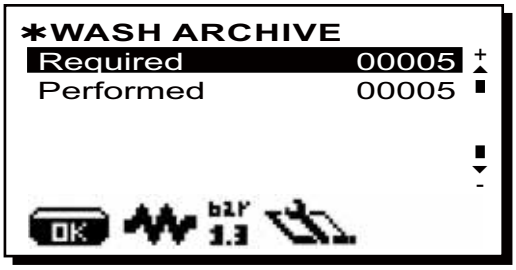
The counters can be reset by positioning the cursor on the relative item and pressing the ▶ button then the ▲ or ▼ button. Press "**OK**" to confirm the reset.

N.B.: the parameter that cannot be reset is:
- ***total coffee***

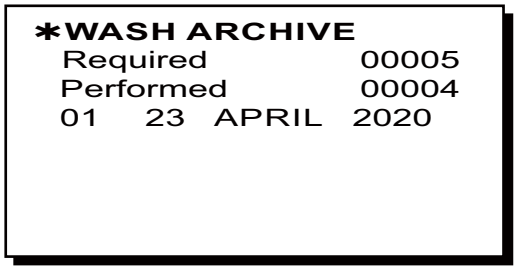
Press ◀ again to return to the main panel.

6.2 WASH ARCHIVE

Press the ▶ button on “Wash archive” to see:

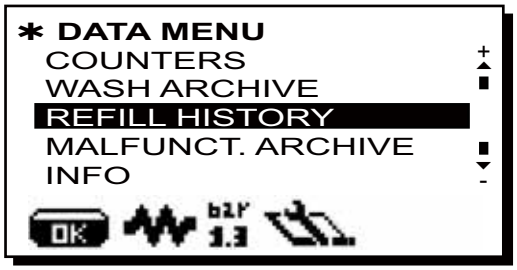


The washing parameters that can be viewed are:
- **Required**: indicates the number of washes that were requested by the machine.
- **Performed**: indicates the number of washes that were carried out within the allocated time (60’)

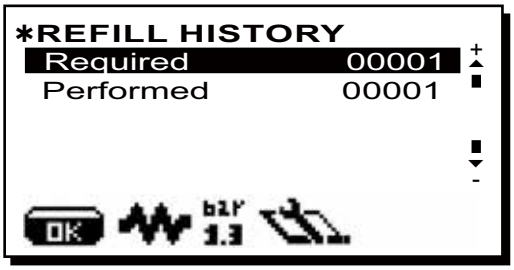


NB: if the requested washes are not carried out within the allocated time, a list of the last 10 missed washes (with the progressive number and the date) is shown under “Performed”.
The first line refers to the most recent data item. Scroll through the list of missed washes using the ▲ and ▼ buttons, then press ◀ to move on to another menu.

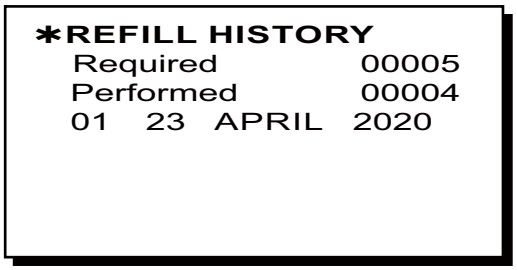
6.3 REFILL HISTORY



Press the ▶ button on “Refill history” to see:



The refill parameters that can be viewed are:
- **Required**: indicates the number of refills that were requested by the machine.
- **Performed**: indicates the number of refills that were carried out within the allocated time (60’).

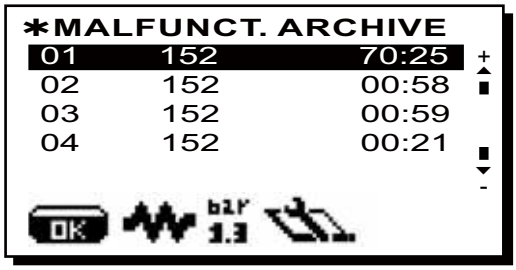


NB: if the requested refills are not carried out within the allocated time, a list of the last 10 missed refills (with the progressive number and the date) is shown under “Performed”.
The first line refers to the most recent data item.

Scroll through the list of missed refills using the ▲ and ▼ buttons, then press ◀ to move on to another menu.

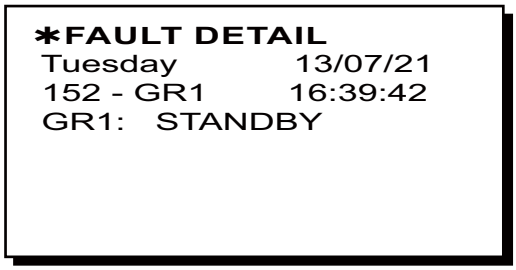
6.4 MALFUNCTIONS ARCHIVE

Press the ▶ button on “Malfunc. archive” to see:



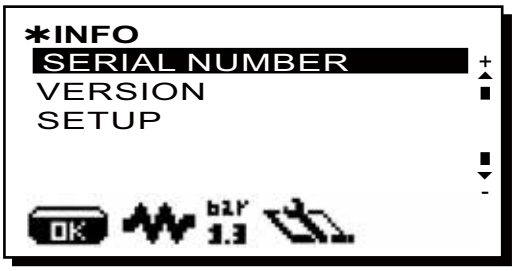
The numbers following the“fault code” indicate the time, in hours and minutes, since the last fault registered.

Press ▶ again to see a detailed display showing:
- the day and time when the fault occurred
- the condition of each group at the time of the fault.

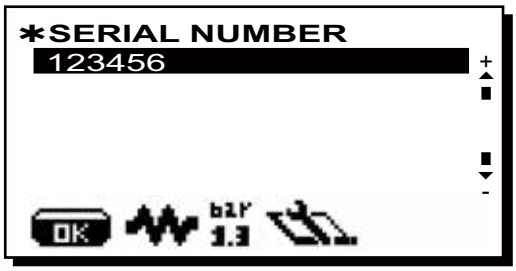


6.5 INFO

By positioning the cursor on “INFO” and then pressing the ▲ or ▼ buttons followed by ▶, the display will show:

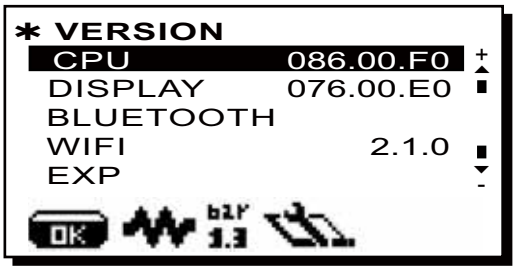


Press the ▶ button on “Serial number” to see:

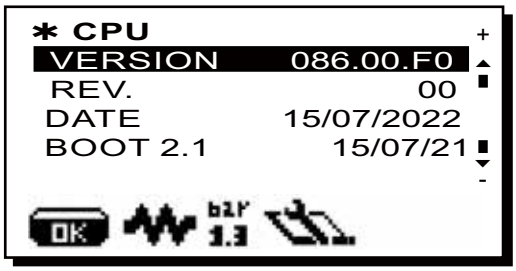


Version

The sub-menus under “Version” shows the memory versions:
- CPU
- display
- WI-FI
- Bluetooth



For some parameters, the pressing of the ▶ button on the lines will display not only the version but also data relating to the revision and the memory date.



Set-up

The parameters entered during the Standard Data entry phase are displayed under "Set-up":

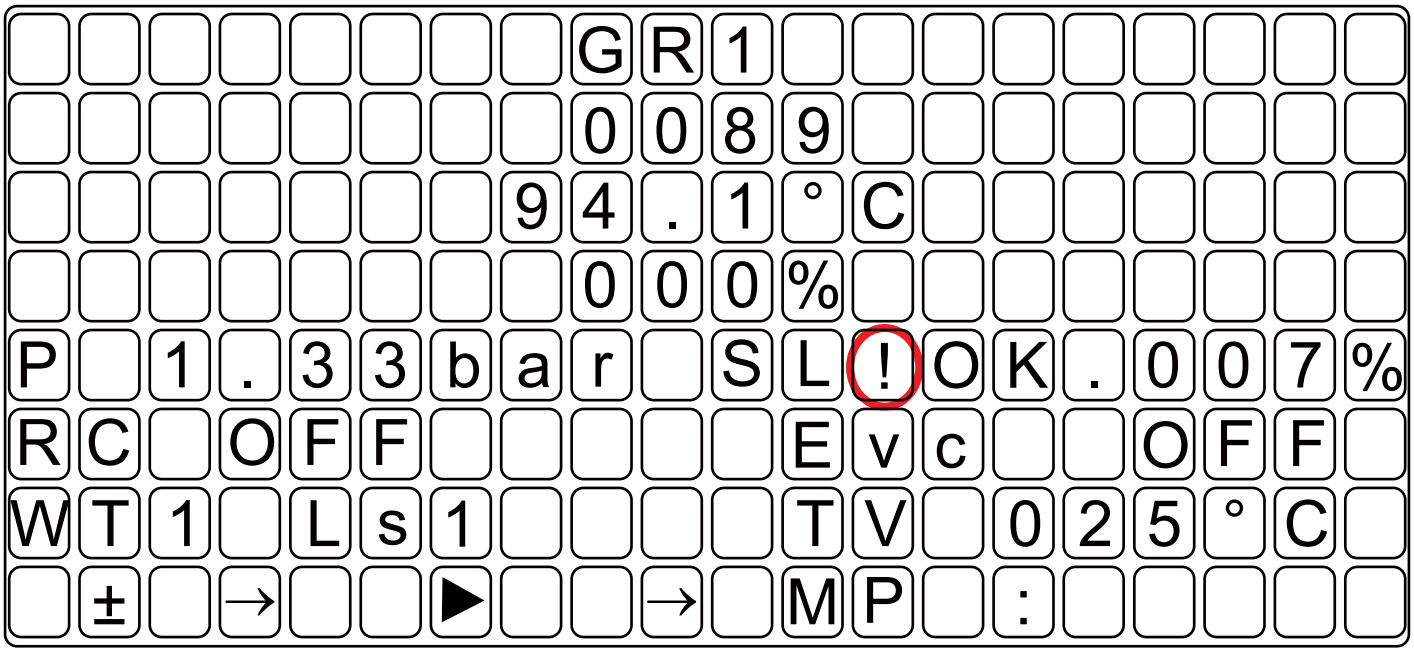
7. MANUAL COMMANDS MENU

To access the manual control panels, position the cursor on “Manual commands” using the “ ▲ and ▼ buttons.

MANUAL COMMANDS - allows the components to be activated manually using the ▲ and ▼ buttons.

When the ▶ button is pressed again, the display shows the following box:

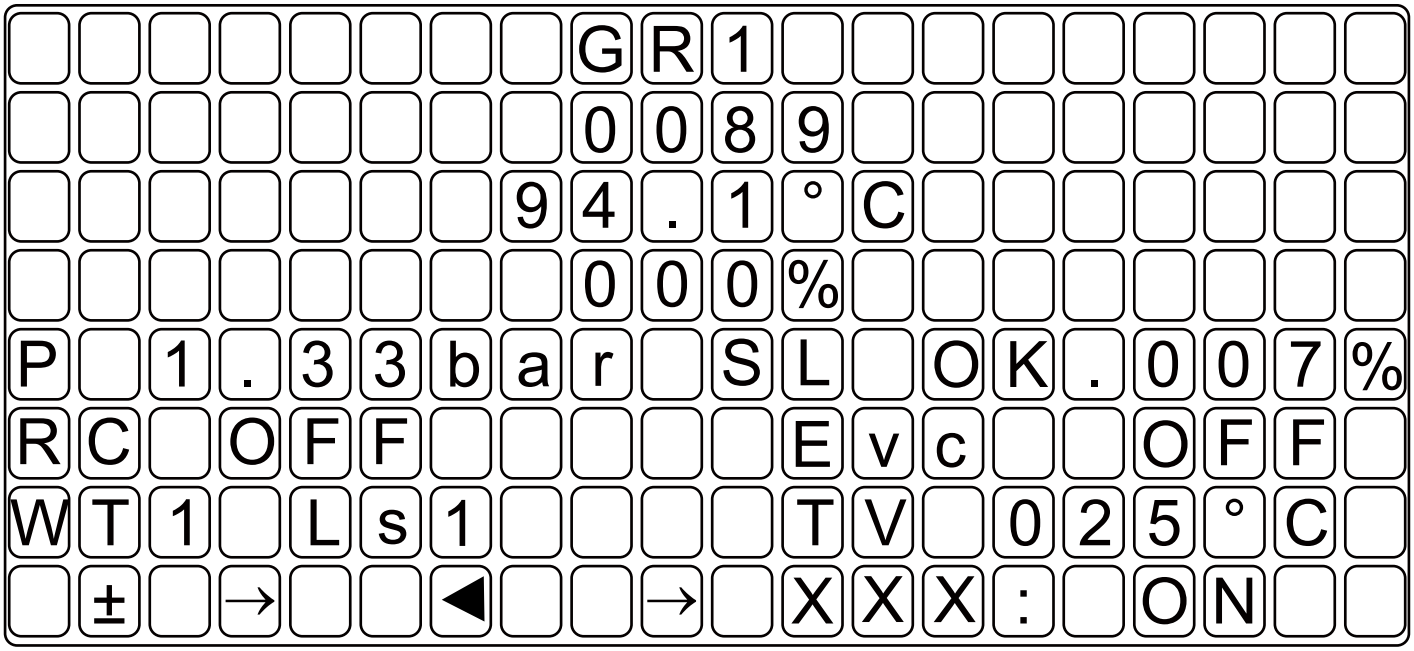
Manual panel 1



- Press ▲ or ▼ to see the various components
- Press ▶ to select the component to be activated and move on to the next panel (M2)
- Press ◀ to quit manual mode.

