



espresso coffee machines

INSTRUCTION MANUAL

S1

Armonia



LSC 021 - Rev. 00 - Ed. 02/2013

WEEE

Disposal of the equipment by the users within the European Community (WEEE) in compliance with the article 13 of the legislative decree issued on 25 July 2005, nr151 "Implementation of the directives 2002/95/CE,2002/96/CE e 2003/108/CE, concerning the decrease in the usage of dangerous substances in the electrical and electronic equipment and the disposal of waste".



The symbol of the crossed waste bin indicated on the equipment or on the packaging means that the product at the end of its lifetime must be disposed of separately from all the other waste.

The separate collection of this equipment coming at the end of its lifetime is organized and run by the importer/distributor. The user who should have to dispose of such equipment should get in touch with the importer/ distributor and follow the procedure they have adopted for the separate disposal of the equipment coming at the end of its lifetime. The proper separate disposal of disused equipment so that it can be recycled and treated according what is environmentally compatible contributes to avoid possible negative effects on the Environment and on Health and allows the reutilization and/or the recycling of the materials the equipment is composed of.

The improper disposal by the user causes the enforcement of the administrative sanctions according to current regulations.

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1 GENERAL DESCRIPTION OF THE MACHINE

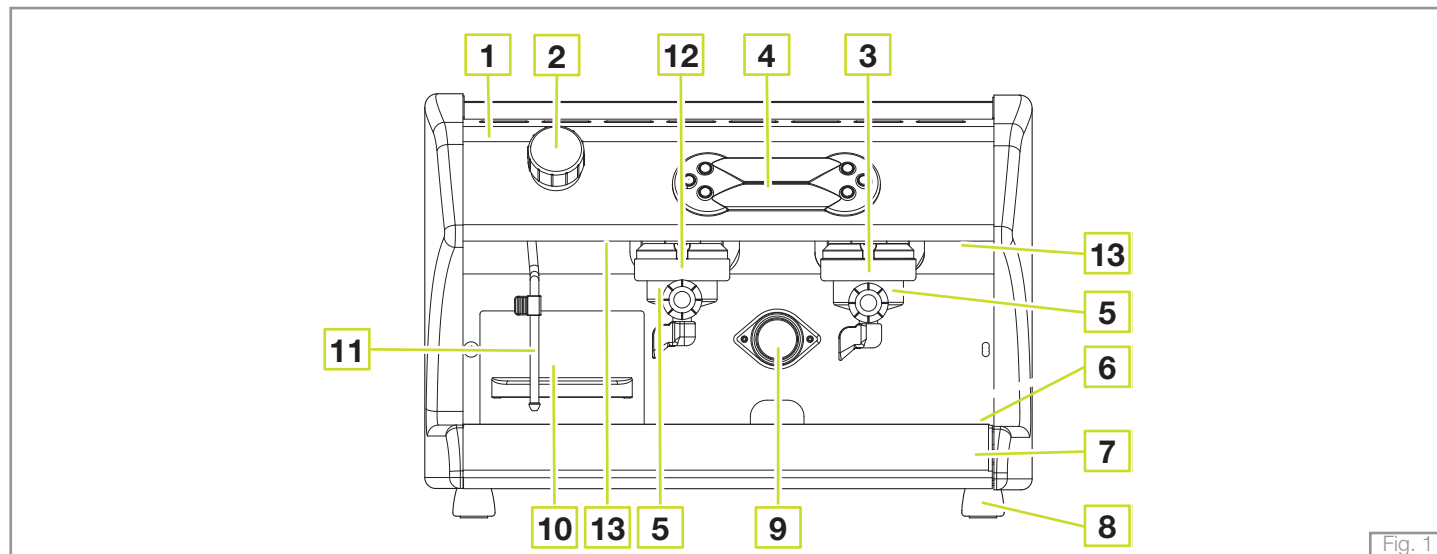


Fig. 1

KEY

- 1. Top cup grid
- 2. Steam delivery knob
- 3. 1st coffee delivery group*
- 4. Control panel
- 5. Filter holder *
- 6. Drip tray grid

- 7. Water drip tray
- 8. Foot
- 9. Gauge
- 10. Water tank
- 11. Steam wand
- 12. 2nd coffee delivery group *

- 13. Work surface lighting LED

* According to the required configuration, the machine can dispense coffee in ground form, in pod form (E.S.E. format) or in capsules (F.A.P. format). To use different pod or capsule formats, please contact **La Spaziale S.p.A.** for more information.

1.1 DESCRIPTION OF THE CONTROL PANEL (EK VERSION)

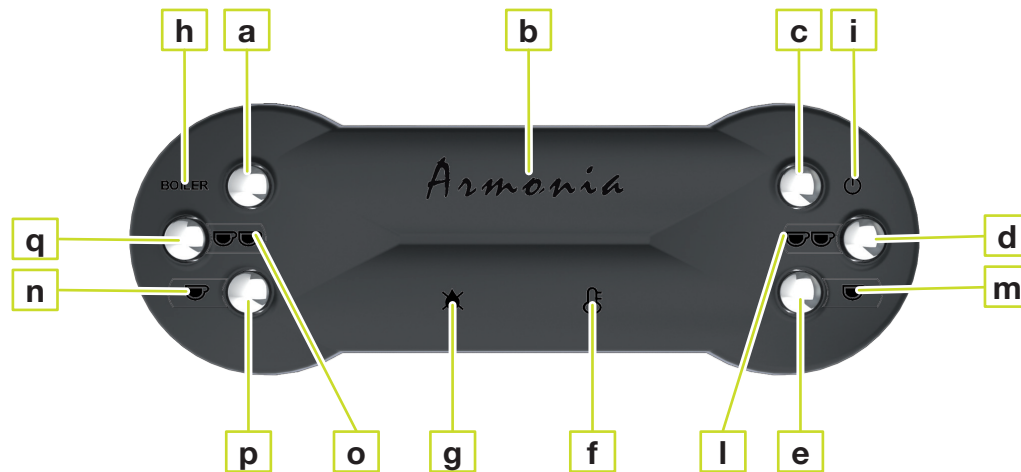


Fig. 2

KEY

- | | | |
|--|------------------------------|--|
| a. ON/OFF button boiler | f. Autolevel symbol | m. One coffee button light (1st gr) |
| b. Armonia logo | g. Water tank empty light | n. One coffee button light (2nd gr) |
| c. ON/OFF button | h. Boiler status light | o. Two coffee button light (2nd gr) |
| d. Two coffee dispensing button (1st gr) | i. Line power light | p. One coffee dispensing button (2nd gr) |
| e. One coffee dispensing button (1st gr) | l. Two coffee light (1st gr) | q. Two coffee dispensing button (2nd gr) |

