



GAGGIA

MILANO



la Reale

INSTALLATION AND USE

First Edition
Rev.00

REV.	DESCRIPTION	DATE

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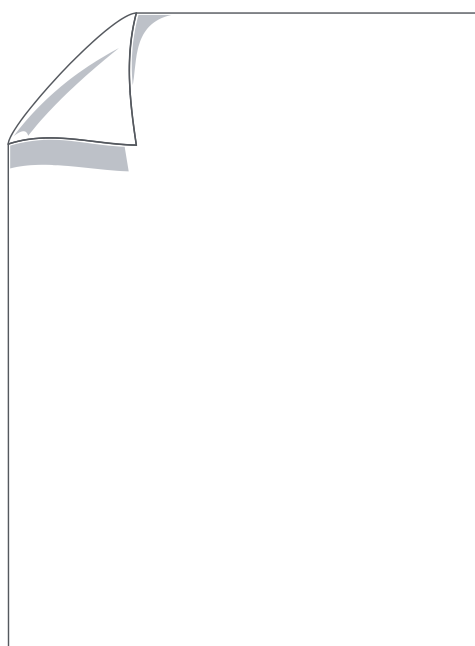
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1 GENERAL INFORMATION

1.1 EC DECLARATION OF CONFORMITY

A facsimile of the “EC Declaration of Conformity” is shown below.

The original document is an integral part of the documentation provided to the Customer along with the machine.

EC DECLARATION OF CONFORMITY

Product : Espresso coffee machine
Type : laReale

SaGa Coffee S.p.A. Loc. Casona 1066 – 40041 Gaggio Montano (BO) – Italy declares here with its own responsibility that the above mentioned product meets the requirements of the following Directives, Standards and Regulations:

LOW VOLTAGE DIRECTIVE 2014/35/EU (ex 2006/95/CE)

Conformity has been controlled with the aid of the following harmonized standards: EN 60335-1 / EN 60335-2-15 / EN 60335-1 (EN 62233)

ELECTROMAGNETIC COMPATIBILITY DIRECTIVE 2014/30/EU (ex 2004/108/CE)

Conformity has been controlled with the aid of the following harmonized standards:
EN 55014-1 / EN 55014-1 (EN 61000-3-2) / EN 55014-1 (EN 61000-3-3) EN 55014-2 (EN 61000-4-2) / EN 55014-2 (EN 61000-4-4) / EN 55014-2 (EN 61000-4-5) EN 55014-2 (EN 61000-4-11) / EN 55014-2 (EN 61000-4-6) / EN 55014-2 (EN 61000-4-3)

PRESSURE DEVICE DIRECTIVE (PED) 2014/68/EU

Coffee machines are in compliance with the directive 2014/68/EU - Form A1 - Category II - and are equipped with the following items which are included in the same directive:

Copper boiler Mardek CE 0045
Safety valve Mardek CE 0045

2011/65/EU (RoHS)

Prescriptions reported in the ROHS Directive, concerning limitations on the use of the listed hazardous substances, are met.

Valbrembo, 11-02-2019

Andrea Zocchi
C.E.O.

1.2 SUBJECT AND PURPOSE OF THE MANUAL

The subject of this manual is the “La Reale” professional espresso coffee machine by SaGa Coffee S.p.A.

This Manual provides all the instructions and information necessary to properly and safely carry out any operation relating to the machine's installation, use, maintenance, and decommissioning.

1.3 USE AND STORAGE OF THE MANUAL

This Manual is intended for the machine's operator and the personnel in charge of its installation and maintenance.

The Manual serves to indicate the machine's intended use and technical characteristics, as well as to provide indications for its proper use, cleaning, and adjustment; it also provides important indications regarding maintenance and any residual risks that may be present, as well as instructions for carrying out operations that require particular care and that must be performed exclusively by maintenance personnel.

This Manual is to be considered an integral part of the machine, and must be **KEPT FOR FUTURE REFERENCE** up until the time of the machine's final disposal.

The Manual must always be available for consultation, and must be stored in a safe, dry place.

If lost or damaged, the Customer can request a new manual from the manufacturer or retailer by indicating the machine's model and serial number, as shown on its identification plate.

This Manual reflects the machine's status at the time of its provision: the manufacturer reserves the right to update its contents with no obligation to update previous editions as well.

1.4 GRAPHICAL CONVENTIONS

The texts and descriptions of **particular importance** for the personnel's safety and for the product's proper use, including any improper conduct to be avoided and the relative obligations and prohibitions, are accompanied by specific symbols.

The graphical representations of the symbols used in this document and their relative meanings are provided below.

DANGER



The text refers to situations of immediate danger for the operators and any exposed persons.

Caution



The text refers to situations that could be potentially dangerous for the operators and any exposed persons.

Warning



The text refers to warnings concerning operations of particular importance for good machine operation.

PROHIBITION



Indicates the prohibition to perform certain actions and procedures; the failure to respect a prohibition could result in damage to the machine (even irreparable), serious harm to the environment, and/or dangerous situations for the staff and any exposed persons.

Note



Supplementary information and/or useful suggestions for the machine's proper use and functionality.



Interventions that can be performed by expert operators (professional baristas) assigned to the machine's use.



Interventions that must be performed exclusively by qualified and authorised personnel (installer, maintenance technician, etc.).

Whenever necessary, certain parts of the text in the Manual are highlighted in bold in order to draw attention to any particularly important aspects.

1.5 DEFINITIONS

Pursuant to the Machinery Directive 2006/42/EC, the meanings of the definitions used in this Manual are provided below.

Hazard: a potential source of injury or damage to health.

Danger zone: any zone within and/or around machinery in which a person is subject to a risk to his health or safety.

Exposed person: any person wholly or partially in a danger zone.

Operator: the person or persons installing, operating, adjusting, maintaining, cleaning, repairing or moving machinery.

Risk: a combination of the probability and the degree of an injury or damage to health that can arise in a hazardous situation.

Guard: a part of the machinery used specifically to provide protection by means of a physical barrier.

Protective device: a device (other than a guard) which reduces the risk, either alone or in conjunction with a guard.

Intended use: the use of machinery in accordance with the information provided in the instructions for use.

Reasonably foreseeable misuse: the use of machinery in a way not intended in the instructions for use, but which may result from readily predictable human behaviour.

1.6 STAFF QUALIFICATION

The personnel in charge of the machine's installation, use, and maintenance, and for whom the information and instructions contained within this Manual are intended, are indicated below:

1.6.1 Trained operator

A professional operator trained for the machine's proper use and aware of the various residual risks present on the machine. This individual must receive instructions regarding the locations and functions of all the command and control devices, the proper product preparation and dispensing procedures, and the proper hygiene measures to be adopted in order to avoid the risk of food contamination during the handling and management of food products. The operator must always work under safe conditions.

1.6.2 Qualified installer

An installer trained to carry out mechanical and electrical installations, with comprehensive safety knowledge and a full awareness of the various residual risks present on the machine.

1.6.3 Qualified maintenance technician

A maintenance technician trained to carry out mechanical and electrical maintenance interventions, with comprehensive safety knowledge and a full awareness of the various residual risks present on the machine. This individual must perform all the maintenance work, including those to be performed upon the machine's internal parts, which require the protective guards to be removed. If necessary, the maintenance technician can also access the internal parts with the machine powered on.


1.7 EC MARKING

The machine has been designed and built in compliance with the following directives:

- The Machinery Directive 2006/42/EC
- The Low Voltage Directive 2014/35/EU
- The Electromagnetic Compatibility Directive (EMC) 2014/30/EU
- The Pressure Equipment Directive (PED) 2014/68/EU

The machine is equipped with a special data plate showing indelible information relating to its EC marking, including its model and serial number.

The data plate also indicates the characteristics of its electrical power supply and its water/steam circuit.

SaGa Coffee S.p.A.					CE
Loc. Casona 1066 - 40041 Gaggio Montano (BO)					
Model: laReale			Year 2019		
Serial Nr.: 9019GRXXXXXXXXX					
Boiler	11Lt	Rated pressure 0,14 MPa	PS 0,2	PT 0,3	Safety valve 0,18 MPa
Exchangers	0,8x2Lt	Rated pressure 1,2 MPa	PS 1,2	PT 1,7	Safety valve 1,3 MPa
Mains pressure: 0.5 Mpa MAX				2GR	
220-240 V / 380-415 V 3N ~ 50-60Hz MAX 8500W					



PROHIBITION



It is prohibited to remove the EC marking plate and/or to replace it with other data plates.

Warning



The Customer must promptly notify SaGa Coffee S.p.A if the EC marking plate is accidentally damaged or detached from the machine, or if the manufacturer's seal that secures the plate to the machine is accidentally removed.

1.8 LIMITATIONS OF LIABILITY

SaGa Coffee S.p.A. shall bear no responsibility for any direct or indirect personal injuries or property damage resulting from:

- improper machine use;
- the use of the machine by unqualified personnel;
- inadequate machine maintenance;
- the use of non-original spare parts or parts not expressly authorised by the manufacturer;
- unforeseeable events;
- the failure to observe the safety requirements contained in this Manual.

The indications contained in this Manual must be scrupulously respected, and the SaGa Coffee S.p.A. Technical Support service must be contacted for any doubts that may arise.

1.9 WARRANTY

With regard to the duration and operability of the warranty covering the machine and its individual parts, please refer to the general terms and conditions of sale established during the contract phase.

Maintenance interventions by unqualified personnel not authorised by the manufacturer, and/or the use of non-original spare parts or parts not expressly authorised by the manufacturer, will invalidate the warranty.

Warning



Maintenance operations may only be performed upon the machine's internal parts by qualified personnel authorised by SaGa Coffee S.p.A.

1.10 TECHNICAL SUPPORT

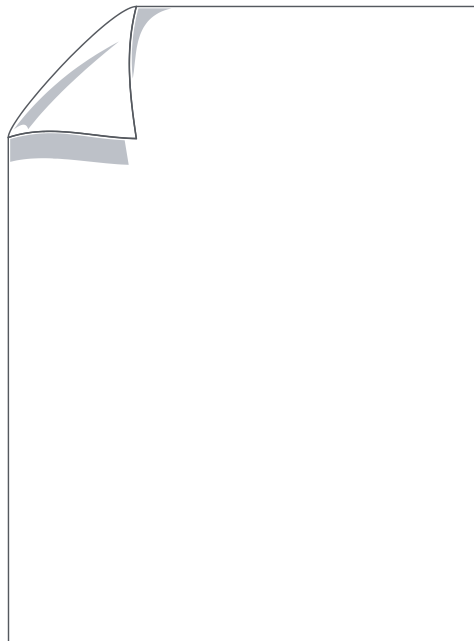
The SaGa Coffee S.p.A. Support Service is at the customer's complete disposal for maintenance and/or any other type of intervention required on the machine. Qualified personnel and specific equipment is available for all maintenance, overhaul and repair work on all machine parts. The determination of whether or not the requested intervention can be covered by the warranty lies exclusively with the SaGa Coffee S.p.A. Support Service's technicians. The SaGa Coffee S.p.A. Support Service is always available to provide the Customer with clarifications and useful advice for improving the machine's performance and functionality.

1.11 GENERAL SAFETY REQUIREMENTS

- The machine may only be used by properly trained personnel who have carefully read and fully understood the contents of this Manual and all the safety requirements contained herein.
- The machine may be used by children ages 8 and up and by people with reduced physical, sensory, or mental capabilities, or who do not have the necessary knowledge or experience, provided that they are supervised or are provided with appropriate instructions regarding the machine's safe use and have understood its inherent hazards. Children mustn't be permitted to play with the machine. The cleaning and maintenance operations intended to be performed by the user must not be performed by children without proper supervision.
- This machine is intended for professional use in commercial or other similar environments:
 - locales outfitted for serving food and beverages (bars, cafés, etc.);
 - locales outfitted for dining (restaurants, taverns, etc.);
 - environments like bed & breakfasts, farm holiday structures, private clubs, and other similar organisations.
- In performing their assigned duties (use, installation, maintenance), the personnel assigned to the machine must always scrupulously respect all the safety requirements indicated in this manual.

- While using the machine, the operator is responsible for any third parties in the work zone.
- The personnel assigned to the machine (installer, operator, maintenance technician, etc.) is required to notify the manufacture of any defects or deterioration encountered that could compromise the system's original safety conditions.
- Prior to installing and commissioning the machine, the installer is required to verify the environmental conditions in order to ensure the safety and hygiene of the operators, the users, and any exposed persons.
- The machine must only be installed in locations where its use and maintenance are reserved exclusively for qualified personnel.
- The machine's installation must only be performed by a qualified and authorised installer.
- The machine must only be used in adequately lit environments.
- For safety reasons, any worn or damaged parts must always be promptly replaced with original spare parts.
- The power cable must be regularly checked to ensure that it is in perfect condition. Any damage encountered on the cable must never be repaired using electrical tape or clamps under any circumstances; if the power cable is damaged, it must be replaced by the manufacturer or its technical support service.
- The internal parts must only be cleaned with the machine off and disconnected from the power outlet.
- Only use appropriate products to clean the machine and its various parts, and avoid any risks of food contamination.
- Only qualified and authorised maintenance personnel may remove the protective devices to perform interventions on the machine's internal parts.
- Do not expose the machine to the elements (sun, rain, etc.).
- Prolonged stoppages (downtime) at temperatures below 0°C (zero degrees centigrade) can result in serious damage to the pipes and boilers; prior to every prolonged stoppage, empty the water circuit completely and drain all the pressurised parts.
- The machine must be installed in the horizontal position. The support surface mustn't have a slope greater than 1°. In order to ensure normal operation, the machine must be installed in a location where the ambient temperature falls within the range of +5°C and +32°C, with a relative humidity no greater than 70%. Do not use jets of water or install in a location where jets of water are utilised.
- It is forbidden to remove the machine's safety devices.
- It is forbidden to operate the machine with parts of its casing removed.
- The components of the packaging must be disposed of at an appropriate disposal centre, and must never be left unattended or within reach of children, animals, or unauthorised persons under any circumstances.
- The manufacturer shall bear no responsibility for any injuries or property damage caused by machine interventions carried out by unqualified or unauthorised individuals.

- The operator assigned to the machine's use must respect the current hygiene standards in the country where the machine is installed, and must make sure that the periodic cleaning and maintenance operations are properly carried out.
- The operator assigned to machine use must never use it whilst barefoot.
- It is recommended to use a platform made from an insulating and anti-static material (e.g.: wood) and a circuit breaker compliant with the local legal provisions in order to minimise the risk of electrical shock.
- Never touch the espresso spouts and hot water/steam nozzles with your hands or other parts of the body, as the liquid/steam is dispensed at a high temperatures and could cause serious burns.
- Never operate the machine without water.
- Any obstructions could result in sudden jets of hot liquids or steam, with potentially serious consequences. Keep the water is clean as possible using filters and water softeners.
- The cups must be thoroughly dried before being placed on the dedicated surface.



2 SAFETY

2.1 USE OF THE MACHINE

2.1.1 Intended use

The machine is designed for the professional preparation of espresso coffee using coffee blends, and for the collection and dispensing of water and/or steam.

The machine must be operated by one operator only.

The machine is only designed for indoor use.

The machine can process the following types of products:

- ground espresso coffee blends;
- liquid food products, such as milk and water.

2.1.2 Improper use

Any use of the machine, or the product being processed, which differs from that explicitly indicated in Ch. "2.1.1 Intended use" is to be considered improper and unintended, as the consequent risks cannot be assessed.

It is prohibited to use the machine in the following manner:

- with electrical power and performance characteristics other than those indicated in this manual;
- with one or more parts of its casing removed;
- if not properly installed and connected to its power sources, in accordance with the indications contained in this manual;
- the use of the machine's surfaces as tread surfaces or support services for other objects;
- the use of the machine in explosive atmospheres;
- the use of the machine in outdoor environments.

The machine is not intended for use by people with reduced physical, sensory, or mental capabilities, or who do not have the necessary knowledge or experience, unless they are supervised or are provided with appropriate instructions regarding the machine's safe use by a person responsible for their safety.

It is strictly prohibited for the machine to be used by children under the current legal working age in the country where the machine is installed.

SaGa Coffee S.p.A. shall bear no responsibility for the machine's improper use.

2.2 ENVIRONMENTAL CONDITIONS

The machine is intended for professional use in civilian environments with the following ambient conditions:

- temperature: from +5 to +30 °C;
- relative humidity max. 60% (non condensing).

The usage environment must be enclosed, covered, and protected from the weather.

The machine must only be used in environments that do not pose a risk of fire or explosion, as it has not been designed to be explosion-proof.

It is therefore prohibited to install or use it in areas where a risk of explosion is present.

The machine's place of installation must have sufficient natural lighting, and must be equipped with adequate artificial lighting and ventilation to ensure the health and safety of the operators and any exposed persons.

The room's lighting must be compliant with the current regulations in the machine's country of installation, must ensure good visibility of the product and every part of the machine itself, must not create any hazardous glare, and must allow for the characters/symbols shown on the screen to be clearly read and for the command and control devices to be easily identified.

The machine's operating area must have a lighting level of at least 400 lux.

The user is responsible for evaluating the need for an adequate ventilation system for eliminating the presence of any steam and dust generated during the production process.

Warning



The zone defined as the “operator's area” must remain clean, dry, and free of any encumbrances.

2.3 NOISE

The machine's noise emission level changes with its various phases of use; the tests conducted have shown that the A-weighted sound pressure level emitted by the machine never exceeds 70 dB(A), and is therefore not hazardous to the health of the exposed persons.

2.4 VIBRATIONS

If installed properly and under conditions consistent with the proper usage conditions indicated in this Manual, the machine does not generate any vibrations hazardous to the health of the exposed persons during operation.

2.5 ELECTROMAGNETIC COMPATIBILITY

The machine is suitable for use in civilian electromagnetic environments, as it is compliant with the electromagnetic compatibility requirements for such environments (disturbance immunity, disturbance emission).

The machine includes components compliant with the 2014/30/EU EMC Directive, which are installed and used in accordance with their manufacturers' instructions.

2.6 PROTECTIVE DEVICES

The internal machine structure is entirely protected by a metallic casing, which prevents the operator from coming into contact with its hazardous internal parts (components and materials).

The fixed removable guards that allow for access to the machine's internal parts can only be removed using tools.

Warning



Only qualified maintenance personnel may remove the removable fixed guards and access the machine's internal parts.

2.7 PRESSURISED PARTS

The pressurised parts that make up the machine's water/steam circuit and are subject to Directive 2014/68/EU (PED) are compliant with the same; the declarations of conformity for the utilised components are contained in the machine's technical construction file.

Each machine boiler is protected against overpressure by a safety valve, calibrated directly by its manufacturer to ensure the exact intervention value.

Warning



The safety valves must be periodically checked to ensure that they comply with the current regulatory requirements in the machine's country of installation.

PROHIBITION



It is strictly forbidden to change the factory calibration of the safety valves.

2.8 ELECTRICAL SYSTEM AND ISOLATION FROM THE POWER SOURCE

The machine's electrical system is compliant with the Low Voltage Directive 2014/35/EU and the Electromagnetic Compatibility (EMC) Directive 2014/30/EU. The electrical power supply to the machine requires single- or 3-phase voltage with neutral.