! Optional symbol: if this symbol appears, it indicates anomalies on the level probe signal.

Manual panel 2

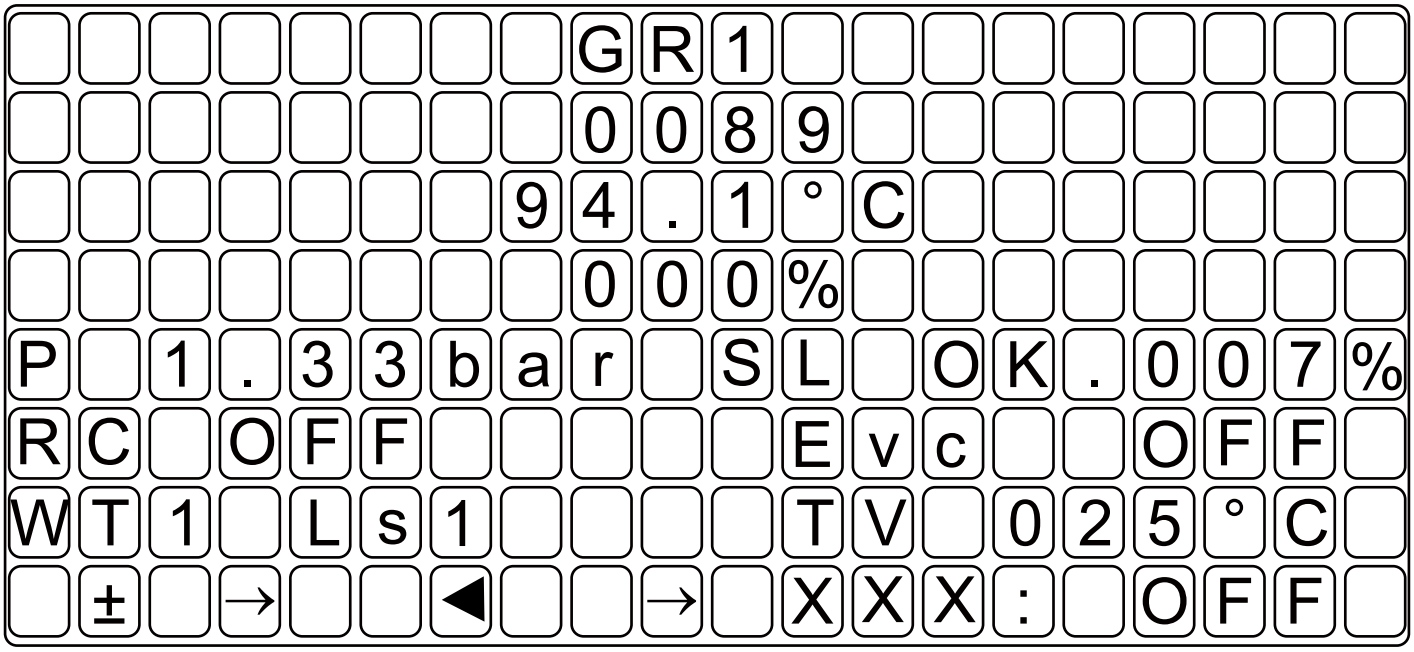


- Press ▲ or ▼ to activate the components.

If they have a direction, use ▲ and ▼ to alternate (“+” LH / “-” RH).

- Press ◀ to return to panel M1.

Manual panel



Level signal:

-Nominal operating range: from 7 to 53% (approx.) (e.g. 8% level OK; 50% no water, level probe uncovered)

-Other values -> signal anomaly - check the wiring and connections

Key

P	Boiler pressure
SL	Water level in the boiler
RC	Boiler heating element
Evc	Boiler filling solenoid valve
WT	Water tank
TV	Steam temperature (if the Autosteam system is **not** present, this parameter is not shown)

The symbols used to define the components that can be accessed for movement are as follows:

MP	Pump motor
Evi	Water inlet solenoid valve
Ein1	Infusion solenoid valve
MC	Autosteam compressor motor *
Ets	Autosteam solenoid valve *
Evc	Boiler filling solenoid valve
Eac	Hot water solenoid valve
G1	Coffee dispensing solenoid valves

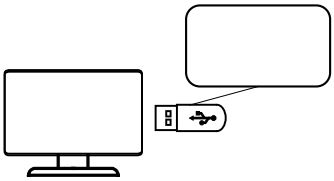
The components marked with * are only applied with certain product configurations.

PRELIMINARY INDICATIONS

Do not switch off the machine or remove the USB pen drive until the update has been completed.

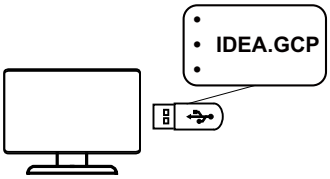
If possible, use a USB pen drive with an operating LED.

1



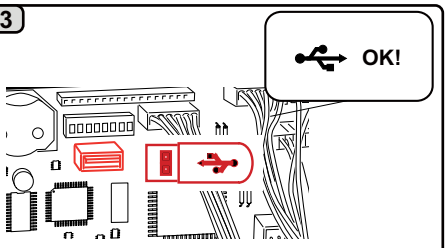
Format the USB pen drive (e.g. Windows FAT32).

2



Unzip the firmware folder and copy all the files to the main path on the USB pen drive.

3

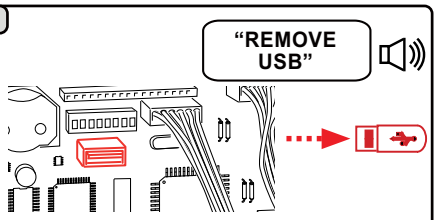


After removing the side panel (as explained in the "DISMANTLING" section),

with the machine switched on

insert the USB pen drive in the relative port on the machine's CPU board, then wait for it to be recognised.

4

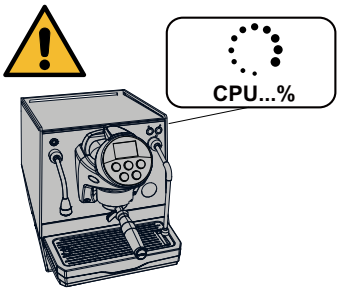


Wait for the files to be copied to the machine.

When the copying process has ended, intermittent beeps will sound.

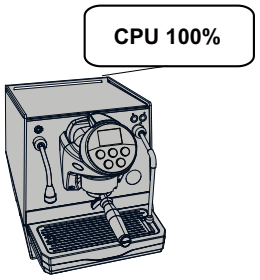
Remove the USB pen drive from the CPU board.

5



The CPU update procedure continues after the USB pen drive has been removed from the CPU board.

6



CPU update completed.

The machine will restart automatically.

8. DIAGNOSTICS MESSAGES

MALFUN. CODE	DESCRIPTION	POSSIBLE CAUSES	VERIFICATIONS and SOLUTIONS
017	**Invalid firmware detected on iDEA expansion board**	• iDEA expansion board not programmed correctly	• Update the software. If the problem persists, replace the iDEA expansion board
019	**Board communication fault on 485 Bus: iDEA expansion board**	• Module on 485 Bus not connected correctly • Board faulty or not programmed	• Check the module is correctly inserted and positioned on the relative connector • Check the status LED is working properly (normally flashing on the module) • Update the software. If the problem persists: • Replace module on 485 Bus • Replace iDEA CPU
020	**Power supply overcurrent alarm on USB port**	• USB-port current-consumption too high	• Check the status of the USB port and its connections in order to identify possible causes of excessive consumption (e.g. short-circuit) • Once the cause of the malfunction is fixed the USB port should restore itself automatically and return to normal operation. • If the problem persists, replace the CPU board
(x)21	**Group boiler pressure sensor x out of range (x = 1, 2, 3, 4)** Note: Group 1 is to the far left.	• Sensor faulty • Board faulty	• Check the wiring • Replace the sensor • Replace the board
024	**Insufficient clock battery voltage, or another fault (e.g. clock "jammed")**	• Contacts oxidised. • Dead battery. • Clock blocked.	• Clean the contacts on the battery. • Measure the voltage of the battery (3 V DC) and, if necessary, replace it. If the battery is OK try, with the machine turned off, to remove it from the board and wait 2-3 minutes. Then reinsert the battery and check that the clock is working properly.
(x)30	**Restart on the button pad or group display (x = 1, 2, 3, 4, 5)** Note: Group 1 is to the far left. 530 = services		•If the fault persists, replace the board.
051	**Boiler temperature sensor outside range**	• Sensor failure • Card failure	• Check cabling • Replace the sensor • Replace the card
(x)51	**Group boiler temperature sensor x out of range (x = 1, 2, 3, 4)** Note: Group 1 is to the far left.	• Thermocuple disconnected • Sensor failure	• Check cabling • Replace the sensor

(x)52	**Group x boiler heating timeout - 20 minutes (x = 1, 2, 3, 4)** Note: group 1 is the one on the far left. 0 = boiler	• The group x boiler safety thermostat has been triggered • The resistance is interrupted (cabling defect)	• Check if the safety thermostat of the group x boiler has been triggered, and reset it if necessary • Check if there are interruptions or detached fastons on the cabling • Check that the group x boiler resistance is not interrupted and replace it if necessary
(x)53	**Steam thermocouple out of range RH = 053; LH = 153**	• Thermocuple disconnected • Wrong configuration during standard data insertion	• Enter in the programming mode and insert the correct standard data • Check connections • Replace the steam temperature probe
058	**Boiler overpressure alarm**	• Resistanc alwayspowered • Temperature sensor out of range.	• Check cabling • Replace the sensor
059	**Boiler: Refill timeout**	• No water • Refill EV failure • Wiring interrupted • Card failure	• Check water is supplied from the main line • Replace the refill EV • Check cabling • Replace the card
060	**Boiler-level signal errors.**	• Electrical fault • Leakage to earth	• Check wiring • Check, by activating the components individually on the manual control panel, that the level signal does not show any anomalies (%)
062	**Coffees dispensed for MM1 with flow under the limit (3 consecutive coffees dispensed).**	• Coffee filter blocked • Coffee type changed • Qref calibration wrong • Grind too fine, excessive dose ground.	• Wash the group • Clean/replace the coffee filter • Use a coarser grind • Calibrate the machine correctly on the basis of the coffee/recipe.
063	**Coffees dispensed referred to MM1 with flow over the limit (3 consecutive coffees dispensed).**	• Coffee type changed • Qref calibration wrong • Grinding too coarse • Grinder/dispenser blocked, insufficient dose of ground coffee.	• Check that there are no external elements in the grinders • Check that the measure grinder is working (pick-up current and fuses) • Use a finer grind • Calibrate the machine correctly on the basis of the coffee/recipe.
064	**Coffees dispensed referred to MM2 with flow under the limit (3 consecutive coffees dispensed).**	• Coffee filter blocked • Coffee type changed • Qref calibration wrong • Grind too fine, excessive dose ground.	• Wash the group • Clean/replace the coffee filter • Use a coarser grind • Calibrate the machine correctly on the basis of the coffee/recipe.
065	**Coffees dispensed referred to MM2 with flow over the limit (3 consecutive coffees dispensed).**	• Coffee type changed • Qref calibration wrong • Grinding too coarse • Grinder/dispenser blocked, insufficient dose of ground coffee.	• Check that there are no external elements in the grinders • Check that the measure grinder is working (pick-up current and fuses) • Use a finer grind • Calibrate the machine correctly on the basis of the coffee/recipe.

(x)66	**Coffee water dose fault during dispensing (recipe test or self-learning). (x = 1, 2, 3, 4)** Note: Group 1 is to the far left.	• Clogged hydraulic circuit • Faulty volumetric doser	• Check water is supplied from the main line. • Check there are no fitting obstructions or leakage. • Check flowmeter electrical connections. • Replace the broken flowmeter. • Replace the broken board.
(x)67	**Fault on group volumetric measuring device during coffee washing (x = 1, 2, 3, 4)** Note: Group 1 is to the far left.	• Clogged hydraulic circuit. • Faulty volumetric doser	• Check water is supplied from the main line. • Check there are no fitting obstructions or leakage. • Check flowmeter electrical connections. • Replace the broken flowmeter. • Replace the broken board.
(x)70	**Measure-grinder adjustment: Bluetooth set up by the technician. (x = 1, 2) MM1 = 170; MM2 = 270**		• Event only archived and not displayed on the display during normal machine operation.
(x)82	**Button pad reset via CPU board owing to repeated communication problems. (x = 0, 2)**		• Check the insulation • Check the wiring and connections
(x)83	**Exclusion of group button pad from I2C Bus communication (x = 1, 2, 3, 4)** Note: Group 1 is to the far left. **(083=water button pad, 583 steam button pad, 683 TS board, 783 RGB light module)**	• Incorrect keyboard configuration (if applicable). • Wiring interrupted • Card failure.	• Check that the dip switches are correctly configured on the key board (if applicable). • Check cabling • Replace key board.
(x)85	**Bluetooth communication error (x = 1, 2) MM1 = 185; MM2 = 285**	• Incorrect association with measure grinder. • Measure grinder turned off.	• Turn on the grinder. • Repeat device association.
(x)87	**Calibration fault on group touchscreen (x = 1, 2, 3, 4)** Note: Group 1 is to the far left.		**Calibrate the touchscreen**
092	**Request water softener resin regeneration.**		• Softener maintenance.
093	**Request replacement water filter**		• Replace the water-softner filter.
096	**Maintenance needed)**		• The machine has displayed the message to warn the user that maintenance must be performed. Carry out maintenance operations.
097	**Reset standard password**	• Action desired by the user by entering the special code (applicable only for machines with TFT display).	