1.2 DESCRIPTION OF THE CONTROL PANEL (EP VERSION)

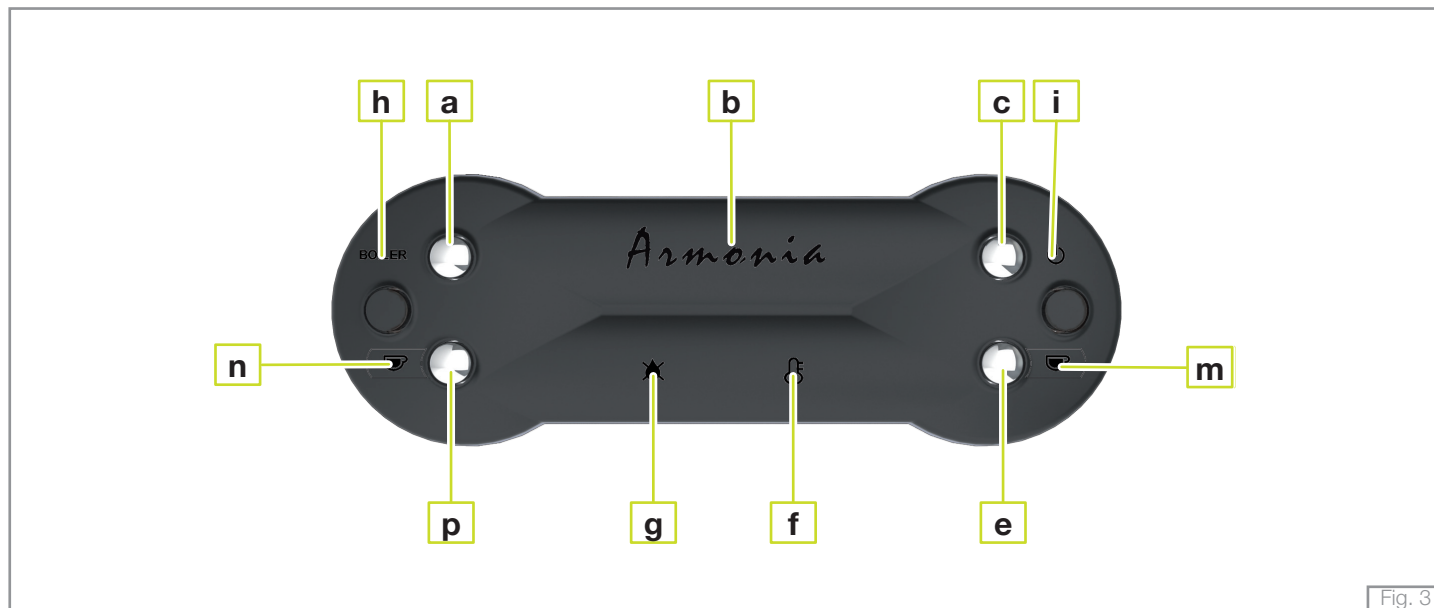


Fig. 3

KEY

- | | | |
|--------------------------------------|---------------------------------|--------------------------------------|
| a. ON/OFF button boiler | g. Water tank empty light | P. Coffee dispensing button (2nd gr) |
| b. Armonia logo | h. Boiler status light | |
| c. ON/OFF button | i. Line power light | |
| e. Coffee dispensing button (1st gr) | m. Coffee button light (1st gr) | |
| f. Autolevel symbol | n. Coffee button light (2nd gr) | |

1.3 DESCRIPTION OF THE CONTROL PANEL POD/CAPSULE VERSION

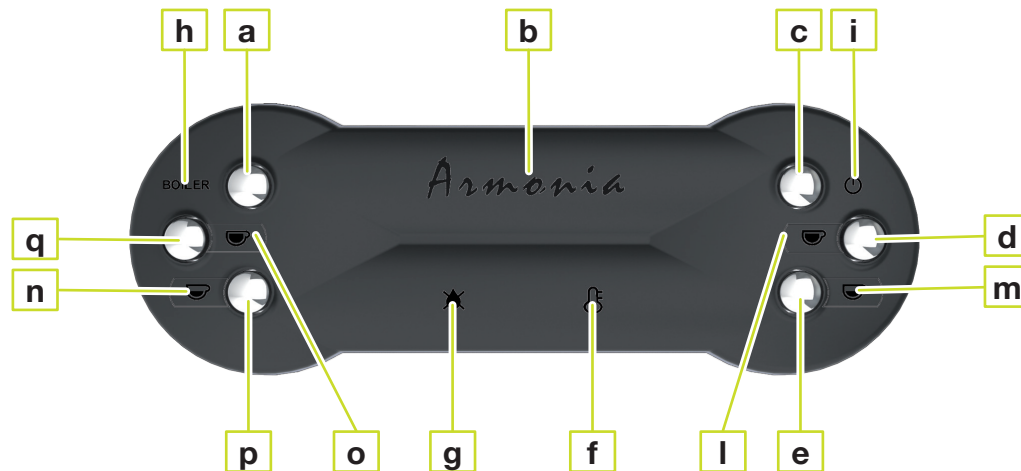


Fig. 2

KEY

- | | | |
|--|--|--|
| a. ON/OFF button boiler | f. Autolevel symbol | m. One short coffee button light (1st gr) |
| b. Armonia logo | g. Water tank empty light | n. One short coffee button light (2nd gr) |
| c. ON/OFF button | h. Boiler status light | o. One long coffee button light (2nd gr) |
| d. One long coffee dispensing button (1st gr) | i. Line power light | p. One short coffee dispensing button (2nd gr) |
| e. One short coffee dispensing button (1st gr) | l. One long coffee button light (1st gr) | q. One long coffee dispensing button (2nd gr) |

2. GENERAL ADVICE FOR THE INSTALLER

Read carefully the instructions and warnings contained in this manual, since they provide important indications concerning the installation of the appliance.



Attention!

The client must prepare the wiring system so that it is in an ideal position for the correct installation of the machine. The installation engineer cannot change the existing system put in place by the customer. See chapter 2.2: “Arrangements for installation provided by the customer”.



Attention!

The appliance must be installed where use and maintenance are restricted to trained staff.

2.1 GENERAL WARNINGS



Attention!

CAREFULLY READ THE FOLLOWING WARNINGS, WHICH OFFER IMPORTANT GUIDELINES FOR THE SAFE USE AND MAINTENANCE OF THE APPLIANCE.

The appliance must only be used for its intended purpose and it must be installed in a suitable place for its use. Any other use is therefore considered as improper and unreasonable.

The manufacturer cannot be held liable for any damage caused by improper, incorrect or unreasonable use. Installation must be carried out by qualified personnel according to current laws and to the manufacturer's instructions. Incorrect installation may cause damage to people, animals or property for which the manufacturer cannot be held liable.



Danger!

The electrical safety of the appliance is fully achieved only after it has been correctly connected to an earthing system as required by the laws in force.

It is necessary to have the earthing connection checked by professionally qualified personnel. The manufacturer cannot be held liable for any damage caused by the lack or inefficiency of the system's earthing connection. The appliance has not been designed for outdoor use. It must only be operated in a place where the ambient temperature is between **+5 °C** and **+40 °C**.



