TRUFROST & BUTLER

USER MANUAL

E1 Eagle One NEO

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1 MACHINE DESCRIPTION

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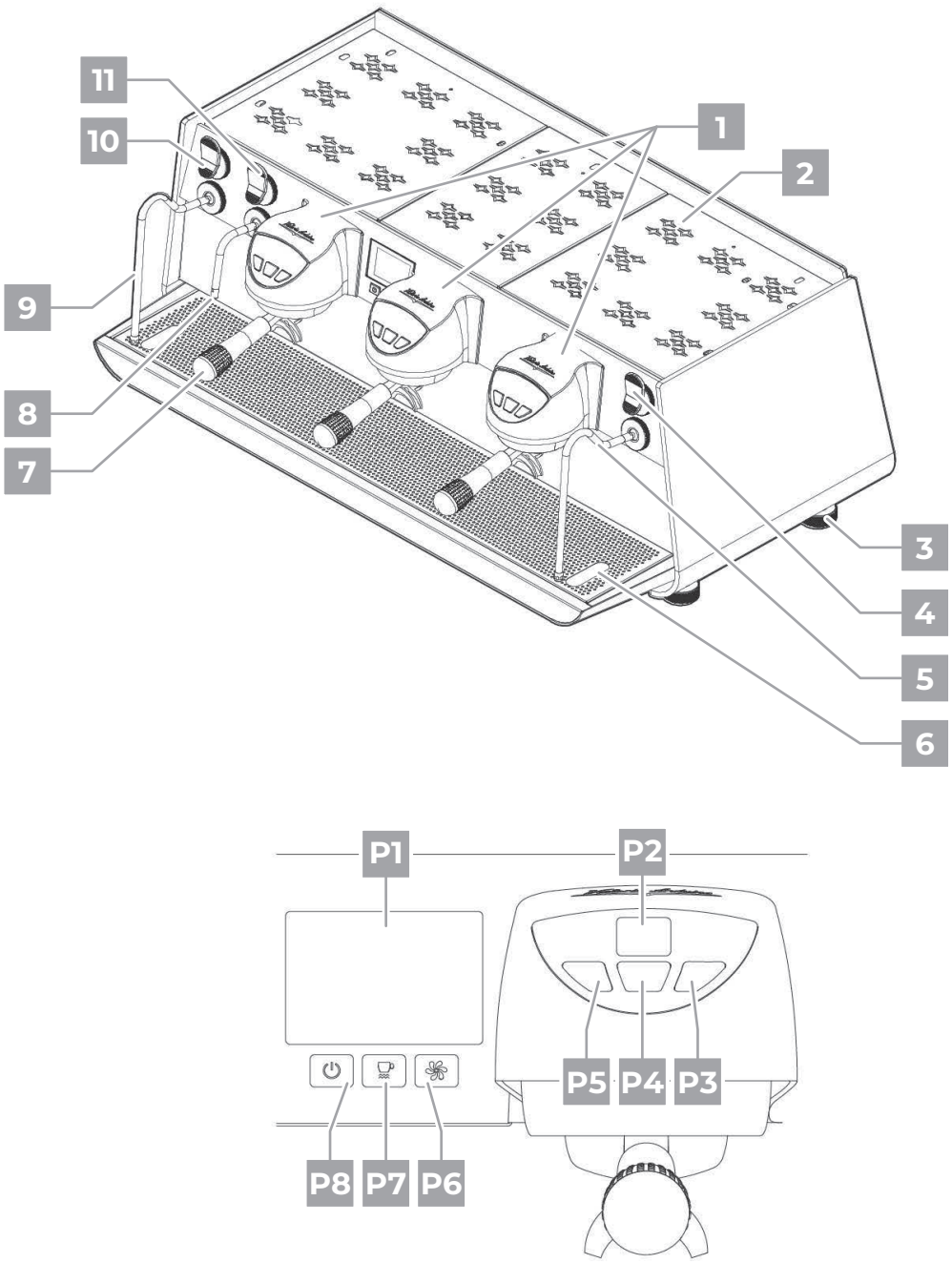
I.I MACHINE GENERAL DESCRIPTION

01



1 Infusion group
2 Cup warmer
3 Machine foot
4 Steam knob
5 Steam wand
6 Water collection pan
7 Filter-holder
8 Hot water wand
9 Steam wand
10 Steam knob
11 Hot water knob

P1 Touch screen display
P2 Ghost group display
P3 Coffee delivery button dose 1
P4 Coffee delivery button dose 2
P5 Coffee delivery button dose 3
P6 Washing button
P7 Cup warmer ON/OFF button
P8 Machine ON/OFF button

I.3 SAFETY REGULATIONS

Read this book carefully. It provides important information concerning safety of installation, use and maintenance. Save it carefully for future reference.

All illustrations contained in this manual are meant for information purposes only.

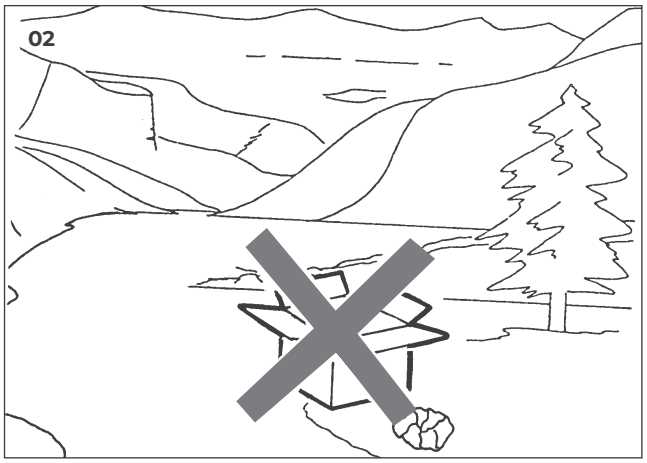
Your machine may differ slightly from the one shown here.

Simonelli Group reserves the right to make changes to production and to the manual without any obligation to update previous production and manuals accordingly.

After unpacking, make sure the appliance is complete. In case of doubts, do not use the appliance, but contact a qualified technician. Packaging items which are potentially dangerous (plastic bags, polystyrene foam, nails, etc.) must be kept out of children's reach and must not be disposed of in the environment.

RISK OF POLLUTION

02



The machine can be installed in staff kitchen areas in shops, offices and other working environments, farm houses by clients in hotels, motels and other residential type environments bed and breakfast type environments.

Before turning ON the machine make certain that the rating indicated on the label matches the available power supply. The nameplate can be seen inside the machine when removing the water collection pan. The machine must be installed according to the applicable federal, state and local standards (codes) in force with regard to plumbing systems including back-flow prevention devices. For this reason, the plumbing connections must be carried out by a qualified technician. The warranty expires if the characteristics of the power supply do not correspond to the nameplate data.

The appliance must be installed according to the applicable federal/ national/local standards (codes) concerning the hydraulic systems including back-flow devices. Owing to the above, the hydraulic connections must be carried out by a skilled technician. The warranty will be rendered null and void in case the features of the power supply do not match the plate data.

In case of installation in kitchens, connect the equipotential conductor to the terminal on the machine indicated by the symbol ⏚.

The manufacturer is not held responsible for possible damage caused by failure in earthing the plant. For the electrical safety of the appliance, it is necessary to equip the system with the proper grounding. This must be carried out by a qualified electrician who must ensure that the electric power of the system is sufficient to absorb the maximum power input stated on the plate.

03

The electrician with the apposite qualification certificate must make sure that the section of the system cables is suitable to the power absorbed by the machine.

The use of adapters, multiple sockets or extensions is strictly forbidden. If they prove necessary, call a fully qualified electrician.

For appliances powered at 220-230 V, the maximum impedance from the mains must below 0.37 Ohm.

When installing the device, it is necessary to use the parts and materials supplied with the device itself.

Should it be necessary to use other parts, the installation engineer needs to check their suitability for use in contact with water for human consumption.

The machine must be installed in compliance with the local health standards in force for Hygiene and water safety environmental protection. Therefore, contact an authorized service man.

For connecting the waterline, always use a new pipe supplied, Do not use old pipes.

The device needs to be supplied with water that is suitable for human consumption and compliant with the regulations in force in the place of installation. The installation engineer needs confirmation from the owner/ manager of the system that the water complies with the requirements and standards stated above.

This appliance must only be used as described in this handbook. The manufacturer shall not be liable for any damage caused due to improper, incorrect and unreasonable use.

This appliance is not suitable for use by children or persons with reduced physical, sensory or mental capabilities, or by persons with a lack of experience or knowledge, unless supervised or given instructions.

Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

The machine shall be installed only in rooms, in which the use and the maintenance are restricted to skilled staff.

The appliance shall not be install where water jets can be used.

The operating temperature must be within the range of [+5, +25]°C.

At the end of installation, the device is switched ON and taken to rated operating conditions, leaving it in a state in which it is “ready for operation”.

After reaching the “ready for operation” condition, the following dispensing operations are carried out:

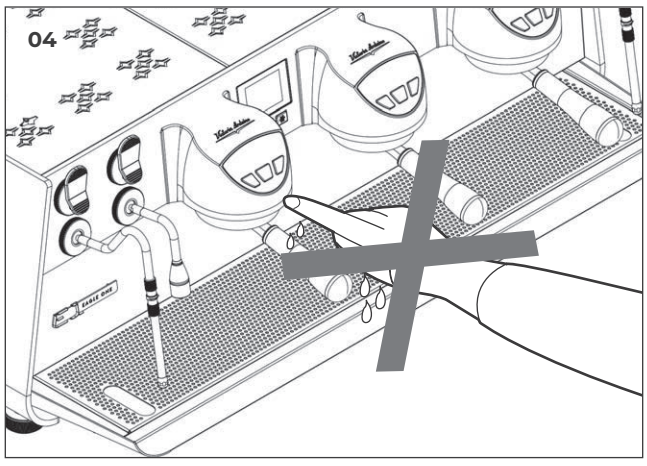
- **100% of the coffee circuit through the coffee dispenser (for more than one dispenser, this is divided equally);**
- **Opening of each steam outlet for 1 minute.**

At the end of installation, it is good practice to draw up a report of the operations.

Basic rules must be observed when using any electric appliance. Never:

- **Touch the machine with wet hands or feet;**
- **Use the machine barefoot;**

RISK OF SHORT CIRCUITS



- **Use extensions in places used as bath or shower;**
- **Pull the supply cable to disconnect the machine from the power mains;**
- **Leave the machine exposed to atmospheric agents (rain, sun, etc..);**
- **Allow the machine to be used by children or by non-authorised personnel that haven't read and understood this manual.**

It is forbidden to leave the machine switched ON without the presence and surveillance of a qualified operator. Simonelli Group is not responsible for damages caused by failure to comply with this prohibition.

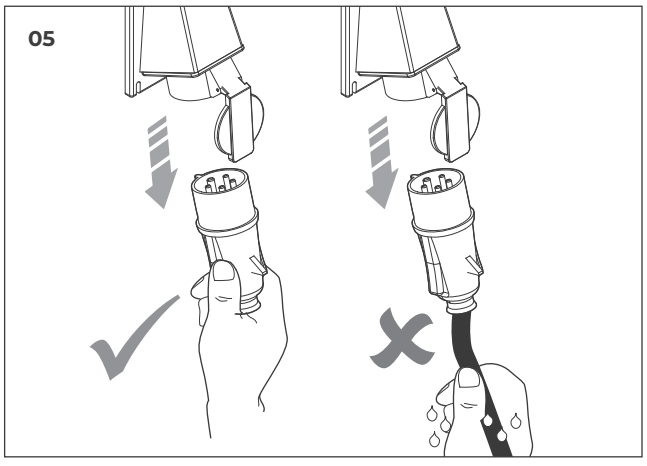
During installation, the mains power system needs to be equipped with a disconnector switch to cut-off each phase.

In case of fire, disconnect power to the machine by turning OFF the main switch. Its absolutely avoid to extinguish the fire with water while power to the machine is ON.

Should it be necessary to replace the power cord, this replacement operation must only be performed by an authorized service centre or by the manufacturer.