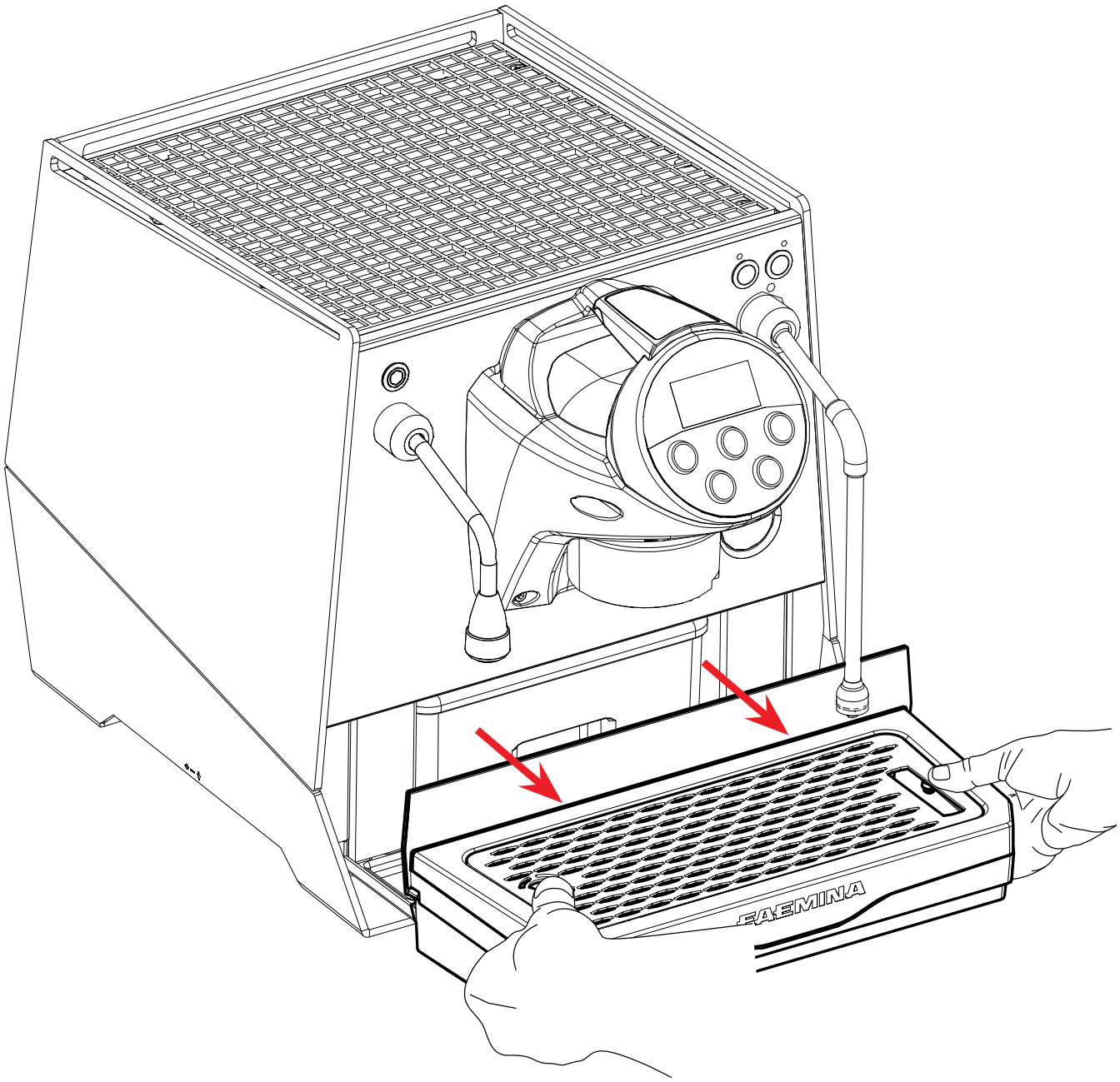
098	**Historical malfunctions and wash 1 reset**	• Initialisation malfunction history (and washing history for machines without TFT display)	• Event only archived and not displayed on the display during normal machine operation.
099	**Default data input.**		

9. DISMANTLING AND ADJUSTMENTS

ALL TASKS MUST BE CARRIED OUT WITH THE MACHINE SWITCHED OFF AND COLD.
ALWAYS USE THE NECESSARY ACCIDENT PREVENTION EQUIPMENT (SHOES, GLOVES).