Attention!

The use of any electrical appliance also requires observance of the following important regulations.

- Do not touch the appliance with wet or damp hands or feet.
- Do not use the appliance barefooted.
- Do not pull the power supply cord to unplug the appliance from the mains power.
- Do not allow children or unqualified persons to use the appliance.
- Access to the appliance's service area must be restricted to those persons with the relevant practical experience and familiarity with the appliance itself, especially in terms of safety and hygiene.
- The device is not intended to be used by people (children included) whose physical , sensory or mental capability are reduced, unless they could benefit, through the intermediation of a person in charge of their safety, of a guard or of instructions concerning the device's use. Children must be kept under surveillance to be sure they wouldn't play with the device.
- Always disconnect the appliance from the mains power supply before carrying out any cleaning or maintenance.
- Before carrying out any routine maintenance or cleaning operation, disconnect the appliance from the mains power and shut off the water supply tap.
- In the event of damage and/or malfunction of the appliance, switch it off completely without trying to make any direct repairs. Contact the nearest Service Centre authorised by the manufacturer.
- In order to guarantee the proper efficiency and operation of the appliance, it is fundamentally important to follow the manufacturer's instructions, and to follow a regular maintenance schedule.
- The appliance has **IPX2** protection against water and therefore, it cannot be installed in areas where it may be subject to jets of water.
- The appliance has **class I** protection against electric shocks.

- The noise emitted by the appliance during normal operation is less than **70 dB**.
- The appliance is supplied without water in the boiler to prevent that exposure to cold temperatures can cause irreparable damage.
- The unit should be operated only with cold water intended for human consumption.



Attention!

Failure to comply with the above regulations could jeopardise the correct operation and safety of the appliance as well as its useful lifetime.

2.2 INSTALLATION

- This appliance is not for built-in installation.
- The appliance needs to be installed so that the plug to disconnect it from the mains power supply remains accessible.
- This appliance must only be used for the purpose for which it was designed.
All other uses are to be considered improper and therefore, unreasonable.
The manufacturer cannot accept any liability for damage caused through improper or unreasonable use.
- The appliance must be placed on a flat surface able to guarantee a sturdy support and a work top height of no less than 1.2 metres from floor height.
- The electrical safety of the appliance is only achieved once the appliance is correctly connected to an efficient earthing system, installed as per current laws and regulations.



Attention!

Before connecting the plug to the mains power system, make sure that the data on the rating plate are in line with those in the place of installation.

2.3 WARNING/TECHNICAL DATA LABELS AND NAMEPLATES APPLIED TO THE MACHINE

In the figure below are shown the warning/technical data labels and nameplates positioned on the machine.



Warning!

Dedicate the time necessary to familiarise yourself with these labels.

Ensure that they are readable and keep them clean or replace those that have deteriorated or illegible (both the text and the graphics).

Use a soft cloth, soap and water to clean the labels. Do not use solvents, petrol, etc.

If a label is positioned on a component part that has to be replaced, ensure that the new component has the same label applied or a new one.

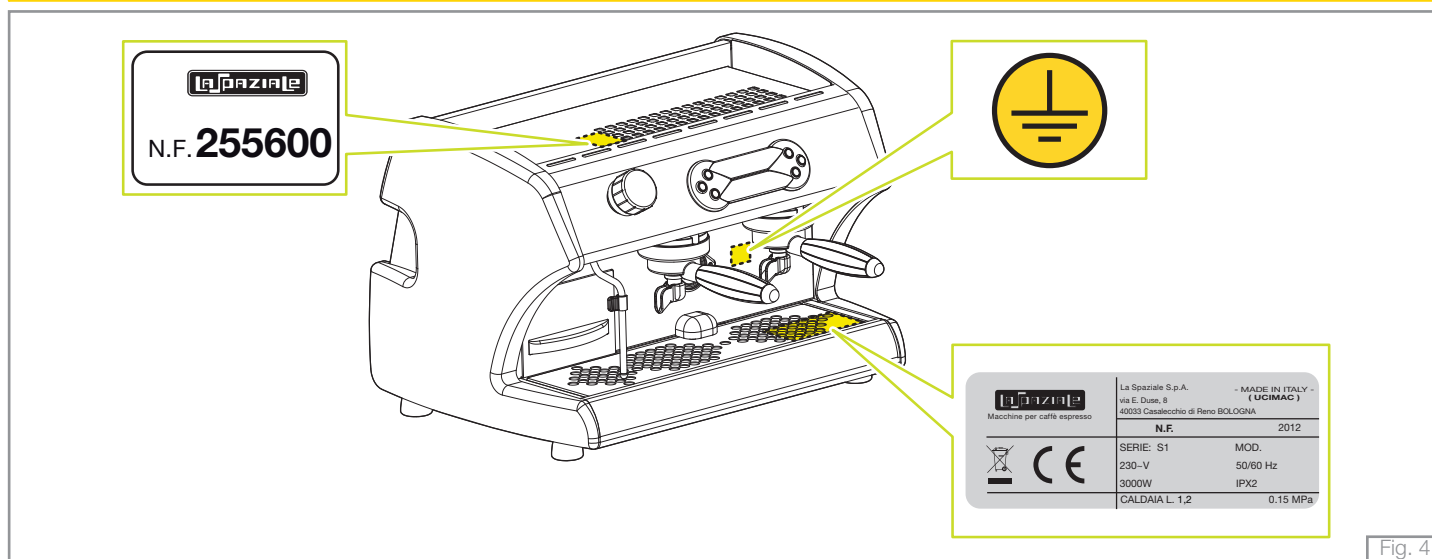


Fig. 4

3. REMOVING THE PACKAGING

After unpacking the machine, please check its integrity; in case of doubt, do not use it and consult the manufacturer. Packaging materials must not be left within children's reach since they are potentially dangerous.



Attention!

The appliance weight is more than 30 kg and therefore, it cannot be moved by a single person alone.



Take note!

Dispose of the packaging as per the norms in force of the country in which the machine is utilised.

3.1 STANDARD EQUIPMENT OF THE MACHINE IN COFFEE POWDER CONFIGURATION

KEY

- A. Two filter holders
- B. One spout for one coffee
- C. One spout for two coffees
- D. 2 sets of filters
- E. 1 set of shower heads
- F. 1 wrench for shower head removal
- G. 1 brush
- H. 1 manual coffee tamper
- I. One coffee dose

3.2 STANDARD EQUIPMENT OF THE MACHINE IN COFFEE PODS CONFIGURATION

KEY

- A. Two filter holders
- B. One spout for one coffee
- C. Two pod filters

3.3 STANDARD EQUIPMENT OF THE MACHINE IN COFFEE CAPSULES CONFIGURATION

KEY

- A. Two filter holders
- B. One spout for one coffee

4. STARTING UP THE APPLIANCE

4.1 FILLING THE WATER TANK

- A. Remove the drip tray (7).
- B. Then take out the container (10) and fill it with cold drinking water.
- C. Refit the water container (10), pushing it all the way down to the bottom and then refit the tray (7).