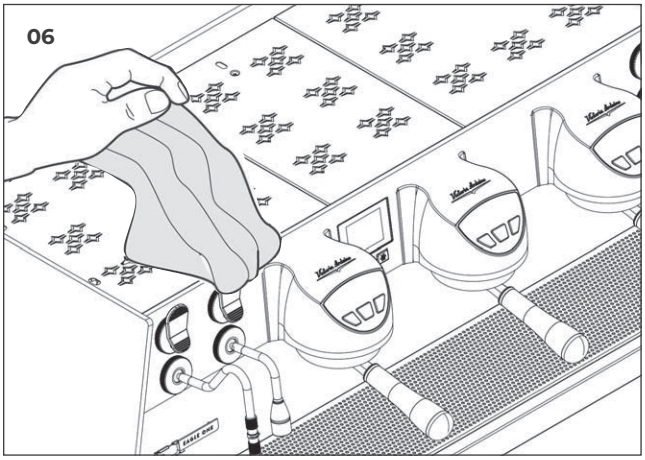
Before servicing the appliance, the authorised technician must switch OFF the appliance and unplug it first.

05



For all cleaning operations, comply exclusively with the instructions given in this booklet manual.

06



In case of breakdown or wrong functioning of the machine, switch it OFF. Any intervention is strictly forbidden. Contact qualified experts only.

Repairs should only be made by the manufacturer or authorized service centres. Use only original spare parts.

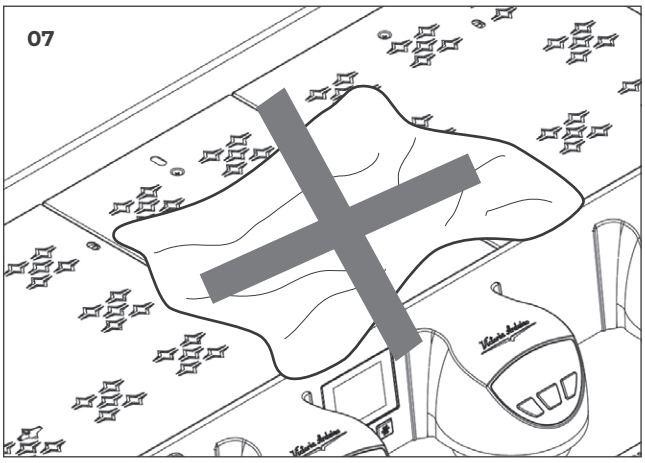
Non-compliance with the above stated can compromise the safety of the machine.

During installation, the licensed electrician shall provide an omni-polar switch as per the applicable safety standard with opening distance of the contacts, which allows the complete disconnection in the conditions in the overvoltage category III. For Australia, the above must be done according to the AS/NZS 3000 installation standard.

To avoid dangerous overheating, make sure the supply cord is fully uncoiled.

Do not obstruct the extraction and/or dissipator grids, especially of the cup warmer.

07

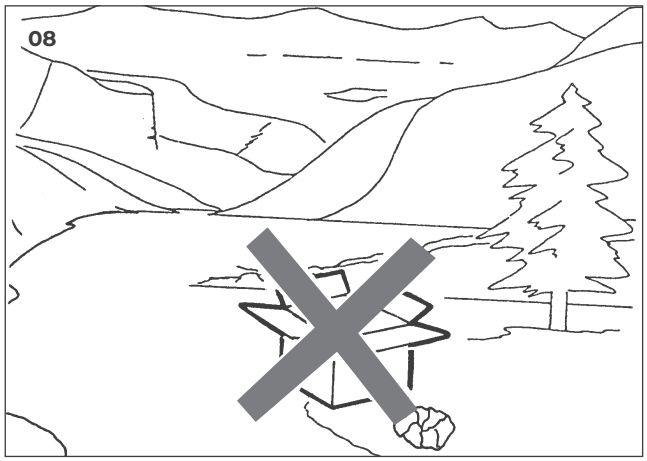


To support the aeration of the machine, place it with a distance of 100 mm from the walls or from other machines on the aeration side.

Single-phase appliances with current above 15 A and three-phase appliances sold without plugs are directly wired to the mains power and therefore, it is not possible to use a plug.

⚠ CAUTION
RISK OF POLLUTION

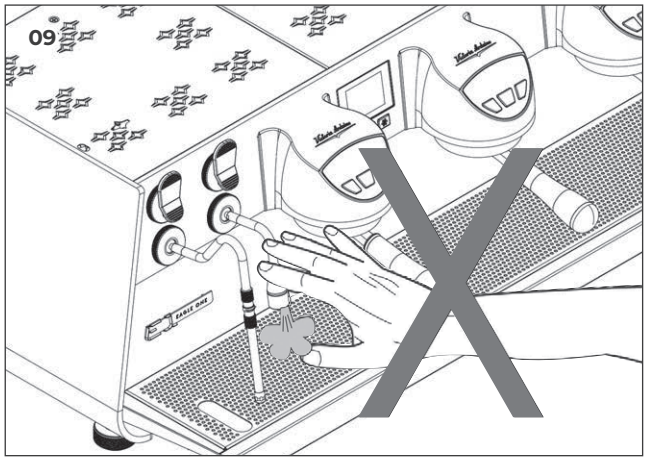
Do not dispose of the machine in the environment; for the disposal, contact an authorized service centre or contact the manufacturer for indications.



Should you decide to stop using the machine, we suggest you render it inoperable by unplugging it and cutting the power supply cord.

Use the steam wand with care and never place hands below the jet of steam. Do not touch the wand immediately after use.

⚠ WARNING
RISK OF BURNS OR SCALDING



⚠ WARNING
RISK OF BURNS OR SCALDING

We remind you that before carrying out any installation, maintenance, unloading or adjustment operations, the qualified operator must put on work gloves and protective footwear.

When the machine is left unattended for a long period, close the water inlet cap.

⚠ RISK OF POLLUTION

After washing is started, do not stop it to prevent detergent residues from remaining into the delivery group.

The maximum noise disturbance level is lower than 70 db.

If the pipe connecting to the mains water is replaced the old pipe must never be re-used.

In case of machine with water connection to the line, the minimum pressure must be 2 bar and the max. pressure for the proper operation of the machine must not exceed 4 bar.

WARNING

INFORMATION TO THE USERS

Under the senses of the Directives 2011/65/EU, 2012/19/EU and 2015/863/EU, concerning the reduction of the use of dangerous substances in electric and electronic equipment, as well as the disposal of wastes.

The symbol of the crossed large rubbish container that is present on the machine points out that the product at the end of its life cycle must be collected separately from the other wastes. The user for this reason will have to give the equipment that got to its life cycle to the suitable separate waste collection centres of electronic and Electrotechnical wastes, or to give it back to the seller or dealer when buying a new equipment of equivalent type, in terms of one to one. The suitable separate waste collection for the following sending of the disused equipment to recycling, the dealing or handling and compatible environment disposal contributes to avoid possible negative effects on the environment and on the people's health and helps the recycling of the materials the machine is composed of. The user's illegal disposal of the product implies the application of administrative fines as stated in Law Decree n. 22/1997" (article 50 and followings of the Law Decree n. 22/1997).

I.4 PREPARATION BY THE PURCHASER

Preparation of the installation site.
The purchaser must prepare the surface on which the machine will stand suitable to support the machine weight (see the installation Chapter).

ELECTRICAL REQUIREMENTS
The mains power installation must comply with the safely regulations and standards in force in the country of installation and must include an efficient earth system. An omnipolar cut-off device must be installed on the power line upstream of the machine.

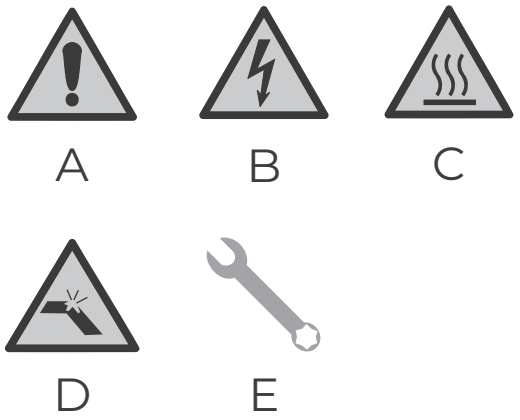
The power wires must be sized according to the maximum current required by the machine to ensure a total voltage loss under full load of less than 2%.

PLUMBING REQUIREMENTS
Prepare a suitable drain and a mains that supply water a maximum hardness of 3/5 French degrees (60/85 ppm).

I.5 SYMBOLS

A General hazard
B Electrical shock hazard
C Burns hazard
D Hazard of damage to the machine
E Operation reserved for the qualified technician, in compliance with current standards

10



I.6 RESIDUAL RISKS

Although the manufacturer has provided mechanical and electrical safety systems, dangerous areas persist during the use of the machine:

- Coffee dispensing groups.
- Steam wand.
- Hot water wand.
- Cup warmer.

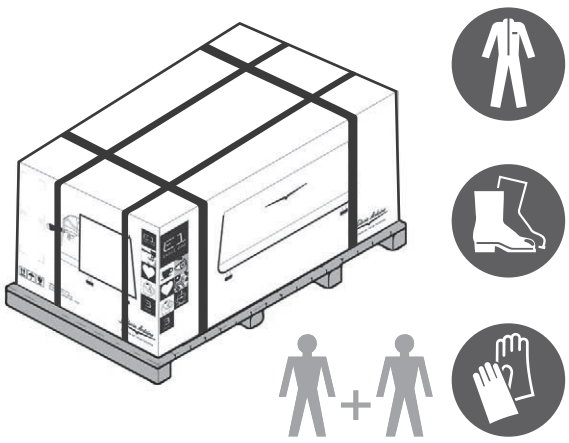
11

I.7 MACHINE RECEIVING

I.7.I TRANSPORT

The machine is transported on pallets containing several machines inside cartons strapped to the pallet.
Operators performing any shipping or handling operations must wear gloves, safety shoes and overalls with elasticized cuffs.
The machine must be moved by 2 or more operators.

12



WARNING

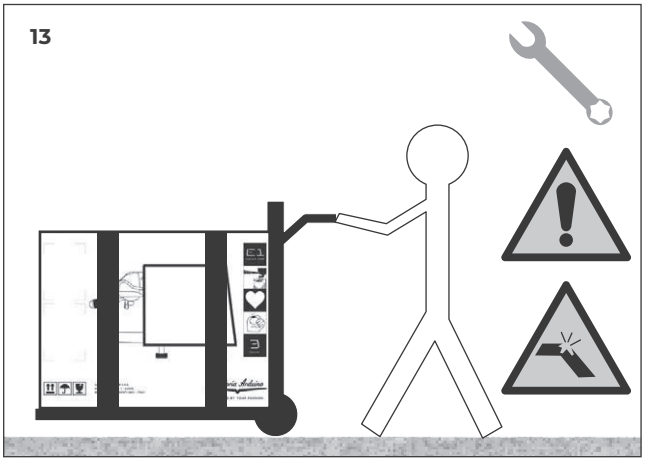
Failure to respect current safety regulations and standards on lifting and handling materials absolves the Manufacturer from all liability for possible damage to person or things.

WARNING

During the entire handling operation, the operator must make sure no one or nothing is inside the operating area.

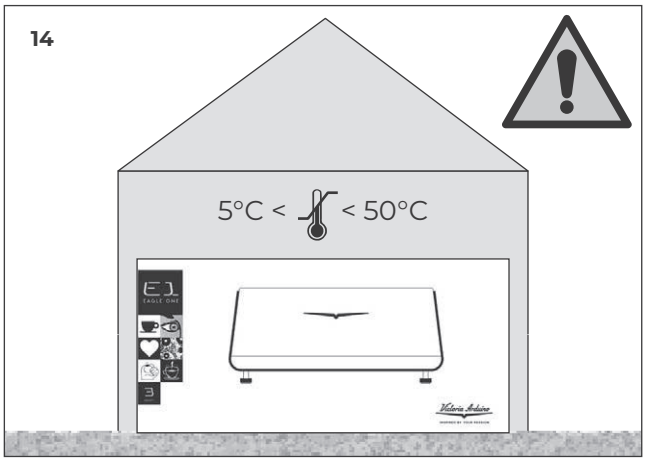
I.7.2 MOVEMENTS

Slowly lift the pallet about 30 cm from the ground and reach the loading area.
After checking that there are no obstacles, things or people, proceed with the loading.
Once you arrive at your destination, always with a suitable lifting device (e.g. forklift), after making sure that there are no things or people in the unloading area, take the pallet to the ground and move it about 30 cm from the ground, until to the storage area.