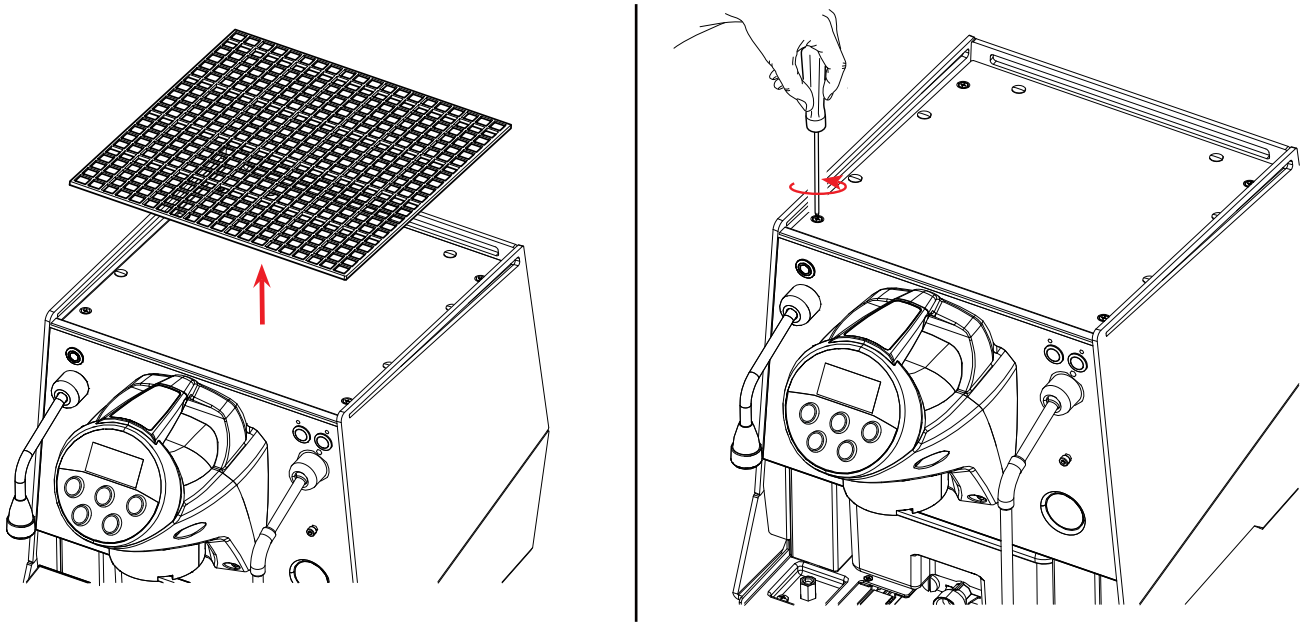
9.1 Removing the basin

1

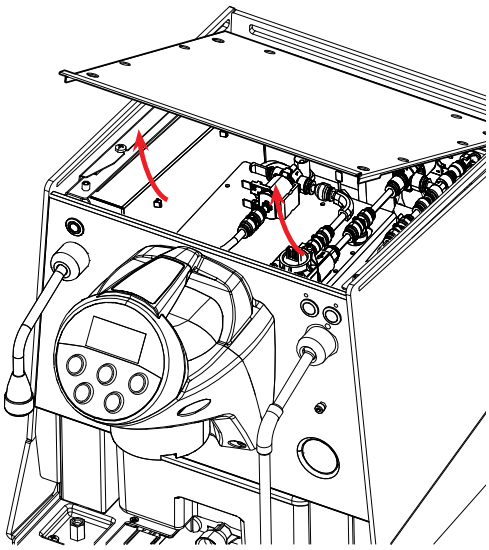


9.2 Removing the cup-holder plate

1

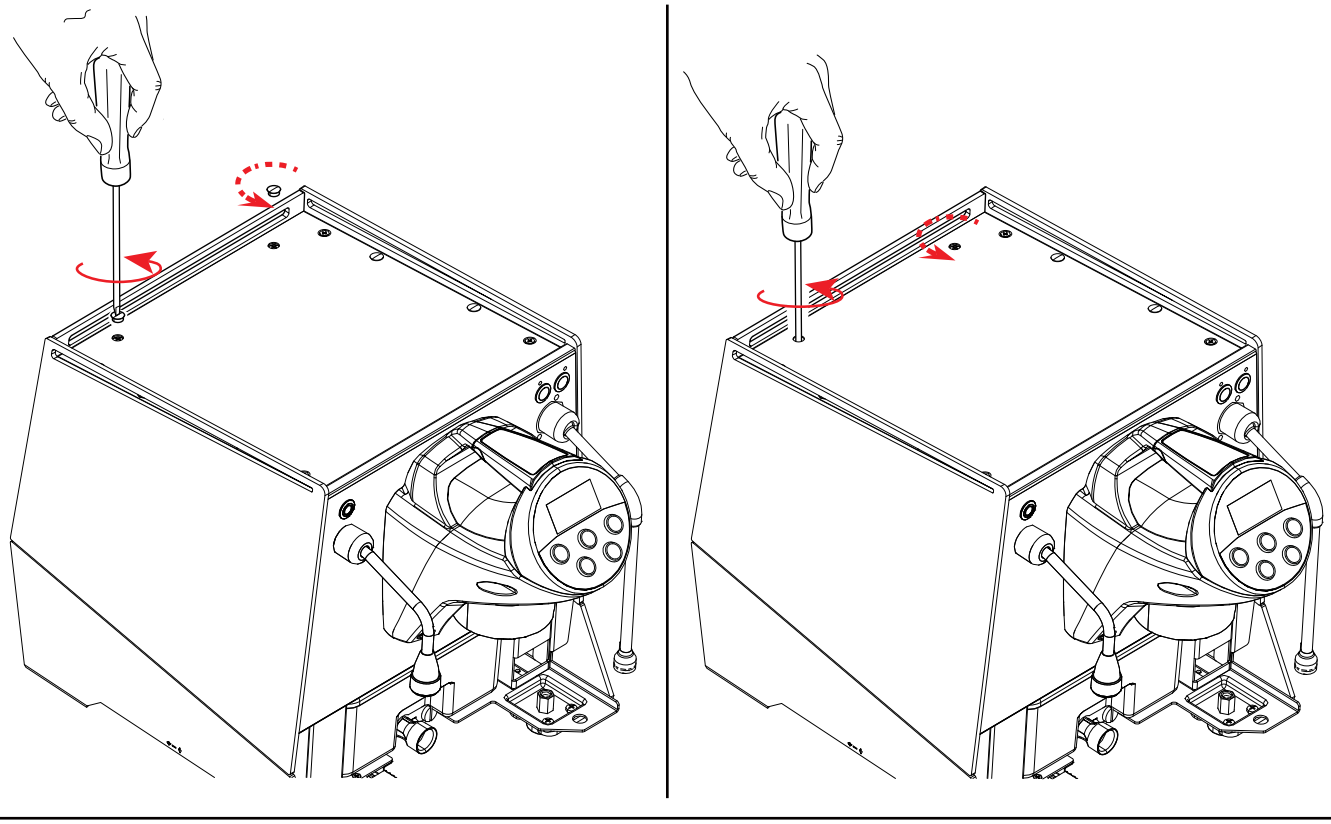


2

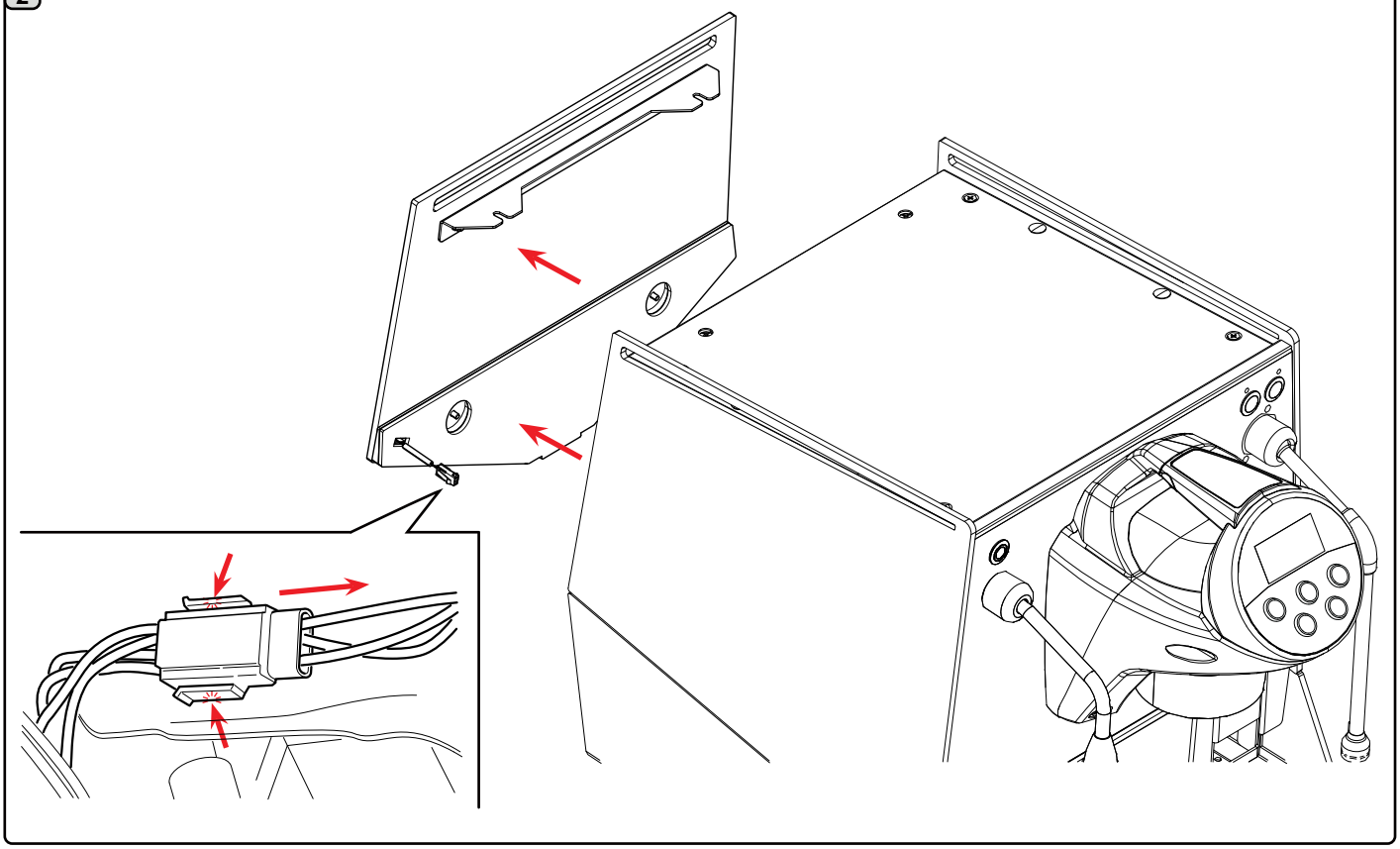


9.3 Removing the rear panel

1

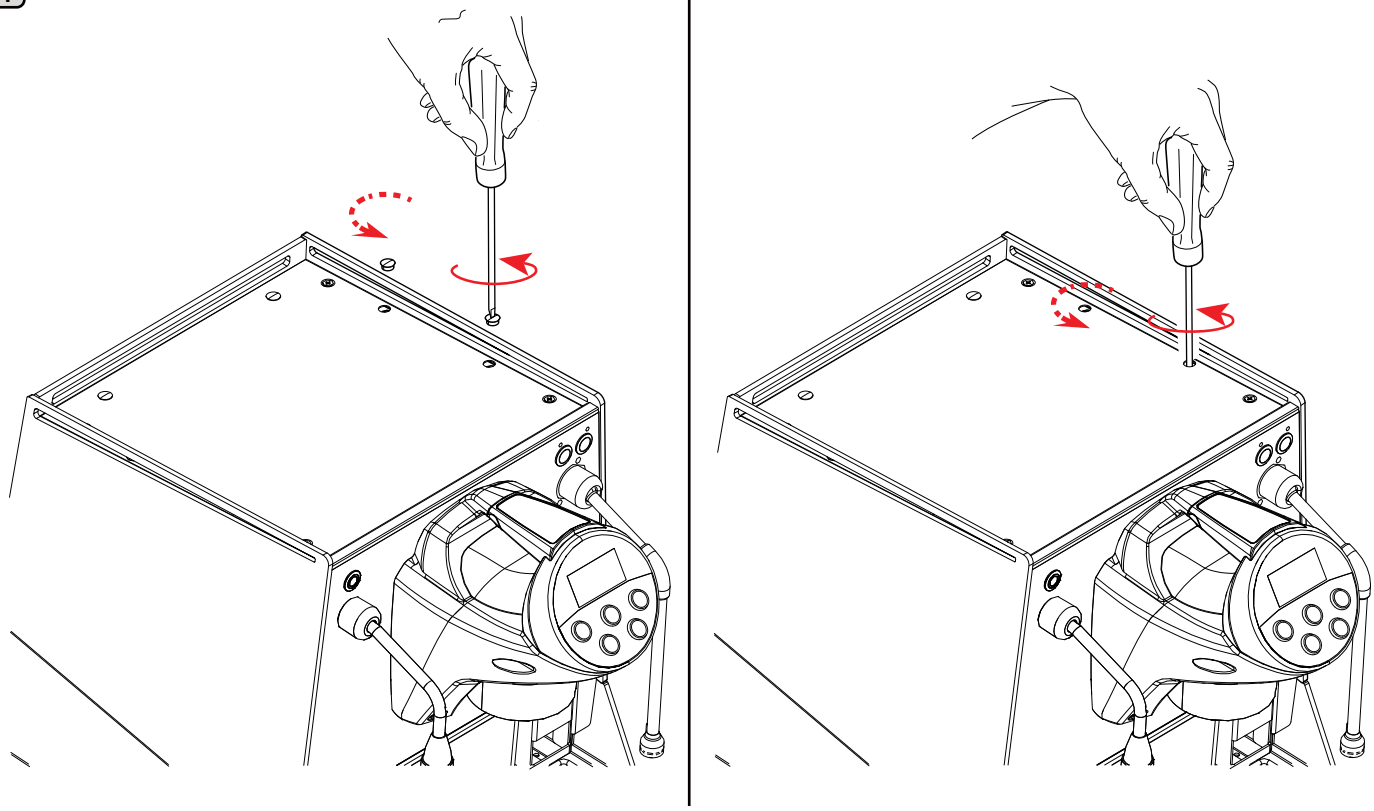


2

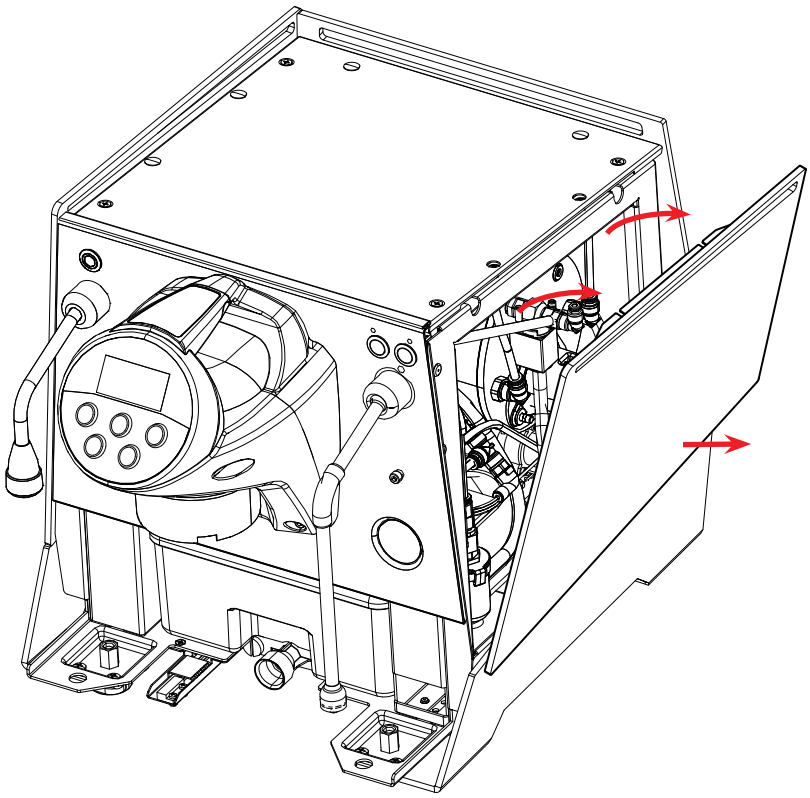


9.4 Removing the side panels

1

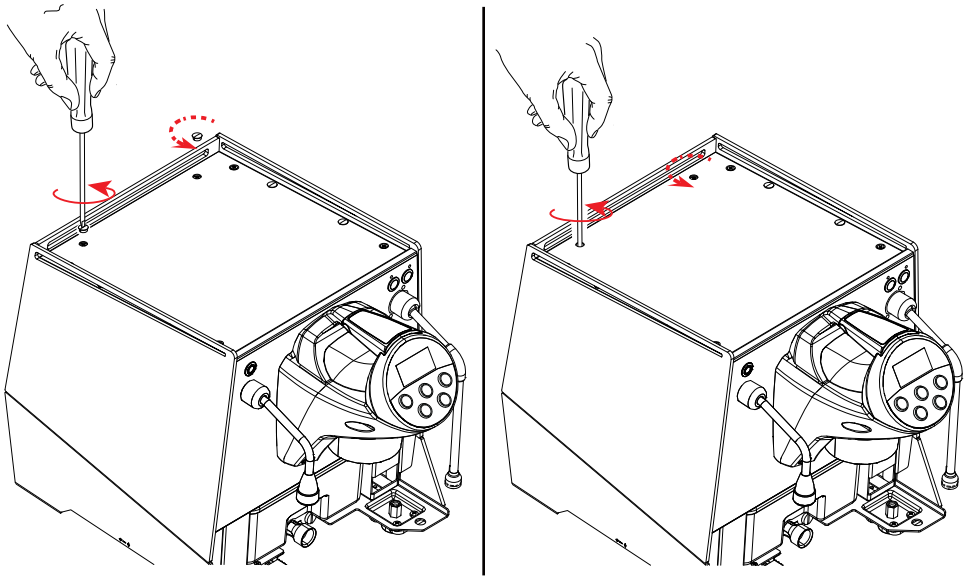


2

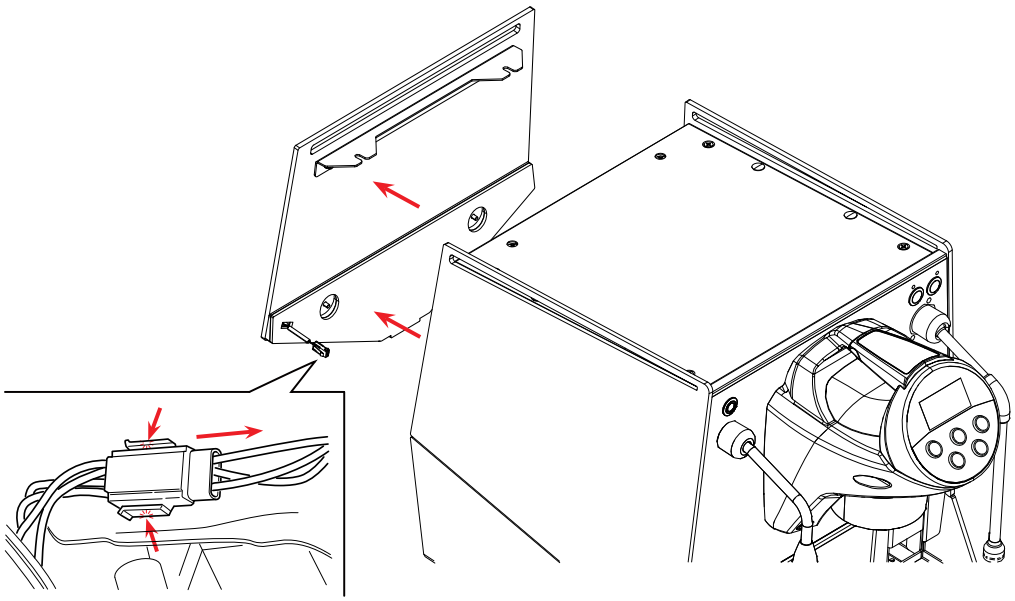


9.5 Draining the boiler

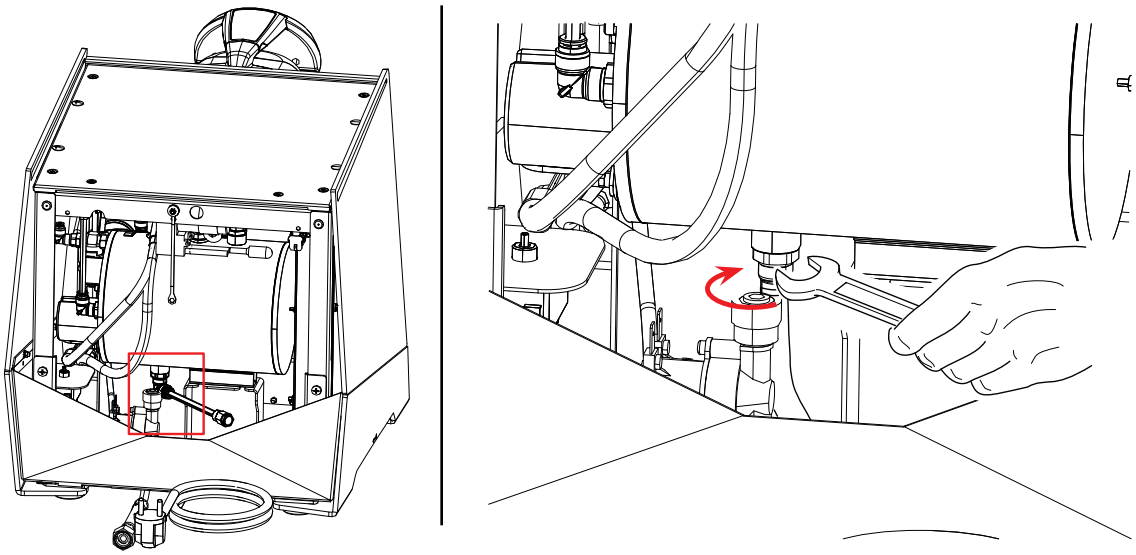