4.2 FIRST-TIME APPLIANCE INSTALLATION



Attention!

When the appliance is installed for the first time, carry out the steps listed below.

- A. Plug the appliance into the mains power source; the line light (i) will flash to show that the appliance is connected to the mains power (Standby);
- B. Press the **ON/OFF** buttons together with (c) the coffee dispenser of the 1st group on the right (e), holding them down until water begins to be poured from the 1st delivery group on the right (5).
- C. During this stage, the lights (g), (i) and (m) will flash and the pump will be operating.
- D. Release the two buttons to stop the boiler filling cycle: the appliance will automatically return to Stand-by mode.
- E. Press the **ON/OFF** buttons together with (c) the coffee dispenser of the 2nd group on the right (p) holding them down until water begins to be poured from the 1st delivery group on the right (12).
- F. During this stage, the lights (g), (i) and (n) will flash and the pump will be operating.
- G. Release the two buttons to interrupt the boiler filling cycle; the appliance will automatically return to Stand-by mode.

4.3 SWITCHING ON AND HEATING THE MACHINE

- A. Press and hold down the **ON/OFF** button (**c**) for about 3 seconds; the light (**i**) will flash and then stay lit to show that the appliance is on. All of the appliance LEDs will switch on for 1 second.
- B. The boiler autofill function will be enabled automatically until the factory-set water level is reached (light **f** on).
- C. Once the boiler has been filled, the light (**h**) will begin to flash to show that the boiler is heating.
- D. Every time that the boiler temperature drops to below the set level, the light to show working temperature will begin to flash until the boiler returns to its set temperature.
- E. Fit the filter holder (**5**) onto the delivery groups (**3** and **12**).
- F. The appliance is now ready for use.



Attention!

To switch off the boiler, press the button **a**. When the boiler is switched off, it is not possible to use the steam function. If the boiler is switched off, when the machine is switched on, the boiler will stay off.

5. MAKING COFFEE

5.1 MAKING COFFEE WITH GROUND COFFEE POWDER

- A. Remove the filter holder **(5)** from the delivery groups **(3-12)**.
- B. Fill it with ground coffee (using the measure provided), taking care not to leave coffee residues on the top rim of the filter holder **(5)**, and then press the coffee with the presser provided.
- C. Refit the filter holder **(5)** securely to the delivery groups **(3-12)**.
- D. Place one or two cups under the filter holder **(5)**.
- E. **Model EP** Use the one coffee dispensing button from the same group, until the required amount of coffee has been poured and then press the button again to stop the delivery action manually.
- F. **Model EK** It is sufficient to press one of the delivery buttons **(d-e-p-q)** with the ready-set doses (programmed during installation).



Take note!

While using the appliance, check the fill level of the tray and empty if necessary.

5.2 MAKING COFFEE WITH PODS OR CAPSULES.

- A. Remove the filter holder **(5)** from the delivery groups **(3-12)**.
- B. Insert the plastic capsule or coffee pod into the filter holder.
- C. Refit the filter holder **(5)** securely to the delivery groups **(3-12)**.
- D. Place a cup under the filter holder **(5)**.
- E. **Model EP** Use the one coffee dispensing button from the same group, until the required amount of coffee has been poured and then press the button again to stop the delivery action manually.
- F. **Model EK** It is sufficient to press one of the delivery buttons **(e-p)** with the ready-set doses (programmed during installation).



Take note!

To stop coffee delivery earlier after using one of the buttons with pre-set doses, just press the button on the same touchpad.

6. DISPENSING STEAM



Warning!

This is only possible with the boiler switched on, light **h** on.

- A. Insert the steam wand **(11)** into a jug containing the drink to be heated.
- B. Turn the steam dial **(2)** anticlockwise.
- C. After heating the drink, turn the dial **(2)** clockwise to stop the steam flow.
- D. Remove the jug from the steam wand **(11)** and clean the wand immediately with a wet sponge to remove all residues of the heated drink.



Attention!

Do not turn the knob **(2)** to deliver steam before inserting the steam wand **(11)** into the pitcher in order to prevent possible burns.

7. PROGRAMMING

7.1 PROGRAMMING DOSES (EK version).

1ST COFFEE DELIVERY GROUP:

- A. While the appliance is operating (light **i** on without flashing) press and hold down the **ON/OFF** button **(c)** for about 3 seconds; the power light **l** will flash, as will the LEDs **(l-m-n-o)**.
- B. Fill the filter holder **(5)** with ground coffee (using the measure provided), taking care not to leave coffee residues on the top rim of the filter holder **(5)**, and then press the coffee with the presser provided.
- C. Fit the filter holder **(5)** to the group **(3)**, placing a cup under the filter holder.
- D. Press the one cup button **(e)** to commence delivery; the stand-by LED will flash and the light **(m)** will switch on to show that a single coffee dose is being programmed.

- E. When the amount of coffee in the cup has reached the required level, press the button **(e)** again to stop delivery.
- F. The display will automatically return to the initial programming screen.
- G. Fill the filter holder with the two coffee filter **(5)** with ground coffee (using the measure provided), taking care not to leave coffee residues on the top rim of the filter holder **(5)**, and then press the coffee with the presser provided.
- H. Fit the filter holder **(5)** onto the group **(3)**, placing two cups under the filter holder.
- I. Press the two coffee button **(d)** to commence delivery; the stand-by LED will flash and the light **(l)** will switch on to show that a double coffee dose is being programmed.
- L. When the amount of coffee in the cup has reached the required level, press the button **(d)** again to stop delivery.
- M. The display will automatically return to the initial programming screen.

2nd COFFEE DELIVERY GROUP:

- A. Fill the filter holder **(5)** with ground coffee (using the measure provided), taking care not to leave coffee residues on the top rim of the filter holder **(5)**, and then press the coffee with the presser provided.
- B. Fit the filter holder **(5)** to the group **(12)**, placing a cup under the filter holder.
- C. Press the one cup button **(p)** to commence delivery; pouring will start and the light **(n)** will switch on to show that a single coffee dose is being programmed.
- D. When the amount of coffee in the cup has reached the required level, press the button **(p)** again to stop delivery.
- E. The display will automatically return to the initial programming screen.
- F. Fill the filter holder with the two coffee filter **(5)** with ground coffee (using the measure provided), taking care not to leave coffee residues on the top rim of the filter holder **(5)**, and then press the coffee with the presser provided.
- G. Fit the filter holder **(5)** onto the group **(12)**, placing two cups under the filter holder.
- H. Press the two coffee button **(q)** to commence delivery; pouring will start and the light **(o)** will switch on to show that a double coffee dose is being programmed.
- I. When the amount of coffee in the cup has reached the required level, press the button **(q)** again to stop delivery.
- L. The display will automatically return to the initial programming screen.
- M. Press the **ON/OFF** button **(c)** again to quit the dose programming mode.