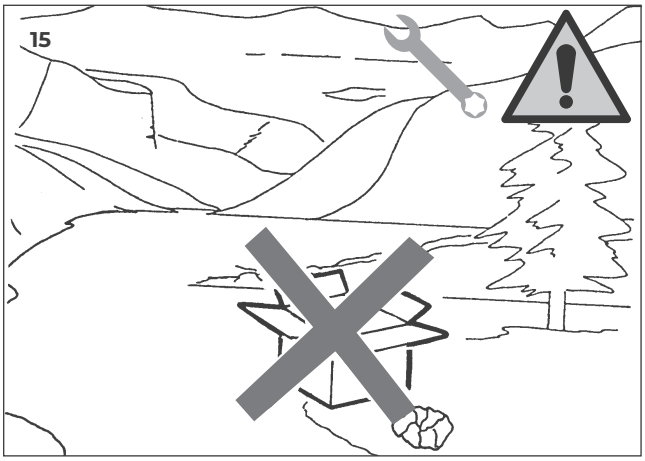
I.7.3 STORAGE

The package containing the machine must be stored away from atmospheric agents.
Before performing the following operations, make certain that the load is in stable and will not fall when the straps are cut.
Wearing gloves and safety shoes, the operator must cut the straps and store the product. During this operation, see the product technical features for the weight of the machine being stored and proceed as necessary.



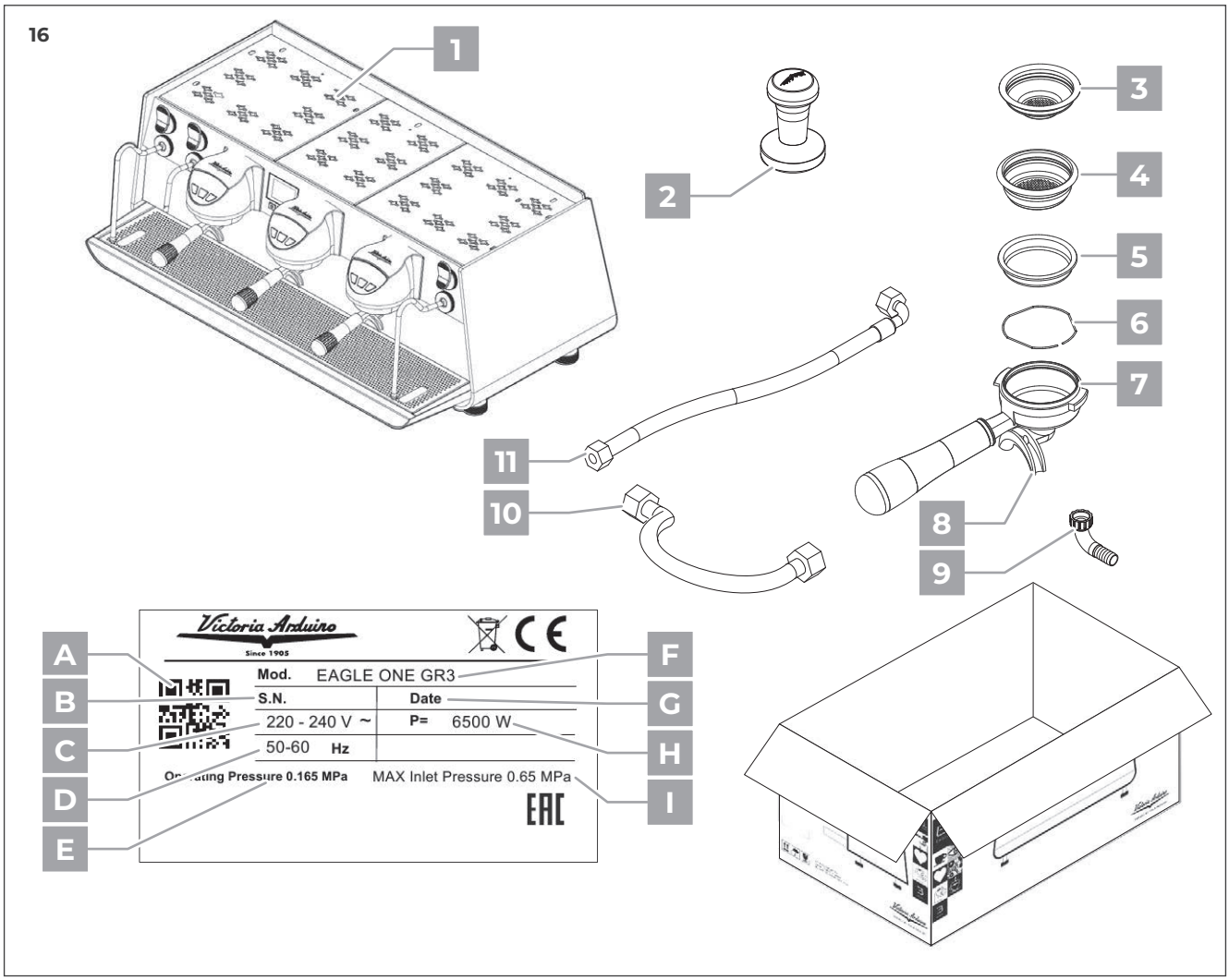
I.7.4 UNPACKING

Once the machine has been released from the pallet or container, do not pollute the environment with these items.



I.8 CONTENTS CHECK

Upon receipt of the box, check that the packaging is intact and visually undamaged. Inside the packaging must be the instruction manual and the relative kit.
In case of damage or faults, contact your local dealer.
For any communication, always communicate the serial number.
The communication must be carried out within 8 days from the receipt of the machine.

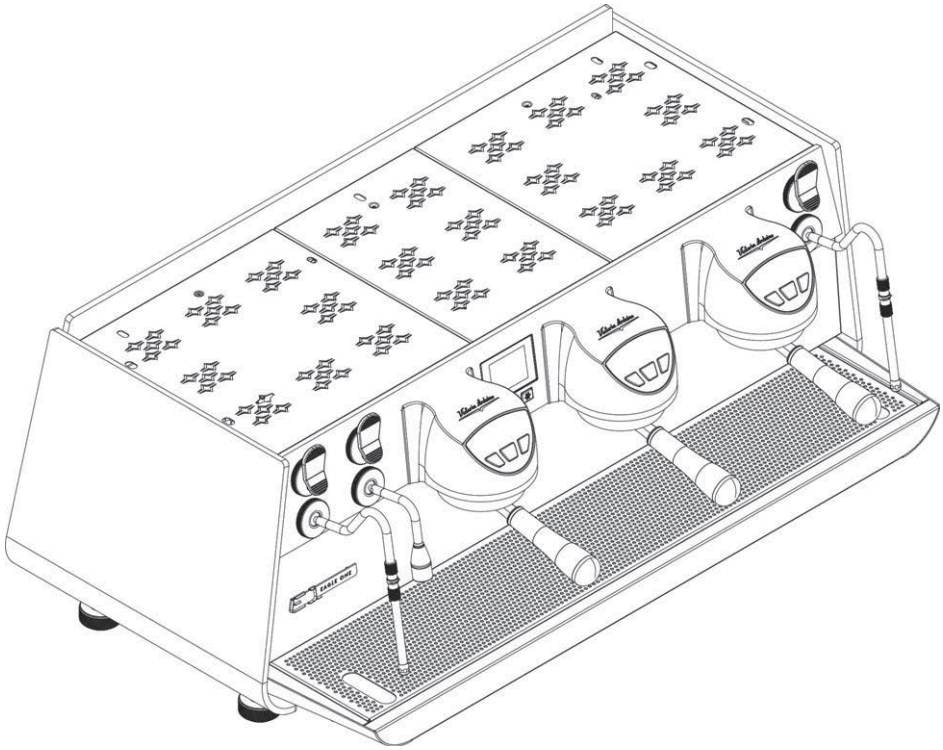


1 Machine (example image)
2 Coffee tamper (1 unit)
3 Single filter (1 unit)
4 Double filter (1 for each group)
5 Blind filter (1 for each group)
6 Spring (1 for each group)
7 Filter-holder (group number + 1)
8 Double delivery spout (1 for each group)
9 Single delivery spout (1 for each group)
10 Filling pipe 3/8” (1 unit)
11 Draining pipe 3/4” (1 unit)

A QR code
B Serial number
C Power supply
D Frequency
E Operating pressure
F Model and version
G Production date
H Power
I Max inlet pressure

The machine internet page can be accessed directly through the QR code.
Download and install one of the Apps to read QR codes on a mobile device.
Start the App and position the camera in front of the code so that it can be clearly seen.
Wait some time while the App processes the result and shows the internet page of the machine on the touch screen.

2 FIRST INSTALLATION AND PRELIMINARY OPERATIONS



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2.9 BASIC PROGRAMMING 28

Prior to installation please carefully read the safety instructions in this manual. The company cannot be held responsible for damage to persons or property arising from non-compliance with safety regulations, either during installation or maintenance of the machine described in this manual.

WARNING

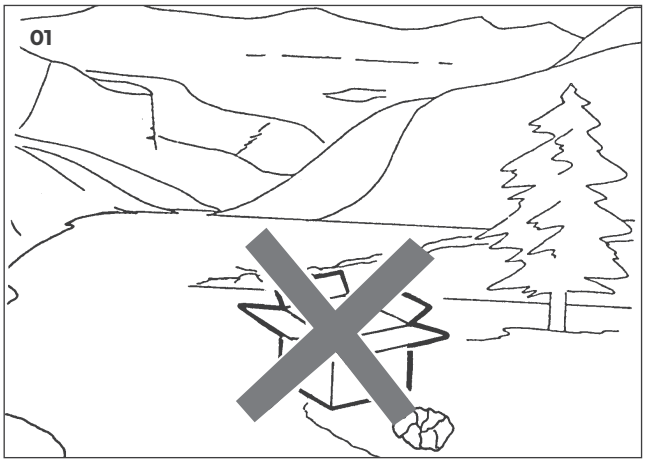
Place the machine in an area where all risks of malfunction can be avoided.

WARNING

Never install in areas where the machine may be subject to jets of water.

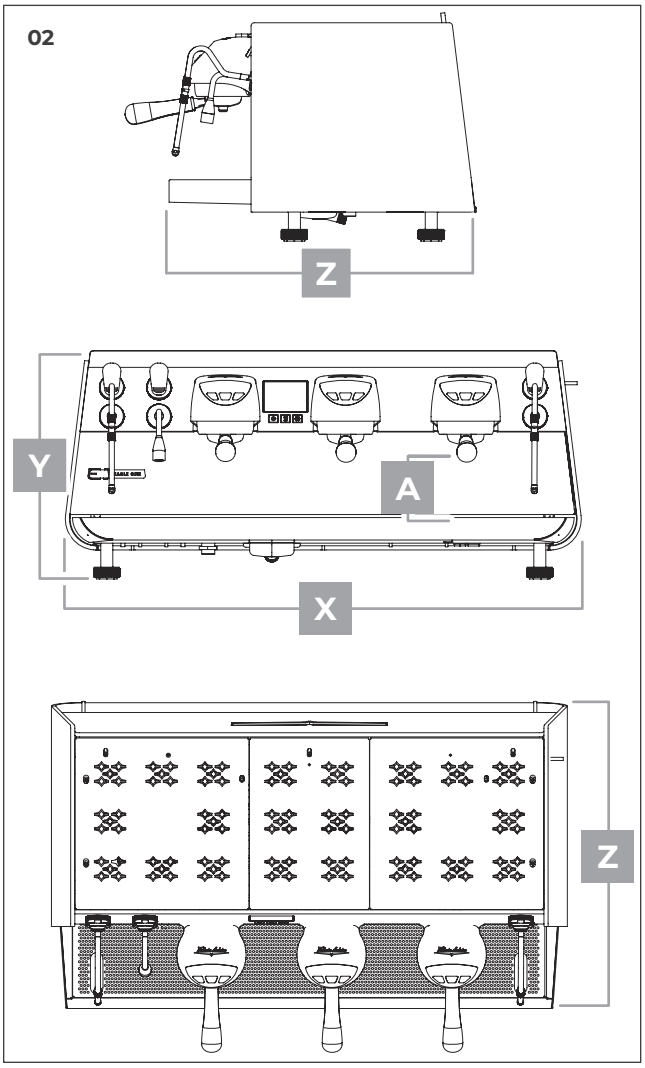
RISK OF POLLUTION

DO NOT DISPOSE PACKAGING in the environment.