1



2



3

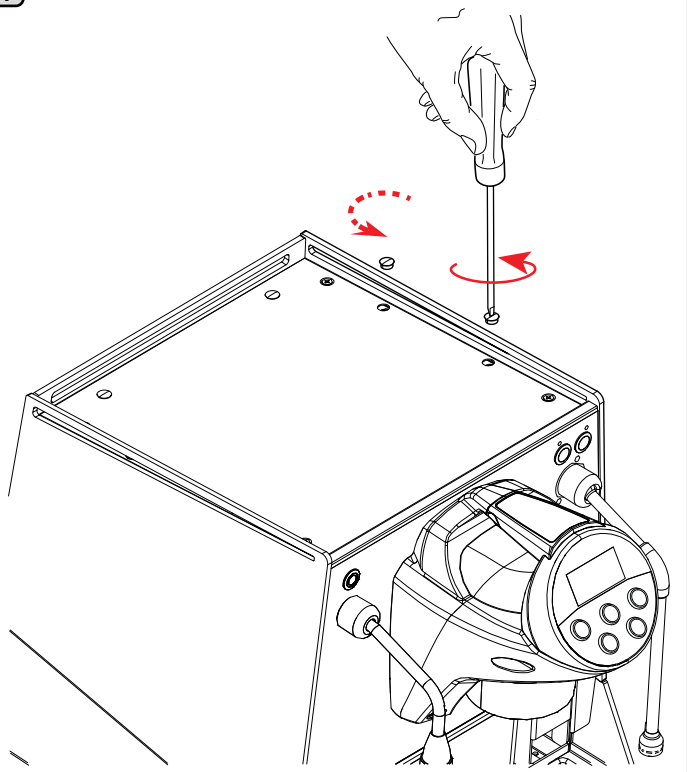


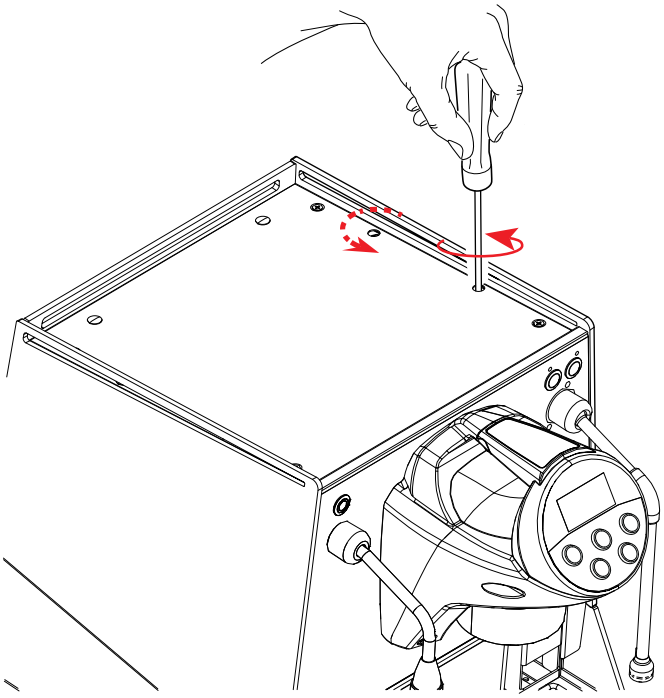
Fit a tube on the drainage connector, then turn the nut in the direction shown in the figure.

9.6 Removing the boiler heating element

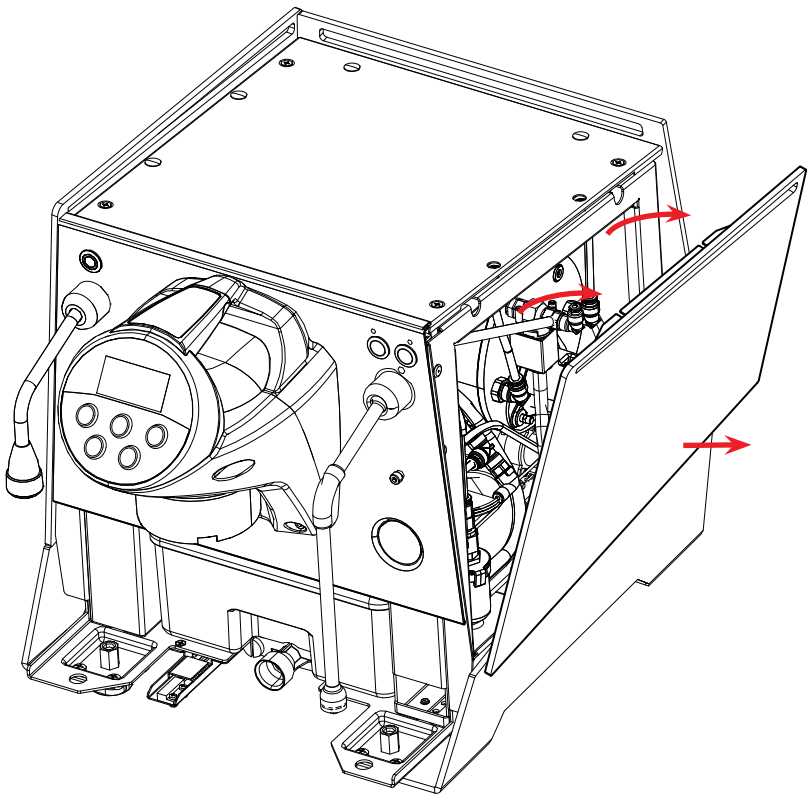
The heating element must only be removed after draining the boiler.

1





2



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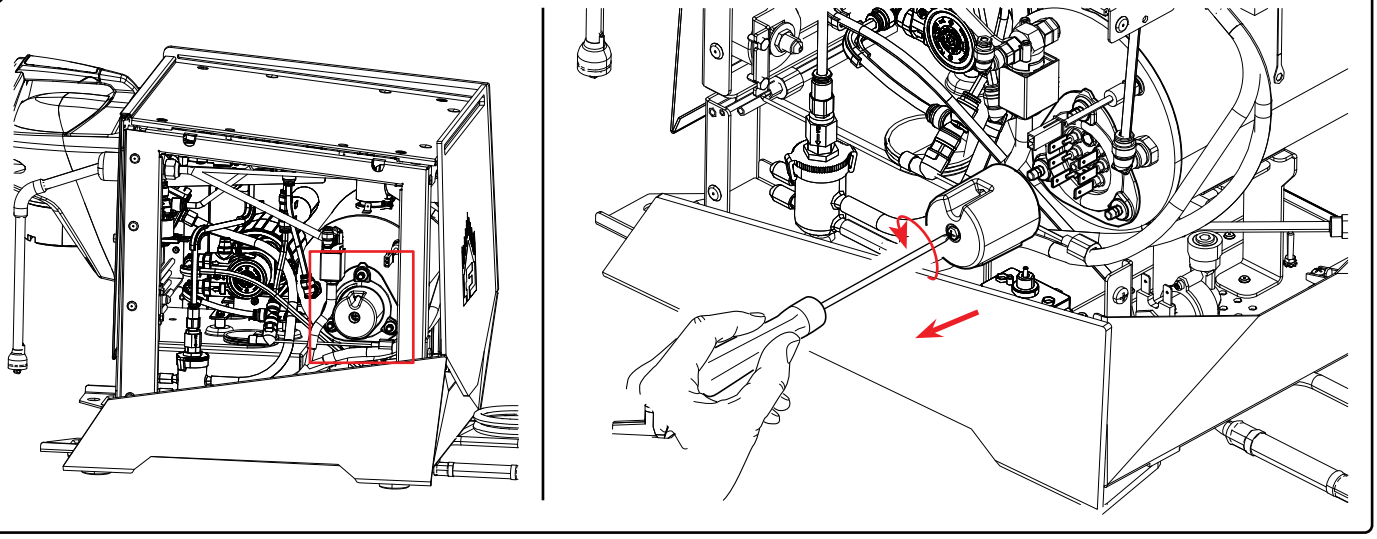
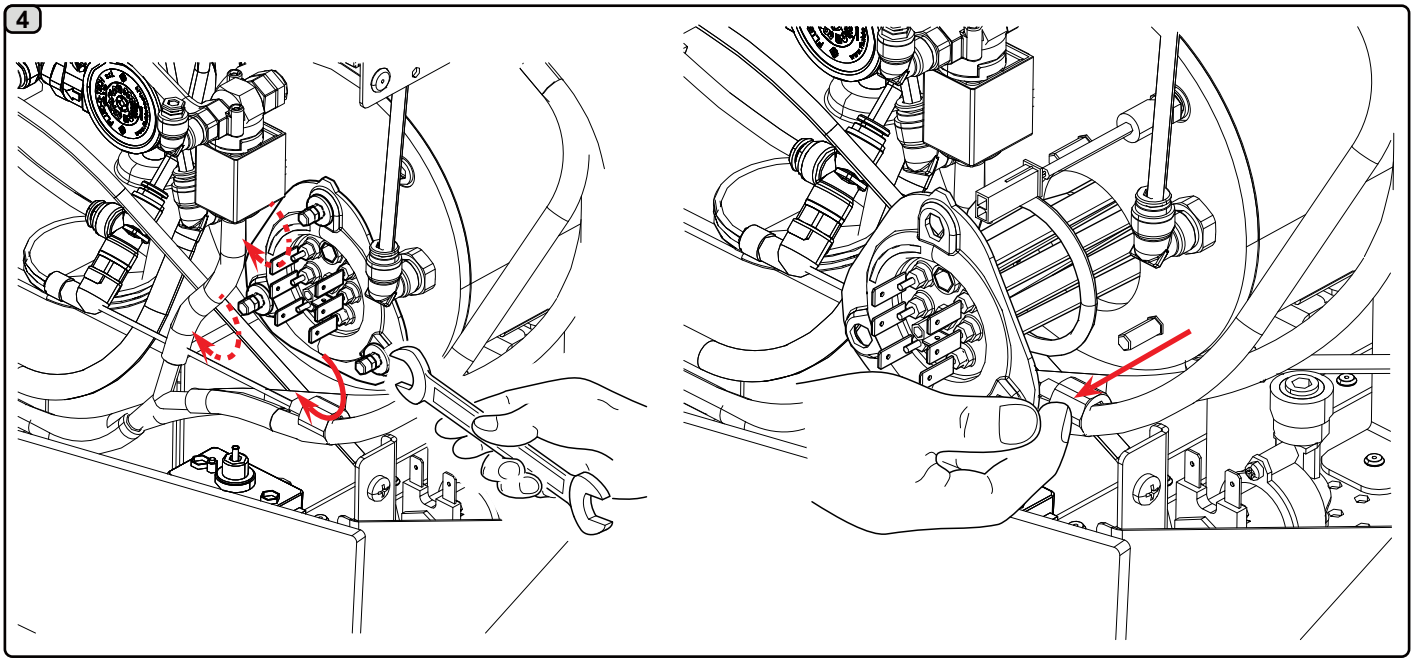
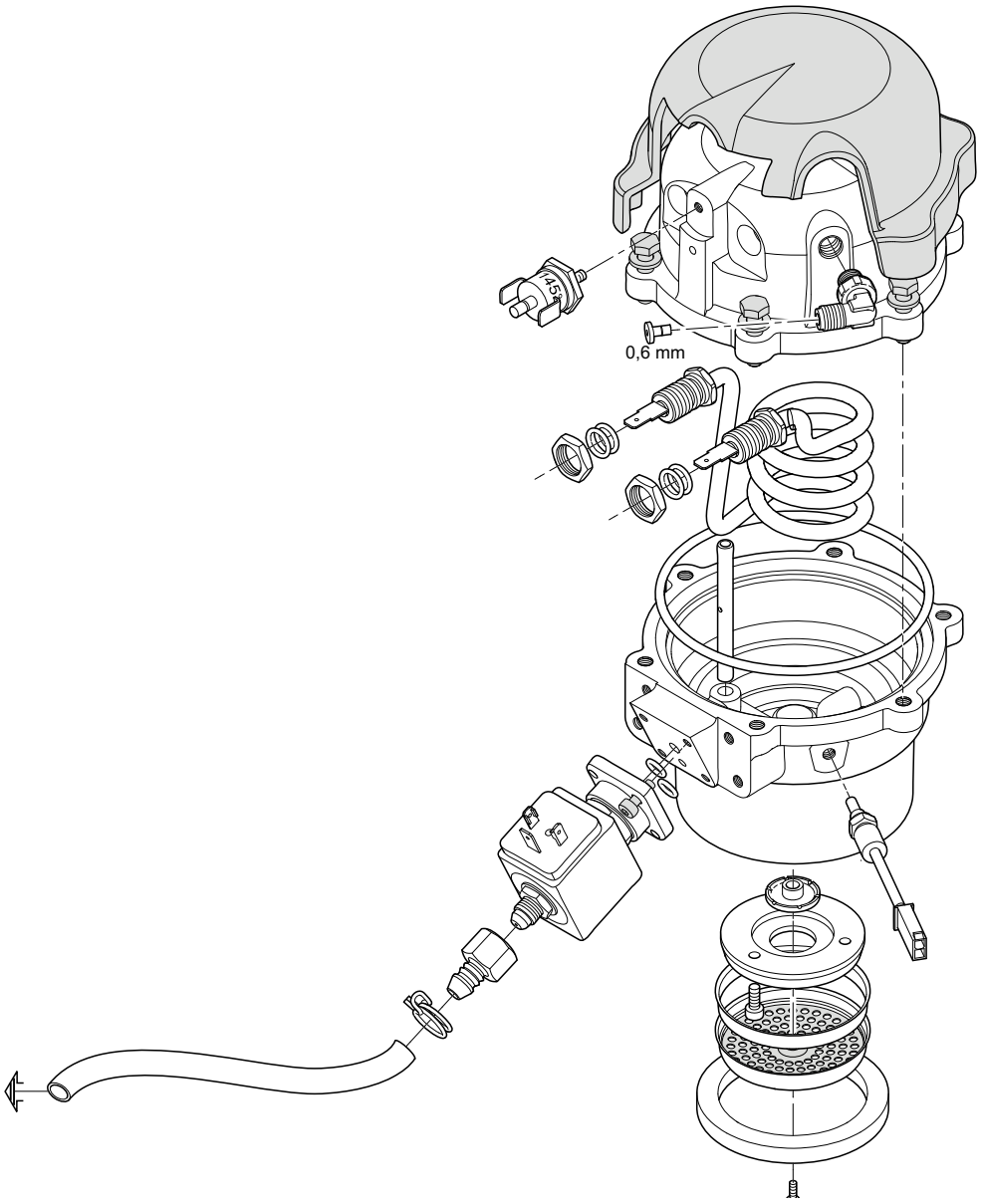