7.2 PROGRAMMING DOSES (pod/capsule version).

1st COFFEE DELIVERY GROUP:

- A. While the appliance is operating (light on and not flashing), press and hold down the **ON/OFF** button **(c)** for about 3 seconds; the power light **l** will flash, as will the LEDs **(l-m-n-o)**.
- B. Fill the filter holder **(5)** with a coffee pod or capsule.
- C. Fit the filter holder **(5)** to the group **(3)**, placing a cup under the filter holder.
- D. Press the one cup button **(e)** to begin delivery; the stand-by LED will flash and the light **(m)** will switch on to show that a single coffee dose is being programmed.
- E. When the amount of coffee in the cup has reached the required level, press the button **(e)** again to stop delivery.
- F. The display will automatically return to the initial programming screen.
- G. Repeat this operation to program the long coffee dose **(d)**.

2nd COFFEE DELIVERY GROUP:

- A. Fill the filter holder **(5)** with a coffee pod or capsule.
- B. Fit the filter holder **(5)** to the group **(12)**, placing a cup under the filter holder.
- C. Press the one cup button **(p)** to begin delivery; the light **(n)** will switch on to show that a single coffee dose is being programmed.
- D. When the amount of coffee in the cup has reached the required level, press the button **(p)** again to stop delivery.
- E. The display will automatically return to the initial programming screen.
- G. Repeat this operation to program the long coffee dose **(q)**.
- H. Press the **ON/OFF** button **(c)** to quit the dose programming mode.

8. COUNTER (optional)

This additional module serves to store the total number of cups poured by the machine.

When the machine is switched on, the display will show the LA SPAZIALE logo, then the software version, followed by the date.



Fig. 5

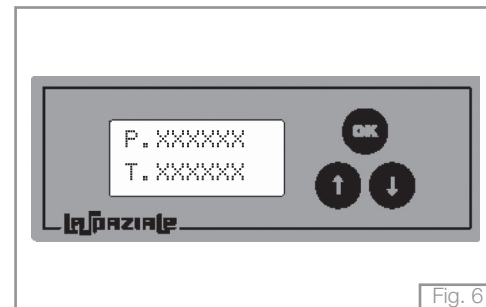


Fig. 6

DATE:

- When the display shows the date, press and hold down the OK button to change it.
- The display will show the first two digits on the left side as flashing; press the up ↑ and down ↓ arrow keys to change the day and press the **OK** button to confirm.
- Repeat the same procedure to change the month and year.
- Press the **OK** button to confirm; the display will return to showing the LA SPAZIALE log with the software version and the date.
- The display shows:

Where **T** is the total number of deliveries made during the whole working lifetime of the machine, while **P** is the partial number of deliveries made by the machine. It is possible to reset the partial number of deliveries by pressing and holding down the **OK** key for 3 seconds.

The display will show:

- Use the \uparrow key to move to **YES** and then press **OK**; the display will show:

- At the end of the reset, the display will show:
- Press the down arrow key \downarrow to show the date of the last reset on the display.
- The counter will only increase for deliveries over 7 seconds long.



Fig. 7



Fig. 8



Fig. 9

9 ALARMS OPERATION

INSUFFICIENT WATER IN THE TANK:

When there is insufficient water in the tank **(10)**, this is signalled by the flashing red light **(g)** on the control panel **(4)**. Top up the tank with cold drinking water (the tank can hold a maximum of 3 litres).



Take note!

If there is not enough water in the tank, the heat regulation function is enabled but it is not possible to deliver from the coffee groups.

COFFEE WATER DOSE SYSTEM FAILURE (EK version):

This alarm means that the system to dose water for coffee delivery has an anomaly. This may be due to the incorrect functioning of the volumetric counter or to coffee that has been ground too finely.

The alarm is signalled by the flashing lights **m-n** if one coffee is being delivered and the lights **l-o** if the dose is for two coffees.



Attention!

If this alarm intervenes, please contact your nearest authorised assistance centre.

BOILER TEMPERATURE DETECTION SYSTEM FAILURE (with boiler enabled only):

This alarm blocks the function and it is signalled with the light **(h)** switching on without flashing.

This alarm intervenes when the temperature reaches over 145 °C (temperature probe short circuited) or is under 60 °C (temperature probe interrupted).

To remove this alarm from the display, de-activate the boiler by pressing the button **(a)**.



Attention!

If this alarm intervenes, please contact your nearest authorised assistance centre.

BOILER AUTOFILL SYSTEM FAILURE (with boiler enabled only):

This alarm blocks the function and it is signalled with the lights **(f)** flashing and **(i)** fixed.

This alarm intervenes when the boiler filling system has been enabled for over 90 seconds from the first switch on or over 60 seconds in normal operating mode.

To remove this alarm from the display, de-activate the boiler by pressing the button **(a)**; the appliance can continue working without switching on the boiler.



Attention!

If this alarm intervenes, please contact your nearest authorised assistance centre.

10 ROUTINE APPLIANCE MAINTENANCE TO BE PERFORMED BY THE USER



Take note!

To grant the efficiency of the appliance and to maintain correct operation, it is necessary to follow the manufacturer's instructions as to cleaning and regular maintenance.



Attention!

Cleaning and routine maintenance operations must be carried out by the user according to the manufacturer's instructions given here below. Before carrying out any kind of cleaning operation, disconnect the appliance from the electricity mains and from the gas system (if fitted). Cleaning and routine maintenance operations must be carried out when the machine is cold and using protective gloves to prevent abrasions.

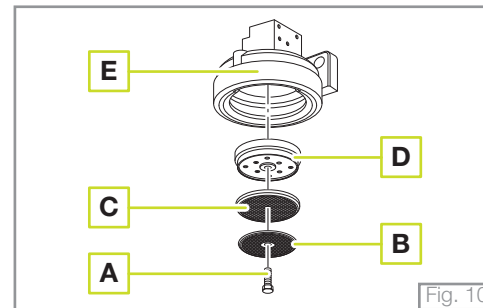
DAILY AT THE END OF THE JOB

- 1) De-activate the appliance, leave it to cool and then clean the filter holders **(5)**, filters and spouts, taking care that there is no build up inside the filter holders or spouts, while for the filter, it is necessary to make sure that all of the holes are clean (use a rough scourer for this operation).
- 2) Clean the shower heads under the delivery group **(3-12)** using the brush provided.
- 3) Clean the tray **(7)** and the tray grille **(6)**, using one of the detergents available, if necessary.

Every 3 days

After turning off the machine, remove the shower heads using the wrench provided; brush them carefully, making sure that all the holes are clean. Then reassemble the parts following the sequence shown in the figure 10.

- A. Fastening screw
- B. Small shower head
- C. Large shower head
- D. Diffuser
- E. Delivery group



Take note!