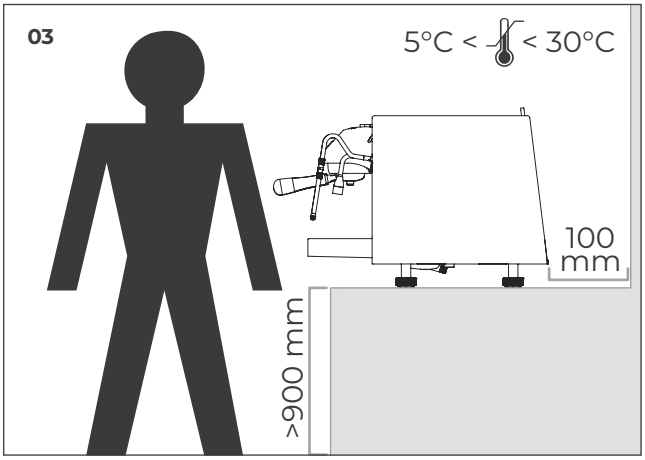


2.1 TECHNICAL CHARACTERISTIC

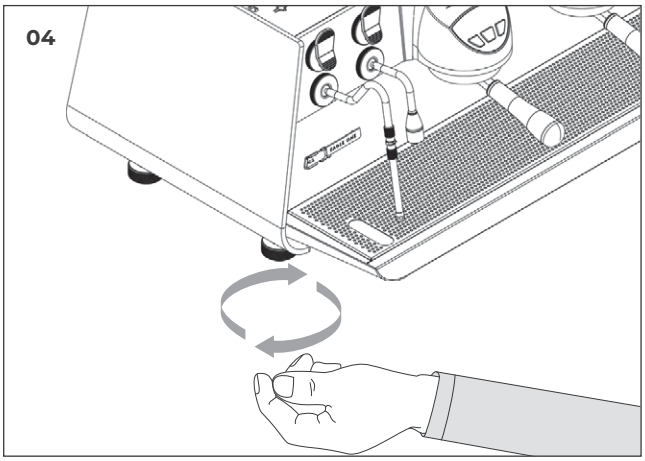
Groups		2	3
Voltage	**V**	220-380	
Power	**W**	5000	6500
Steam boiler capacity	**l**	7 (for each coffee boiler)	
Net weight	**kg/lb**	68,5 / 151,02	84 / 185,19
Gross weight	**kg/lb**	82,7 / 182,32	99,3 / 218,92
Dimensions			
A	**mm inch**	105 4,13	
X	**mm inch**	758 29,84	988 38,9
Y	**mm inch**	437 17,2	
Z	**mm inch**	586 23,07	



Once the packaging has been removed and the integrity of the machine and accessories have been checked, place the machine on a horizontal surface. Position the machine on a horizontal plane at least 100 mm around the machine for proper ventilation.

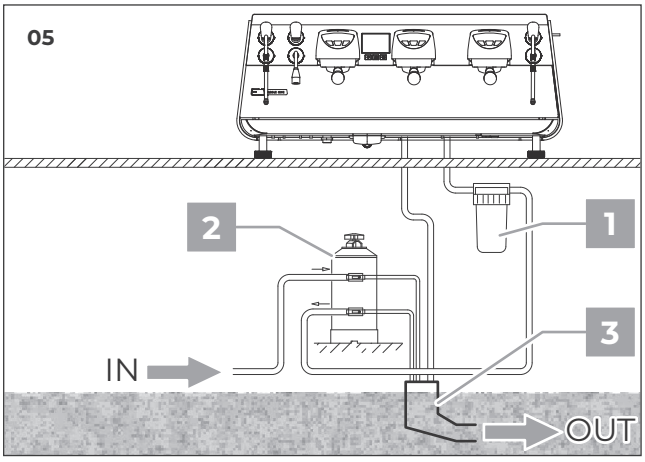


Ensure that it is correctly levelled.
Rotating the feet.



It is advisable to install a softener **(1)** and then a mesh filter **(2)** on the external part of the plumbing system, during preliminaries and after levelling the machine.

1 Softener
2 Mesh filter
3 Drain Ø 50 mm



WARNING

Avoid throttling in the connecting pipes. Assess that the drain pipe (3) is able to eliminate waste.

NOTE

For a correct functioning of the machine the water works pressure must not exceed 4 bars. Otherwise, install a pressure reducer upstream of the softener; the internal diameter of water entrance pipe must not be less than 6 mm (3/8").

2.2 WATER SPECIFICATIONS

Monitoring of water recipe to keep it within required levels and maintenance of filtration system is the user's responsibility.
Failing to meet and maintain water at the following levels will void the entire warranty.

Total hardness	**ppm**	50 - 60
Waterline pressure	**bar**	2-5 (cold water)
Minimum flow	**l/hr**	200
Chloride	**micron**	Less than 1.0
Alkalinity	**ppm**	10-150
Total dissolved salts (TDS)	**ppm**	50 -250
Chloride	**mg/L**	<0.5
pH		6.0- 8.0

2.3 ELECTRICAL SPECIFICATIONS

⚠ WARNING
RISK OF SHORT CIRCUITS

The machine must always be protected by an automatic, omnipolar circuit breaker switch of adequate rating protection with an open distance between the contacts that permits the complete disconnection of the conditions regarding category III excess voltage surge.
Simonelli Group cannot be held liable for any damage to people or things due to non observance of the safety prescriptions.
Prior to connecting the machine to the electrical mains, assess that the voltage shown on the machine's data plate corresponds with that of the mains.
If it does not, carry out the connections on the basis of the available electrical line, as it follows.

NOTE

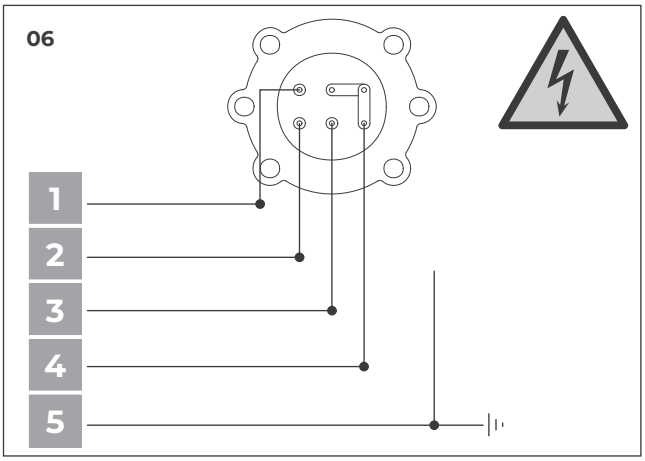
At the beginning of the day's activities and in any case, if there are any pauses of more than 8 hours, then it is necessary to change 100% of the water in the circuits, using the relevant dispensers.

NOTE

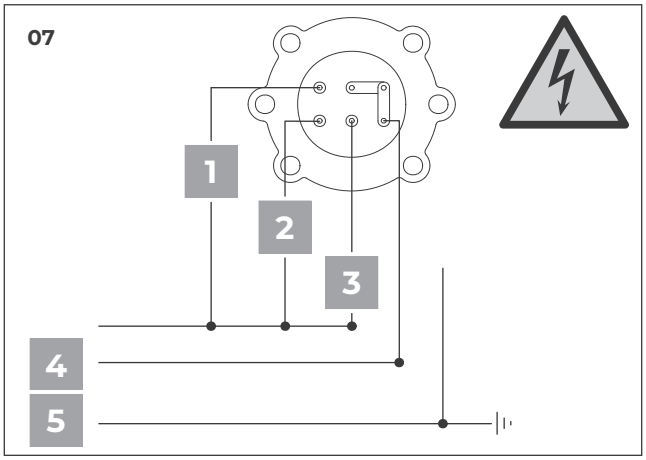
In case of continuous services, carry out the above changes on a weekly basis.

1 Black
2 Grey
3 Brown
4 Blue
5 Yellow-green

For voltage 380 V / 3 phases + Neutral:



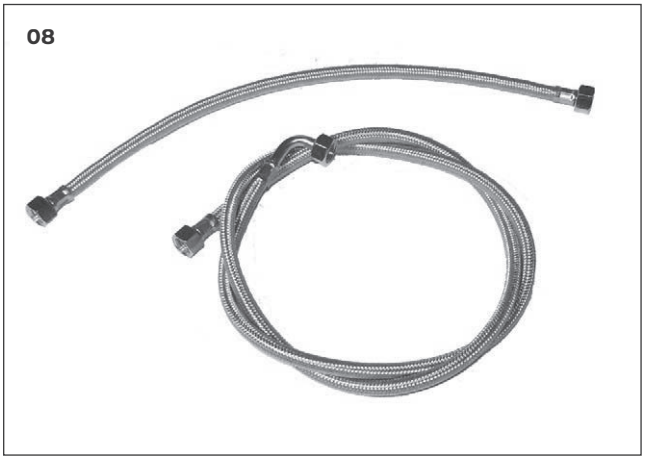
For voltage 230 V single-phase:



2.4 CONNECTION TO THE MAINS WATER SUPPLY

The machine is always supplied with a 1.5 meters long loading pipe and with a 3/8 inch connection.
For the waterline, fitting is straight on one side and with an entrance at 90° angle on the other side. The pipe is provided with tapered fittings therefore it is not necessary to use Teflon tape on the fitting.

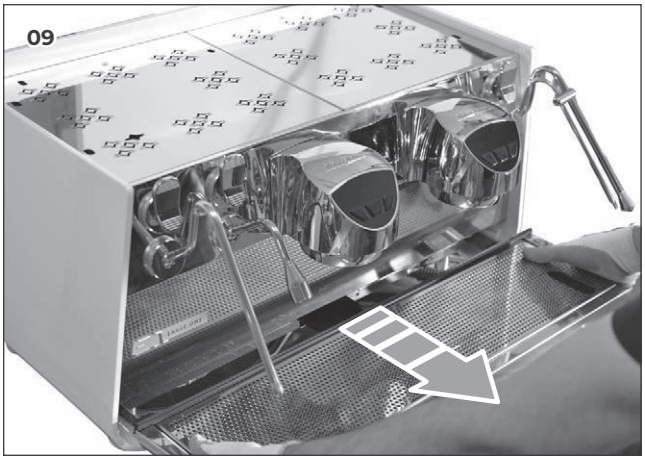
08



To connect the machine to the .waterline, proceed as it follows.

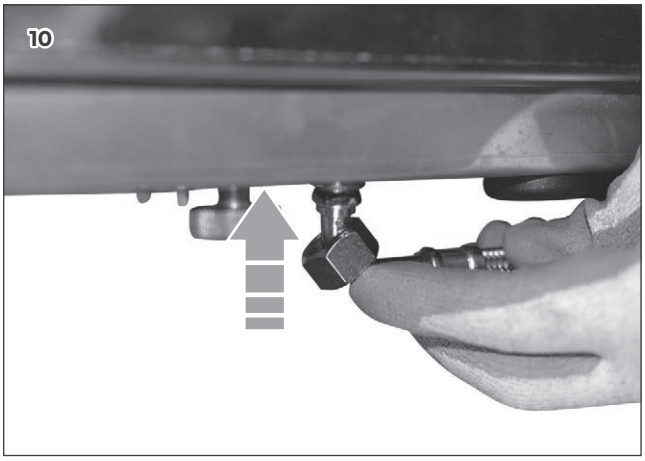
1 Remove the water collection pan.