The machine must be connected to the electrical network via a fixed connection or else via a dedicated plug equipped with a grounding connector.

In the case of a fixed connection to the electrical network, a manual switch must be installed for disconnecting the electrical power line.

Warning



The machine's electrical power line must be equipped with a safety switch compliant with the current regulations in the machine's country of installation.

Warning



The machine's grounding connector must be connected to the building's grounding system.

2.9 FOOD SAFETY

The machine has been designed and built so as to prevent any risk of food contamination.

The parts that come into contact or could potentially come into contact with food products are made from durable, high-quality, wear resistant, non-toxic materials.

All the parts that come into contact or could potentially come into contact with food products can be easily accessed in order to perform cleaning and maintenance interventions.

An automatic cleaning cycle is available for the machine's internal parts that come into contact with food products, which must be performed every day when finished using the machine.

2.10 RESIDUAL RISKS

The residual risks were minimised as much as possible during the design phase.

Several residual risks could not be eliminated, however, and these have been indicated directly on the machine wherever possible using symbols.

The operator assigned to the machine's use is exposed to the potential risk of burns due to:

- contact with hot surfaces (espresso dispensing units, steam nozzle, water dispenser)
- contact with spraying hot water or steam.

Caution

The operator must be adequately trained for the machine's proper use, and must always use caution to avoid accidental contact with hot surfaces and/or spraying hot water or steam.

The machine's maintenance personnel are exposed to the following potential risks while performing maintenance interventions:

- risk of contact with live electrical components/parts

Caution

Before accessing the internal machine parts, the maintenance technician must disconnect the machine from the electricity supply.

Caution

Any maintenance interventions that need to be performed upon internal parts with the machine powered on must only be performed by a qualified and authorised technician.

- risk of burns due to contact with hot internal/ external surfaces or spraying hot water or steam

Caution

The maintenance technician is required to wear protective gloves when performing maintenance interventions upon internal parts if the machine has only recently been shut off.

- Risk of being struck by pressurised jets of water or steam when performing maintenance interventions upon the water/ steam circuit's pressurised internal parts.

Caution

Prior to performing any maintenance interventions upon internal pressurised parts, the maintenance technician must discharge the pressure and make sure that no residual pressure remains.

Caution

Maintenance interventions may only be performed upon internal pressurised parts by qualified and authorised technicians.

2.11 SAFETY SYMBOLS

The parts of the machine that pose residual risks are marked with adhesive safety symbols to draw the attention of the machine's operator and maintenance personnel.



High temperature hazard; symbol applied near points where temperatures greater than 60°C are present.



Electrical hazard; symbol applied near points where a risk of electrical contact is present.

In addition to the safety symbols, warning labels with safety functions for the machine's operator and maintenance personnel may also be present on the machine.

Warning



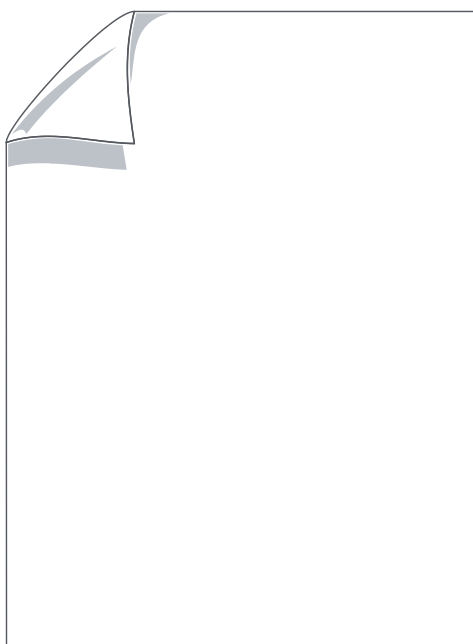
The labels and symbols that perform safety functions mustn't be removed, comfort, or damaged. If a symbol/label shows signs of wear or is removed, a new identical one must be applied in the same position.

2.12 REFERENCE STANDARDS

The referenced standards used for the machine's design and construction are the following:

- The Machinery Directive 2006/42/EC
- The Low Voltage Directive 2014/35/EU
- The Electromagnetic Compatibility Directive (EMC) 2014/30/EU
- The Pressure Equipment Directive (PED) 2014/68/EU
- EN ISO 12100:2010: Safety of machinery
- ISO/TR 14121-2:2013: Safety of machinery – Risk assessment – Part 2: Practical guidance and examples of methods
- UNI EN ISO 14159:2008: Safety of machinery - Hygiene requirements for the design of machinery
- UNI EN 1672-2:2009: Food processing machinery - Basic concepts - Part 2: Hygiene requirements
- UNI EN 16889:2016: Food hygiene - Production and dispensing of hot beverages from hot beverage appliances – Hygiene requirements, migration test
- Regulation (EC) No. 1935/2004 on materials and articles intended to come into contact with food
- Regulation (EC) No. 2023/2006 on good manufacturing practice for materials and articles intended to come into contact with food
- Regulation (EU) No. 10/2011 on plastic materials and articles intended to come into contact with food

- IEC/EN 60335-1-1: Household and similar electrical appliances – Safety – Part 1: General requirements
- IEC/CEI 60335-2-75: Household and similar electrical appliances – Safety – Part 2: Particular requirements for commercial dispensing appliances and vending machines
- EN 62233 (CEI 61-251): Measurement methods for electromagnetic fields of household appliances and similar apparatus with regard to human exposure
- Directive 2011/65/EC “RoHS” on the restriction of the use of certain hazardous substances in electrical and electronic equipment (EEE)
- Directive 2002/96/EC on waste electrical and electronic equipment (WEEE)
- Directive 2003/108/EC amending Directive 2002/96/EC on waste electrical and electronic equipment (WEEE)



3 DESCRIPTION

3.1 MACHINE FUNCTION

The machine is intended for the preparation of espresso coffee and hot beverages through the dispensing of hot water or steam. It is also equipped with a cup warmer tray.

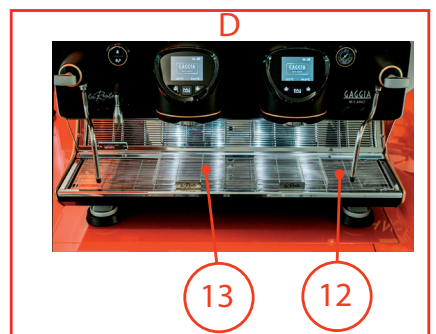
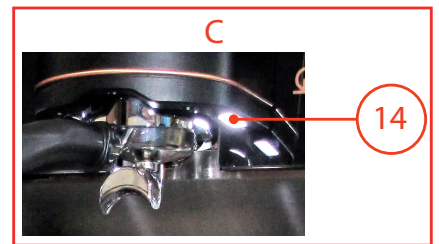
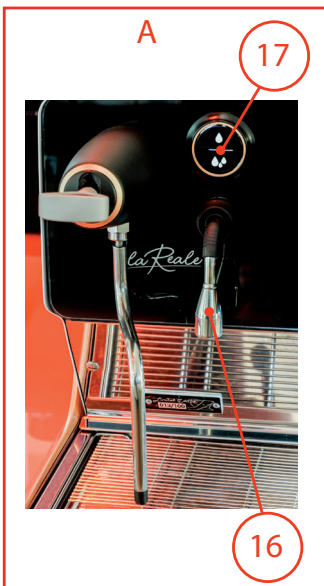
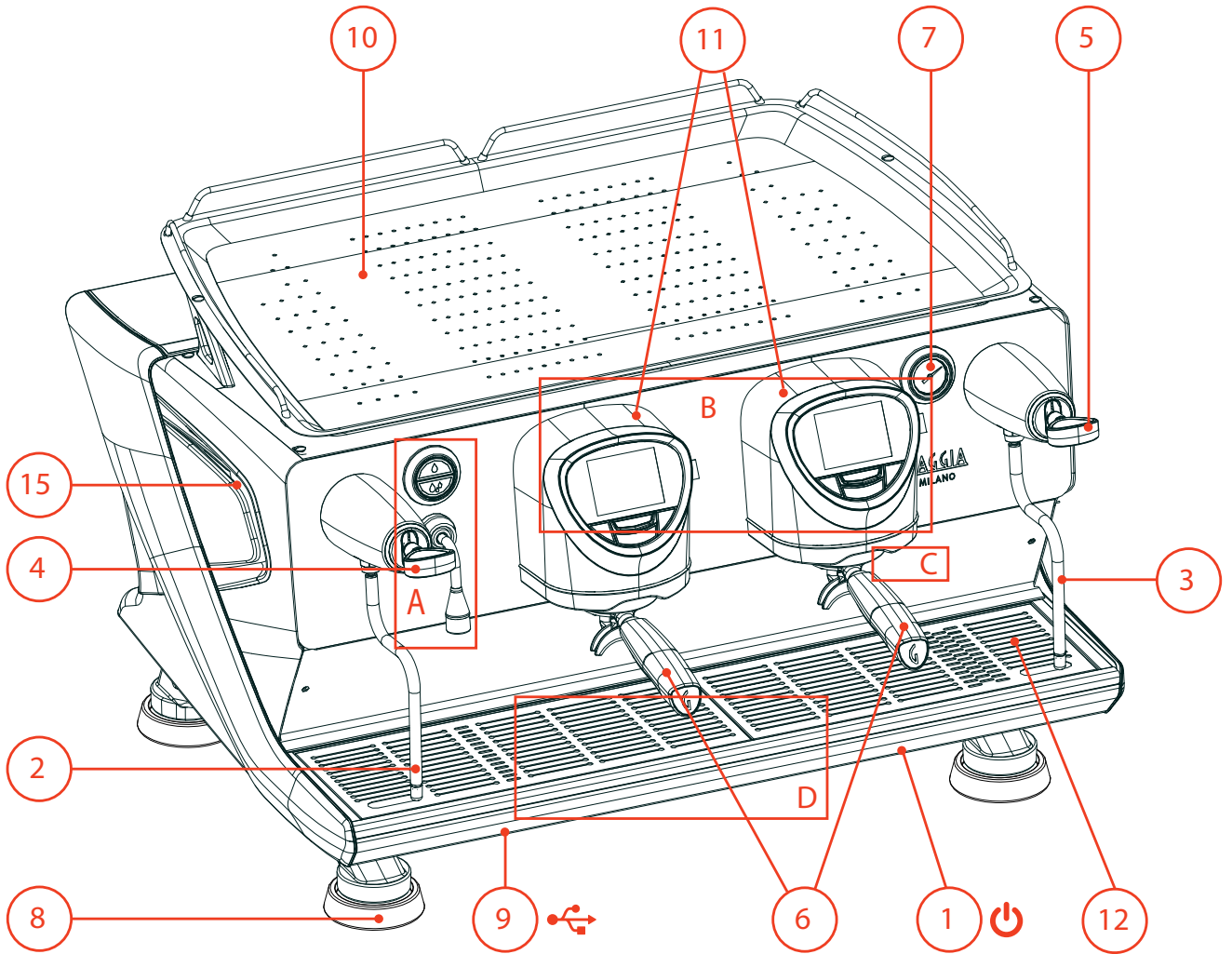
Note



The description provided in the following sections refers to a machine with two espresso dispensing units. The content is also applicable to machines with three espresso dispensing units.

3.2 MAIN COMPONENTS

1. Main switch
2. Left steam nozzle
3. Right steam nozzle
4. Left steam dispensing lever
5. Right steam dispensing lever
6. Filter holder
7. Water pump pressure gauge
8. Adjustable support foot
9. USB ports
10. Cup warmer tray
11. Espresso dispensing units
12. Cup support tray
13. Mobile stand for short cups
14. Espresso dispenser zone LED
15. Casing LED
16. Hot water dispenser
17. Hot water dispensing buttons
18. Touch-screen display
19. Single/double short espresso dispensing button
20. Single/double long espresso dispensing button
21. Manual espresso dispensing start/stop button



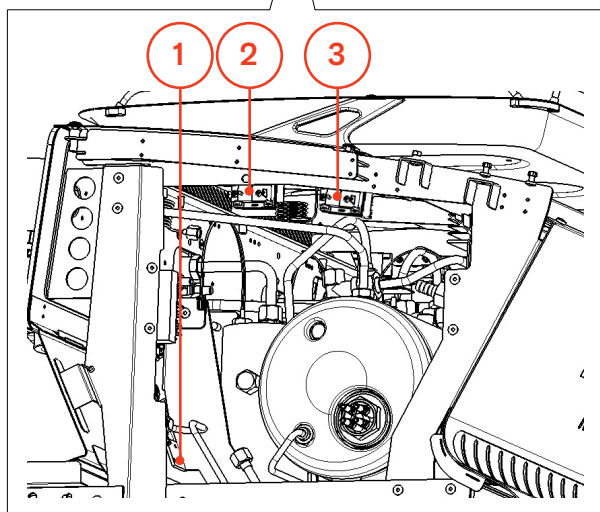
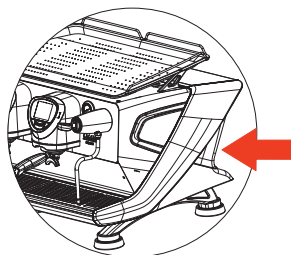
3.3 INTERNAL COMPONENTS

3.3.1 Components that can be accessed after removing the RH side panel



Authorised personnel only

1. Steam boiler thermostat
2. Espresso boiler thermostat, unit 1
3. Espresso boiler thermostat, unit 2

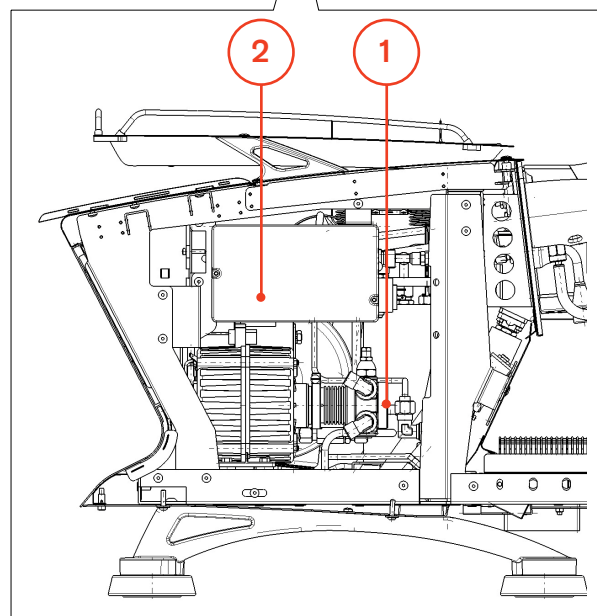
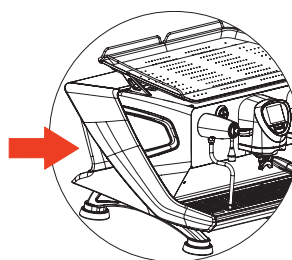


3.3.2 Components that can be accessed after removing the LH side panel



Authorised personnel only

1. Water pump with capacity regulator
2. Master electronic control unit




Note



On the machine with 3 espresso dispensing units, there is a third thermostat.

3.3.3 Components that can be accessed after removing the front cover

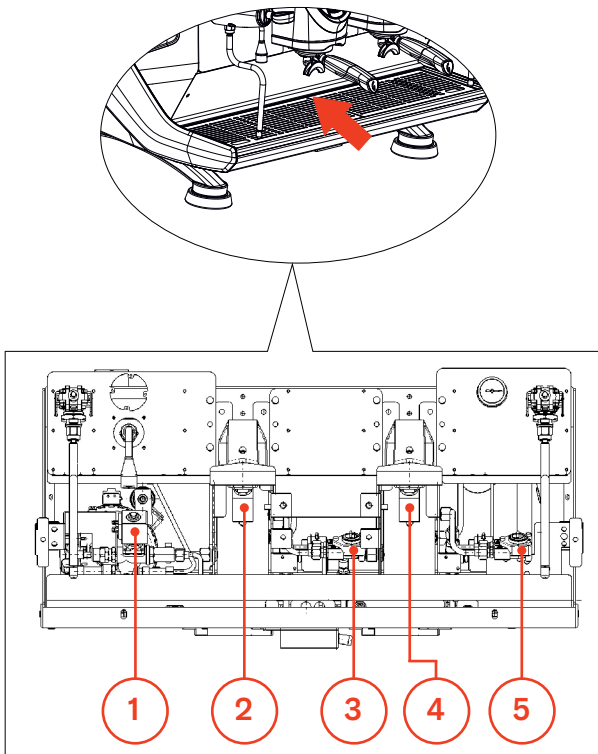
 *Authorised personnel only*

1. Solenoid valve for steam boiler charging
2. Solenoid valve for 3-way dispensing (unit 1)
3. Volumetric counter for dispensed water (unit 1)
4. Solenoid valve for 3-way dispensing (unit 2)
5. Volumetric counter for dispensed water (unit 2)


Note



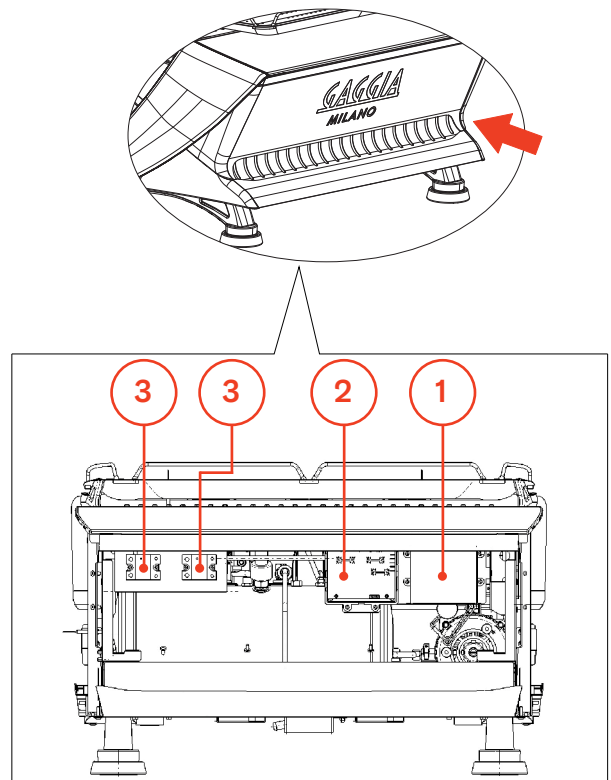
On the machine with 3 espresso dispensing units, there is a volumetric counter and a solenoid valve.



