La Spaziale

espresso coffee machines

S21

EN 00 LSI 026 08-2022

INSTALLER MANUAL

WEEE

Disposal of equipment by individuals in the territory of the European Union (WEEE), according to the standards 2011/65/EU, 2012/19/EU and 2015/863/EU, related to the reduction of the use of hazardous substances in electrical and electronic equipment, as well as waste disposal.

The crossed-out bin symbol on the equipment or its packaging indicates that the product at the end of its useful life should be collected separately from other waste. Separate collection of this end-of-life equipment is organized and managed by the importer/distributor. The user who wishes to dispose of this equipment should therefore contact the importer/distributor and follow the system the importer/distributor has adopted to enable separate collection of the end-of-life equipment. Adequate separate collection for subsequent initiation of the discarded equipment for environmentally sound recycling, treatment and disposal helps to avoid possible adverse environmental and health effects and promotes the reuse and/or recycling of the materials of which the equipment is composed.

l [redacted] isposal of the product by the holder will result in the application of the administrative penalties stipulated in the current norma- tion.

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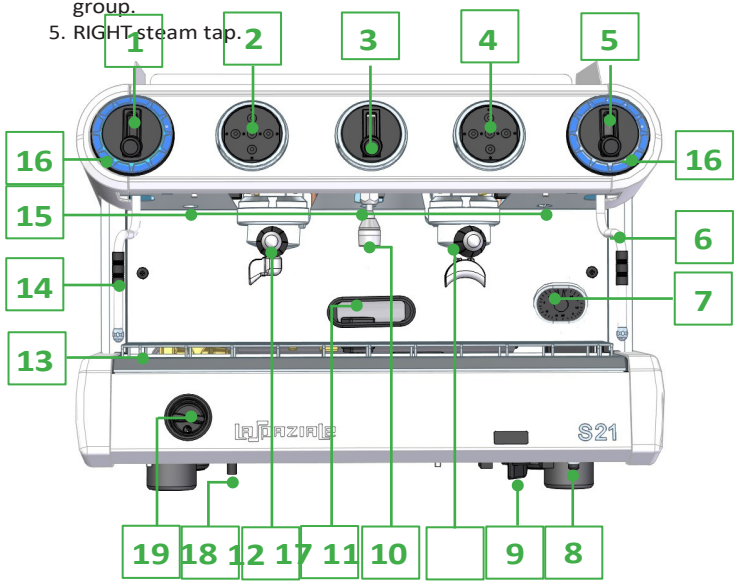
INDEX

1. GENERAL DESCRIPTION OF MACHINE

group.
5. RIGHT steam tap.



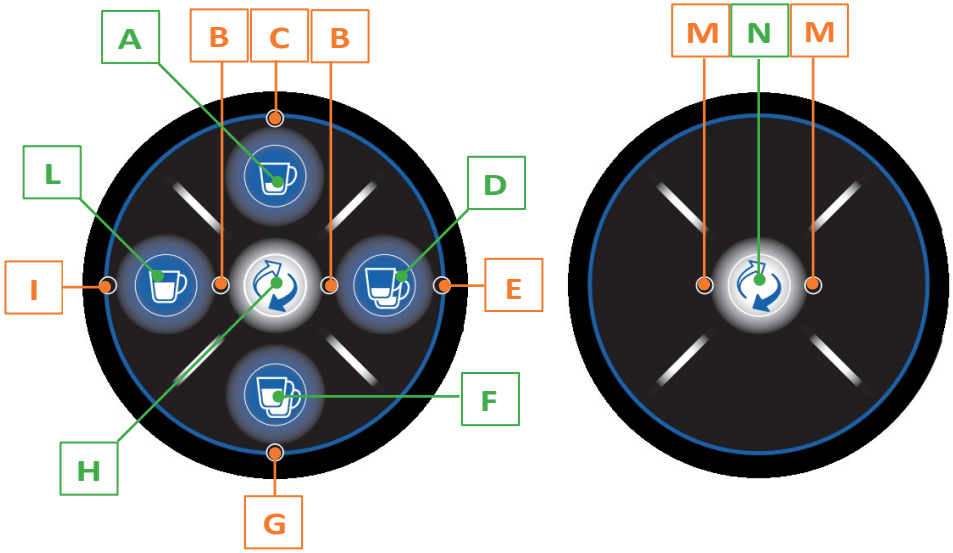
LEGEND:

1. Left steam tap.
2. Push-button panel 2nd group.
3. Tap Water.
4. Push-button panel 1st group.
5. RIGHT steam tap.
6. RIGHT steam lance.
7. Pressure gauge.
8. Cup Warmer Switch*
9. Main switch.
10. Filter holder 2 coffee.
11. Hot water lance.
12. Filter holder 1 coffee.
13. Basin with grid.
14. Left steam lance.
15. Led lighting*.