09



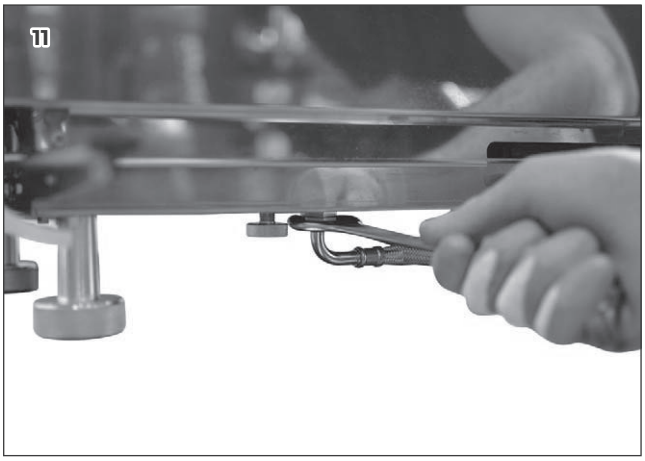
2 Connect the supplied pipe from the water mains supply to the union under machine.

10



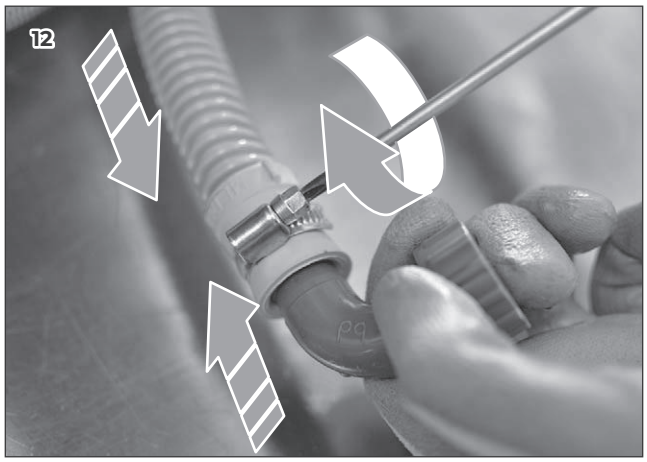
3 Use a 21 mm wrench to tighten.

11

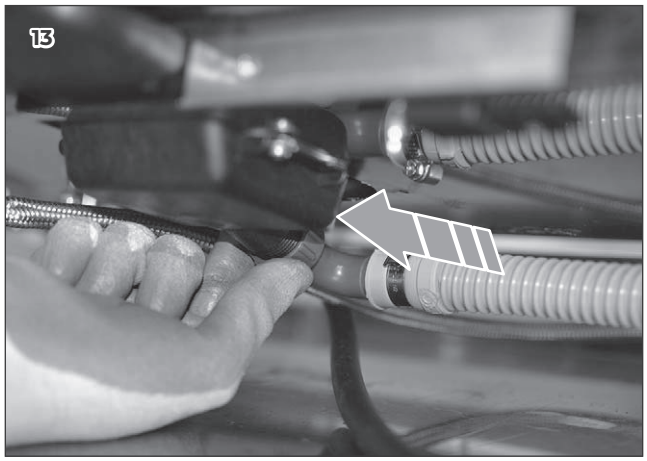


To connect the waste water system, proceed as it follows.

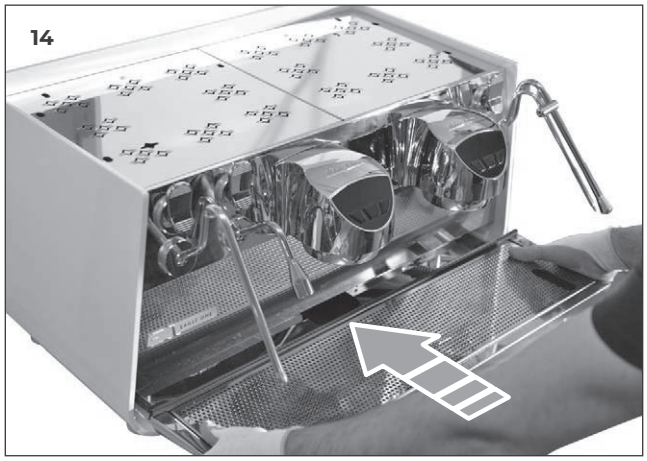
1 Connect the supplied waste water pipe to the supplied joint and use a Philips screwdriver to tighten.



2 Connect the waste water pipe and the joint to the waste water system by manually screwing it to the union.



3 Put back the water collection pan.



2.5 PROCEDURE OF FIRST INSTALLATION

When first installing the machine or after maintenance on the coffee boilers and groups, proceed as it follow.

1 Switch ON (I) the machine by the main switch positioned to the bottom on the right.

2 If the message **"POWER OFF - CLOCK RESET: ENABLED"** appears on the touch screen, proceed as described in step 4.

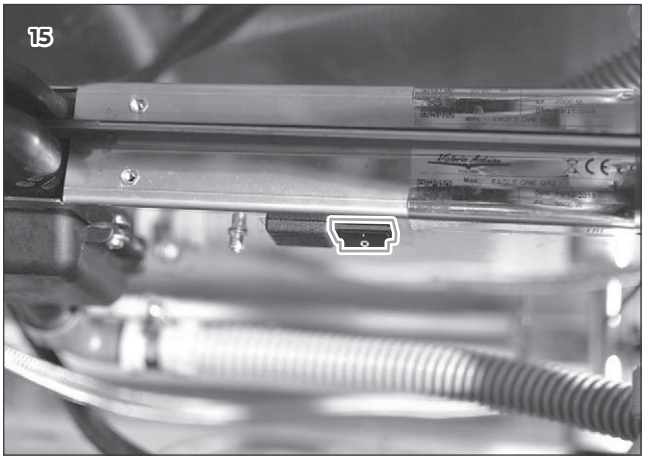
3 If the message **"POWER OFF"** appears on the touch screen, press the key for at least 10 seconds, then leave it: the touch screen will show **"POWER OFF - CLOCK RESET: ENABLED"** and then proceed as described in step 4.

WARNING

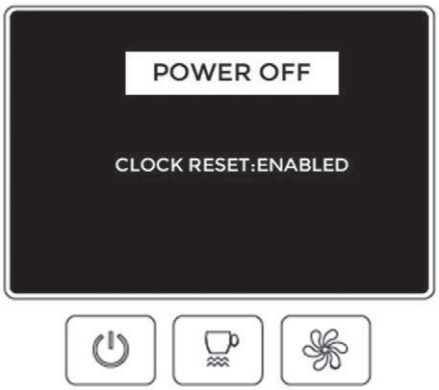
Insert the water collection pan in order to avoid flooding the machine.

4 Turn the machine ON by pressing the power button. The machine will start the pump to fill the coffee boilers for 20 seconds and water will come out from the groups.
- If this cycle is interrupted due to a power outage, or if the machine is accidentally switched OFF from the main switch, the next time the machine is switched ON, the cycle will automatically start again.
- If the cycle does not end with the outflow of water from all the groups, it is reasonable to turn the machine OFF immediately and restart the procedure from step 1, to check whether or not there are problems filling the coffee boilers.

15



16



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18

NOTE

If alarm 7 appears on the touch screen, the machine recognizes that there is a problem. Refer to Chapter 10 to know how to proceed.

WARNING

If the boilers are not completely filled with water, this could damage the coffee boilers.

Once the coffee boilers filling procedure ends, the machine will automatically proceed with the auto-fill function of the steam boiler, hence it will start the pump to reach the correct water level.

If after 90 seconds the water level has not been reached, alarm 2 appears on the touch screen and all keys flash synchronously because the motor protection starts to function.

Furthermore, this system that protects the motor is also utilised to stop the pump from working if there is no water available (e.g., the upstream tap is closed).

Turn the machine OFF and ON to continue the flow of water to the steam boiler. Normally the two-groups machine does not require this operation and the three-groups machine needs it once only.

2.6 WATER INPUT PRESSURE

With machine ON, the touch screen will show the water input pressure.

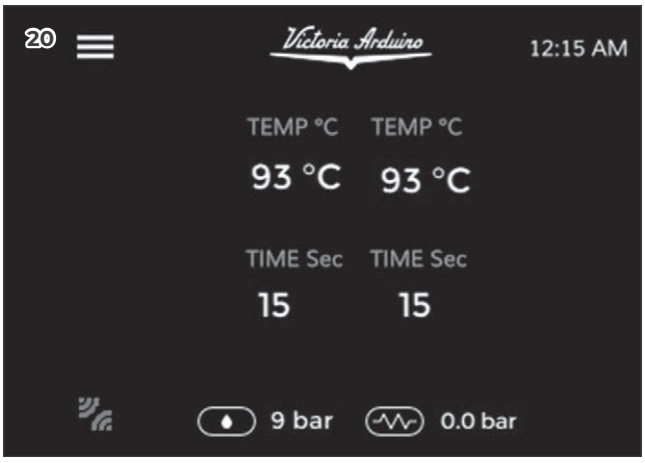
Check that the water input pressure is between 2 and 5 bar. If the pressure is more than 5 bar, insert a pressure reducer upstream to ensure a value between 2 and 5 bar.

19

2.7 ADJUSTMENT OF THE PRESSURE

The pressure of the machine must be set while the coffee is brewing.
While coffee is delivered, check that the value of the gauge reaches 9 bar, the optimum value.

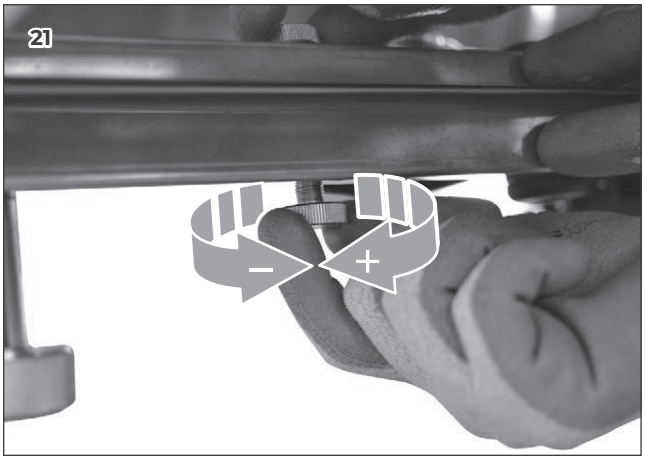
20



In the event that it would be necessary, use the knob located below the machine to make an appropriate adjustment.

Turning the knob clockwise raises the pressure, turning it counter-clockwise, turning it counter-clockwise decreases the pressure. When the machine is on stand by, the touch screen shows the value of the water pressure.

21



2.8 HOT WATER ECONOMISER ADJUSTMENT

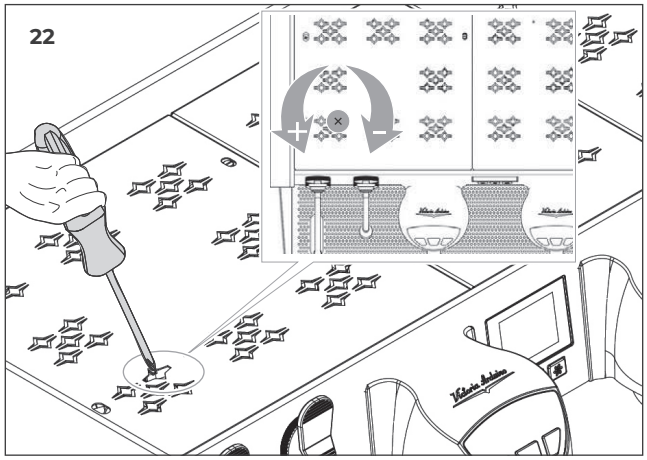
NOTE

This operation can be carried out while the machine is turned ON.

The hot water mixer serves to adjust the temperature of the water leaving the wand and to optimise system performance.
To set the hot water economy device, use a screwdriver on the screw in the top part of the machine, as shown in the figure.

Turn it **CLOCKWISE** / **ANTICLOCKWISE** to **REDUCE** / **INCREASE** the temperature of hot water.