3.3.4 Components that can be accessed after removing the back panel

 *Authorised personnel only*

1. Power supply
2. Power expansion board
3. Solid state relay for the power supply to the steam boiler heating elements



3.3.5 Components that can be accessed after removing the cup warmer and upper cover



Authorised personnel only

1. Steam boiler
2. Boiler - dispensing unit 1
3. Boiler - dispensing unit 2
4. Solenoid valve for mixing hot water A/ cold water for hot water dispenser B
5. Boiler temperature probe - unit 1
6. Boiler temperature probe - unit 2
7. Water level probe in steam boiler
8. Steam boiler temperature probe
9. Overpressure safety valve
10. Boiler temperature safety thermostats - units 1 and 2
11. Anti-vacuum valve
12. Heat exchangers for hot water dispenser
13. Heat exchangers for pre-heating the water for the boilers - units 1 and 2
14. Tap for boiler disconnection - unit 1
15. Tap for boiler disconnection - unit 2

Note

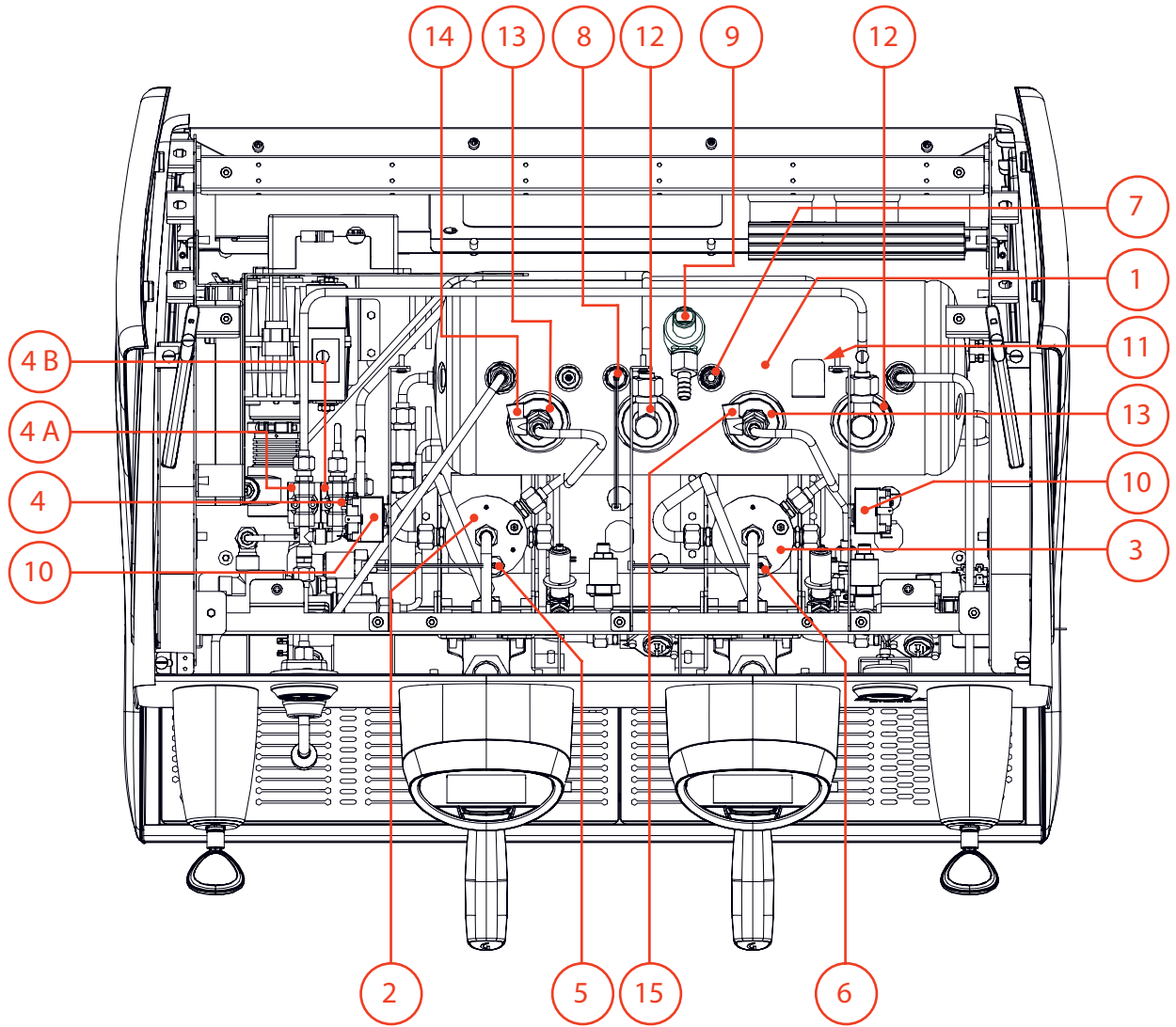


This paragraph describes a machine with two espresso dispensing units. On the machine with 3 units, there is:

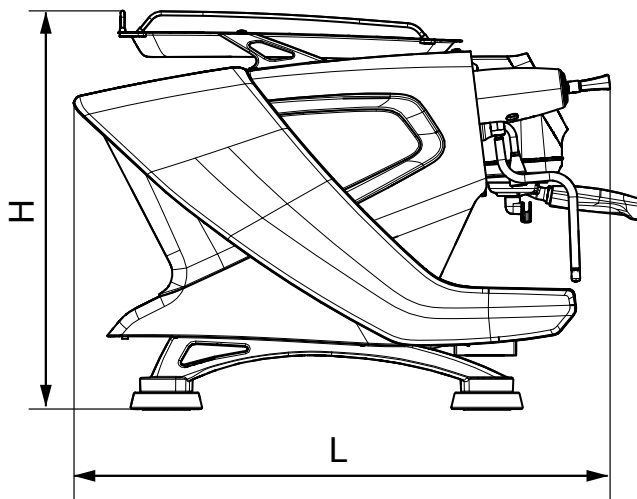
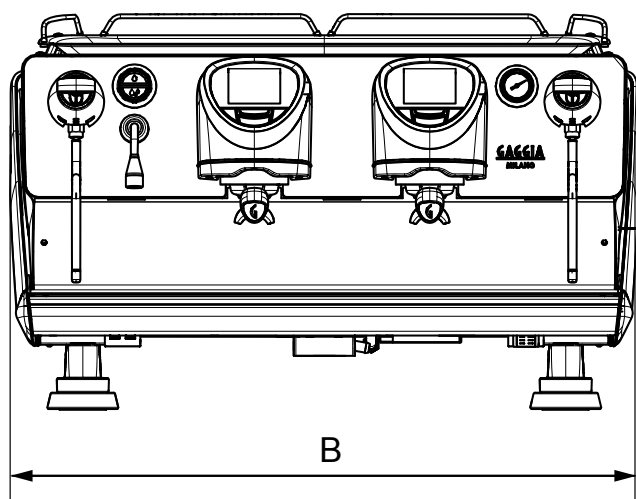
- Boiler - dispensing unit 3
- Boiler temperature probe - unit 3
- Boiler temperature safety thermostat - unit 3

The steam boiler is bigger, and includes:

- Heat exchanger for pre-heating the water for the boiler - unit 3
- Tap for boiler disconnection - unit 2.



3.4 TECHNICAL CHARACTERISTICS



		2 UNITS	3 UNITS
Dimensions (mm)	B	883	1130
	H	556	556
	L	700	
Weight (Kg)		98	120
Steam boiler capacity (L)		11	14
Espresso unit boiler capacity (L/ea)		0.8	
Power supply voltage		220-240V / 380-415V 3N ~ 50-60 Hz	
Total power consumed (W)		8500	10000
Max. steam boiler operating pressure		0.14 MPa	
Max. water intake pressure		0.5 MPa	
Max. espresso unit boiler operating pressure		1.2 MPa	

4

HANDLING AND INSTALLATION

4.1 HANDLING AND INSTALLATION

4.1.1 Packaging

- The machine comes in a sturdy wooden package with appropriate internal protective elements. The conventional symbols to be observed during the machine's handling and storage are shown on the packaging.
- The transport operations must be carried out in accordance with the indications shown on the packaging, moving the package with due caution and avoiding any type of impact.
- Never leave the package exposed to the elements (rain, sun, frost, etc.).

4.1.2 Inspection upon receipt

- Upon receiving the machine, check to make sure that the contents of the package correspond to that which is shown on the transport documentation (see the packaging labels).
- Check to make sure that the original packaging is not damaged and does not show any signs of moisture that might lead you to believe that it has been exposed to the weather.
- After having removed the packaging, check the integrity of the machine, its accessories, and its safety devices.
- The packaging elements (plastic bags, polystyrene foam, nails, etc.) are potentially hazardous and therefore must not be left in reach of children.

4.1.3 Instructions for disposing of the packaging

The packaging materials are environmentally friendly and recyclable. In order to protect the environment, however, they must be brought to appropriate recovery and disposal centres, in accordance with the current local regulations.

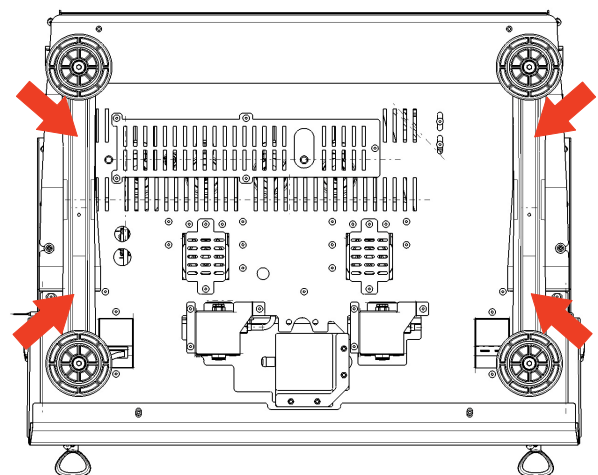
4.1.4 Handling

The personnel in charge of moving the machine must be familiar with the risks associated with handling loads.

Always use maximum caution when handling the machine, and use adequate lifting equipment wherever possible (such as a forklift). In the case of manual handling operations, make sure that:

- a sufficient number of people are involved to handle the machine's weight and gripping requirements;
- the necessary accident prevention devices are always utilised (shoes, gloves, etc.).

The gripping points are shown in the figure.



4.2 INSTALLATION

4.2.1 Installation requirements



Authorised personnel only

Be sure to perform the following checks prior to installation:

- check that the machine casing does not show any signs of impact or deformation;
- make sure there are no signs of tampering;
- check the integrity of the power cable; replace if damaged.
- The espresso machine must be placed on a flat, stable surface suitable for supporting its weight, and must have at least 30cm of free space on all sides.

Note



The uppermost surface of the machine should be at least 1.5m off the ground.

- The ambient temperature must be between 10° and 32°C (50°F and 90°F).

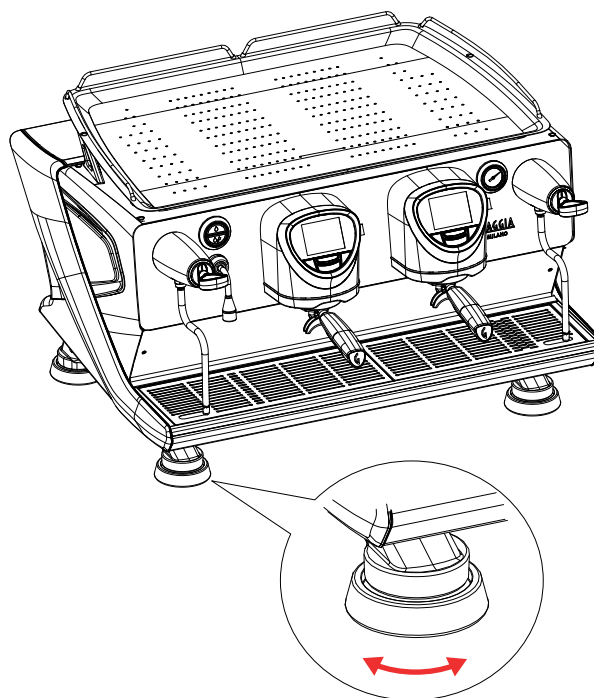
- Do not install the machine outdoors.

Level the machine using the adjustable support feet and an appropriate level.

Note



The machine's support feet can be adjusted by turning the outer ring nut.



4.2.2 Water connection



Authorised personnel only

Warning



The water connections must be made in accordance with the current national and local regulations.

Warning



The machine must be supplied with water suitable for human consumption, with a hardness level greater than 8°F.

Note



You are advised to install a water softener filter for the machine's water supply.

After positioning the machine properly, make the water connection:

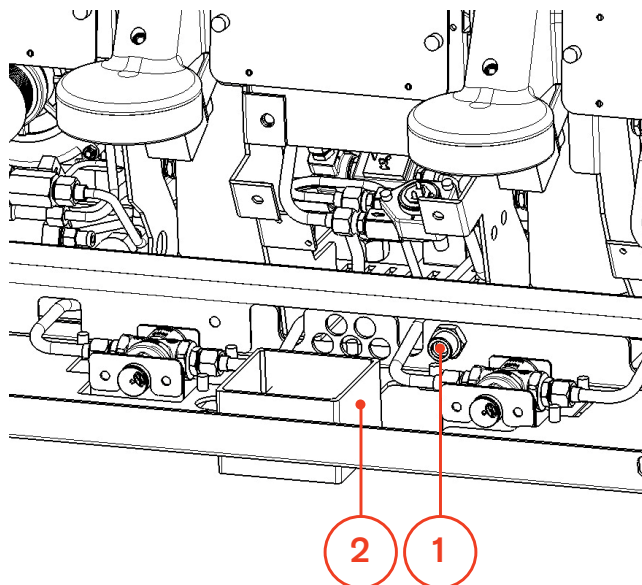
- Using the reinforced flexible hose supplied, connect the machine's water intake connector (1) to the water supply.

Warning



New hoses must be used: the existing ones cannot be re-utilised.

- Using the reinforced transparent hose supplied, connect the tray's drain outlet (2) to a drain equipped with a trap for inspection and cleaning.



4.2.3 Electrical connection



Authorised personnel only

The machine's electrical power supply can be either single phase or three-phase. Refer to the electrical diagram for the connection specifications.

Caution



Prior to proceeding with the electrical connection, check to make sure that the power supply's voltage corresponds to the characteristics indicated on the CE data plate and the connection label on the power cable.

Warning



Check that the electricity line is capable of sustaining the machine load, and make sure that the power cable is intact and complies with the national and European safety regulations.

Caution



The user is responsible for protecting the machine's power supply line with an appropriate safety switch (circuit breaker) compliant with the current regulations in the machine's country of use.

Caution



Connect the power cable to the electricity line using a plug; in the case of fixed installation, a multipolar switch must be installed for network separation, with a distance of at least 3mm between the contacts. For the voltage change, refer to the diagram on the main switch box.

Caution



It is **MANDATORY** to connect the yellow/green wire to the local earthing system. This machine's electrical safety can only be guaranteed when it has been properly connected to a functioning grounding system, as required by the current electrical safety standards. This fundamental safety requisite must be verified, and a thorough inspection of the system must be conducted by professionally qualified personnel if any doubts should arise. The manufacturer shall bear no responsibility for any personal injuries or property damage that may result from the failure to ground the system.

4.2.4 Commissioning



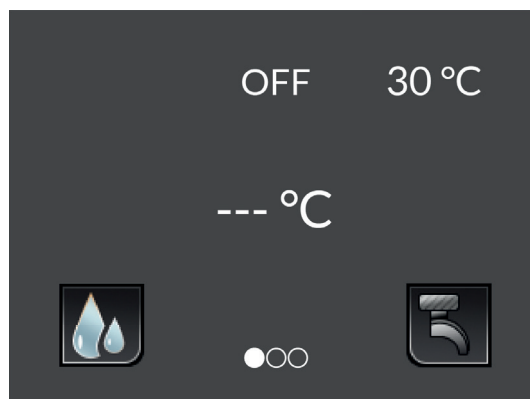
Authorised personnel only

Once installation has been completed, check that the machine is in proper working order:

- turn on the water tap
- switch on the circuit breaker upstream of the machine
- set the main machine switch to (I) and make sure the machine ON light turns on.



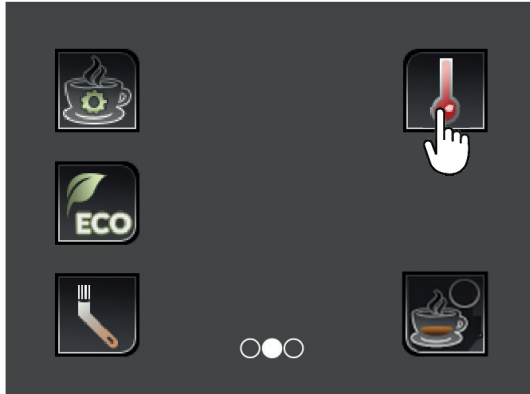
The machine turns on and the software version and logo appear on the display.



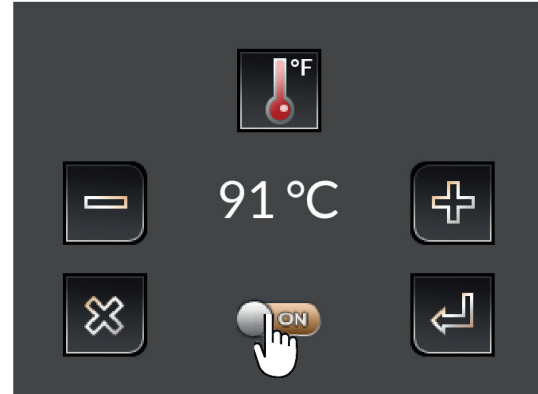
Menu 1 is displayed next.

The machine's software checks the water level in the steam boiler, and loads water until the level probe is reached. Once the level is reached, the water loading operation stops and the steam boiler's heating is engaged.

- press the continuous dispensing button on each unit to eliminate any air present in the espresso circuit, and fill it completely with water; This will prevent the espresso boiler from heating up whilst empty (☕).
- touch (P) the centre of the screen to access menu 2



Press the indicated button to access the espresso boilers' activation screen.



Use the +/- buttons to set the desired temperature and turn the activation selector to its ON position.

Wait for the machine to finish heating before using it.



Cancel/Return to the previous menu



Enter/Confirm

Verify:

- the absence of any leaks from the connections or hoses
- the proper detection of the water level in the steam boiler
- that the temperature in the steam boiler corresponds to the set value

5 USE

5.1 DESCRIPTION OF THE CONTROLS

The operator has various types of controls available for using and programming the machine:

- ON/OFF button
- Touch screen display, present on each espresso dispensing unit, for use and programming
- Buttons for selecting the water dispensing mode for espresso or hot water
- Steam dispensing control levers.