16. Backlit ring*.
17. Gas inspection window*.
18. Piezo Gas Igniter*.
19. Gas tap knob*.

* Optional.

1.1 DESCRIPTION BUTTON PANEL DISPENSING COFFEE



LEGEND: EK

HAND CONTROL

A. Button 1 short coffee.
B. Led Continuous Dispensing Button.
C. Led Button 1 short coffee.
D. Button 2 short coffees.
E. Led Button 2 short coffees.
F. Button 2 long coffees.
G. Led Button 2 long coffees.
H. Continuous dispensing button.
I. Led Long coffee button.
L. Long coffee button.

PULSION EP

M. Led continuous dispensing button.
N. Continuous dispensing button.

2. GENERAL TIPS FOR THE INSTALLER

Carefully read the instructions and warnings contained in this manual and in the "**USE AND MAINTENANCE MANUAL**," a s they provide important information regarding the installation of the appliance.

Warning.

The device may be used only for the purpose for which it was intended. Any other use is to be considered improper, and therefore unreasonable. The manufacturer cannot be held responsible for any damage caused by improper, erroneous and unreasonable use.

Warning.

Ensure that the customer has installed the equipment according to the instructions given in the "USE AND MAINTENANCE MANUAL" supplied w i t h the equipment.

Warning.

Make sure that the power supply of the customer- prepared system corresponds to the power indicated on the nameplate of the application.

Danger!

The appliance is supplied without a plug, thus intended to be installed to the power supply, so it is necessary to pre- see a multipole switch with contact opening equal to or greater than 3 mm, as required by current standards.

Danger!

Should it be necessary to replace the power cord of the device, use only the following types: CET ELETRIC H07RN-F 5 x 2.5 mm (400V) for 2/3-group versions, 5 x 4 mm (400V) for 4-group versions - CET ELETRIC SINGLE-PHASE 3 x 2.5 mm (220V) 2-group versions, 3 x 4 mm (220V) for 3/4-group versions. Cable replacement must be carried out by qualified perso- nals. Total electrical safety of the appliance is achieved only with proper connection to an effective grounding system in accordance with applicable laws.

Danger!

The appliance should be filled only with cold potable water. The maximum mains pressure (static pressure) must be less than 0.6 Mpa.

Danger!

If there is any doubt about the above requirements inherent in the installation previously arranged by the customer, contact qualified personnel for checks.

Danger!

Total electrical safety of the appliance is achieved only by proper connection to an effective grounding system in compliance with applicable laws.

Warning.

Installation must be done by qualified personnel and according to the manufacturer's instructions. Incorrect installation may cause damage to people, animals or property, for which the manufacturer cannot be held responsible.

Warning.

Place the device on a supporting surface, the stability of which must be checked.

Warning.

The appliance must be installed where operation and maintenance are reserved for trained personnel. Electrical, plumbing , gas (optional) and exhaust systems must be arranged by the customer in a suitable location to allow proper installation. The installer may not modify pre-existing installations prepared by the customer. Refer to the chapter "Preinstallation arranged by the customer" in the "USE AND MAINTENANCE MANUAL" supplied with each machine.

3. PACKAGING REMOVAL

After unpacking, check the integrity of the appliance; if in doubt, do not use it and contact the manufacturer. Packaging items should not be left within the reach of children as they are potential sources of danger.

Warning.

As a device weighing more than 30Kg, it cannot be handled by a single person.

Note.

Dispose of packaging items as per regulations in the country where the machine is used.

3.1 EQUIPMENT

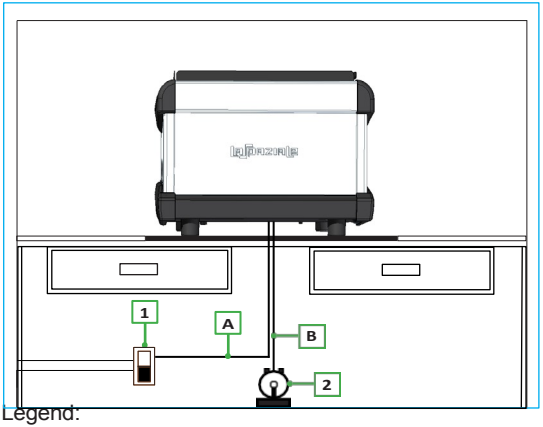
- A set of filter holders with corresponding spouts.
- A complete set of hoses for water connection.
- A series of filters.
- One set of hand showers for each dispenser group.
- A key for disassembling showerheads.
- A toothbrush.
- A manual coffee press.