4



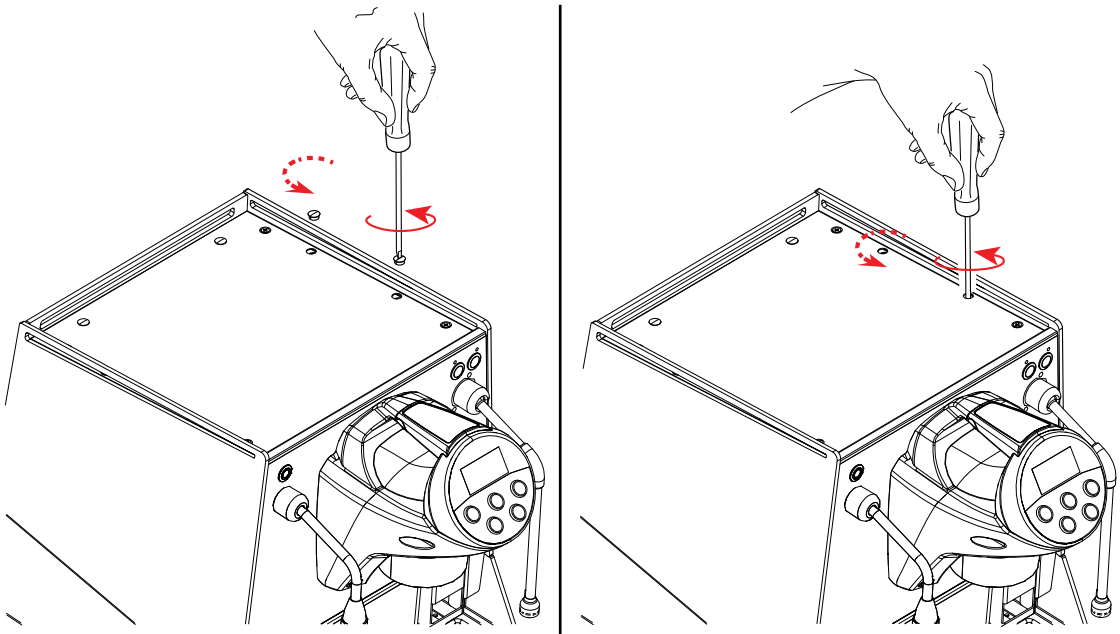
9.7 Removing the coffee boiler

1

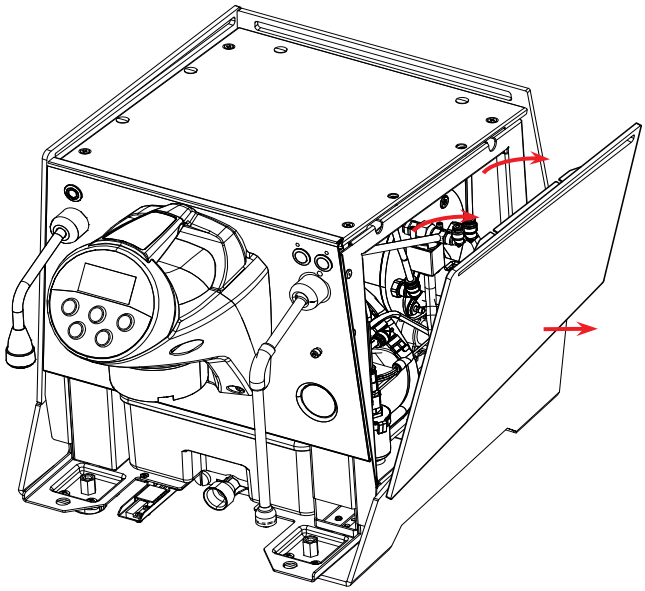


9.8 Resetting the safety thermostat

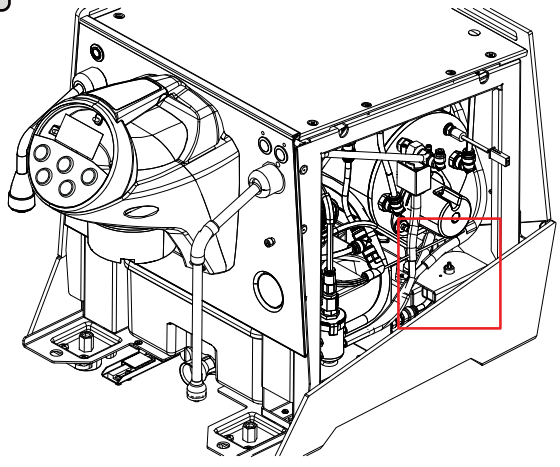
1

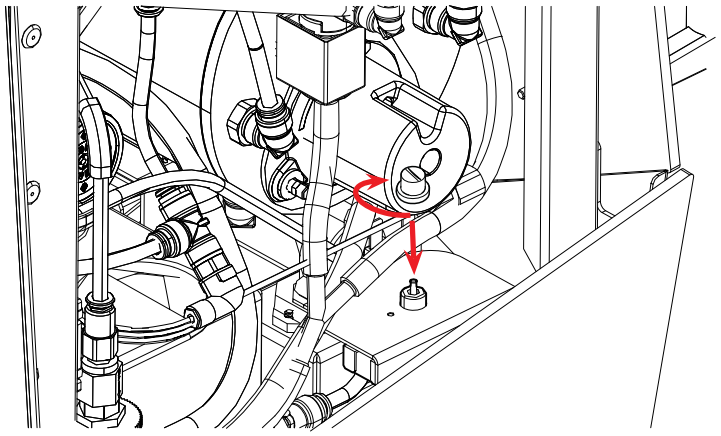


2



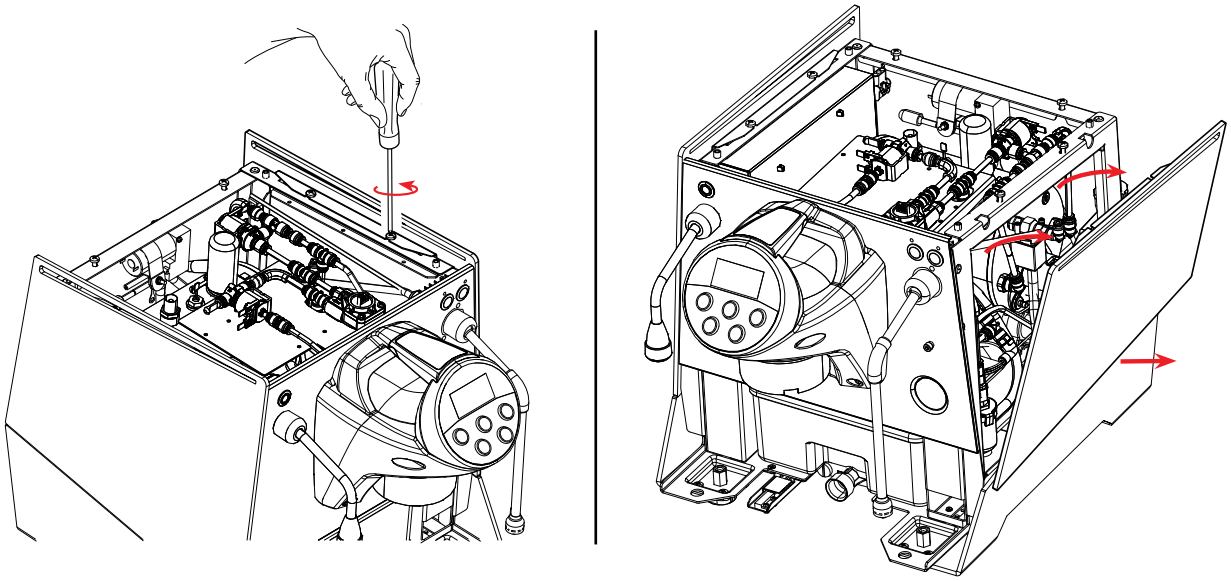
3





9.9 Adjusting the volumetric pump

1



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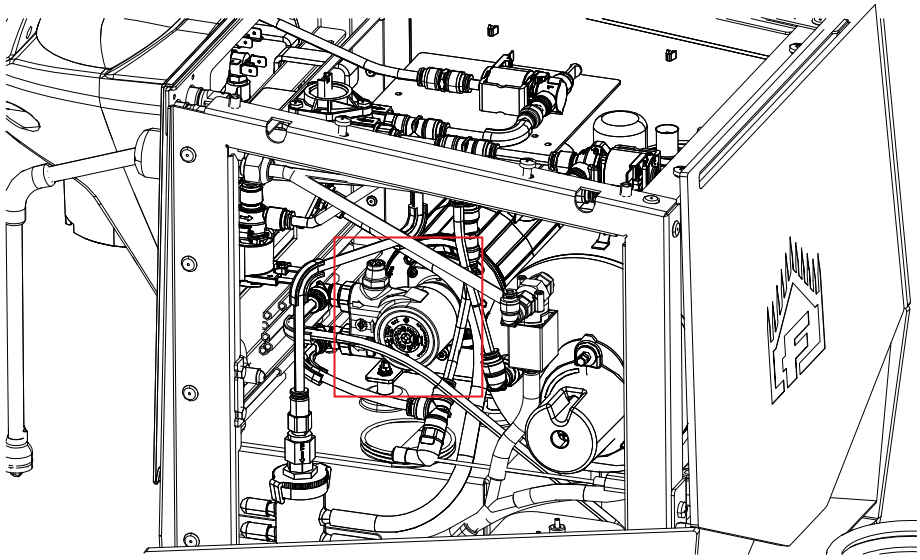