5.1.1 On/Off switch

This is located on the lower part of the machine



**Machine on;
the switch turns on**



**Machine off;
the switch turns off**

5.1.2 Touch-screen display

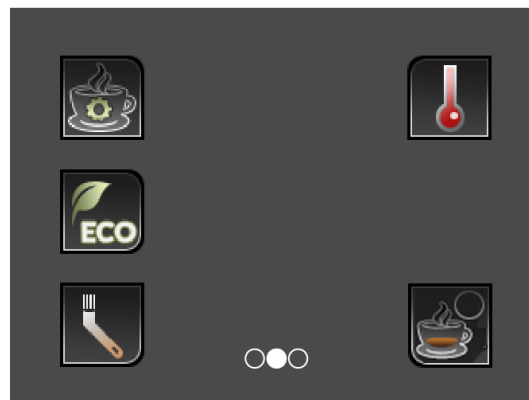
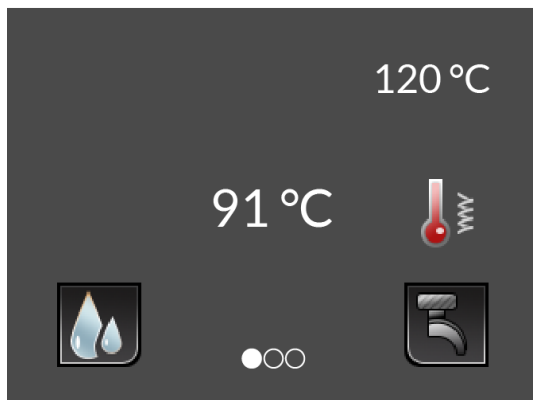
Each espresso dispensing unit has a touch screen display; when turned on, the display shows the following:



- logo
- hours and minutes
- software version

To access the user screens, touch (👆) the centre of the screen.

The user menu is divided into three main screens, which can be used to execute commands, perform programming, or navigate to other screens. To switch from one screen to another, touch (👆) the centre of the screen.



Indicates the activation of the espresso boiler's heating element



Button: activates the espresso unit's purging cycle



Button: this button is used to select either the 1 or 2 cup dispensing mode

The value at the centre of the screen indicates the espresso boiler's water output temperature. This value may be displayed in the following colours:

- Blue if the detected temperature is lower than the set value by 5°C.
- Red if the detected temperature is higher than the set value by 3°C.
- White if the temperature detected is between -4°C and + 2°C.

The value shown on the upper right of the screen corresponds to the temperature detected in the steam boiler.

Temperature visualisation begins at 40°C; if this value is not reached, you will see a series of dashes.



Button: opens the dose programming page



Button: opens the unit's espresso boiler on/off and temperature programming screen



Button: activates the machine's ECO mode (*):

- the LED lights on the casing and the espresso units are off
- the steam boiler is maintained at a lower temperature
- the espresso boilers remain heated



Button: activates the unit wash cycle with detergent 6.1.1)



Button: opens the dose counter page.

(*) ECO mode can be activated instead of shutting the machine off; before using the machine again, ECO mode will have to be deactivated by pressing the button again or by pressing any dispensing button.



Button: opens the screen for programming the time and day of the week (for automatic activation/shut off)




Button: opens the password-protected programming screen



Button: turns the LED lights on the unit and casing ON/OFF



Button: activates and adjusts the cup warmer tray (three temperature levels )



Button: deactivates the heating function on the steam boiler, the espresso unit boilers and the cup warmer.

5.1.3 Espresso dispensing unit buttons



Single/double short espresso dispensing

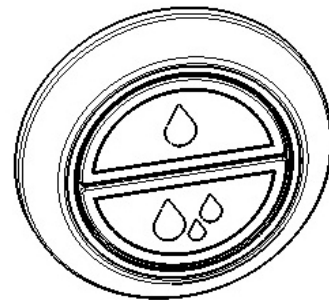


Single/double long espresso dispensing



Manual espresso dispensing ON/OFF

5.1.4 Hot water dispensing buttons



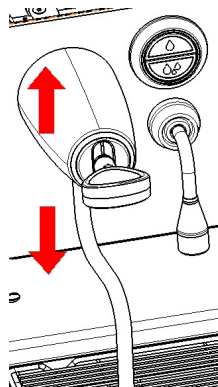
Dispenses the amount of hot water set for the relative button in the dose Programming menu



Dispenses the amount of hot water set for the relative button in the dose Programming menu

5.1.5 Steam dispensing lever

The two steam dispensing nozzles are controlled by the relative lever:



Temporary position:
steam is dispensed as long as the lever remains pressed

Fixed position:
steam is dispensed until the lever is brought back to the central position.

5.2 DAILY ACTIVATION

5.2.1 Turning on the machine (with machine off)

Note



When the machine is turned on using the main switch, it will return to the same OFF or STAND-BY state it was in prior to being shut off.

- Make sure that the machine is receiving water from the water network and that the power line's circuit breaker is engaged.
- Set the main machine switch to (I) 3.2:
 - the switch turns on
 - the LED lights in the dispensing area turn on, as do the ambient LED lights on the sides and back
 - The touch-screen displays are activated
 - Water is loaded into the steam boiler until the pre-set level of the level probe is reached
 - The heating boilers' heating elements are activated
- Wait for the machine to reach its set operating temperature.

5.2.2 Turning on the machine (with machine screensaver active)

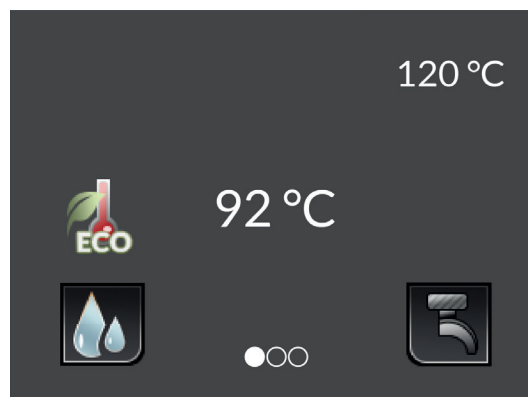


With the machine in standby, just touch the touch-screen display or press any one of the dispensing buttons: the machine is immediately ready for use.

5.2.3 Turning on the machine (with machine in ECO mode)




With the machine in ECO mode, all the user has to do to reactivate it is press the ECO button again, or press any one of the dispensing buttons: the machine is immediately ready for use.



Visualisation of menu 1 with the machine in ECO mode.

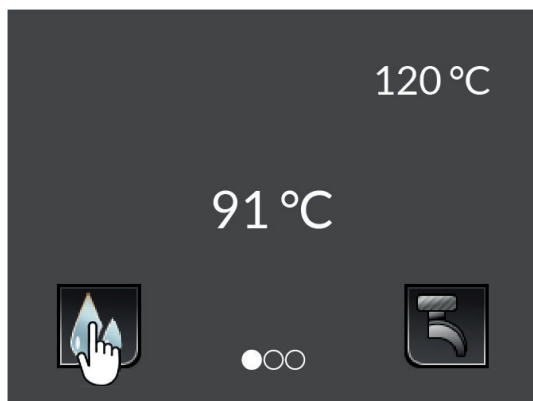
5.2.4 Shutting off the machine

The machine can be powered off completely or set to stand-by mode.

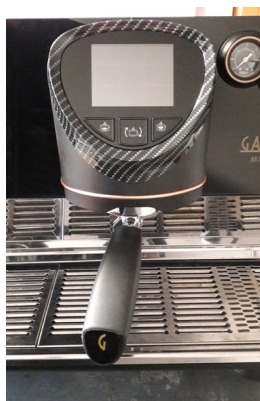
- Complete shut-off:
set the main machine switch to (O) 3.2; the switch turns off and the machine can only be turned back on by turning the main switch to (I) again
- Standby:
press  on the touch-screen 5.1.2; the heating of all the boilers and the cup warmer is deactivated, but the machine remains powered and automatic switch-on is possible.



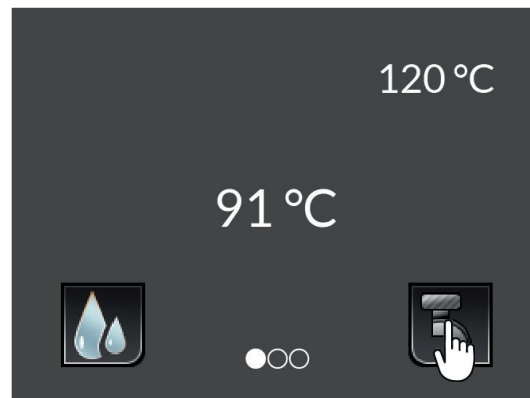
5.3 ESPRESSO DISPENSING



Before dispensing, press the purge button to wash the espresso dispensing unit's perforated disk.



Fill the filter holder with ground coffee, compress it, and insert it into the espresso dispensing unit.



Press the indicated button to select either the 1 or 2 cup dispensing mode.



Press the indicated button to dispense the pre-set amount for a short espresso



Press the indicated button to dispense the pre-set amount for a long espresso

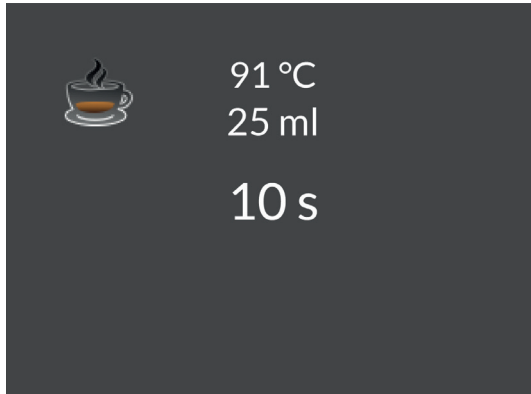


Press the indicated button to turn manual espresso dispensing On/Off

Note



The current dispensing operation can be stopped by pressing the same button again.



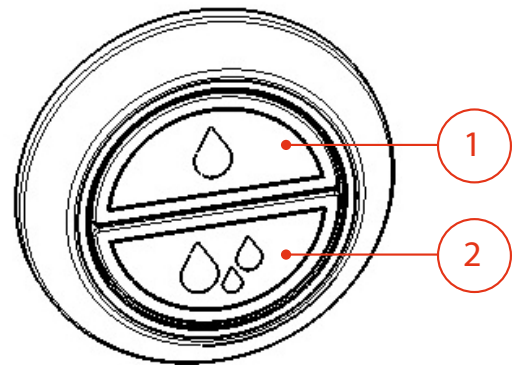
The elapsed time is displayed as long as the dispensing operation is in progress.



At the end of each dispensing operation, the time taken will continue to be displayed for a few seconds.

5.4 HOT WATER DISPENSING

The hot water is dispensed from the relative dispenser 3.2.



After having positioned the appropriate container underneath the dispenser, press button 1 or 2 to dispense the desired amount of water.

Note



The current dispensing operation can be stopped by pressing the same button again.

5.5 STEAM DISPENSING

The steam nozzles are used to heat up beverages 3.2.



Push the steam lever upwards and hold it in that position for several seconds; the lever will return to its original position once released. This operation allows for any condensation that may have formed between steam dispensing operations to be eliminated.



Immerse the steam nozzle in the receptacle containing the beverage to be heated and press down, or else press and hold the steam control lever in the upward position.

Wait until the beverage has reached the desired temperature or emulsion level, then return the steam control lever to its central position to stop the flow of steam.



After each use:

- using a clean sponge, wash the outside of the steam nozzle with hot water to eliminate any organic residues that may be present.
- clean the inside of the nozzle in the following manner: point the pipe towards the cup support tray and, using maximum caution, perform at least one steam dispensing operation.

5.6 BARISTA PRO / TECHNICAL MENU

Using the Barista Pro/Technical menu on the touch-screen, you can configure the main machine operating parameters.

The parameters that can be configured differ according to the software access level (controlled by a password). There are two possible access levels:

- Barista Pro (🔑)
- Technical (🔧)

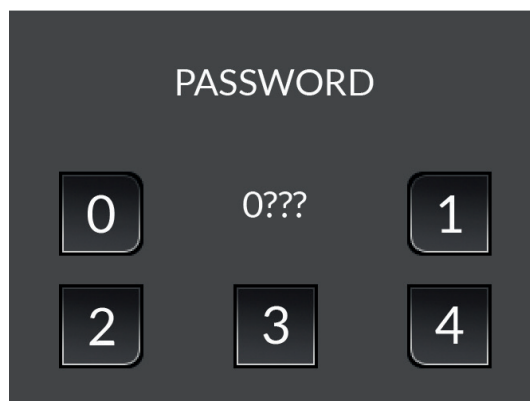
	Barista Pro	Technical
Language		
Number of units		
Pre-infusion		
Tea+pump		
Sensitivity		
Charge+espresso		
Time-out for steam boiler filling		
Maintenance cycles		
Water filter		
Dose programming		
TCI		
Steam boiler temperature		
Unit temperature offset		
Sequential heating		
Cup-warmer temperature		
Purging cycle		
% cold water mix		
Screensaver		
Actuator test 1		
Actuator test 2		
Change password		

5.6.1 Technical menu

Authorised personnel only



Press the indicated button to access the Technical menu.



Enter the access password

Note




The default password is 4444.



Language

The languages that can be set are:

- Italian
- English
- German
- French
- Spanish

Confirm with 

The "back" button (between X and Enter) is used to return to the previous parameter when navigating in the technical menu.

Each parameter inserted in the technical menu has an ID number (at the top left) to make it easier to navigate the menu.



Number of units

For setting the number of coffee units on the machine. The possible values are:

- 2
- 3

Confirm with 



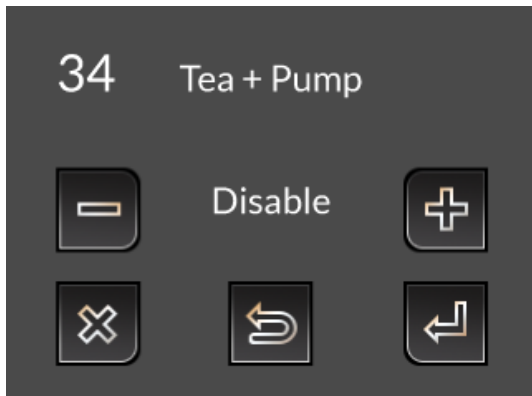
Pre-infusion

When the pre-infusion parameter is enabled, a set time is activated on the coffee doses for an initial infusion stage with a lower pressure 6.6 compared with the real infusion stage that uses the water pump calibration pressure value.

Confirm with 



With the pre-infusion parameter enabled, pre-infusion programming can be set in seconds on both units for single/double short doses, single/double long doses and continuous dosing. Confirm with



Tea+pump
Enables or disables the water pump for dispensing hot water. The possible values are:

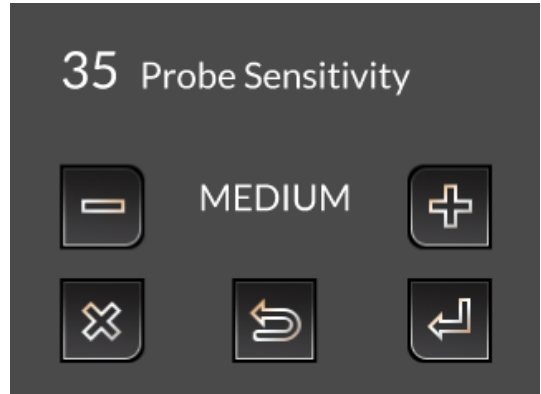
- Enabled
- Disabled

Note



This function must be enabled when the machine is not connected to the mains water supply but takes water from a canister.

Confirm with



Sensitivity
Regulates the sensitivity of the probe that detects the water level in the steam boiler. The possible values are:

- low
- medium
- high

Note



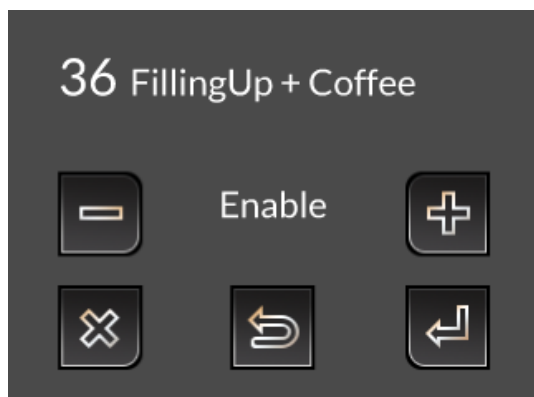
The sensitivity of the level probe must be regulated on the basis of the hardness of the water; water with a scarce mineral content or poor conductivity requires enhanced sensitivity. If the sensitivity level is too low in relation to the water hardness, the probe readings may be incorrect.

Note



You are advised to install a water softener for the machine's water supply.

Confirm with



Charge+espresso

The steam boiler of the machine is fitted with a water charge pump activated by the level probe; the charge can be enabled/disabled while the espresso is being dispensed. The possible values are:

- Enabled
- Disabled

Note



It may be necessary to disable pump activation during espresso dispensing to avoid an excessive lowering of the flow rate to the espresso units.

Confirm with 




Set the maximum operating time for the steam boiler filling pump after the first switch-on.

Note



If the level probe does not detect the filling of the boiler within the time limit, the machine stops and a blocking alarm is activated.

Confirm with 



Maintenance cycles

Sets the number of machine cycles (espresso dispensing+hot water dispensing).

When the set number is reached, a maintenance alarm is activated (but it does not prevent the machine from being used).

Confirm with 



Water filter

Sets the number of litres of water that can flow through the water softener filter before the water filter alarm is activated.

Confirm with

This alarm is displayed on the counters page and during dispensing (but it does not prevent the machine from being used).

Note



To reset the alarm on the counters page, press and hold the relative icon.



Dose programming

Enables or disables the Dose Programming user menu 5.6.2. The possible values are:

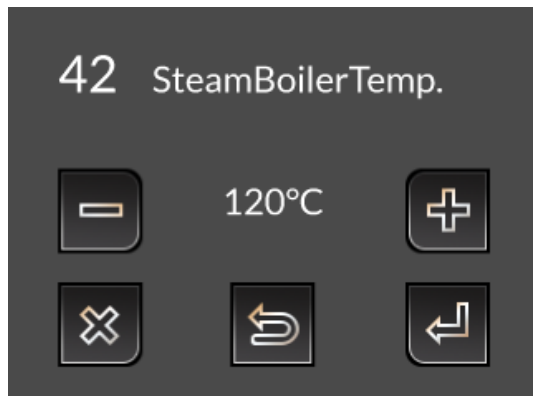
- Enabled
- Disabled

Confirm with



Enables or disables the possibility to access the menu for setting the espresso boiler temperatures.

Confirm with




Steam boiler temperature
Sets the operating temperature of the steam boiler.

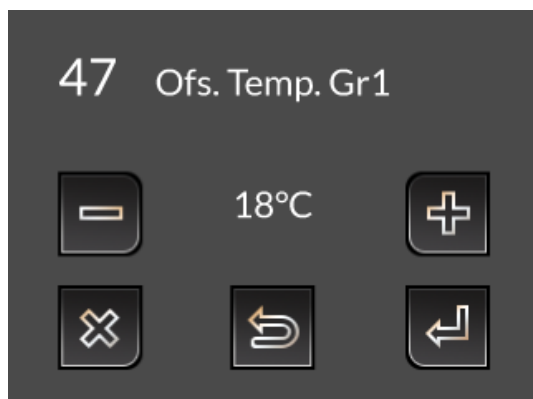
Confirm with 



Sequential heating

When this parameter is enabled, the maximum input current limit below 32 Ampere is managed at the supply voltages indicated on the data plate.