4. INSTALLATION

Place the machine on a supporting surface, lifting it only from below. Before connecting the machine to the power supply, make sure the data on the nameplates match the specifications of where it is installed.

4.1 INSTALLATION WIRING DIAGRAM

During electrical connection, refer to all warnings and suggestions in this manual. In addition, the ali- mentation cable must be completely uncoiled to avoid danger of overheating. Check the voltage at the installation point of the machine and connect the power cord, as shown in the figure below. The machine cables are marked as se- gue: A - Machine power cable (connected directly to 'main switch 1); B - Motor pump cable (if not integrated into the machine, connected directly to motor pump 2).
Versions of the machine with the integrated motor pump do not have a cable (B).



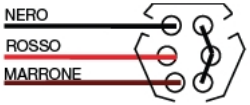
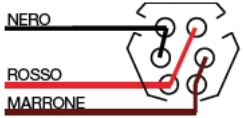
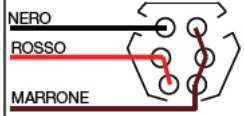
Legend:
1 Main switch (arranged by the customer);
2 Motor pump (if not integrated).

Warning.

Connect the yellow/green cable (B) to the ground terminal on the motor pump if the motor pump is not integrated into the machine.

Danger!

The blue wire (D) is connected to the neutral of the 'electrical system.

	V400/3Ph	V230/3Ph	V230/1Ph	
COLLEGAMENTO RESISTENZA				
COLLEGAMENTO CAVO ALIMENTAZIONE				CABLAGGIO CAVO ALIMENTAZIONE A= GRIGIO B= NERO C= MARRONE D= AZZURRO E= GIALLO VERDE

Note.

230-volt connections are possible only if the nameplate shows a power rating of less than 6300 W.

4.2 HYDRAULIC INSTALLATION DIAGRAM

Warning.

The machine is supplied without water in the boiler to prevent 'any exposure to a temperature below 0° C, may cause irreparable damage.

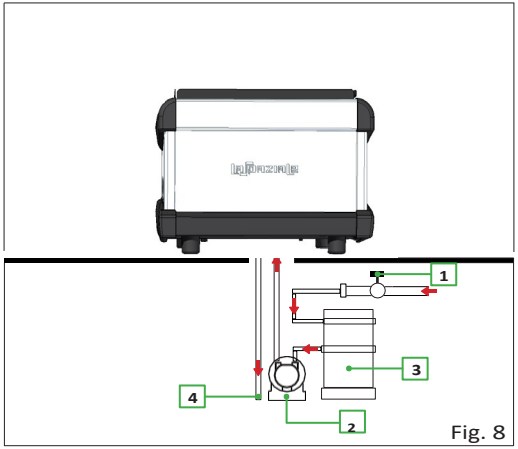


Fig. 8

Legend:
1 Water tap (previously placed by the customer).
2 Motor pump (supplied with the machine-if not integrated).
3 Water treatment system (optional).
4 Drain trap (previously installed by the customer).

Make the connections as shown in Fig. 8 following the instructions below:

- Always use the hoses supplied with the machine for the water supply connection; do not use other hoses already attached.
- Make sure the hoses are not defective, crushed or kinked.
- Tighten the hose ferrules firmly but without exerting too much pressure.

Danger!

THE INSTALLATION OF A WATER TREATMENT SYSTEM IS RECOMMENDED TO PROLONG THE LIFE OF THE MACHINE.
Before installing the machine, check the water hardness and, if necessary, install the 'water treatment system according to the manufacturer's instructions and current regulations.

Danger!

In the absence of a water treatment system in the plumbing system, a filter should be attached to the inlet hose of the motor pump to prevent the entry of impurities, which could damage the motor pump or the machine.

Note!

In case there is a centralized water treatment system in the room, it is not recommended to install another one for the coffee machine.

Note.

In case the pressure of 'water from the water mains is higher than 6 bar or is not constant, it is recommended to install a pressure reducer.

Warning.

Mount the external motor pump at a distance that prevents drops or splashes of water and protects the motor pump from salt when filling the softener. Before connecting the hose coming from the motor pump or softener, in the case of appliances with built-in pumps, insert it into a bucket and keep the water faucet open (1- Fig. 8) for a few minutes in order to remove possible residue from new hoses and, in any case, until the water is clear.