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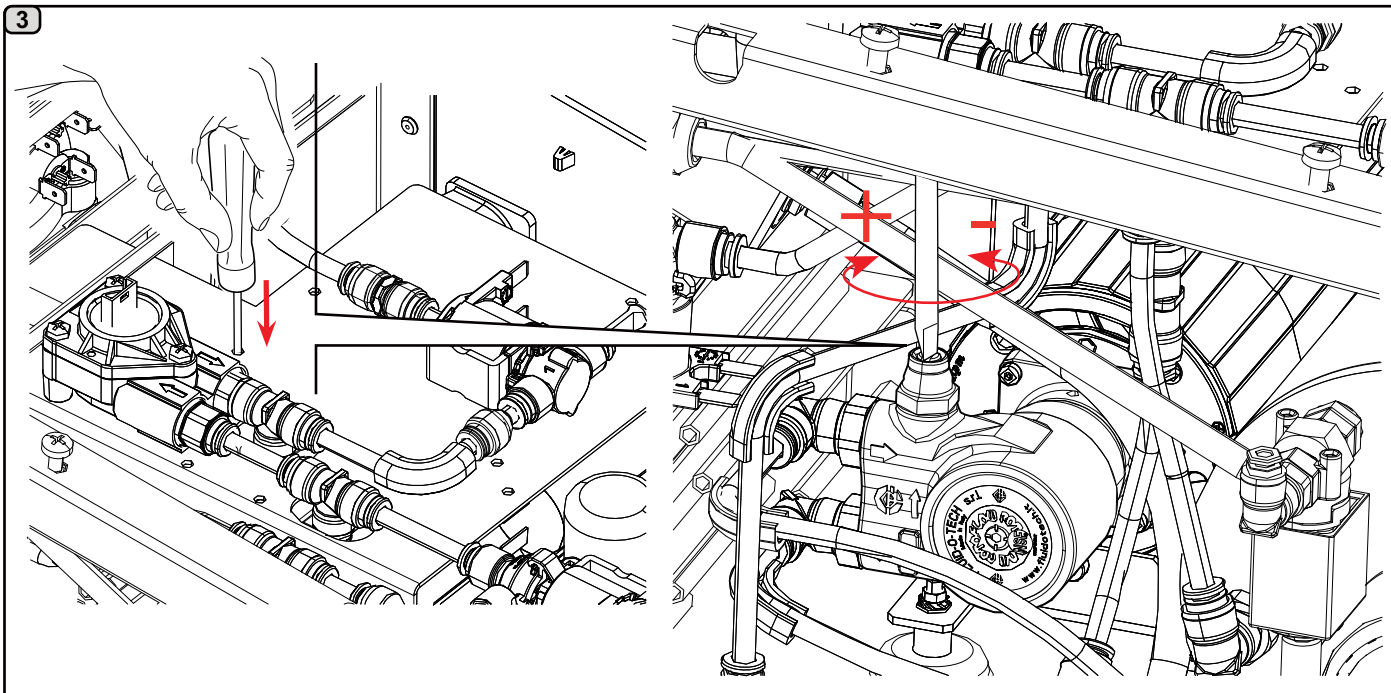
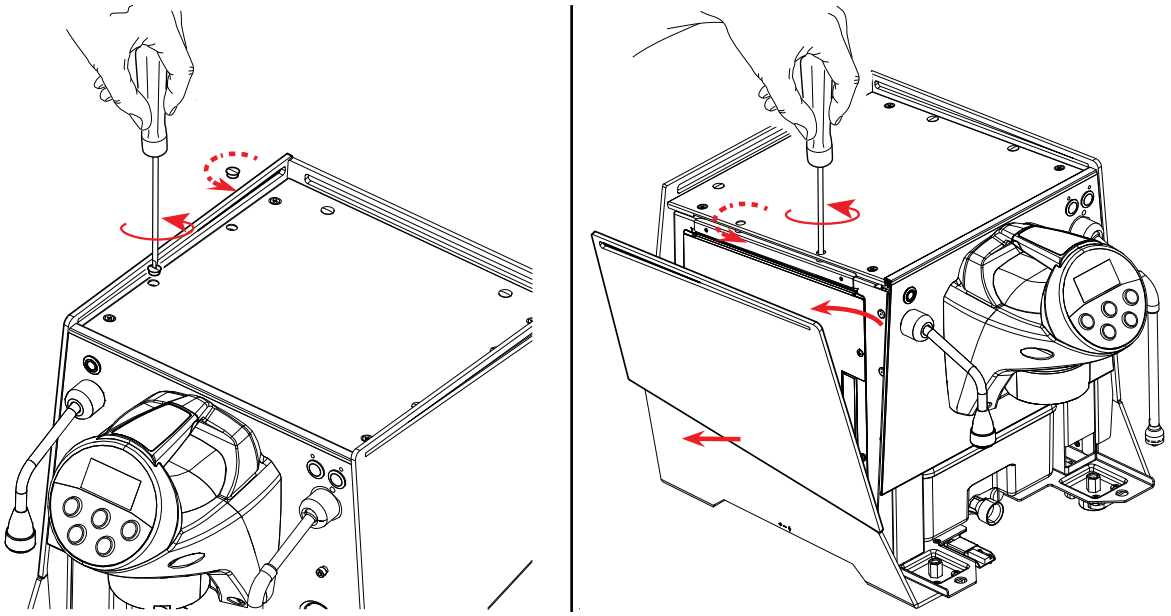
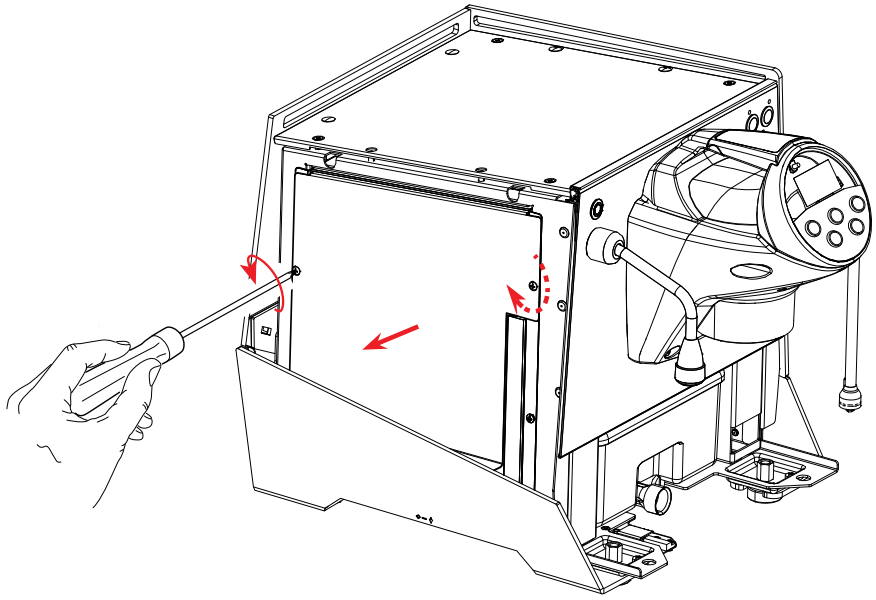


9.10 Replacing the battery

1



2



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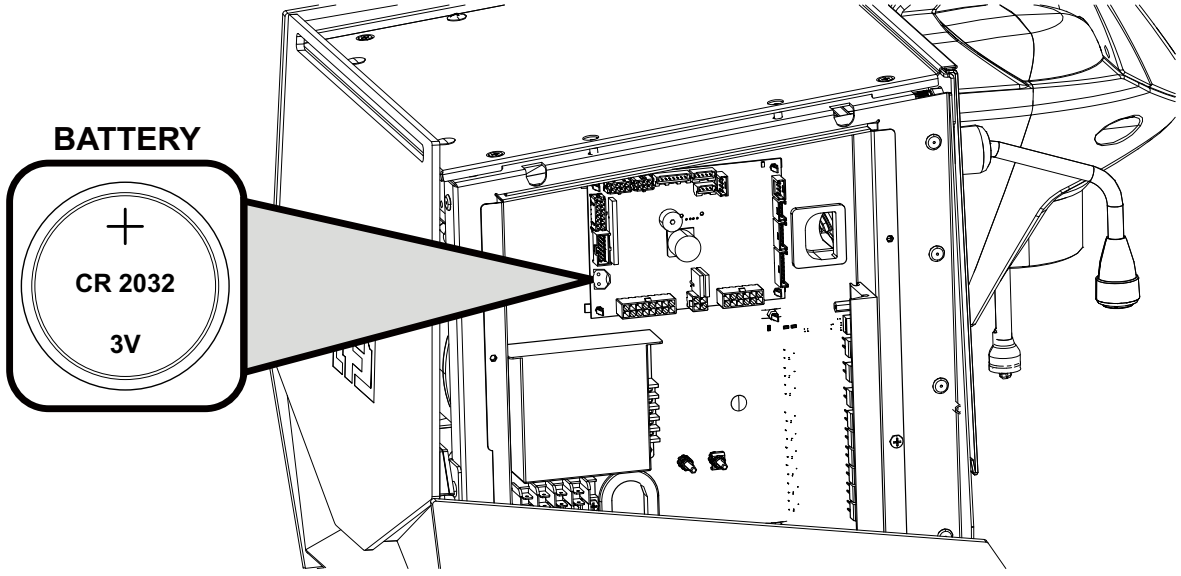
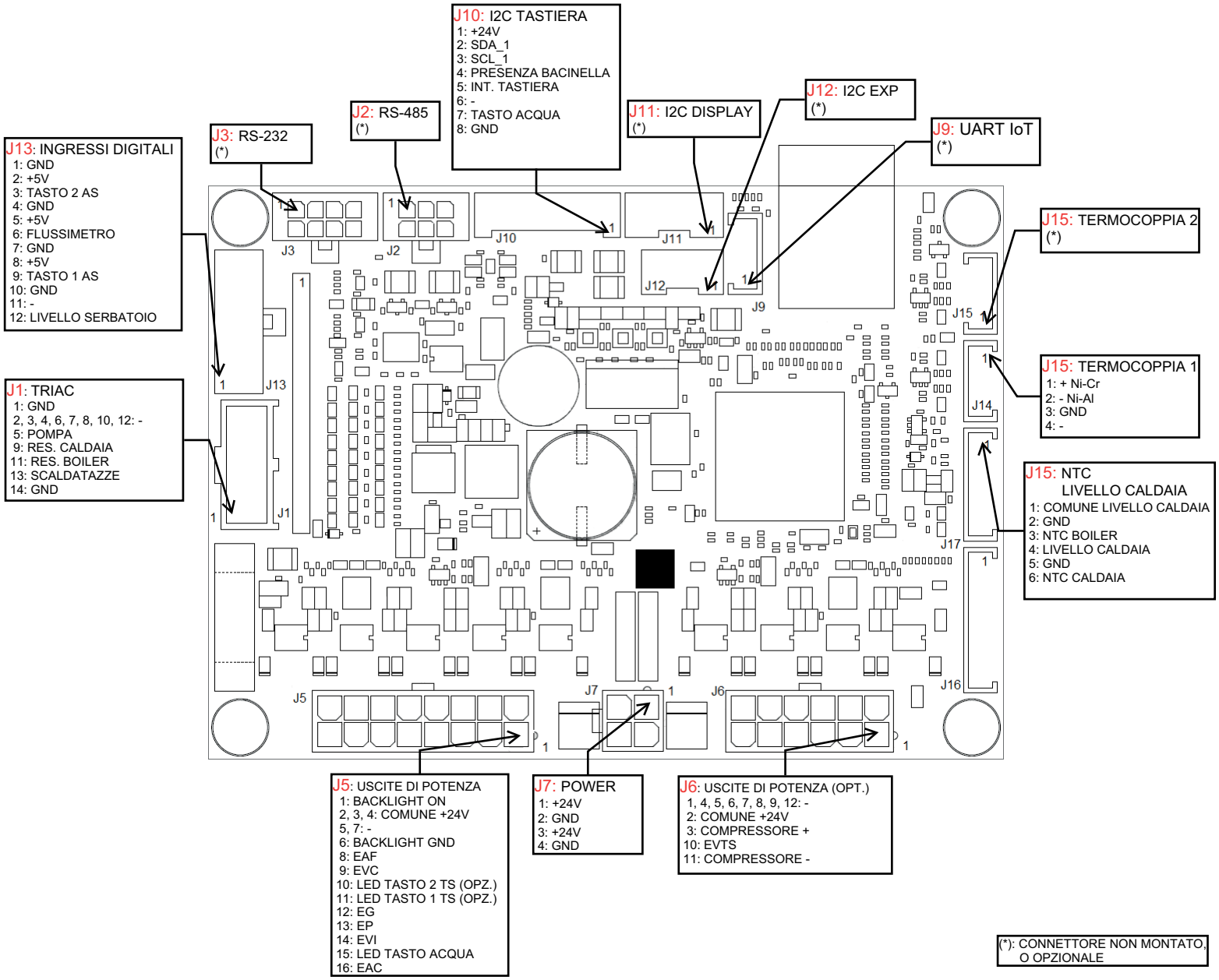