Do not use water jets to clean the machine.

BODYWORK

Clean the bodywork of the appliance using mild detergent to prevent any damage. We recommend not to use abrasive sponges that could damage the body panels.

WATER SOFTENER

The appliance has a filter with a microfiltration, scale removal, antichlorine and bacteria prevention function. The system is comprised of an adaptor (code no. 9683) to which the cartridge (code no. 9682) is applied.

This cartridge has an average life of about 100 litres of treated water (about 4000 deliveries) and once spent, it must be replaced and the spent cartridge disposed of as normal domestic waste.



Take note!

As well as these manuals, each appliance is provided with a separate manual (in DE, EN, FR, IT, NL, DK, PT, ES, NO, SV, PL) to illustrate the filter characteristics and the use and maintenance operations.

11 TECHNICAL SECTION



Attention!

The operations in this chapter must only be carried out by qualified persons.

11.1 ADJUSTMENT OF APPLIANCE OPERATING TEMPERATURE

This device serves to adjust the temperature of each delivery group **(3-12)** using two mechanical thermostats inside the appliance.

To access the two thermostats, remove the top cup rack and the fastening screw.

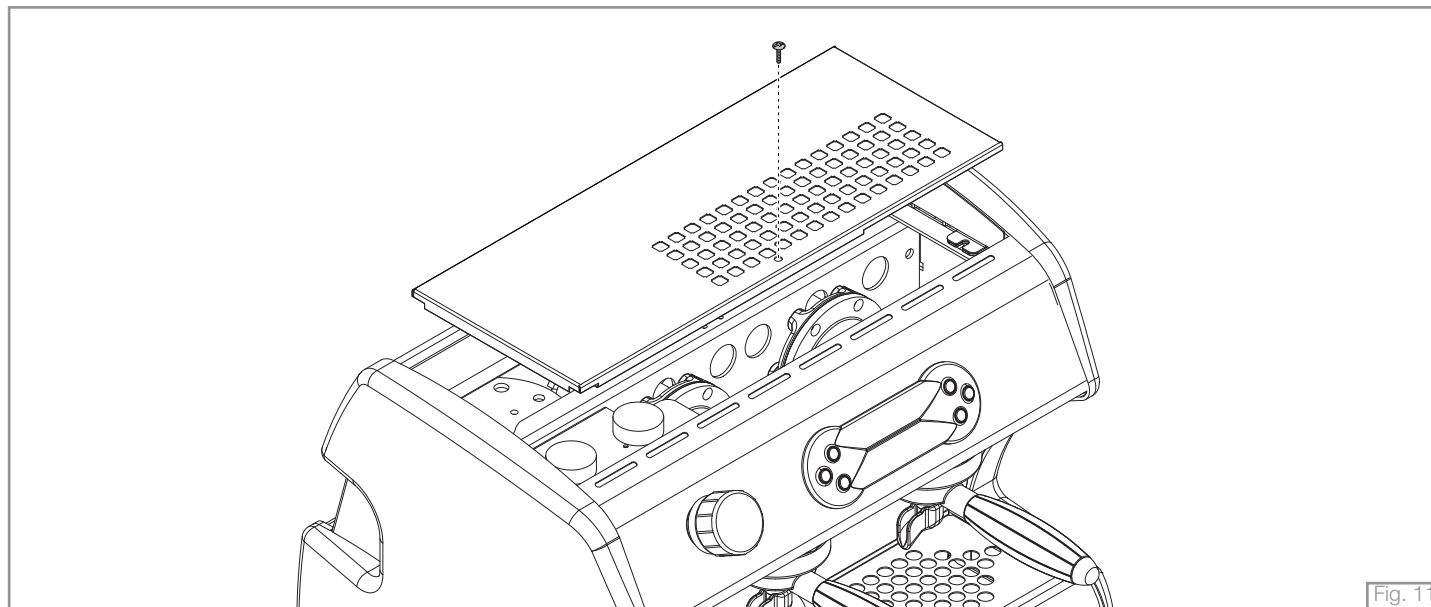


Fig. 11

The default temperature for the coffee delivery groups is factory set to 100 °C.
Turn the dial for the 1st mechanical thermostat on the right **(A)** clockwise to increase the temperature of the 1st delivery group.
Turn the dial for the 1st mechanical thermostat on the right **(A)** anticlockwise to reduce the temperature of the 1st delivery group.
Repeat the same operations for the mechanical thermostat on the left **(B)** to change the temperature of the 2nd delivery group.

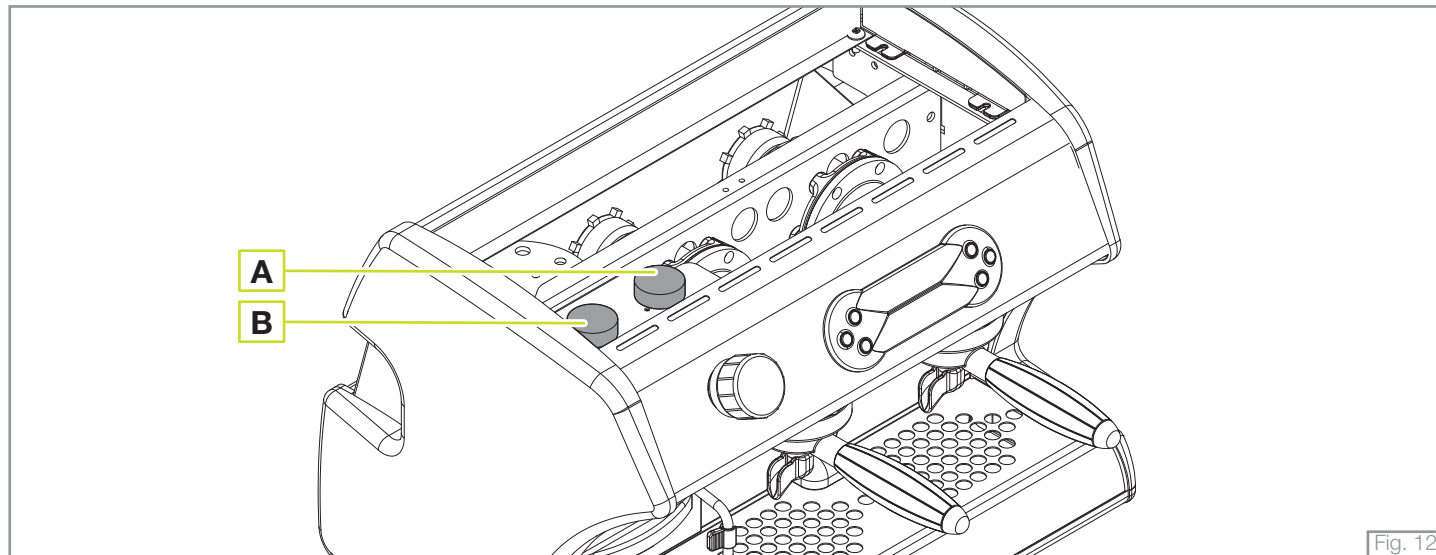


Fig. 12



Take note!