4.3 EXHAUST SYSTEM

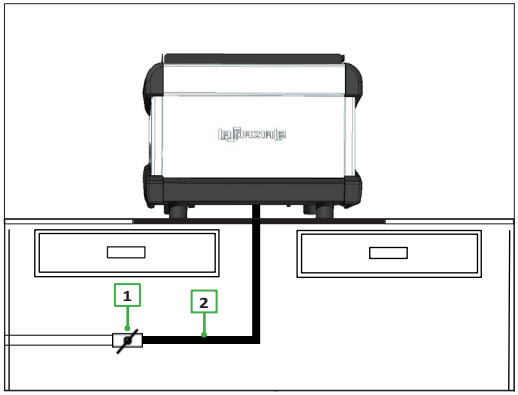
Connect the plug-in drain hose to the hose holder on the machine's sump and place the other end directly into the U-shaped drain hose of the prepared drainage system. Ensure that the hose is not obstructed or crushed in its length and that it is angled enough to drain smoothly.

Danger!

Avoid feeding the drain pipe into basins or buckets placed under the meter as this increases the chances of creating dirt receptacles, resulting in the proliferation of bacteria.

4.4 GAS PLANT (optional)

LEGEND:
1. Gas tap (previously installed by the customer).
2. Gas supply pipe.



Note.

The appliance is set up by the manufacturer to operate with LPG gas (G30).
When connecting the appliance to the 'system, use only hoses suitable for the type of gas used and in accordance with applicable laws.

Warning.

If the appliance is operated on LPG, make sure that the supply pressure does not exceed 30 mbar, as a higher pres- sion could damage the appliance.

4.5 GAS TABLE.

UGELLO TIPO DI GAS	Ø FORO G30	Ø FORO G20	Consumo nominale G30 gr / h	Consumo nominale G20 l / h	POTENZA NOMINALE Watt	POTENZA NOMINALE Kcal / h
Mod. 2 gruppi	57	95	11	15	160	1376
Mod. 3 gruppi	75	118	182	24	2500	2150

⚠ Note.

Nozzle bore (Ø) is expressed in hundredths of a mm.
These values refer to the warm-up phase of the machine,
that is, when the gas pressure switch is fully open (with flame at maximum).

Adaptation to a different type of gas is done by replacing the nozzle as indicated in the following instructions and complying with the conditions given in the gas table.
To change the gas nozzle, unscrew fastening screw 1 (Fig. 8, right) and slide out the fitting toward the pressure switch in order to access the gas nozzle.
Loosen the nozzle and replace it with the one suitable for the type of gas at the place of installation. Return the fitting to its original position and finally tighten screw 1 again (Fig. 8).

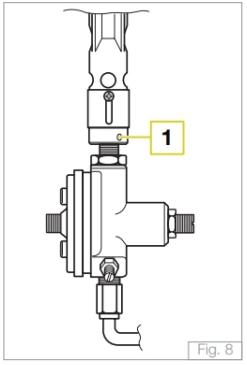
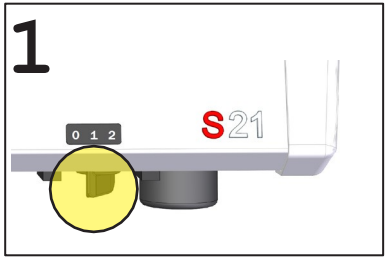


Fig. 8

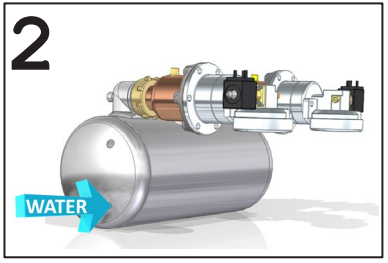
⚠ Warning.

The appliance does not require flue outlet. For proper installation of the 'gas system, you must comply with applicable laws.

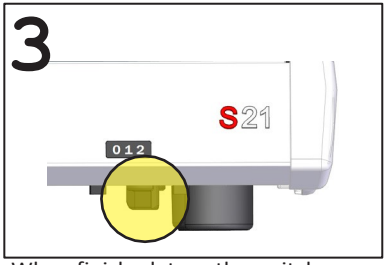
5. ELECTRIC IGNITION OF THE MACHINE FROM COFFEE



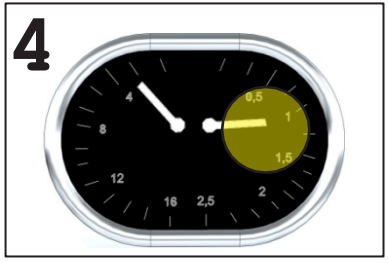
Turn the knob one click.
Of the 'main switch (9 pg. 2).