22



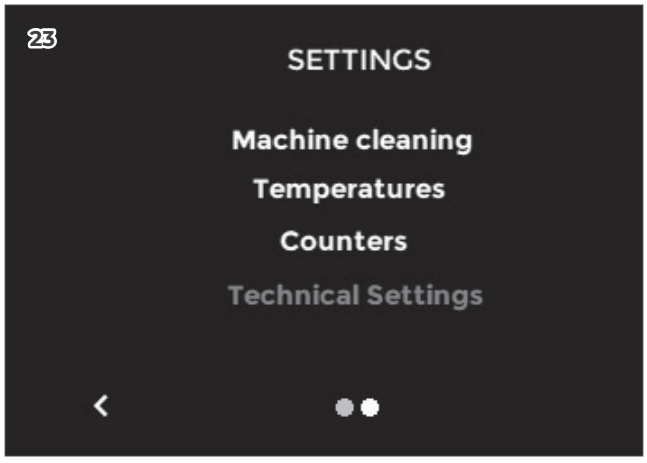
2.9 BASIC PROGRAMMING

Using the touch screen panel you can move inside the interface. Press to enable or select the proper function.
The preliminary operations to be carried out once the machine is installed and turned ON are as it follows.

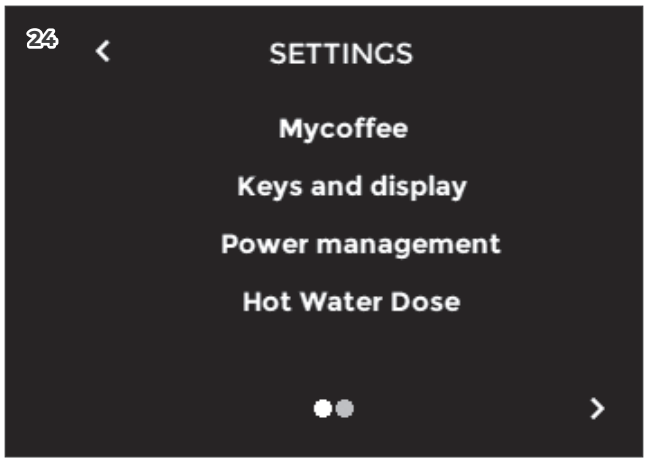
1. Update the language from the **Technical Settings** menu;
2. Update the date and time from the **Keys and display** menu;
3. Set the pressure of the steam boiler from the **Temperatures** menu;
4. Set the coffee temperatures and doses (amount in CC) from **Mycoffee** menu.

For more information about the touch screen operation, see the Chapter 9.

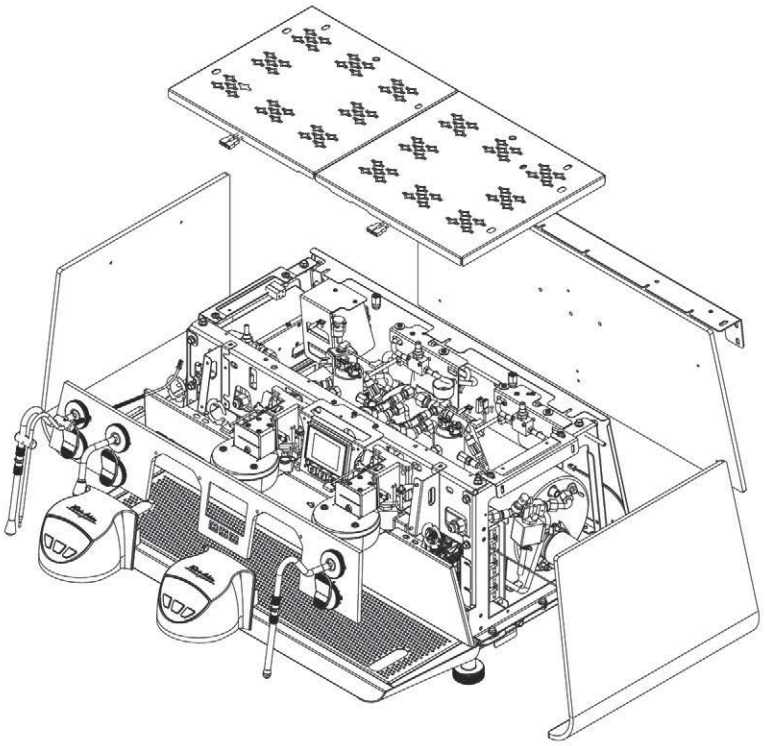
23



24



3 REMOVAL OF EXTERNAL SURFACE



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3.6 REMOVAL OF THE GROUP COVERS. 36
3.7 REMOVAL OF THE TOUCH SCREEN 37

Use gloves to protect against sharp or hot surfaces that you can bump against involuntarily during operations.

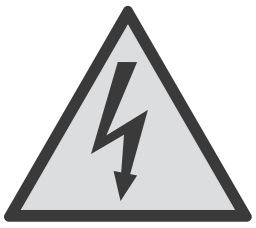
NOTE

Before proceeding with the removal of the panels it is advisable to clean and free up enough space where the machine parts will rest so that they are not be unintentionally damaged.

DANGER

Before proceeding with the operations described in the Chapter make sure that the machine is turned OFF and unplugged from the mains.

01



DANGER

02

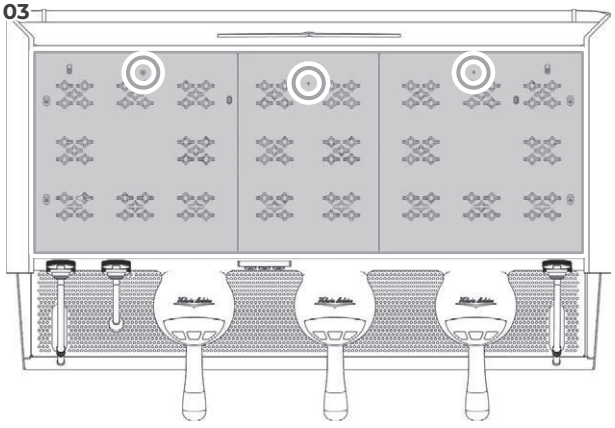
HOT AND CUTTINGS SURFACES

3.1 REMOVAL OF THE CUP HOLDER SURFACE

To remove the modular cup holder surface:

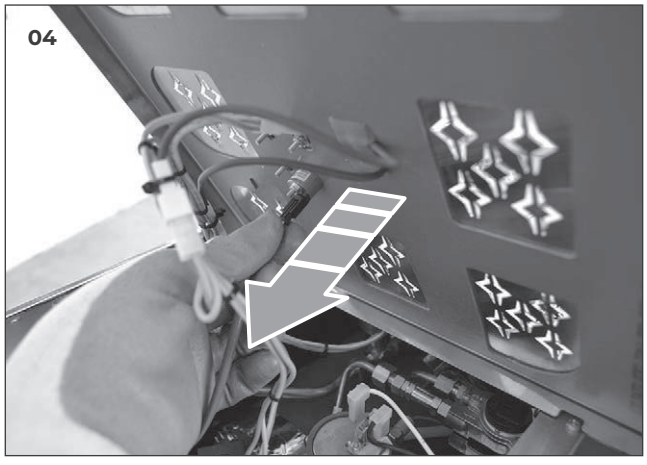
1 Utilising a Philips screwdriver, remove the screws of each module.

03



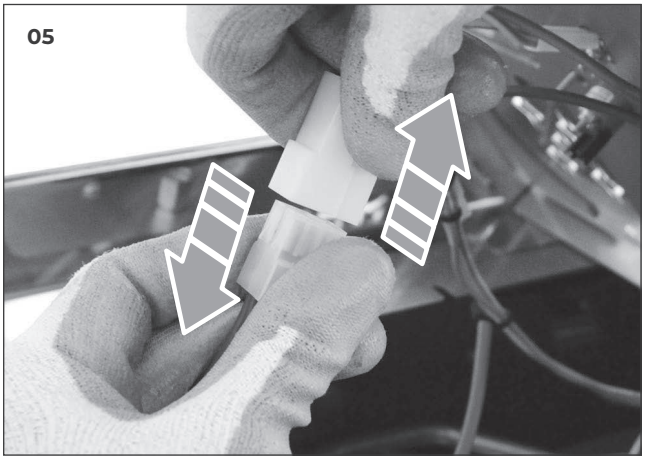
2 If the machine has the cupwarmer (optional), lift the left module and disconnect the temperature sensor of the cupwarmer.

04



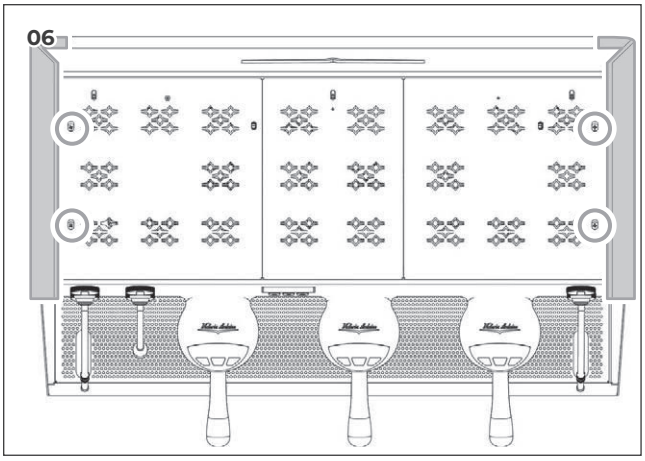
3 If the machine has the cupwarmer (optional), lift the left module and disconnect the power of the cupwarmer.

4 Remove the panel.



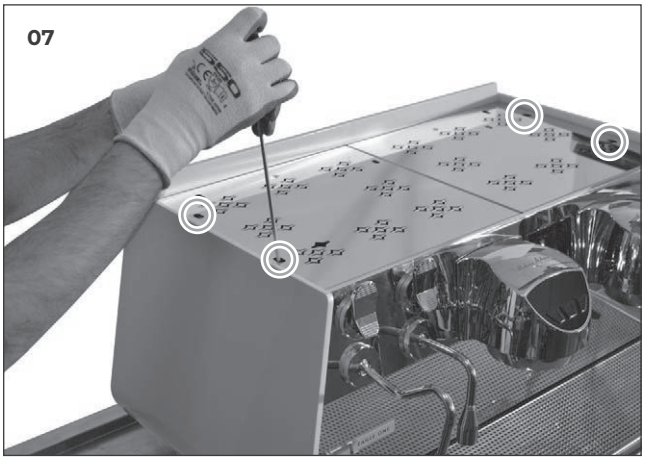
3.2 REMOVAL OF THE SIDE PANELS

The procedure is identical for each side panel.

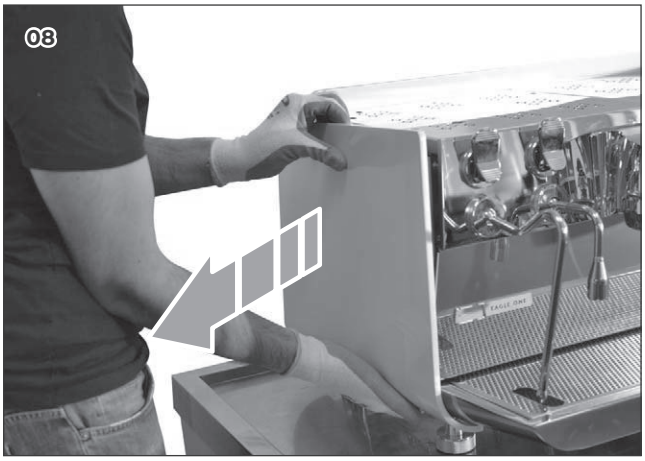


To remove one side panel, it is necessary to:

1 Utilising a Philips screwdriver, loosen the screws on the upper part.



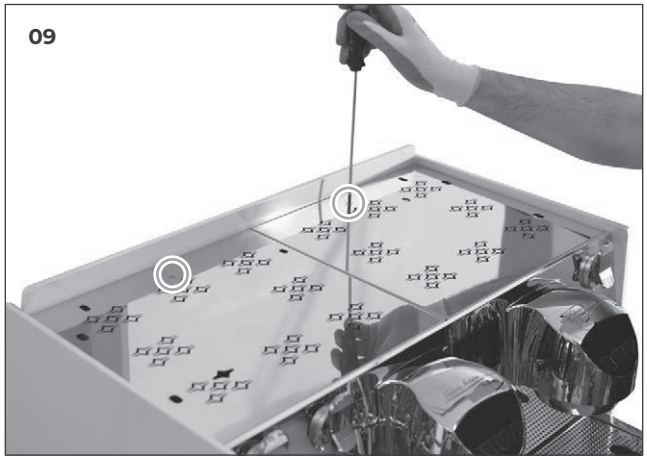
2 Put a hand below the side panel and with the other hand slide it out.