Confirm with 

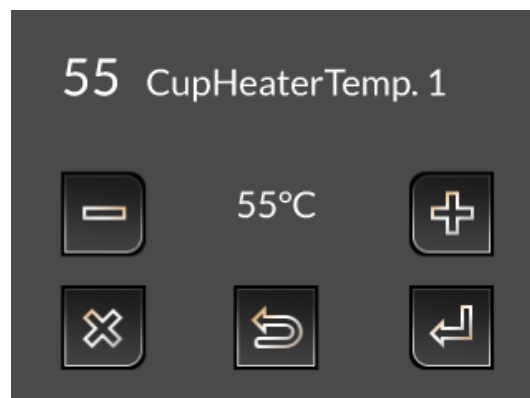


Offset temperature for units 1 and 2 (and 3, if present).

Sets the increase to be applied to the unit espresso boiler temperature in order to obtain the espresso temperature set in Espresso boiler temperature 5.6.5.1.


The minimum value is 0 and the maximum is 20.

Confirm with 



Cup-warmer temperature (1-2-3)

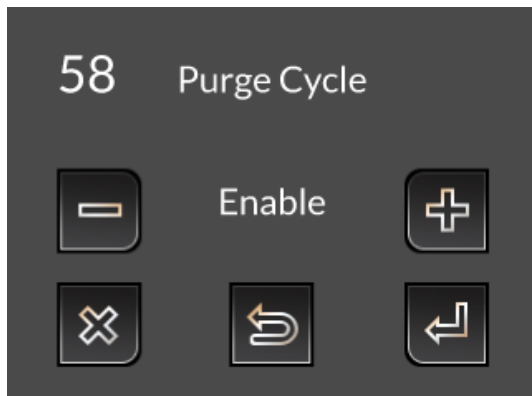
Sets the temperatures of the three temperature levels that can be selected for the cup-warmer tray 5.6.6.

Confirm with 

Note



When the liquid passes from the espresso boiler to the filter-holder outlet, it undergoes a temperature drop affected by the ambient temperature.




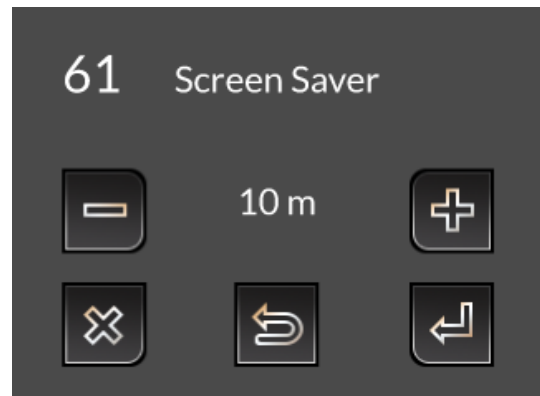
Purging cycle

Enables or disables the purging function key and relative programming 5.6.2.2.

The possible values are:

- Enabled
- Disabled

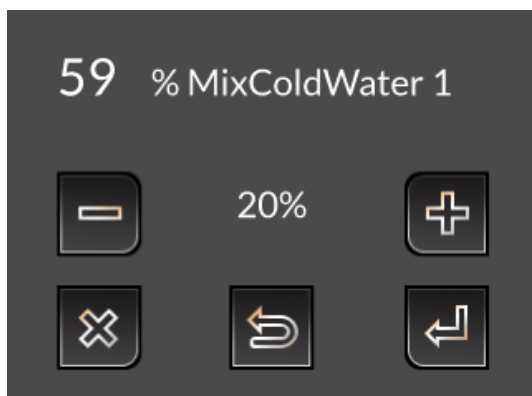
Confirm with 



Screensaver

Used to set how many minutes of machine inactivity must elapse before the screensaver is enabled.


Confirm with 



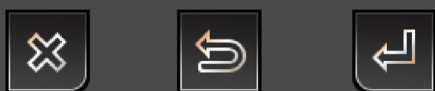
% Cold water mixing (1-2)

Used to regulate the temperature of the water from the hot water dispenser; this is done by mixing - via a proportional solenoid valve - cold water with the hot water from the steam boiler heat exchanger.

The values that can be set vary from 0% hot to 100% cold.


Confirm with 

62 Test actuators 1



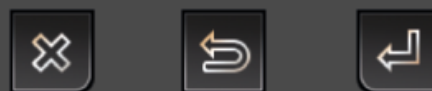
Actuator test 1

By pressing the dispensing buttons, you can make sure the actuators in the machine are working properly.

Confirm with 


Actuator test 1	Activation
Unit 1	
T1	solenoid valve for unit 1 dispensing
T2	solenoid valve for unit 1 pre-infusion
T3	water pump
Unit 2	
T1	solenoid valve for unit 2 dispensing
T2	solenoid valve for unit 2 pre-infusion
T3	solenoid valve for steam boiler filling

63 Test actuators 2

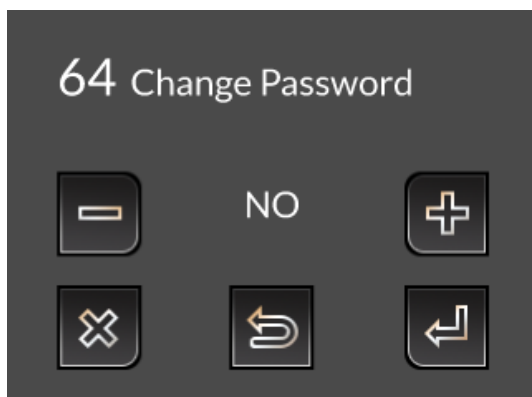


Actuator test 2

By pressing the dispensing buttons, you can make sure the actuators in the machine are working properly.


Confirm with 

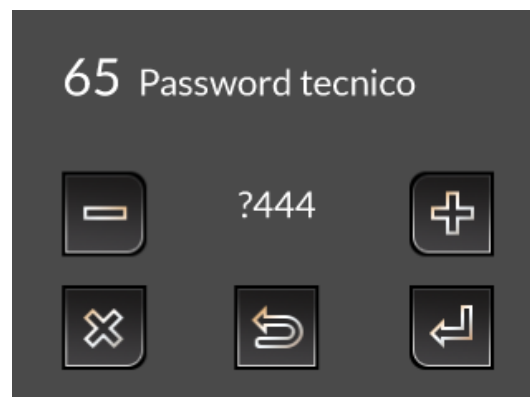
Actuator test 2	Activation
Unit 1	
T1	espresso heating, unit 1
T2	solenoid valve for hot water for tea
T3	solenoid valve for cold water mix for tea
Unit 2	
T1	espresso heating, unit 2
T2	steam boiler heating
T3	cup-warmer heating




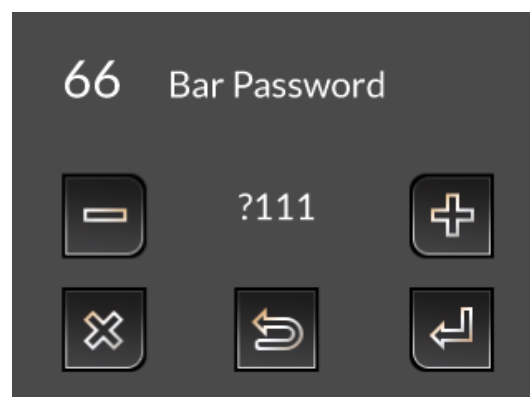
Change password
Used to change the access password
The possible values are:


- YES
- NO

Confirm with 



Change password
Used to change the new access password with
Technical level.
Enter the new password using the + and -
buttons.
Confirm with 



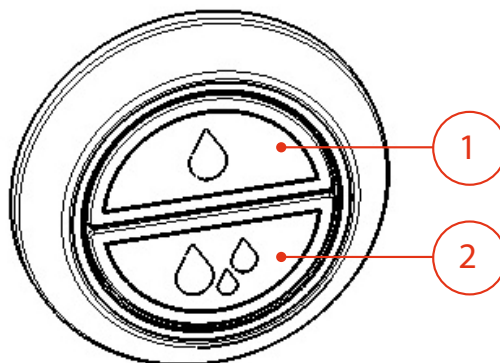
Change password
Used to change the new access password with
Barista Pro level.
Enter the new password using the + and -
buttons.
Confirm with 

5.6.2 Dose programming

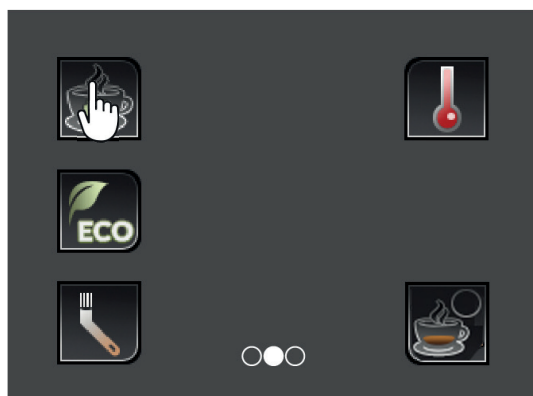
Note



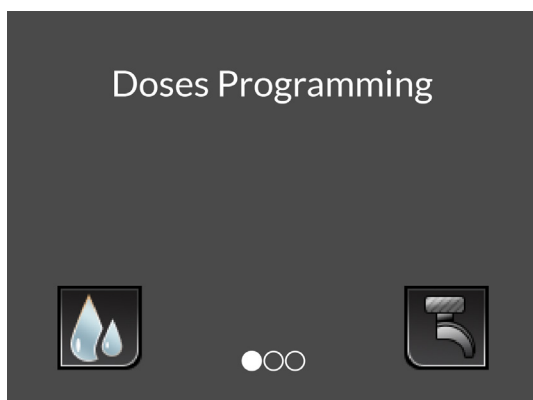
The Dose Programming menu can only be accessed if it has been enabled on the relative page of the Technical menu 5.6.1.



5.6.2.1. Hot water doses

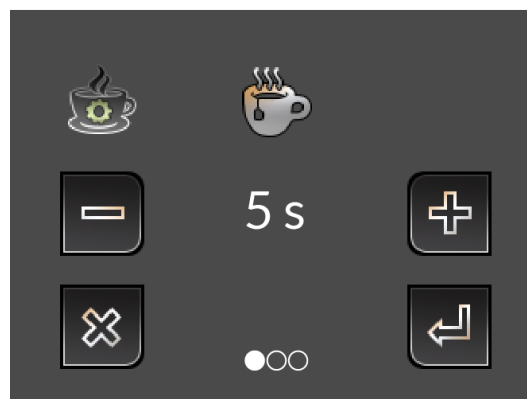


Press the indicated button to access the dose programming page.



Press button 1 or 2 to set the hot water dispensing time.

The hot water programming page will appear:



Indication of the dose you are programming: hot water dispensing



Reduces the dispensing time (sec.)



Increases the dispensing time (sec.)



Cancel/Return to the previous menu



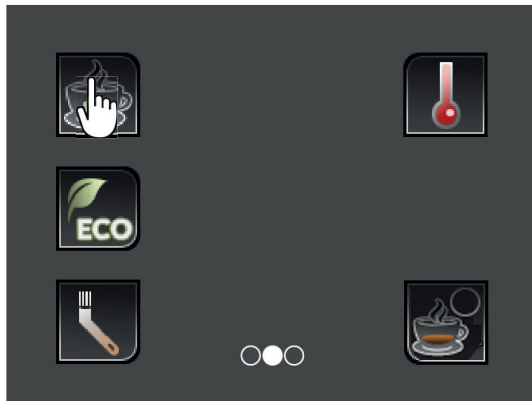
Enter/Confirm

5.6.2.2. Purging water doses

Note



The purging water can only be programmed if it has been enabled on the Purging Cycle page of the technical menu 5.6.1.

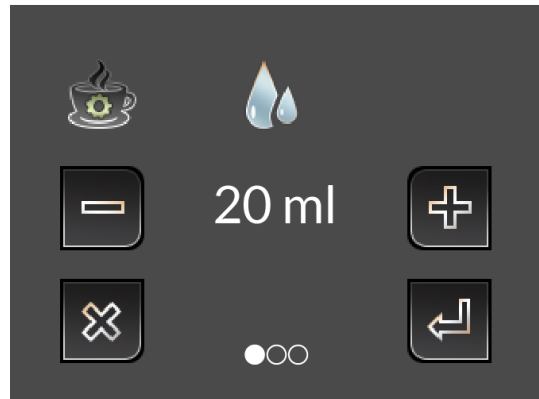


Press the indicated button to access the dose programming page.



Press the indicated button to set the purge dispensing ml.

The purge water programming page will appear:



Indication of the button you are programming: purge water dispensing



Reduces the quantity of liquid dispensed (ml); the min. value is 3ml



Increases the quantity of liquid dispensed (ml); the max. value is 40ml



Undo



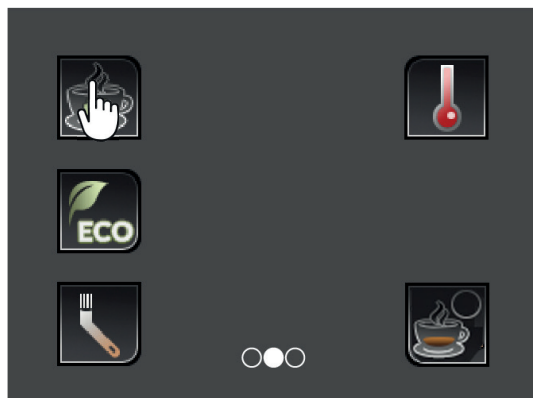
Enter/Return to the previous menu

Note



Programming settings made on unit 1 (the first on the left) are also applied to unit 2 and unit 3 (if installed); programming settings made on unit 2 are also applied to unit 3 (if installed).

5.6.2.3. Espresso doses



Press the indicated button to access the dose programming page.



The following programming relates to the dispensing of a single or double dose of espresso, depending on the button visualised:



Programming of double espresso dispensing



Programming of single espresso dispensing



Indication of the button you are programming: single short espresso dispensing



Indication of the button you are programming: double short espresso dispensing

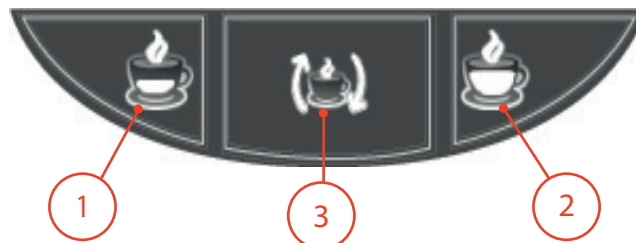


By pressing the TEST button, you can dispense the programmed dose to test it



Reduces the quantity of liquid dispensed (ml)

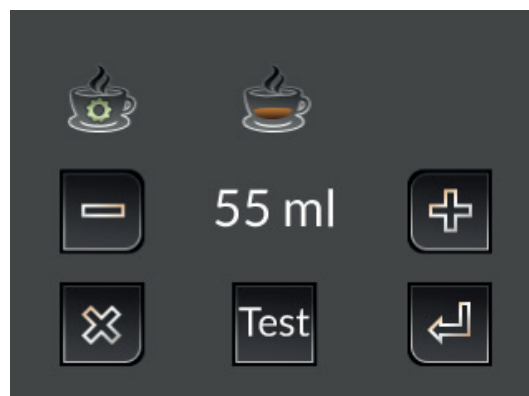
A



Press button (1) to program short espresso dispensing

B

The espresso dose programming page will appear:





Increases the quantity of liquid dispensed (ml)



Undo/Return to the previous menu



Enter

Note



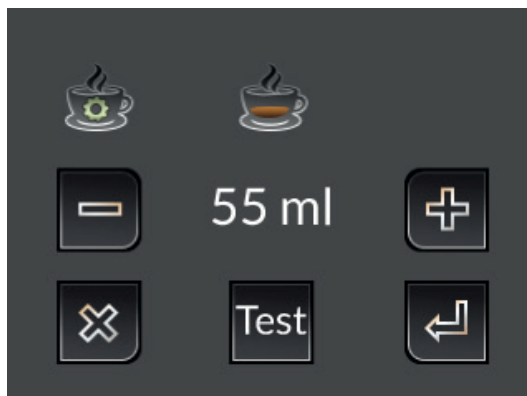
Repeat points A and B, pressing button (2) to program long espresso dispensing and button (3) to program continuous espresso dispensing.

Self-learning

Espresso dispensing can be programmed with self-learning.



With the Espresso dose programming page open, press button 1 or 2 to begin dispensing, and press it again when the required quantity has been dispensed.



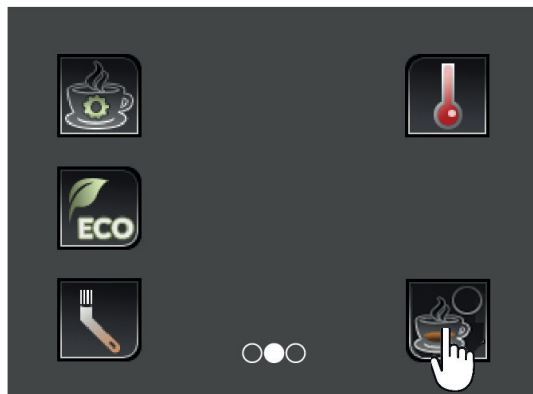
The quantity shown is the quantity programmed in self-learning.

Confirm with

5.6.3 Counters



Expert operator only



Press the indicated button to access the counter menu pages. The menu consists of three pages on unit 1 and two pages on units 2 and 3.



The page shows the counters of the doses dispensed by the unit you are working on.



Single long espresso dispensing counter



Double long espresso dispensing counter



Single short espresso dispensing counter



Double short espresso dispensing counter



Continuous espresso dispensing counter



Open the next page



Washing counter



With the first touch of the word "reset", it turns yellow. Press again to confirm the reset.



The page shows the counters of the doses of hot water dispensed.

Note



The page is only visualised on unit 1.



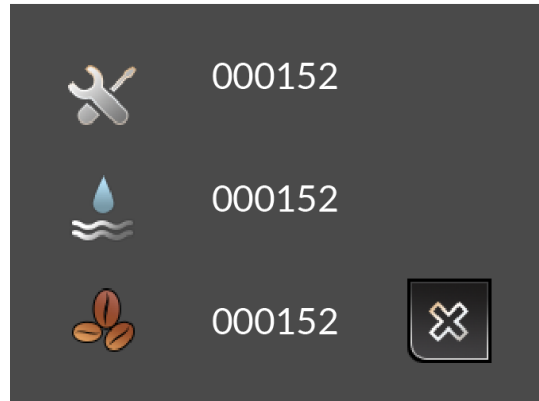
Hot water dispensing counters (1 and 2)



Open the next page



With the first touch of the word "reset", it turns yellow. Press again to confirm the reset.



The page shows the general machine counters.



Machine cycle counter; when the number of espresso and hot water cycles set in the Technical menu is reached 5.6.1, an alarm is displayed 6.4



Counter for litres through water softener filter; when the number of litres set in the Technical menu is reached 5.6.1, an alarm is displayed 6.4



Total number of espresso dispensing operations made by the machine. This counter is never reset.