The device provides charge-ments of water in the boiler.



When finished, turn the switch ge-neral to position 2 to turn on the boiler heating.



Wait for the unit to reach the thermal steady state pressure, indicated by the pressure gauge (7, p. 2).

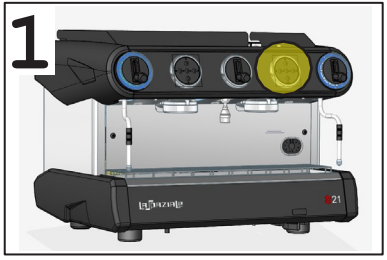
⚠ Note.

For coffee brewing, hot water dispensing, steam and cleaning, see **the USER & MAINTENANCE MANUAL** included with the appliance.

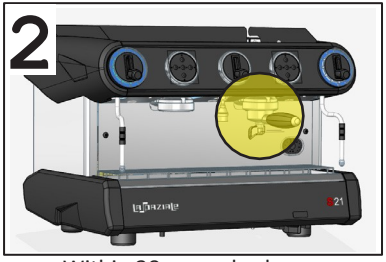
⚠ Note.

For possible ordering of spare parts, see the spare parts catalog available in the 'restricted area of the website www.laspaziale.com.

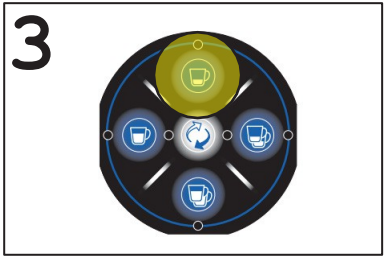
5.1 COFFEE DOSAGE PROGRAMMING (only EK)



Hold down the continuous dispensing button on the first button from the right, for about 5 seconds, the two LEDs of the pressed button start flashing.



Within 30 seconds place a filter holder, containing a dose of ground coffee, to the group and place a cup under the corresponding group.



Press the button a 1 short coffee, once the required dose of coffee is reached, press the same button again to stop.

Once the dose is set, the corresponding symbol will turn off, indicating that programming is complete. Repeat the above procedure for the other buttons.

Note.

Perform this procedure to program other doses, using the filter holder for 1 cup (12, p. 2) or 2 cups (10, p. 3), depending on the dose to be programmed.

Note!

To exit programming, press the continuous dispensing button for 5 seconds or wait 1 minute to exit automatically.

Danger!

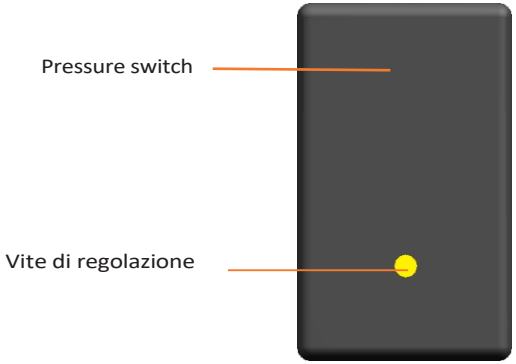
By setting doses on the first right hand button panel, the other groups will automatically acquire the same dosage; if you want to set a different dosage per group, repeat the same setting procedure on the button panel corresponding to the group to be programmed differently.

5.2 PRESSURE REGULATION BOILER

The appliance's electric heating system is already adjusted by the manufacturer to work at a temperature of 120 °C in the boiler corresponding to 1 bar pressure, the latter of which can be displayed on the pressure gauge (7, p.2) located in the appliance. To increase or decrease the pressure of the boiler, the electrical pressure switch inside the appliance (right side) must be operated as follows:

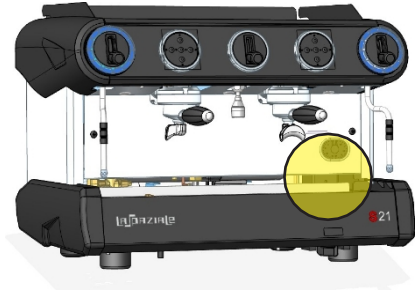
THREE-PHASE PRESSURE SWITCH:
- To increase the boiler pressure, turn the adjustment screw counterclockwise.
- To decrease the boiler pressure, turn the adjustment screw clockwise.

SINGLE-PHASE PRESSURE SWITCH:
- To increase the boiler pressure, turn the adjustment screw clockwise.
- To decrease the boiler pressure, turn the adjustment screw counterclockwise.



Note.