The running temperature for the appliance must only be changed to improve the result in the cup, based on the coffee blend being used.

11.2 VIBRATION PUMP PRESSURE CALIBRATION

The appliance is fitted with two vibration pumps: one for each delivery group.

The two pumps are factory set to 9 bar when the delivery groups are set to deliver ground coffee and 12 bar for coffee delivery groups configured to delivery coffee in pod or capsule format.

To adjust the vibration pump pressure, remove the basin, tank and waste cover panel.

To increase the vibration pump pressure for the first group on the right, turn the ring nut anticlockwise.

To reduce vibration pump pressure for the first group on the right, turn the ring nut anticlockwise.

The procedure to calibrate the vibration pump for the 2nd group is the same.

11.3 ELECTRONIC BOARD CONFIGURATION

The electronic board can be configured to manage the two group delivery control versions: automatic (EK) and semiautomatic (EP).

The electronic board has a JP3 connector to configure the board: if closed the control unit is in the EK (automatic) version and if open, it is in the EP (semiautomatic) version.

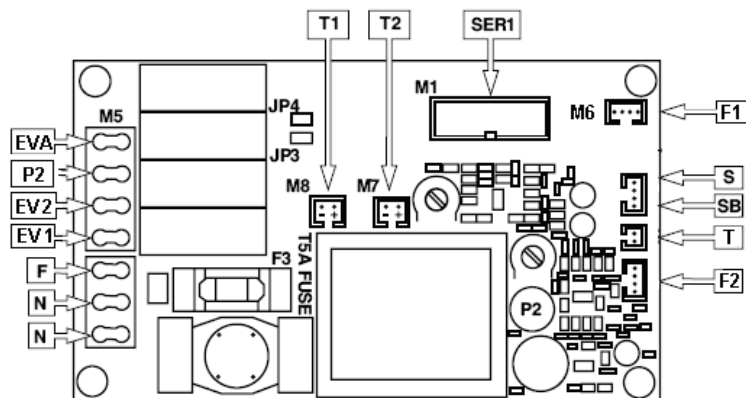


Fig. 13

11.4 POWER CONTROL UNIT CONNECTION DIAGRAM

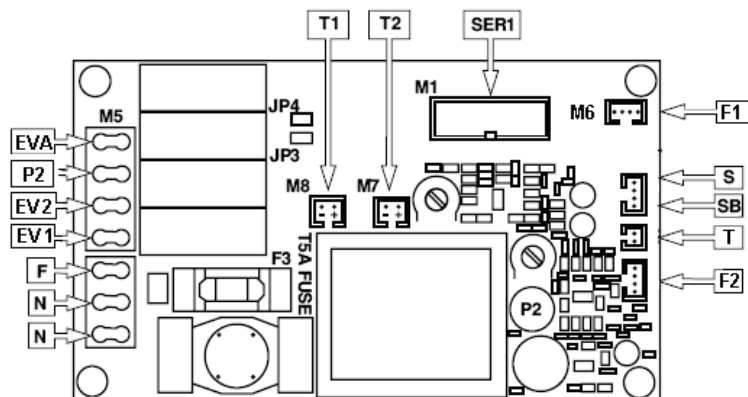


Fig. 14

KEY

F = Phase

N = Neutral

EV1 = Control for vibration pump 1 + 1st delivery group solenoid valve

EV2 = 2nd delivery group solenoid valve

P2 = 2nd group vibration pump

EVA = Auto-level solenoid

T1 = Triak boiler

T2 = Triak group

Ser1 = Connection to button pad

F1 = 1st GR volumetric counter

F2 = 2nd GR volumetric counter

S = Boiler temperature probe

SB = Boiler level

T = Canister level

11.5 BUTTON PAD CONNECTION DIAGRAM

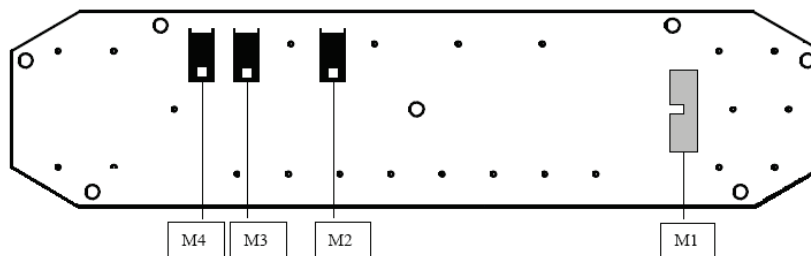


Fig. 15

KEY

M1 = Control board flat connector

M2 = 12 Volt input

M3 = 12 Volt output (delivery counter power)