Quit counter menu

5.6.4 Setting the clock menu



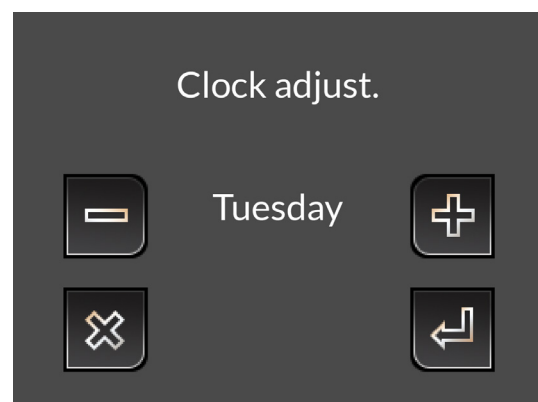
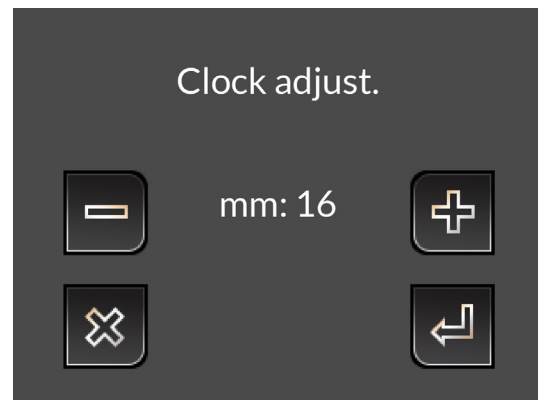
Expert operator only







Press the indicated button to access the clock menu pages. This menu lets you:

- set the hours, minutes and day of the week.
- set automatic switch-on/switch-off (defining the on/off times and the weekly day of closure).

1 switch-on and 1 switch-off can be set, valid for every day of the week except any possible closure days (up to 3), when the machine can only be switched on manually.







Setting the hour, minutes and day of the week.

-  Reduce
-  Increase
-  Undo
-  Enter/Confirm




Setting automatic switch-on/switch-off.

-  Reduce
-  Increase
-  Undo
-  Enter/Confirm

If you do not want to use the automatic switch-on/switch-off function, set "--" as the Auto On time; in this case, the Auto Off page will not be displayed.

Warning



If the Auto On/Auto Off function is used, the machine must not be switched off via the main switch but with the  button.

The machine will be switched off, but will remain powered (the machine power indicator light is still illuminated).



Setting the day of closure



Reduce



Increase



Cancel/Return to the previous menu



Enter/Confirm

If you do not want to set a day of closure, select "-----".

5.6.5 Boiler temperature



Expert operator only

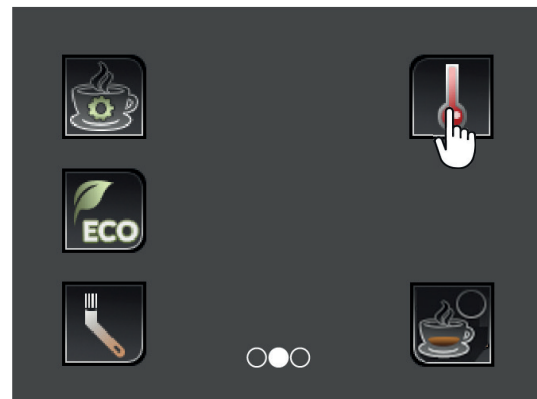
5.6.5.1. Espresso boiler temperature

This procedure regulates the temperature of the espresso boiler of the unit you are working on.

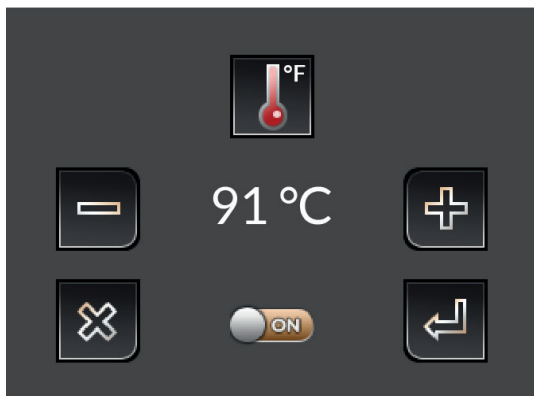
Note



The set temperature is the temperature of the water on the espresso panel. The temperature of the water in the boiler is higher (equal to the offset value set in the Technical menu) 5.6.1.



Press the indicated button to access the on/off and temperature adjustment page for the espresso boiler of the unit



Selection button °C or °F



Reduces the required temperature of the espresso boiler



Increases the required temperature of the espresso boiler



Undo/Return to the previous menu



Enter/Confirm



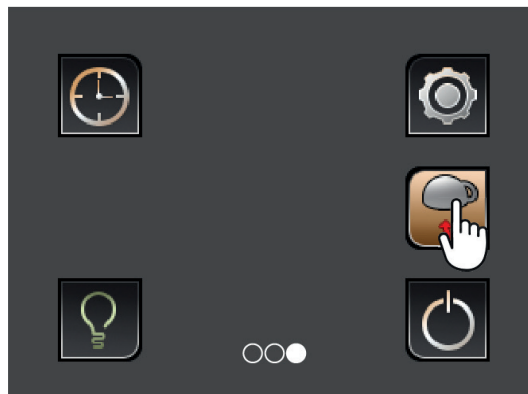
On/Off button for espresso boiler heating

Note



With espresso boiler heating OFF, the temperature of the water will depend solely on the pre-heating carried out by the steam boiler heat exchanger.

5.6.6 Cup-warmer



Press the indicated button to activate/deactivate the cup-warmer.

The sequence with every pressing of the button is:

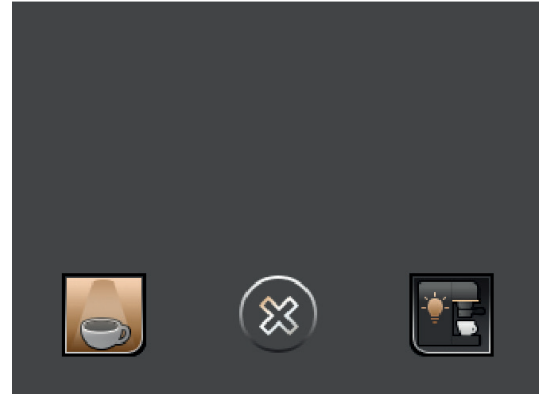
OFF->ON1->ON2->ON3->OFF

The temperatures of levels 1, 2 and 3 are set in the Technical menu 5.6.1.

5.6.7 Lighting



Press the indicated button to access the lights menu page.



Dispensing area lights ON and ambient lights OFF



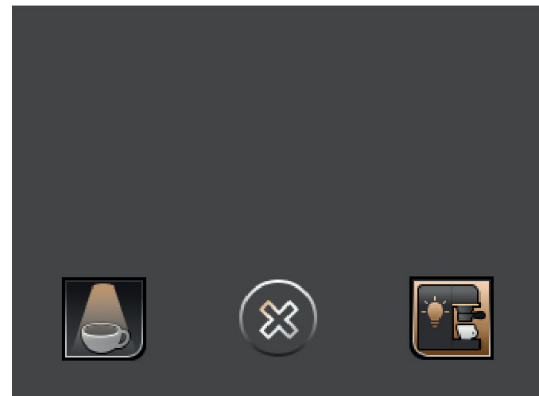
Switches the dispensing area lights on/off



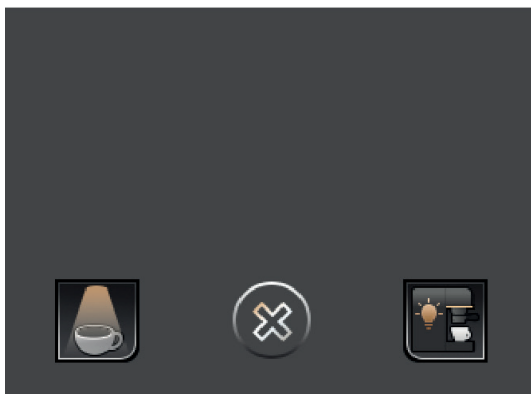
Switches on/off the ambient lights on the sides of the casing and the back



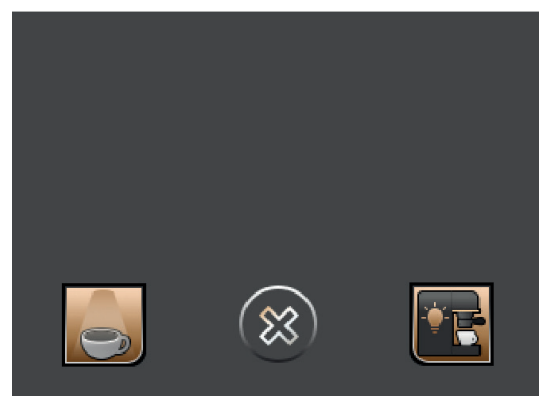
Cancel/Return to the previous menu



Dispensing area lights OFF and ambient lights ON



Dispensing area lights and ambient lights OFF



Dispensing area lights and ambient lights ON

6 CLEANING AND MAINTENANCE

6.1 DAILY MAINTENANCE



Expert operator only

The daily maintenance operations must be performed at the end of each workday.

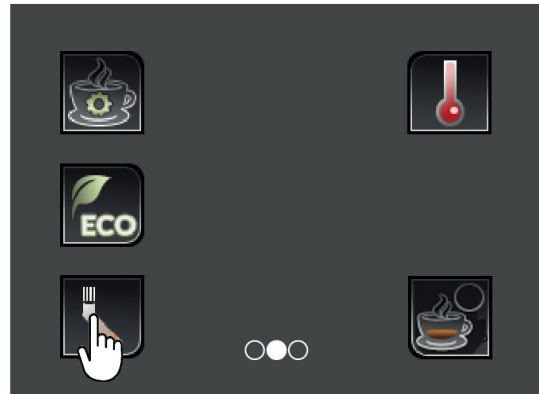
6.1.1 Washing with detergent



Replace the espresso filter with the blind filter and insert the detergent.



Insert the filter-holder in the unit to be washed



Press the indicated button to start the wash cycle. The machine performs a series of purging operations, activating the espresso solenoid valve in sequence.



The wash water is discharged into the tray through the espresso unit's solenoid valve.

Note



While one unit is being watched, the other units can be used normally.

Note

Wash cycles can be run simultaneously on different units.

Note

A wash cycle cannot be interrupted once it has been initiated.

**6.1.2 Cleaning the filter holder****Note**

The procedure must be performed with all the filter holders.



Fill a container of a suitable size with hot water (50 to 80°C) and an appropriate amount of detergent, based on the product's indications.

Remove the filter from the filter-holder, levering it out with the aid of a suitable tool. Soak the two elements in the solution for a few minutes, taking care not to immerse the plastic handle. Remove any residue and then rinse.

Replace the filter in the filter-holder, making sure the internal locking spring is in the right position.

6.1.3 Cleaning the perforated disk

Use a suitable tool to lever out the perforated disk, taking care not to damage the unit gasket.

Caution

Burn hazard. Make sure that the perforated disk is not too hot before performing this operation.

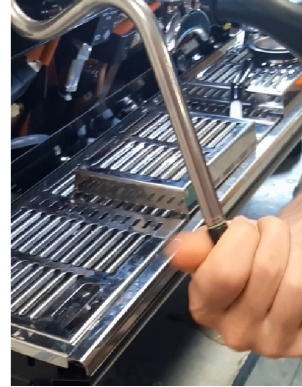


Separate the unit's gasket from the perforated disk, immerse them in the detergent solution for several minutes, and eliminate any residues; then rinse.



Use the supplied brush to clean the perforated disk's position.

Press the perforated disk and gasket back into the espresso unit.

6.1.4 Cleaning the steam nozzle

Unscrew the steam nozzle.



Pass a pipe cleaner through all the nozzle's holes to eliminate any residues.

Screw the nozzle back onto the steam pipe.

6.1.5 Cleaning the casing

- Clean the glass on the front using a soft cloth.
- Clean the touch-screen displays with a soft cloth dipped in a non-alcohol-based detergent.
- Use a damp sponge to clean the stainless steel cup support grille and cup stands.
- Remove the cup support grille and use a sponge to clean inside the tray.

6.2 WEEKLY MAINTENANCE



Expert operator only

6.2.1 Cleaning the hot water dispenser's aerator filter



Unscrew the aerator filter from the hot water dispenser.



Clean the filter.

Screw the aerator filter back onto the hot water dispenser.

6.3 ACCESS TO INTERNAL MACHINE COMPONENTS



Expert operator only

Note



The procedures described in the following paragraphs must only be carried out by technical personnel.

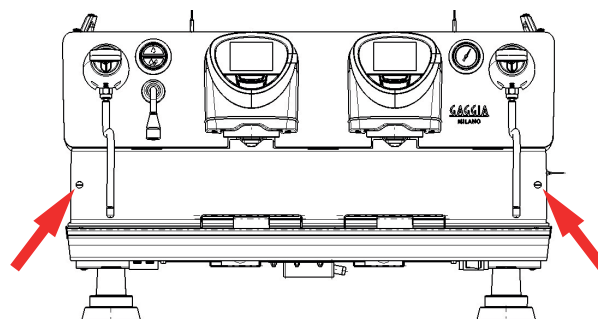
Caution



Before beginning, make sure the machine is disconnected from the power supply and that the upstream circuit breaker is ON.

6.3.1 Removing the front cover

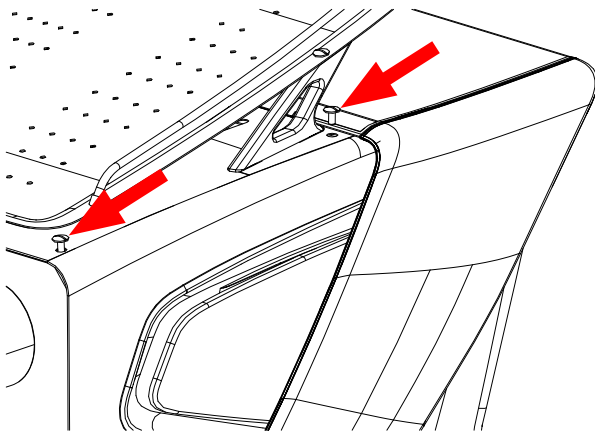
- Remove the cup support grille from the tray.
- Loosen the two front slotted head screws.



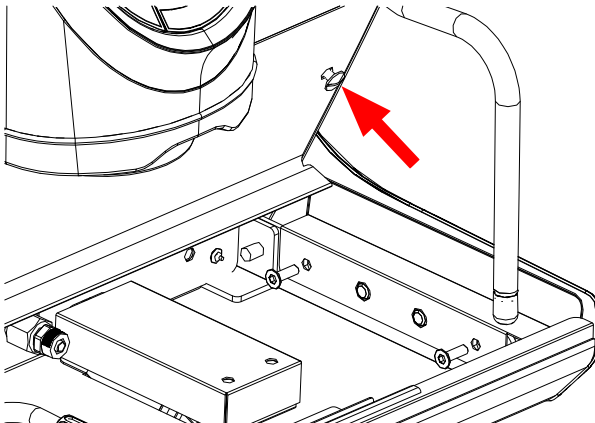
- Remove the front cover.

6.3.2 Removing the right and left side panels

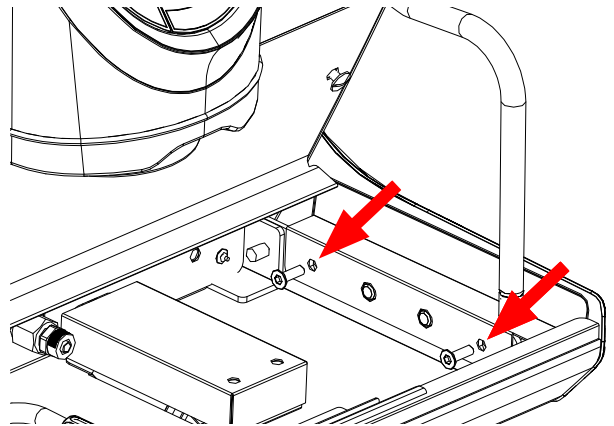
- Remove the cup support grille from the tray.
- Removing the RH side panel:
 - Loosen the front and rear slotted head screws.



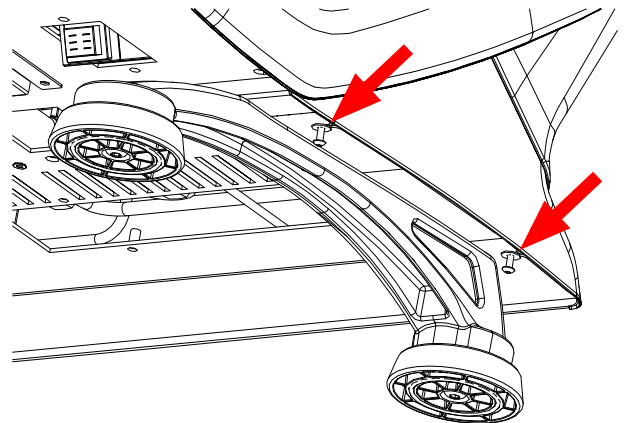
- Loosen the front slotted head screw.



- Loosen the two screws underneath the tray.



- Loosen the two lower countersunk hex-head screws.



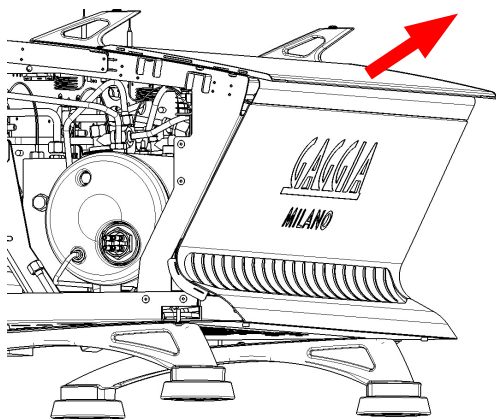
- Remove the side panel and disconnect the LED supply connector.



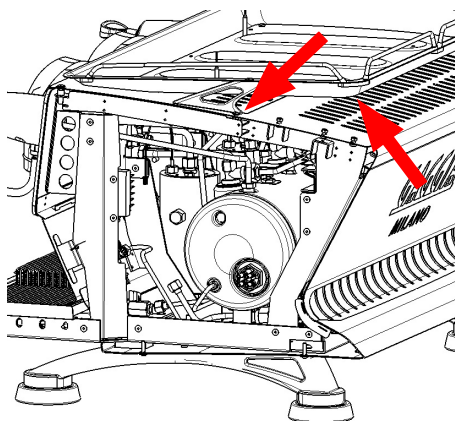
- Repeat the procedure for the LH panel.

6.3.3 Removing the back panel

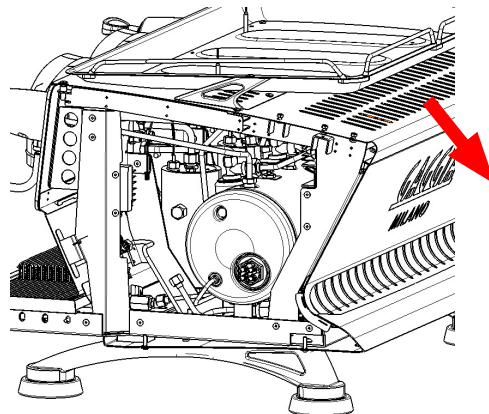
- Remove the RH and LH side panels 6.3.2.
- Remove the upper panel (held in place by two magnets).