The pressure switch is located on the right side of the machine; to access it, remove the bowl and grate. Remove the yellow protective cap to access the adjustment screw.



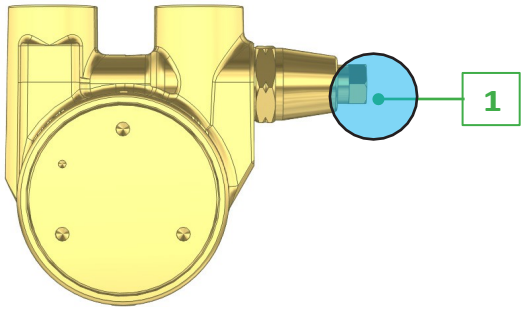
Danger!

Remove power from the device if you need to act on the pressure switch.

Note.

The boiler pressure (thermal regime) is changed solely for the purpose of adapting the temperature of the device to the type of coffee blend being used, so as to improve the result in the cup.

5.3 PRESSURE REGULATION PUMP

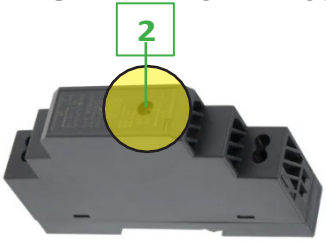


The suitable working pressure is between 8 and 10 bar. That pressure can be visualized by turning on a regulator assembly on the machine's pressure gauge (7, p. 2).

To adjust the pressure, act on the adjustment screw (1) on the motor pump, after loosening the lock nut (if any).

To increase pressure turn the screw (1) clockwise; to decrease pressure turn it counterclockwise.

5.4 LED LIGHT INTENSITY ADJUSTMENT (optional)



Act on the adjustment screw (2) of the switching power supply to adjust the light intensity of the backlit ring lights and the LEDs that illuminate the work surface.
To access the switching power supply, remove the bowl and cover plate.

5.5 ITC SYSTEM (optional)

This system allows a different coffee ero- gation temperature to be set for each group.

The temperature of each group is independent of the temperature set in the boiler.
To change the temperature of a group, use the respective flow regulator, which is accessible through the opening on the top of the cup rest top (3).
Turn the adjustment screw counterclockwise, to decrease the temperature.
Turn the adjustment screw clockwise, to increase the temperature.

6 ALARM MANAGEMENT

EK MODEL

THE LED RELATED TO THE COFFEE DOSE BEING BREWED FLASHES AFTER 5-6 SECONDS:

This alarm is displayed when, during dispensing, there is a malfunction of the volumetric system related to the group in dispensing, or if there is too fine a grind.
After checking the grind, if the problem persists, call an authorized service center.

ALL THE RELATIVE LEDS OF THE BUTTON PANELS FLASH:

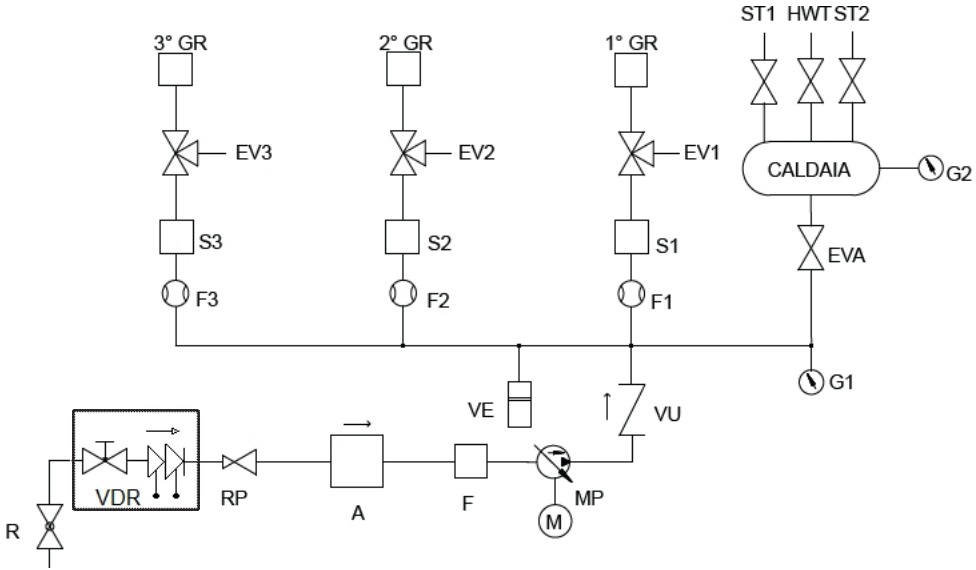
The automatic loading of 'water into the boiler has been left on for over 4 minutes (6 minutes for the 3-group), total lockout of the machine. To restore normal operation, turn off the machine using the power switch.
If the problem persists, call an authorized service center.