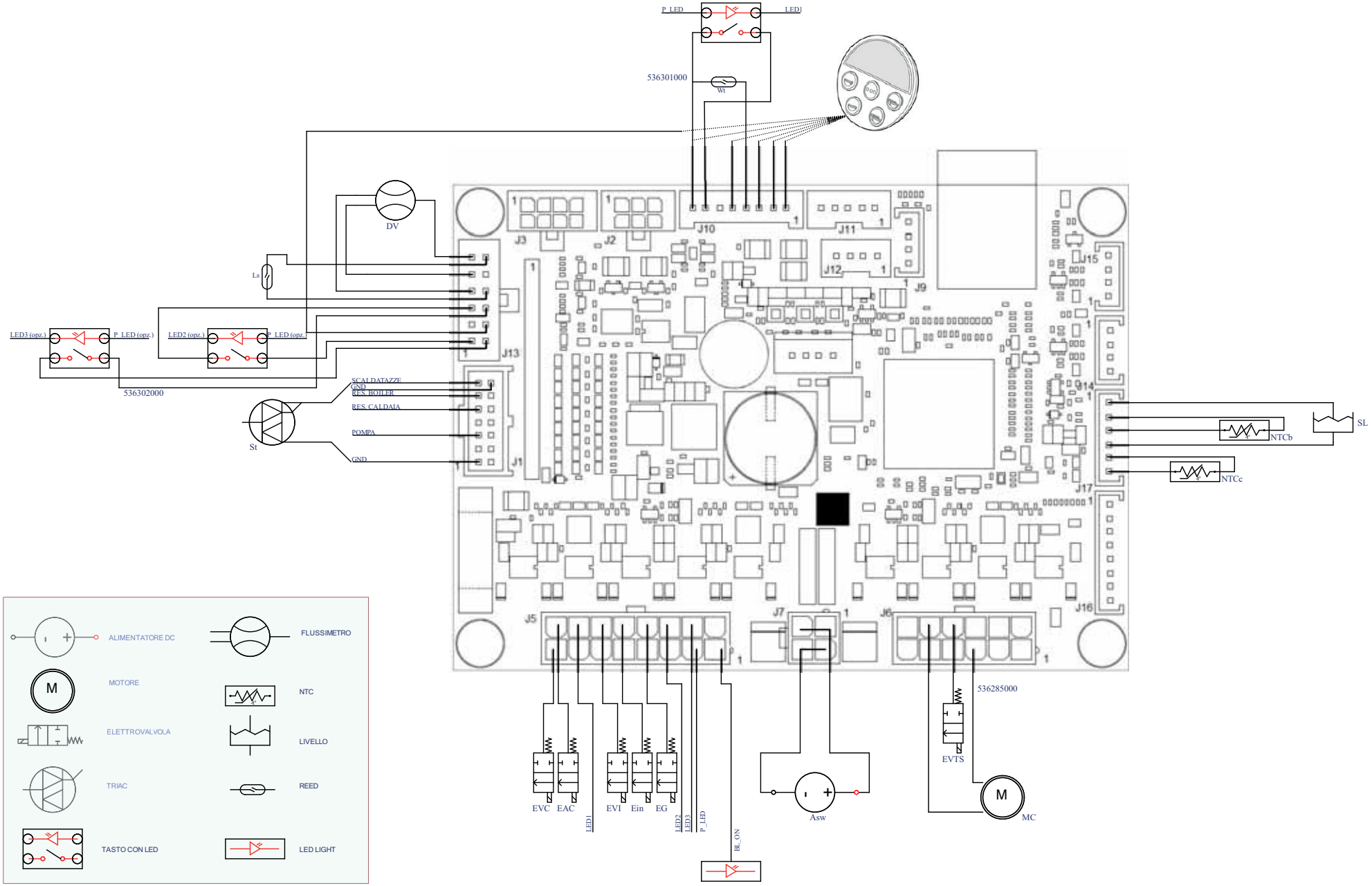
English

WIRING DIAGRAM
CPU BOARD



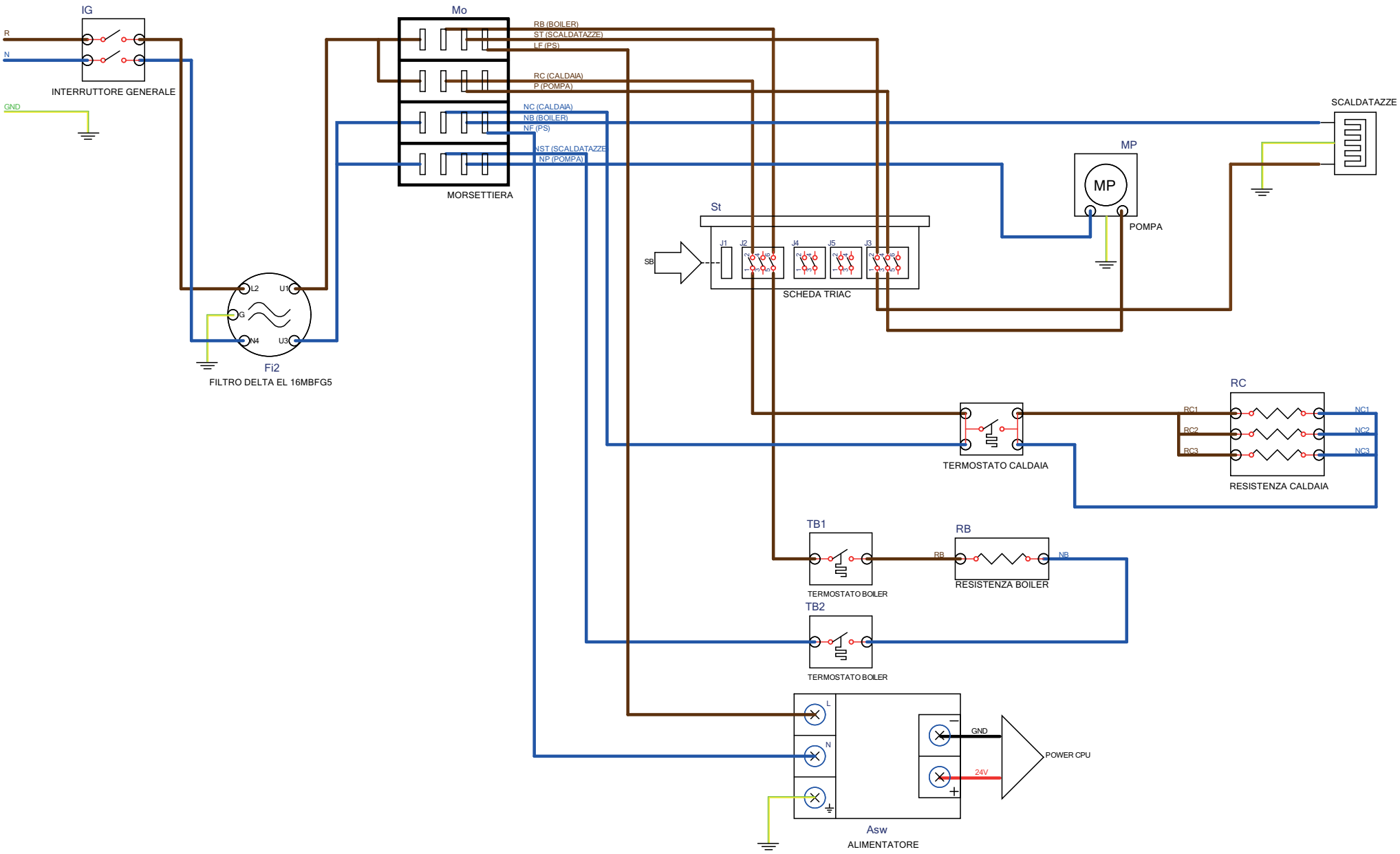
English

WIRING DIAGRAM
Functional wiring diagram - low voltage



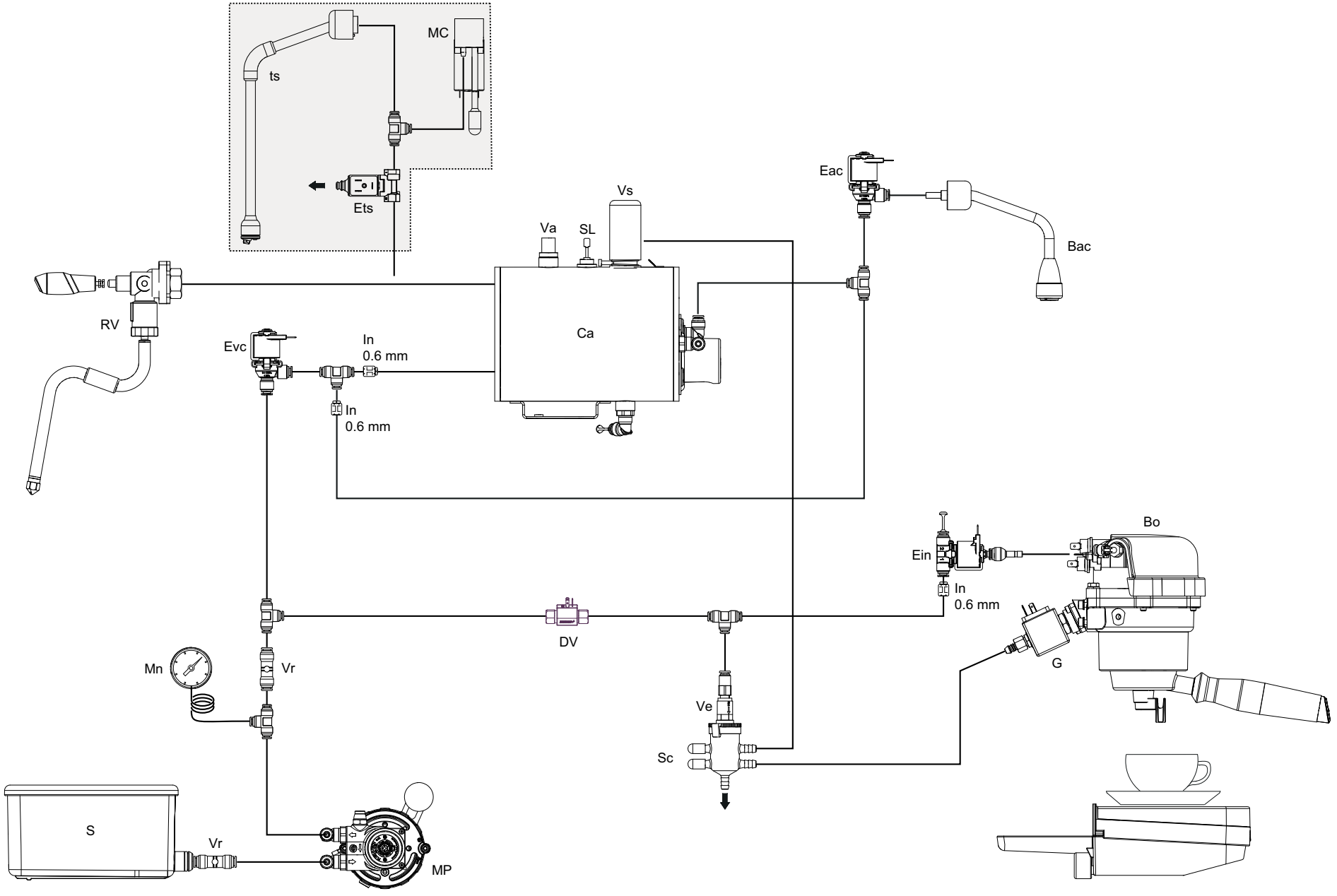
English

WIRING DIAGRAM
Power supply



English

Hydraulic circuit



FAEMINA_2139

FAEMA

Hydraulic circuit key

IT LEGENDA

Bac	erogatore dell'acqua calda
Ca	Caldaia
DV	Contatore volumetrico
Eac	Elettrovalvola acqua calda
Ein	Elettrovalvola infusione
Ets	Elettrovalvola turbosteam
Evc	Elettrovalvola carico caldaia
G	Elettrovalvola caffè
In	Iniettore
MC	Motore compressore
Mn	Manometro
MP	motore pompa
RV	Rubinetto vapore
S	serbatoio
Sc	scarico
SL	Sonda livello Caldaia
ts	Selettore turbosteam
Va	Valvola antirisucchio
Ve	valvole di espansione
Vr	Valvola antiritorno
Vs	Valvola di sicurezza caldaia

EN LEGEND

Bac	hot-water delivery spout
Ca	Service boiler
DV	Flowmeter
Eac	Hot-water solenoid valve
Ein	Infusion solenoid valve
Ets	Turbosteam solenoid valve
Evc	Boiler-water-supply solenoid valve
G	Coffee solenoid valve
In	Nozzle
MC	Compressor motor
Mn	Pressure gauge
MP	pump motor
RV	Steam tap
S	tank
Sc	drain
SL	Boiler-level probe
ts	Turbosteam selector
Va	Anti-backflow valve
Ve	expansion valves
Vr	Check anti-backflow valve
Vs	Service-boiler safety valve

FR LÉGENDE

Bac	distributeur d'eau chaude
Ca	Chaudière
DV	Compteur volumétrique
Eac	Électrovanne eau chaude
Ein	Électrovanne infusion
Ets	Électrovanne turbosteam
Evc	Électrovanne remplissage chaudière
G	Électrovanne café
In	Injecteur
MC	Moteur compresseur
Mn	Manomètre
MP	moteur pompe
RV	Robinet vapeur
S	réservoir
Sc	vidange
SL	Sonde de niveau Chaudière
ts	Sélecteur turbosteam
Va	Soupape d'évacuation
Ve	soupapes d’expansion
Vr	Clapet anti-retour
Vs	Clapet de sécurité chaudière

DE LEGENDE

Bac	Heißwasserausgabe
Ca	Heizkessel
DV	Volumenzähler
Eac	Magnetventil Heißwasser
Ein	Magnetventil Vorbrühung
Ets	Magnetventil Turbosteam
Evc	Magnetventil Wasserkesseleinlass
G	Magnetventil Kaffee
In	Düse
MC	Motor Kompressor
Mn	Manometer
MP	Pumpenmotor
RV	Dampfhahn
S	Wassertank
Sc	Auslass
SL	Füllstandssonde Heizkessel
ts	Turbosteam-Wahlschalter
Va	Entlüftungsventil
Ve	Expansionsventile
Vr	Rückschlagventil
Vs	Heizkessel-Sicherheitsventil

ES LEYENDA

Bac	distribuidor del agua caliente
Ca	Caldera
DV	Contador volumétrico
Eac	Electroválvula agua caliente
Ein	Electroválvula infusión
Ets	Electroválvula turbosteam
Evc	Electroválvula carga caldera
G	Electroválvula café
In	Inyector
MC	Motor compresor
Mn	Manómetro
MP	motor-bomba
RV	Grifo vapor
S	depósito
Sc	descarga
SL	Sonda nivel caldera
ts	Selector turbosteam
Va	Válvula de purga
Ve	válvulas de expansión
Vr	Válvula de retención
Vs	Válvula de seguridad caldera

PT LEGENDA

Bac	distribuidor de água quente
Ca	Caldeira
DV	Contador volumétrico
Eac	Eletroválvula da água quente
Ein	Eletroválvula da infusão
Ets	Eletroválvula do turbosteam
Evc	Eletroválvula de enchimento da caldeira
G	Eletroválvula do café
In	Injetor
MC	Motor do compressor
Mn	Manómetro
MP	motor da bomba
RV	Torneira do vapor
S	Depósito
Sc	escoamento
SL	Sonda de nível na caldeira
ts	Seletor turbosteam
Va	Válvula anti-sucção
Ve	válvulas de expansão
Vr	Válvula anti-retorno
Vs	Válvula de segurança da caldeira

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