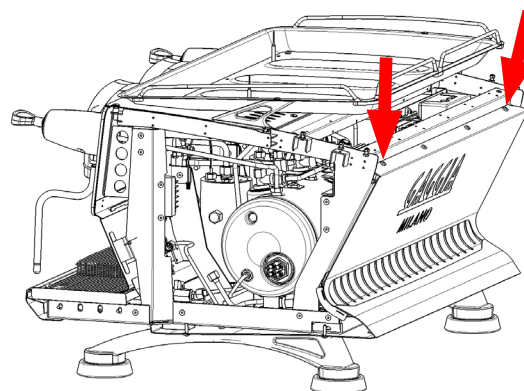
- Removing the upper cover:
 - Loosen the four slotted head screws (two on the right and two on the left of the machine).



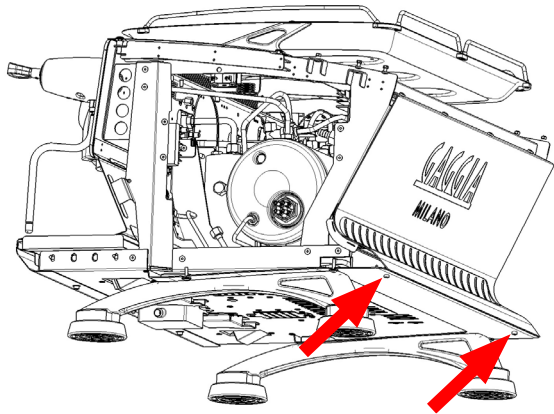
- Slide the upper cover out to remove it.



- Removing the back panel:
 - Loosen the two screws that fix the upper edge of the panel.



- Loosen the two countersunk hex-head screws that fix the lower edge of the panel.

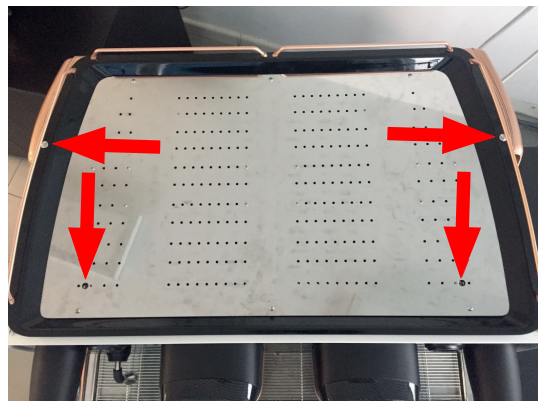


Slide out the back panel and disconnect the rear LED supply connector.



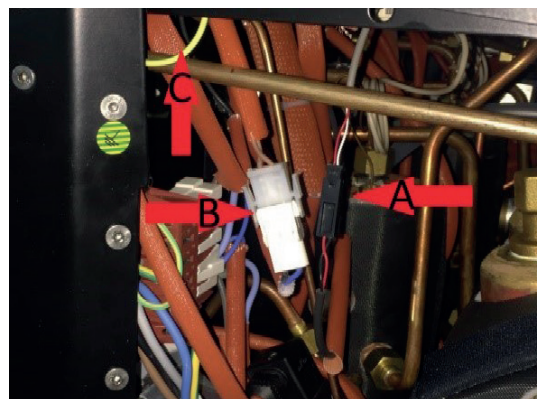
6.3.4 Removing the cup-warmer tray

- Remove the RH and LH side panels (par. 6.3.2).
- Loosen the two rear screws that fix the cup-warmer tray, and the two screws that fix the cup-warmer plate.

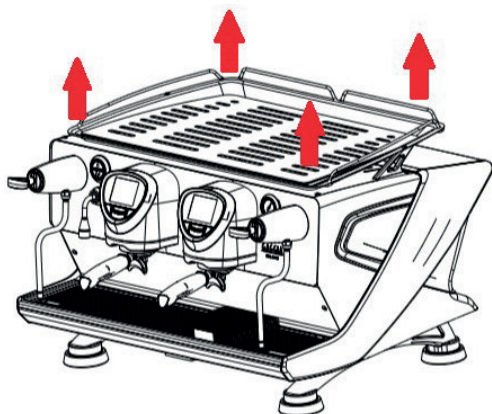


After removing the RH panel, disconnect:

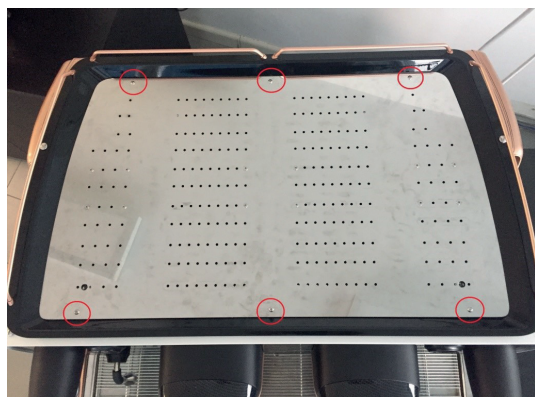
- A: the cup-warmer temperature probe wiring
- B: the cup-warmer supply wiring
- C: the cup-warmer earth wiring



- Lift out the cup-warmer tray.

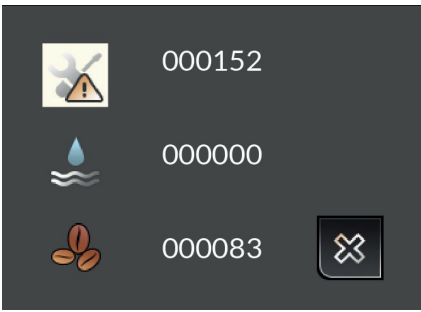
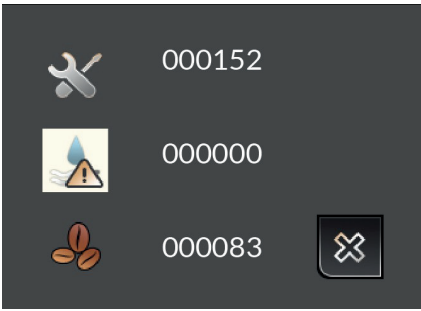
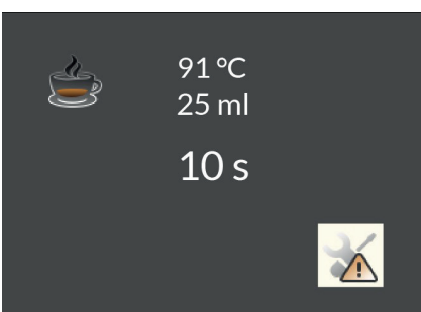


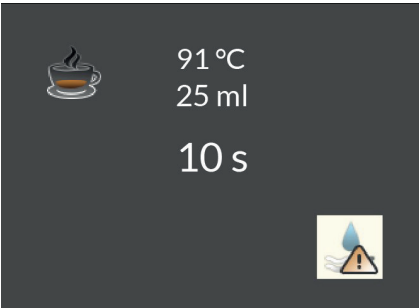
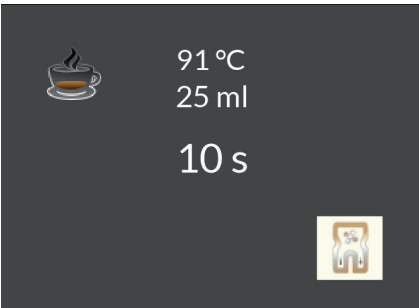
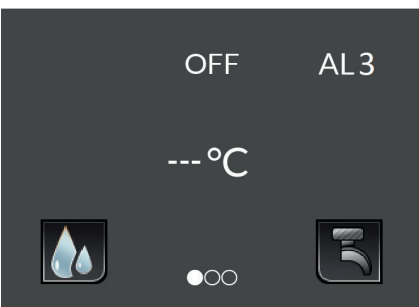
- To remove the cup-warmer plate from the tray, remove the six fixing screws then lift the plate (pay attention to the temperature probe, supply and earth wiring of the cup-warmer):

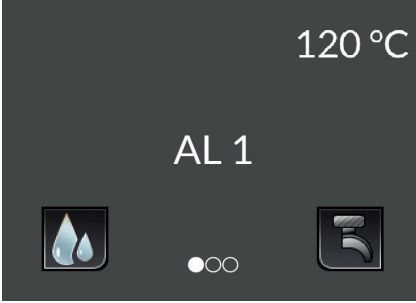
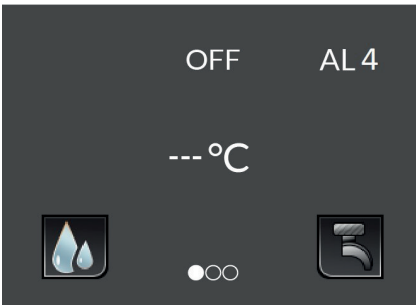
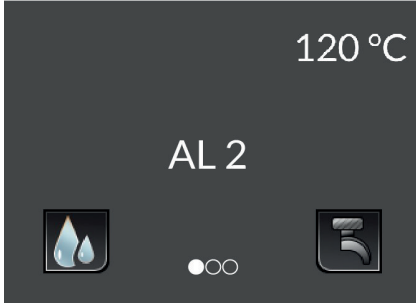




6.4 ALARMS


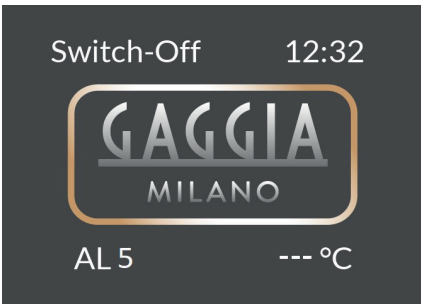
The following table shows the alarms that may be triggered on the machine, the relative causes and possible solutions.

ALARM	CAUSE	SOLUTION
	Ref. 5.6.3 When the maintenance cycle counter reaches the value set in the Technical menu, the alarm symbol appears in the relative icon.	Carry out maintenance. To eliminate the alarm, press and hold the relative icon; the warning triangle will disappear and the total machine cycle counter will be reset (at the value set in the Technical menu).
	Ref. 5.6.3 When the water softener filter litre counter reaches the value set in the Technical menu, the alarm symbol appears in the relative icon.	Regenerate the water softener filter. To eliminate the alarm, press and hold the relative icon; the warning triangle will disappear and the filter litre counter will be reset (at the value set in the Technical menu).
	During dispensing, if the maintenance cycle counter reaches the value set in the Technical menu, a specific alarm symbol appears at the bottom right.	Carry out maintenance. To eliminate the alarm, press and hold the relative icon on the counter page; the warning triangle will disappear and the total machine cycle counter will be reset (at the value set in the Technical menu).

ALARM	CAUSE	SOLUTION
	<p>During dispensing, if the water softener filter litre counter reaches the value set in the Technical menu, a specific alarm symbol appears at the bottom right.</p>	<p>To eliminate the alarm, press and hold the relative icon; the warning triangle will disappear and the filter litre counter will be reset (at the value set in the Technical menu).</p>
	<p>During dispensing, if the volumetric counter does not read the impulses correctly, a specific alarm symbol appears at the bottom right.</p>	<ul style="list-style-type: none"> - Check the connection wiring between the volumetric counter and the machine board - Potential volumetric counter fault: check and replace - Potential machine board fault: check and replace
	<p>When the steam boiler temperature probe is disconnected (circuit open), alarm AL3 appears on every unit.</p>	<ul style="list-style-type: none"> - Check the connection wiring between the steam boiler temperature probe and the machine board - Potential steam boiler temperature probe fault: check and replace - Potential machine board fault: check and replace.

ALARM	CAUSE	SOLUTION
	<p>When the espresso boiler temperature probe of an espresso unit is disconnected (circuit open), alarm AL1 appears on the corresponding unit.</p>	<ul style="list-style-type: none"> - Check the connection wiring between the espresso boiler temperature probe and the machine board - Potential espresso boiler temperature probe fault: check and replace - Potential machine board fault: check and replace.
	<p>When the steam boiler temperature probe reaches a value higher than 140°C, alarm AL4 appears on every unit.</p>	<ul style="list-style-type: none"> - Check the connection wiring between the steam boiler temperature probe and the machine board - Potential steam boiler temperature probe fault (short-circuit): check and replace - Potential machine board fault: check and replace.
	<p>When the espresso boiler temperature probe of an espresso unit reaches a value higher than 140°C, alarm AL2 appears on the corresponding unit.</p>	<ul style="list-style-type: none"> - Check the connection wiring between the espresso boiler temperature probe and the machine board - Potential espresso boiler temperature probe fault: check and replace - Potential fault of TRIAC on expansion board: check and replace the expansion board - Potential machine board fault: check and replace.

ALARM	CAUSE	SOLUTION
	<p>When the water charge in the steam boiler is not completed within the time limit set in the Technical menu, alarm AL6 appears on every unit.</p>	<ul style="list-style-type: none"> - Check the correct water supply from the hydraulic system - Check the connection wiring between the steam boiler charge valve and the machine board - Potential steam boiler charge valve fault: check and replace - Potential machine board fault: check and replace.
	<p>When the board clock has synchronisation or battery problems, the following alarm appears on the clock programming button on the third page.</p>	<ul style="list-style-type: none"> - Make a factory pre-set in the Technical menu (contact an authorised Gaggia Milano Aftersales Service for the relative password) - The clock board battery may be dead: check and replace - If possible, try to reload the software on the machine board - Potential machine board fault: check and replace

ALARM	CAUSE	SOLUTION
 <p>Switch-Off 12:32 GAGGIA MILANO --- °C</p>	<p>Menu 1 - in the event of synchronisation problems in the machine software, a general deactivation alarm appears.</p>	<ul style="list-style-type: none"> - Switch the machine off, and then back on again - Make a factory pre-set in the Technical menu (contact an authorised Gaggia Milano Aftersales Service for the relative password) - If possible, try to reload the software on the machine board - Potential machine board fault: check and replace
 <p>Switch-Off 12:32 GAGGIA MILANO AL 5 --- °C</p>	<p>Menu 1 - when the heating of the steam boiler is not completed within the time limit set in the software, alarm AL5 appears on every unit.</p>	<ul style="list-style-type: none"> - Potential steam boiler heating element fault: check and replace - Potential steam boiler safety thermostat fault: check and replace - Potential wiring fault on steam boiler heating element: check and replace - Potential solid state relay fault: check and replace - Potential machine board fault: check and replace

Caution



If alarm AL1, AL2 or AL3 is activated, not only is the info given on the displays concerned but all the dispensing buttons also start flashing.

6.5 REGULATING THE WATER PUMP FLOW RATE



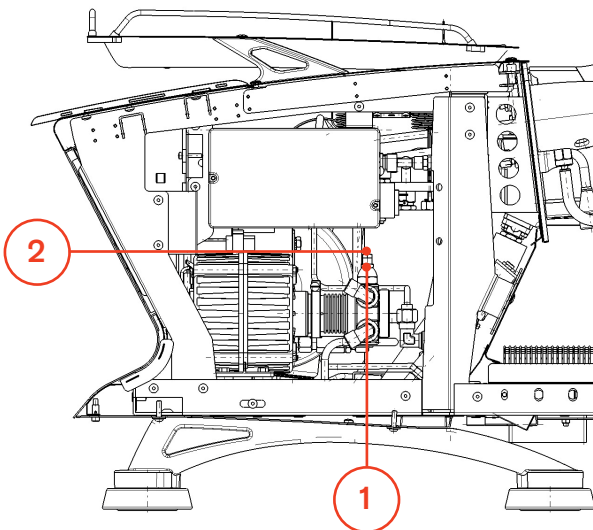
Authorised personnel only

Note

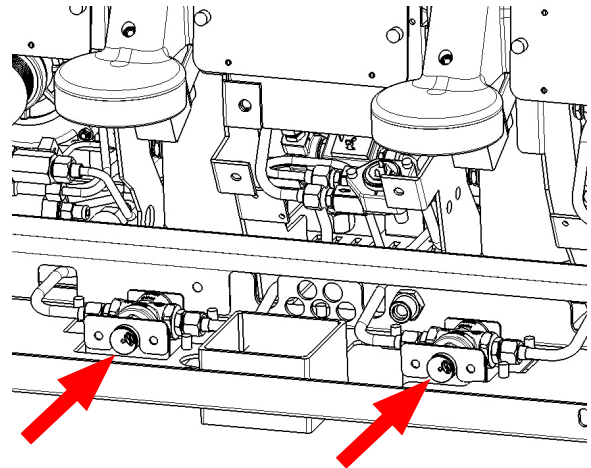


The pump flow rate must have a nominal pressure of 9 bar for the standard version, or 12 bar for the DFC version.

- Access the water pump by removing the LH side panel 6.3.2.
- Loosen the locking nut (1).
- Regulate the flow rate by adjusting the screw (2).
- When you have finished, replace the LH side panel.



6.6 REGULATING THE PRE-INFUSION PRESSURE



Remove the protective covers and tighten or loosen the screws of the pressure regulators to increase or reduce the pressure of each espresso dispensing unit during the pre-infusion phase.

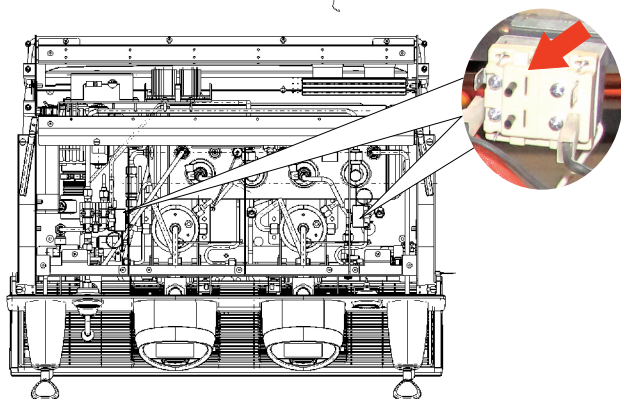
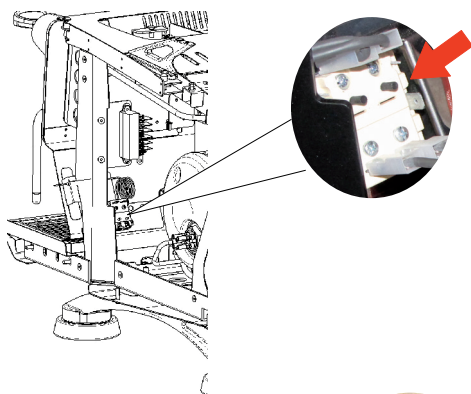
6.7 RESETTING THE BOILER SAFETY THERMOSTATS

Caution



Before resetting the safety thermostat, identify and resolve the problem that triggered it.