MODEL EP

BUTTON PANEL LEDS FLASH ALTERNATELY:

The automatic load of 'water in the boiler remained on beyond the 4 minutes (6 minutes for the 3-group), total blockage of the machine.
To restore normal operation, turn off the machine using the power switch.
If the problem persists, call an authorized service center.

7 HYDRAULIC SCHEME

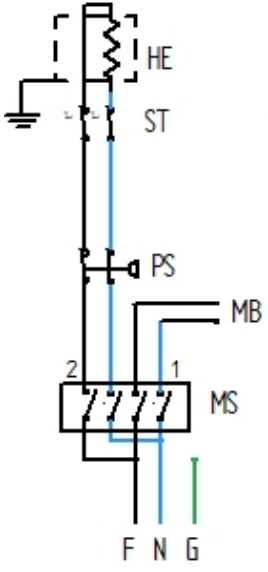


LEGEND:

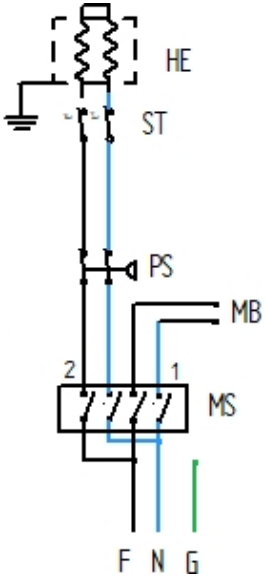
R = WATER MAINS TAP
VDR = DOUBLE CHECK VALVE
A = WATER TREATMENT SYSTEM (OPT.) F = WATER FILTER (OPTIONAL)
MP = MOTOPUMP
VU = CHECK VALVE
VE = EXPANSION VALVE
G1 = WATER MAINS/PUMP PRESSURE GAUGE EVA = SELF-LEVEL SOLENOID VALVE G2 = BOILER PRESSURE GAUGE F1 = VOLUMETRIC METER 1ST GR F2 = VOLUMETRIC METER 2ND GR F3 = VOLUMETRIC METER 3RD GR S1 = HEAT EXCHANGER 1ST GR S2 = HEAT EXCHANGER 2ND GR S3 = HEAT EXCHANGER 3RD GR EV1 = SOLENOID VALVE 1ST GR COFFEE EV2 = SOLENOID VALVE 2ND GR COFFEE EV3 = SOLENOID VALVE 3RD GR COFFEE
ST1 = STEAM TAP LEFT
ST2 = RIGHT STEAM TAP HWT = HOT WATER TAP