M4 = LED connection

11.6 WATER SUPPLY DIAGRAM

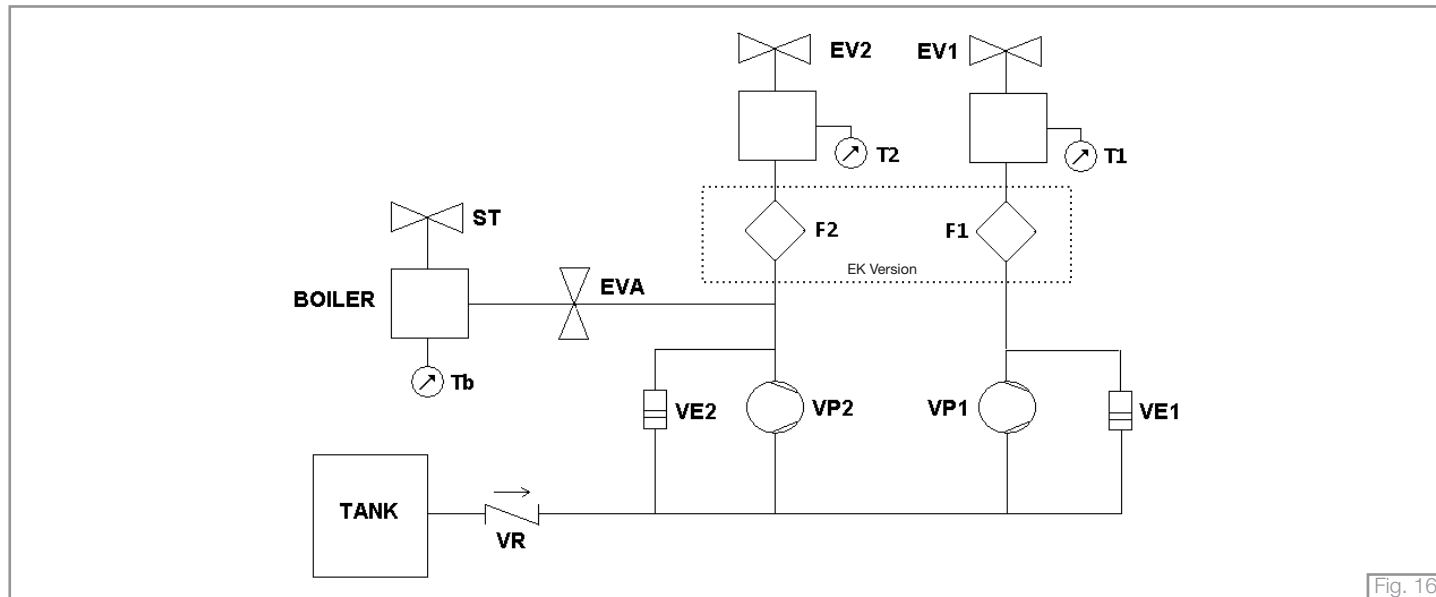


Fig. 16

KEY

TANK

= Tank

VR

= Check valve

VE1

= Group 1 expansion valve

VP1

= Group 1 vibration pump

VE2

= Group 2 expansion valve

VP1

= Group 2 vibration pump

EVA

= Autolevel solenoid

ST

= Steam cock

F1

= 1st group volumetric counter
(EK version machine only)

F2

= 2nd group volumetric counter
(EK version machine only)

C1

= 1st coffee group

C2

= 2nd coffee group

BOILER

= steam boiler

EV1

= 1st group solenoid

EV2

= 2nd group solenoid

11.7 WIRING DIAGRAM

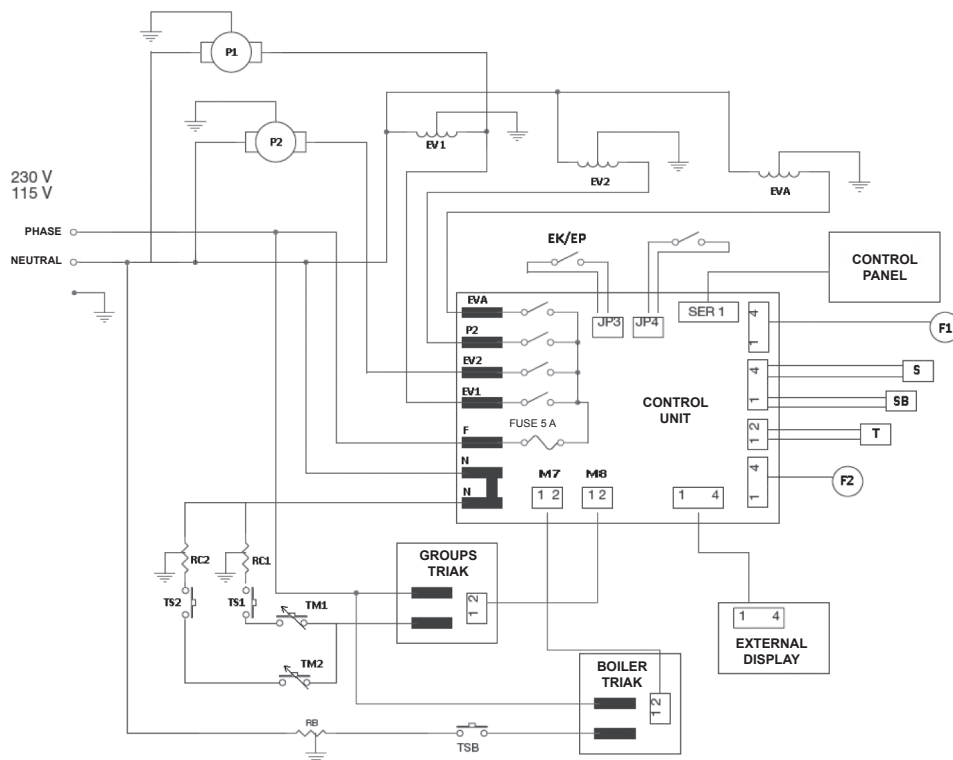


Fig. 17

KEY

P1 = 1st group vibration pump

P2 = 2nd group vibration pump

EV1 = 1st group solenoid

EV2 = 2nd group solenoid

EVA = autolevel solenoid

TS1 = 1st coffee group safety thermostat

TS2 = 2nd coffee group safety thermostat

TSB = steam boiler safety thermostat

TM1 = 1st coffee group temperature adjustment thermostat

TM2 = 2nd coffee group temperature adjustment thermostat

RC1 = 1st coffee group heating element

RC2 = 2nd coffee group heating element

RB = steam boiler heating element

Jp3 = version EP/EK switchover

Jp4 = DELIVERY COUNT DATA TRANSMISSION output signal.

M7 = boiler static relay connector

M8 = coffee group static relay connector

12 TECHNICAL DATA

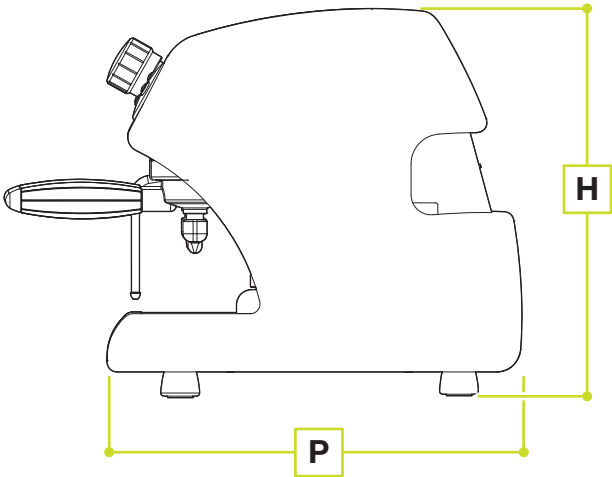
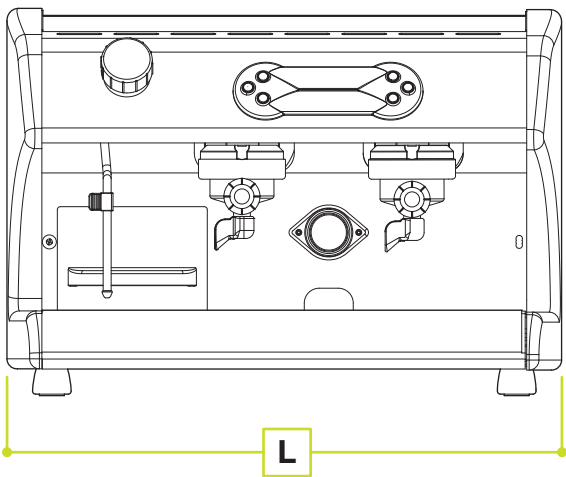


Fig. 18

DIMENSIONS AND WEIGHT		
L (mm)	P (mm)	H (mm)
550	415	385


POWER SUPPLY RATING AND ABSORPTION		
VOLT	Hz	W
230	50/60	1200/800/800



espresso coffee machines

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