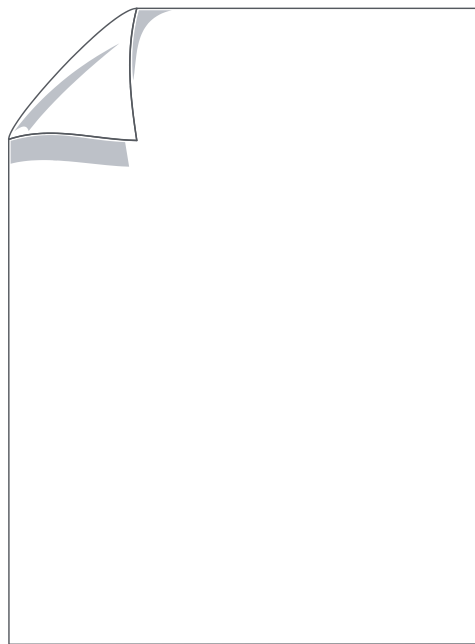
- Access the safety thermostats by removing the RH side panel 6.3.2.
- Identify the thermostat that was triggered 3.3.1, and reset it by pressing the button (1).



6.8 MASTER CONTROL UNIT BUFFER BATTERY

The master electronic control unit 3.3.2 is fitted with a clock buffer battery of the CR2032u type (3V).

This battery has a lifespan of approx. 10 years.



7 DISPOSAL

7.1 DISPOSAL OF THE MACHINE

When decommissioning the machine, be sure to respect the indications provided below, in accordance with Italian Legislative Decree no. 49/2014, which implemented the second Directive 2012/9/EU on Waste Electrical and Electronic Equipment (WEEE).

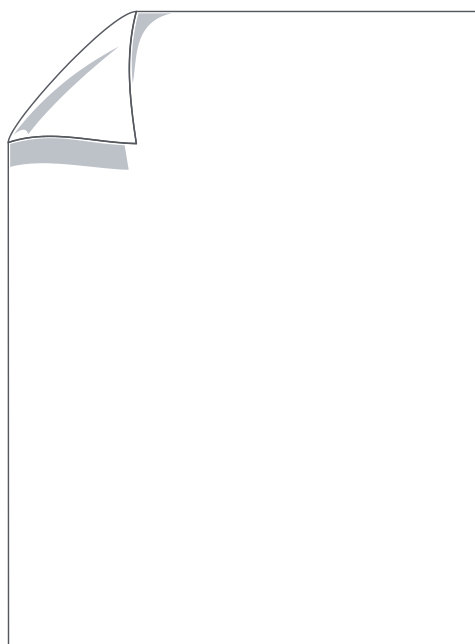


The crossed-out waste bin symbol on the machine or its packaging indicates that the various parts of the product must be sorted and disposed of separately at the end of its working life.

When deciding to dispose of this machine at the end of its working life, the user must contact the manufacturer and follow the procedure indicated for the separate disposal of the various parts.

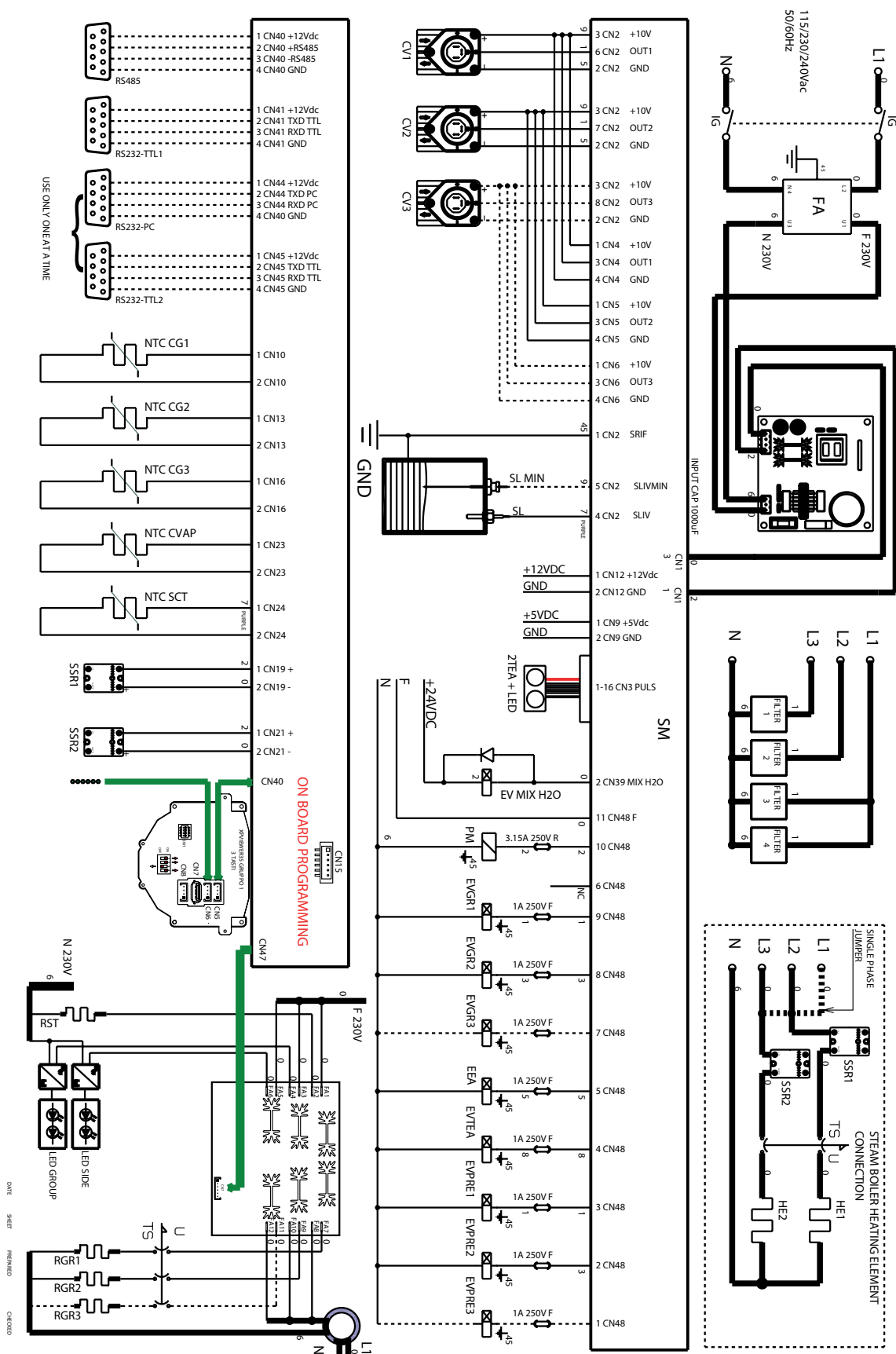
The proper sorting of the various parts for subsequent recycling, treatment and environmentally-friendly disposal helps to prevent harm to the environment and human health, and facilitates the re-use and/or recycling of the materials that make up the machine itself.

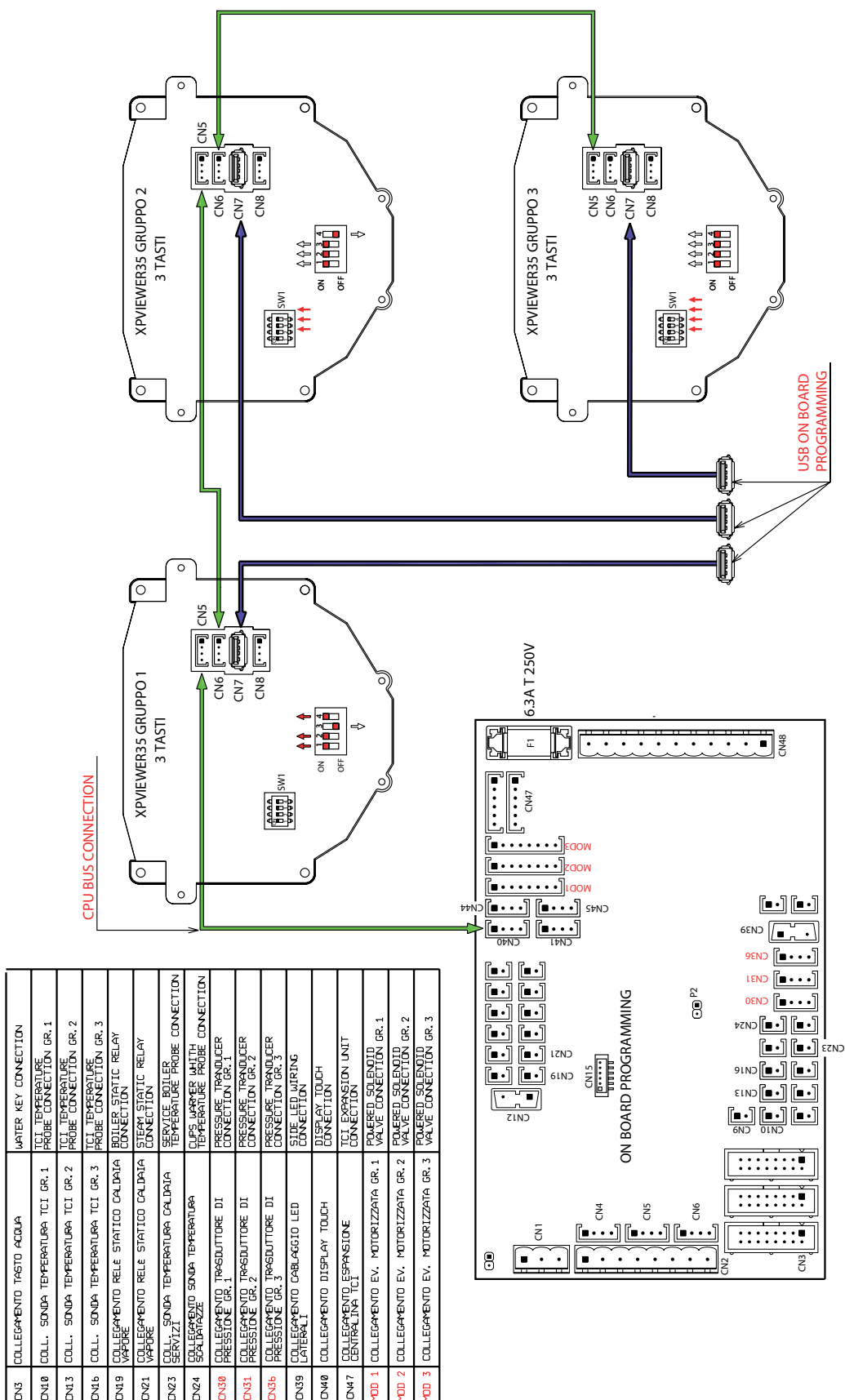
The unlawful disposal of the product by its owner could result in the application of the administrative penalties envisaged by the current legislation.

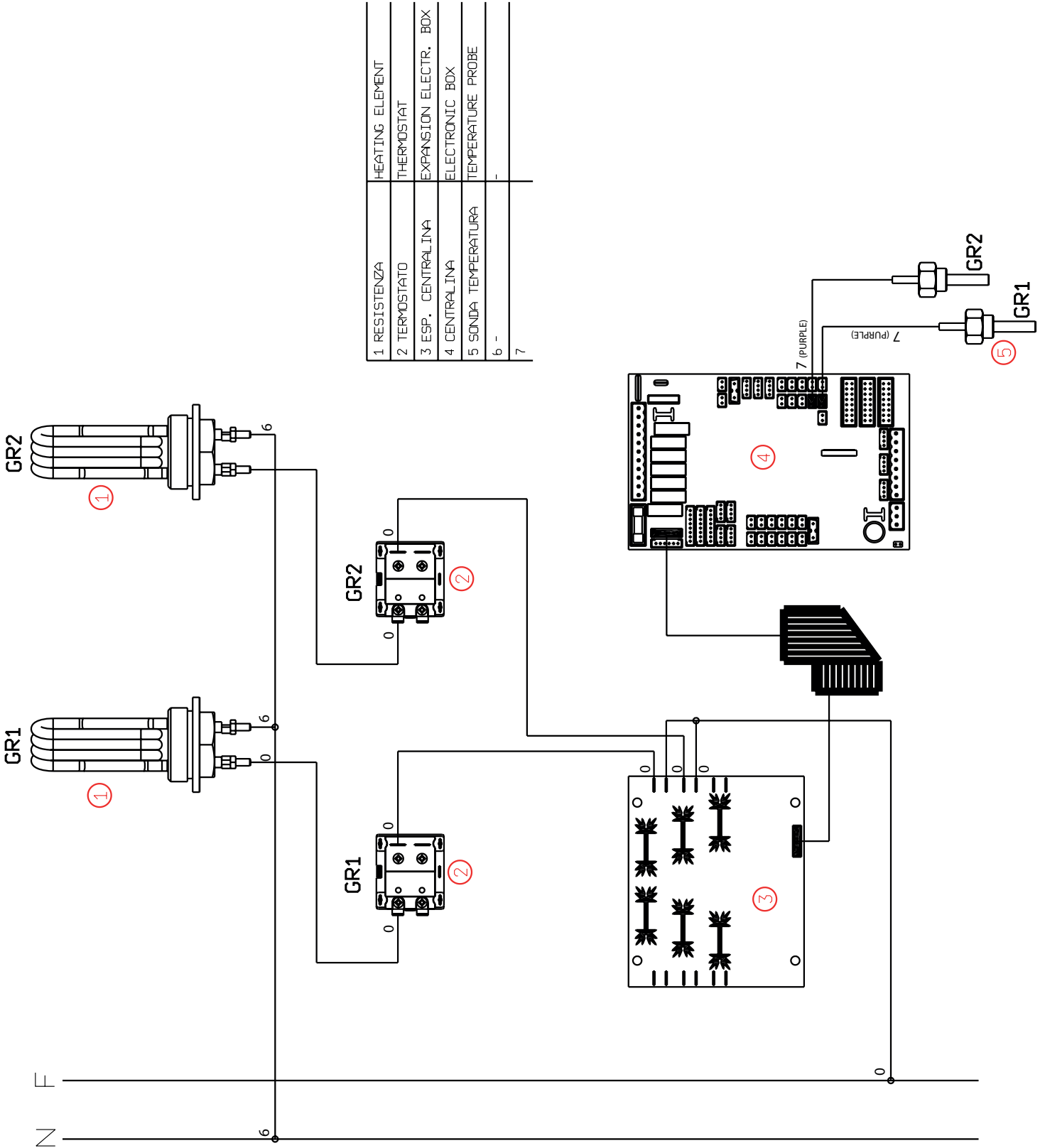


8 ELECTRIC AND HYDRAULIC DIAGRAMS

8.1 ELECTRIC DIAGRAMS

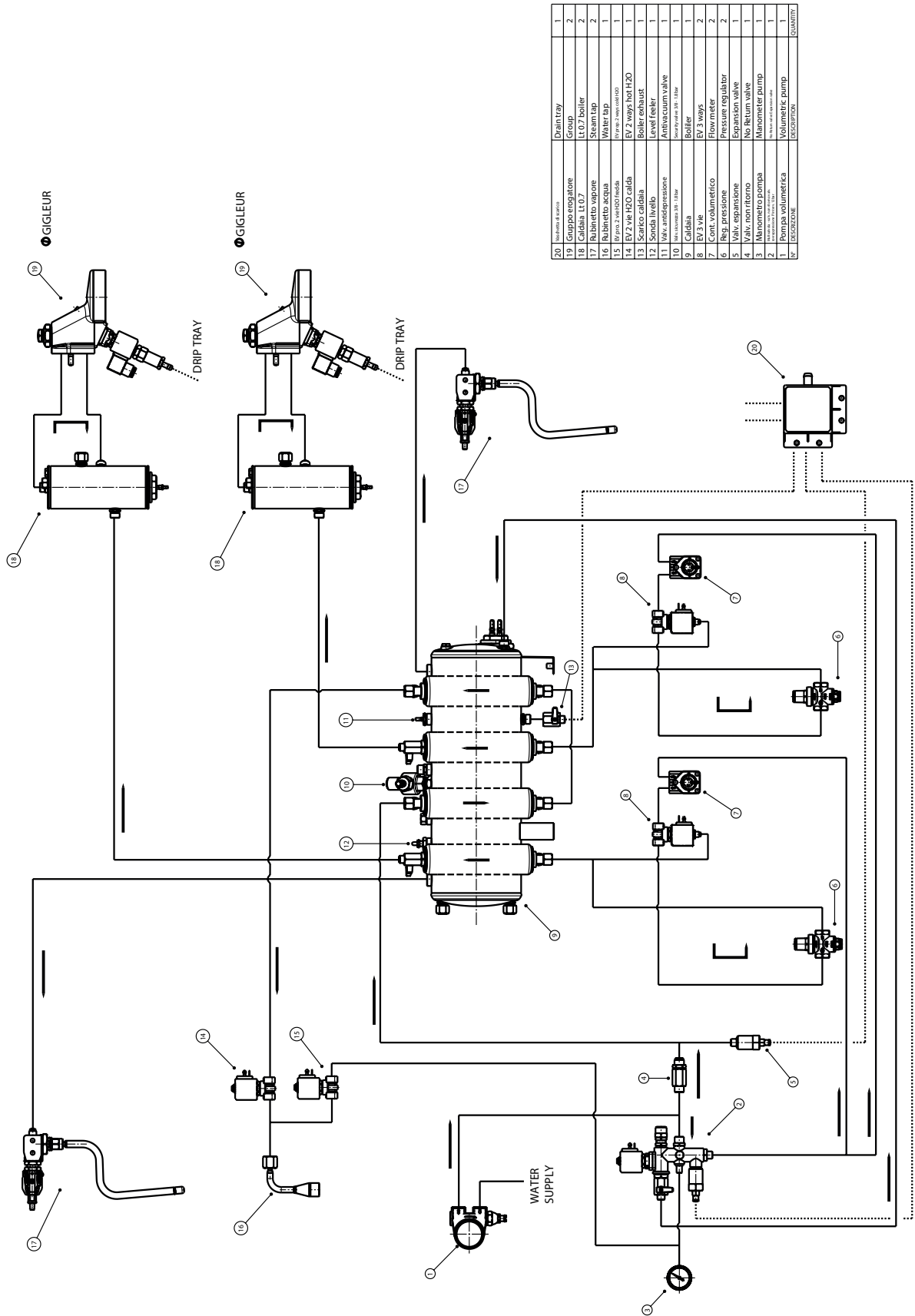






1	RESISTENZA	HEATING ELEMENT
2	TERMOSTATO	THERMOSTAT
3	ESP. CENTRALINA	EXPANSION ELECTR. BOX
4	CENTRALINA	ELECTRONIC BOX
5	SONDA TEMPERATURA	TEMPERATURE PROBE
6	-	-
7	-	-

8.2 HYDRAULIC DIAGRAM



N°	DESCRIZIONE	QUANTITÀ
20	Gruppo erogatore	1
19	Gruppo erogatore	2
18	Caldia LIU7 boiler	2
17	Rubinetto vapore	2
16	Rubinetto acqua	1
15	DRIP TRAY	1
14	EV 2-way, hot (H2O)	1
13	Scarico caldaia	1
12	Scada livello	1
11	EV 3-way	1
10	Manometro pompa	1
9	Caldia	1
8	EV 3-way	2
7	Cont. volumetrico	2
6	Reg. pressione	2
5	Valv. espansione	1
4	Valv. non ritorno	1
3	Manometro pompa	1
2	Pompa volumetrica	1
1	Pompa volumetrica	1



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