7.1 WIRING DIAGRAM

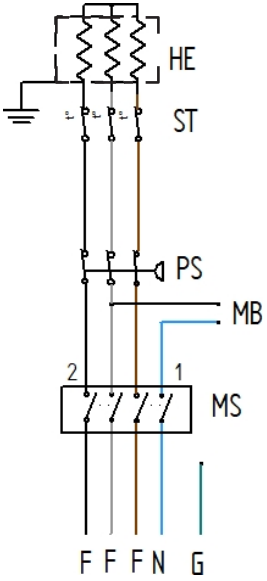
S21 SPACE



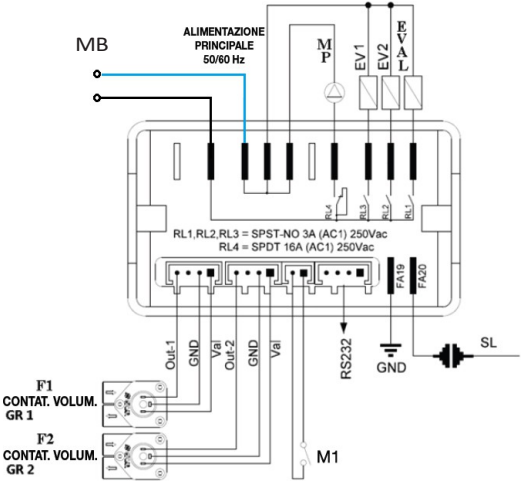
S21 2 GR 220-240 VOLTS



S21 2/3 GR 400 VOLT



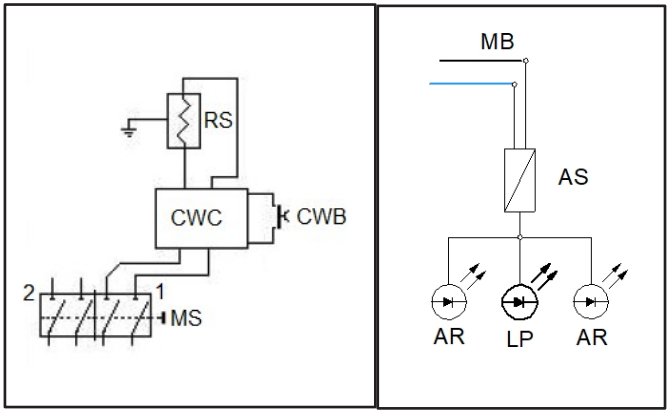
ELECTRONIC CONTROL UNIT



7.2 WIRING DIAGRAM AND LEGEND

CUP WARMER HEATING ELEMENT

LED LIGHTING

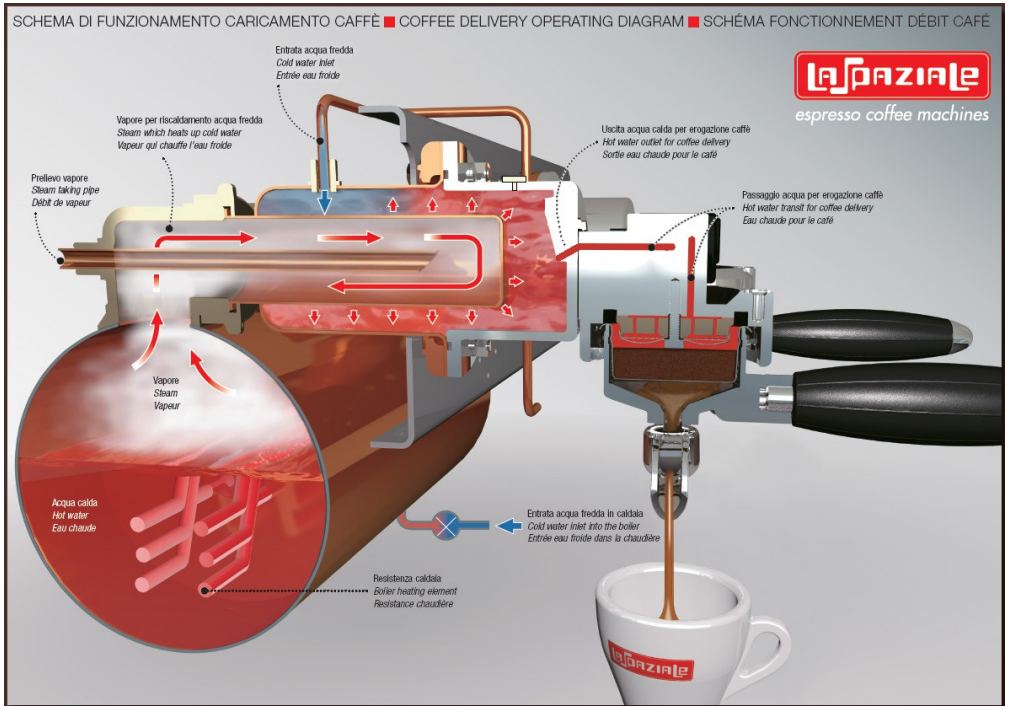


LEGEND:

HE = BOILER ELECTRICAL RESISTANCE ST = SAFETY THERMOSTAT
PS = PRESSURE SWITCH
MB = ELECTRONIC CONTROL UNIT MS = MAIN SWITCH F = PHASE
N = NEUTRAL
G = MASS
MP = MOTOPUMP
EV1 = SOLENOID VALVE 1ST COFFEE GROUP EV2 = SOLENOID VALVE 2ND COFFEE GROUP EVAL = SOLENOID VALVE AUTO LEVEL
F1 = VOLUMETRIC COUNTER 1ST COFFEE GROUP F2 = VOLUMETRIC COUNTER 2ND COFFEE GROUP
M1 = JUMPER DISABLE CONTINUOUS DISPENSING KEY RS232 = SERIAL RS232
GND = MASS
SL = LEVEL PROBE
RS = CUP WARMER RESISTOR
CWS = CUP WARMER RESISTOR CONTROL UNIT
CWB = CUP WARMER RESISTOR BUTTON AS = SWITCHING POWER SUPPLY UNIT
AR = LED BACKLIT RINGS

7.3 THERMAL SYSTEM THE SPACE

All LA SPAZIALE espresso machines, are built with a heat exchange system between the boiler and the coffee group. A special patent, unique in the world, for the thermoregulation o f the coffee brewing group based on the circulation of steam instead of water.



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