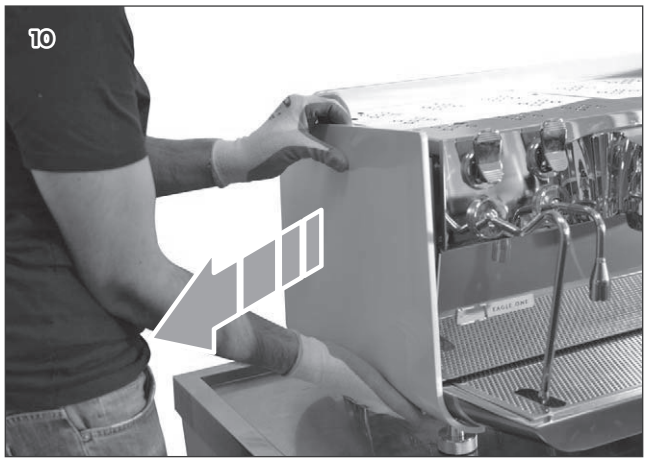
3.3 REMOVAL OF THE REAR PANEL

To remove the back panel it is necessary to:

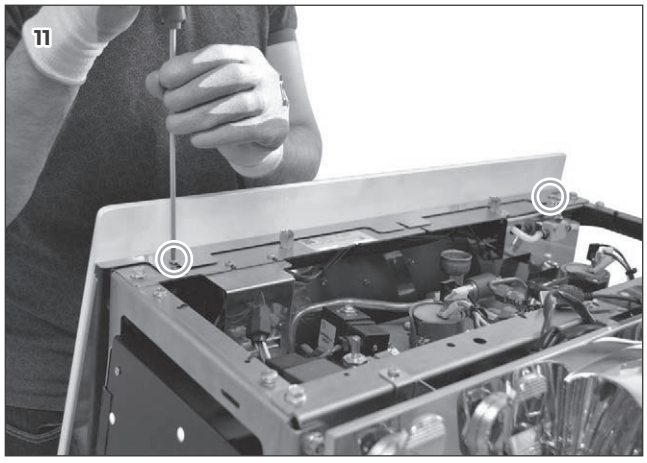
1 Remove the cup holder surface.



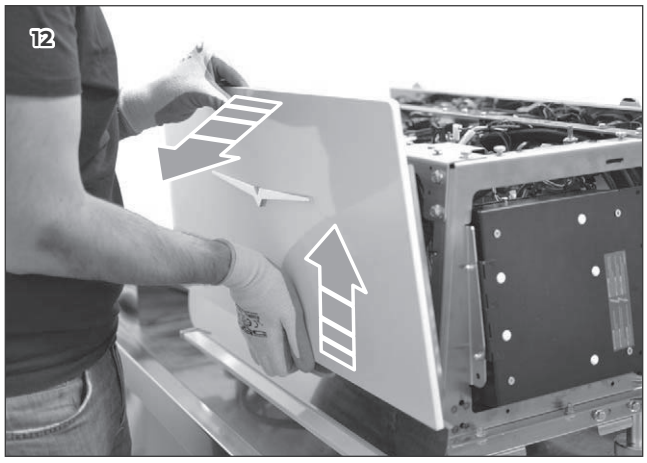
2 Remove both side panels.



3 Utilizing a Philips screwdriver, loosen the upper screws.

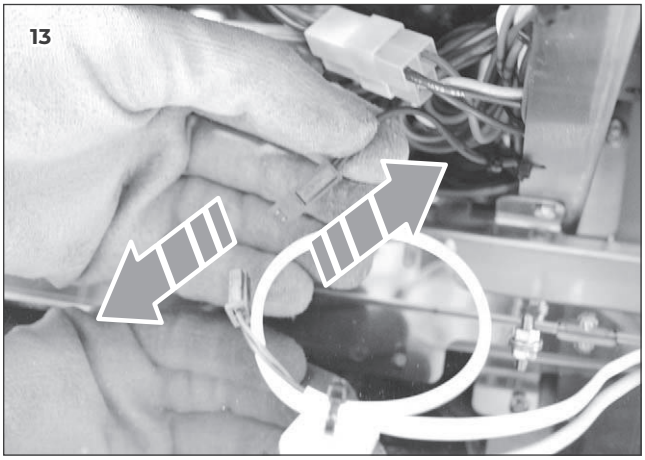


4 With a hand pull the high side of the panel and with the other hand lift it from the bottom.



NOTE

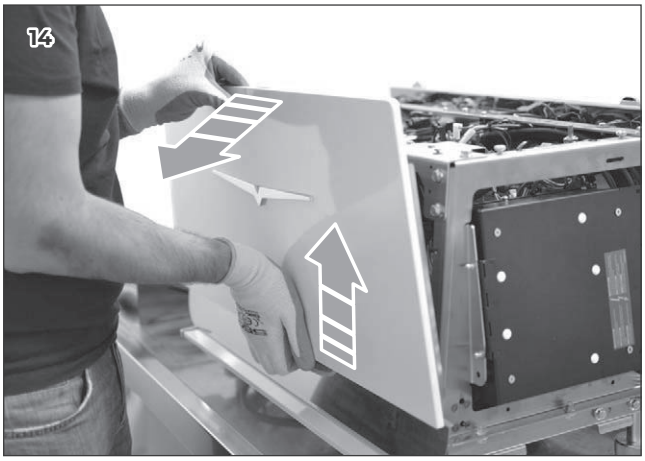
If the machine has the LED bar (optional), remember to disconnect it before to completely remove the panel.


13

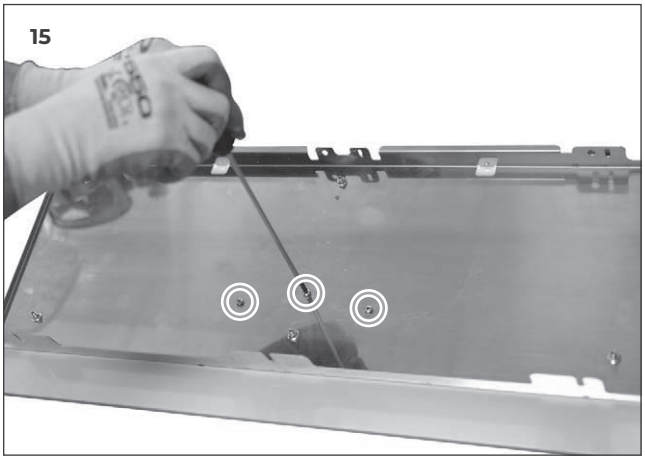
3.3.I DISASSEMBLE THE REAR PANEL

The rear panel of **Eagle One** can be personalized. To proceed it is necessary to disassemble it, as it follows.

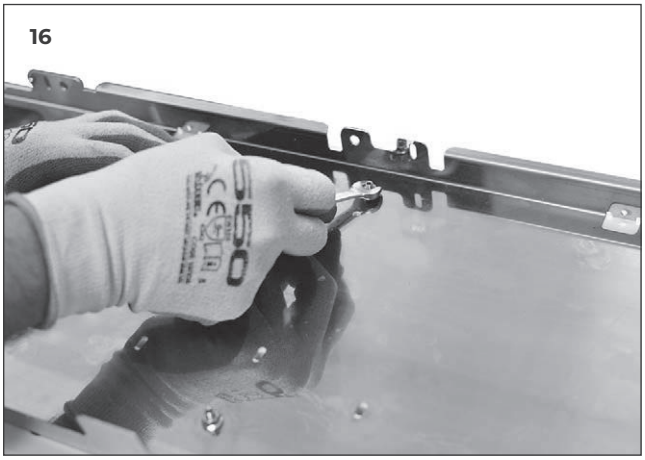
1 Remove the rear panel as described in the previous paragraph.


14

2 Utilizing a Philips screwdriver, remove the three screws and take off the eagle.


15

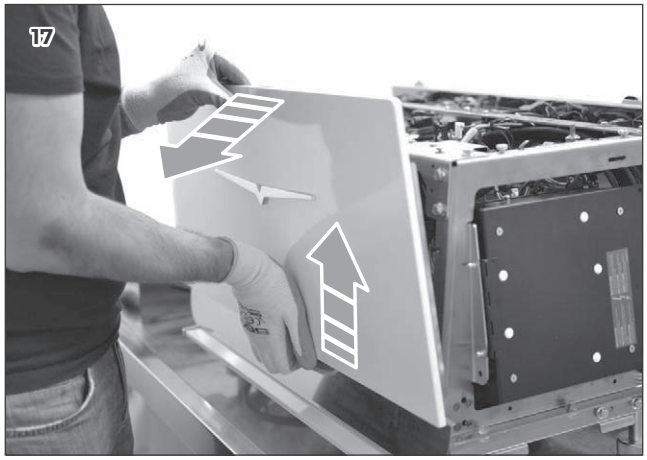
3 Utilizing a 8 mm wrench, remove the six screws and disassemble the panel.


16

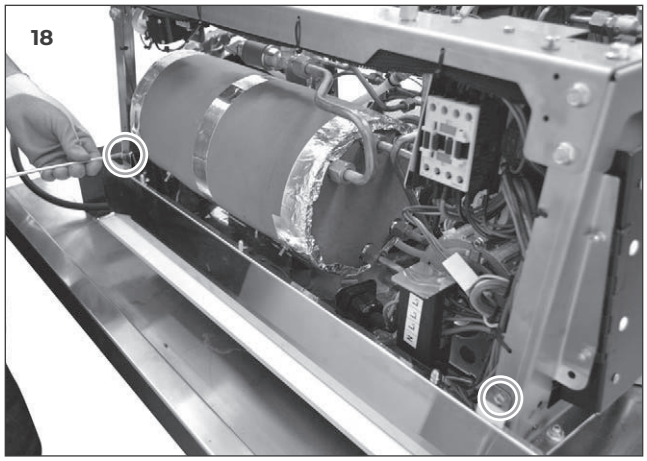
3.4 REMOVAL OF LOWER REAR PANEL

To remove the lower rear panel, it is necessary to:

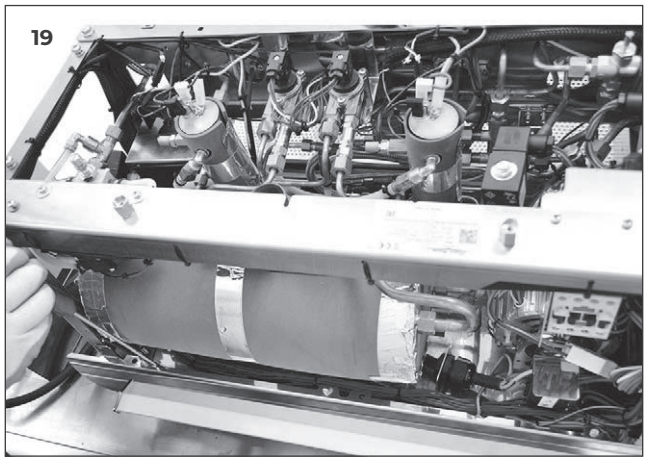
1 Remove the rear panel as described in the previous paragraph.



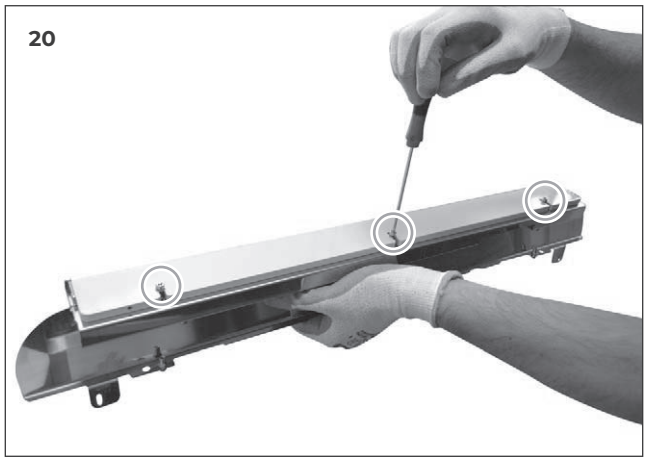
2 Utilizing a Philips screwdriver, remove the two lateral screws.



3 Utilizing a Philips screwdriver, loosen the three screws on the bottom.



4 Using a 3 mm Allen Key, loosen the three screws to disassemble the panel.



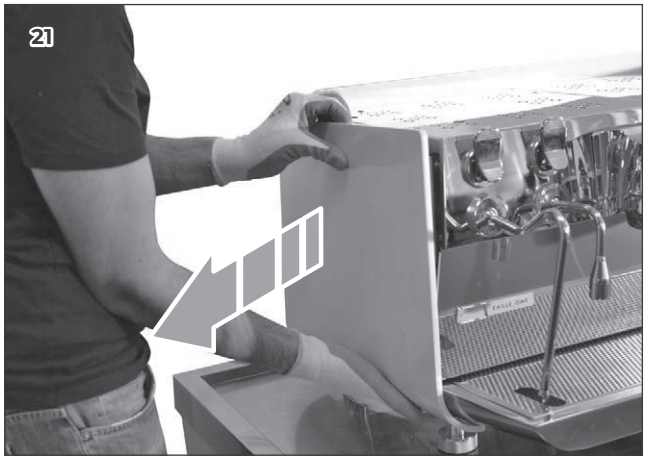
NOTE

There is a washer between the screw and the panel.

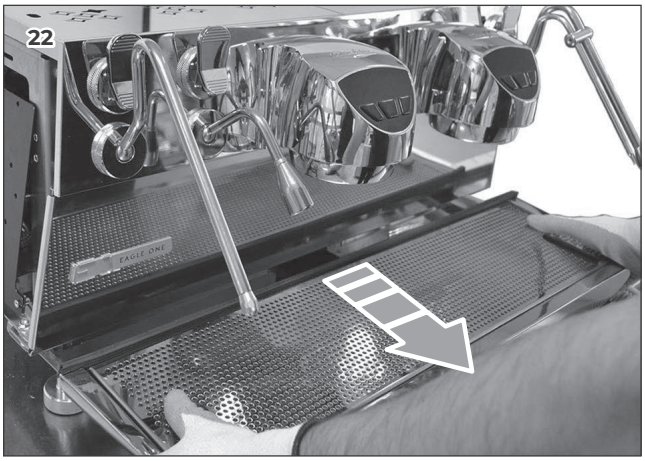
3.5 REMOVAL OF THE LOWER FRONT PANEL

To remove the lower front panel, it is necessary to:

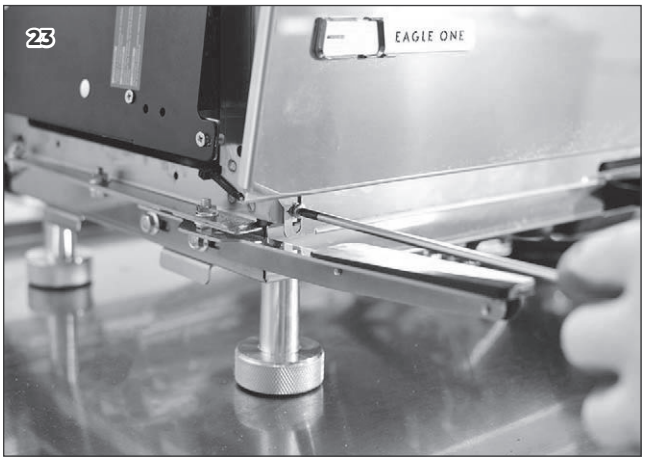
1 Remove both side panels.



2 Remove the work surface pulling out the water collection pan.



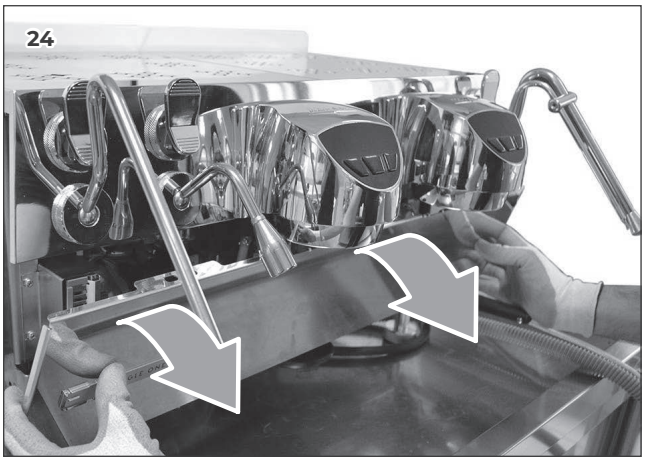
3 Utilizing a Philips screwdriver, loosen the two side screws that keep the front panel in position.



NOTE

Owing to the shape of the panel, it is not necessary to loosen the screws totally.

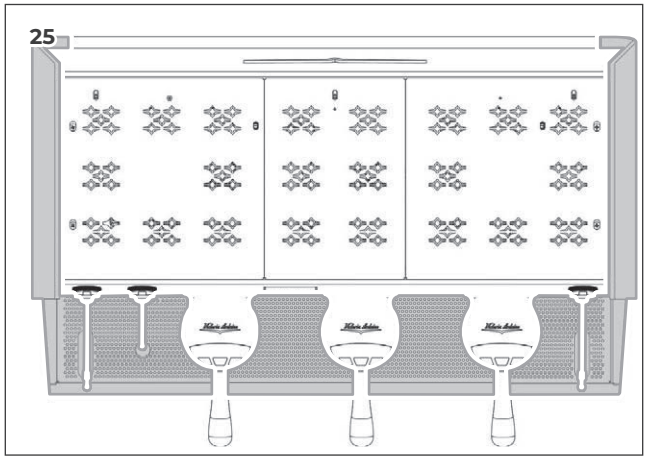
4 Lower the panel to free it from the fixing screws, rotate it from the top downwards and pull it out.



3.6 REMOVAL OF THE GROUP COVERS

To access the groups, proceed as it follows.

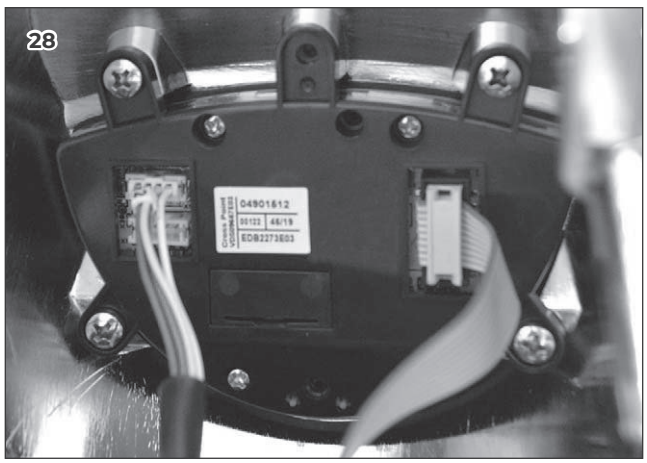
1 Remove the side panels, the water collection pan and the lower front panel, as described in the previous paragraphs.



2 Utilizing a 3 mm Allen Key, partially unscrew the two screws holding the group cover.

3 Rotate the group cover from the top downwards to remove it from the machine.

4 Check connections to memorize them and disconnect them.

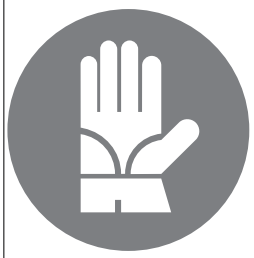


DANGER

If the machine has been turn OFF recently, wear protective gloves.

For further information about operations on the group covers and service boards, refer to Chapter 8.

29



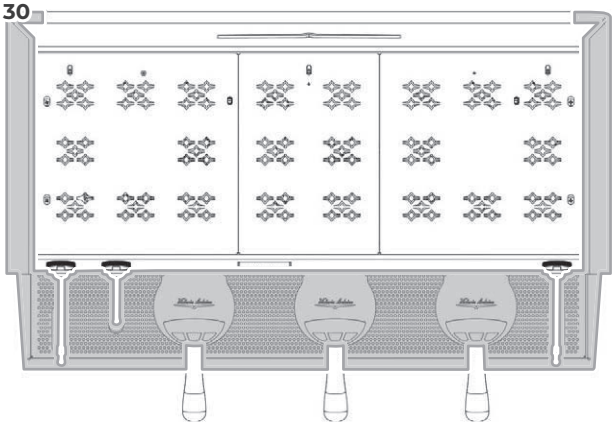
HOT AND CUTTINGS SURFACES

3.7 REMOVAL OF THE TOUCH SCREEN

To remove the touch screen, it is necessary to:

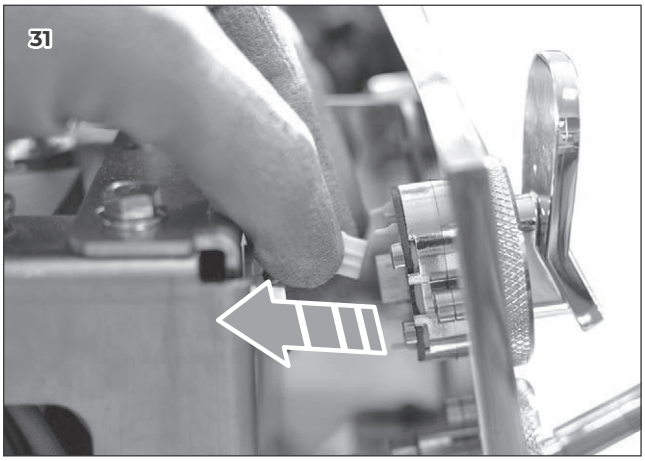
1 Remove the side panels, the cup holder surface, the water collection pan, the lower front panel and the group covers.

30



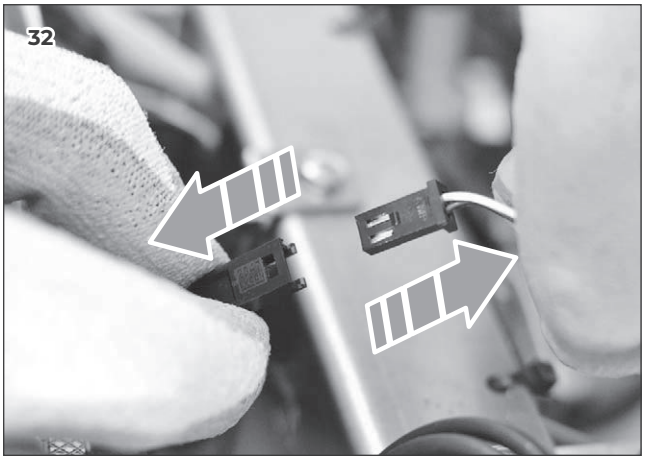
2 Disconnect the wands electrical connections:
- Left steam wand or Easycream connection;
- Hot water wand connection;
- Right steam wand or Easycream connection.

31

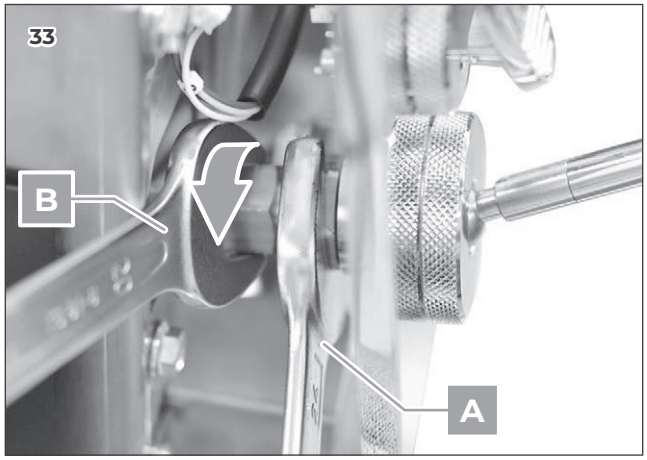


3 If there are Easycream, disconnect temperature probe connections.

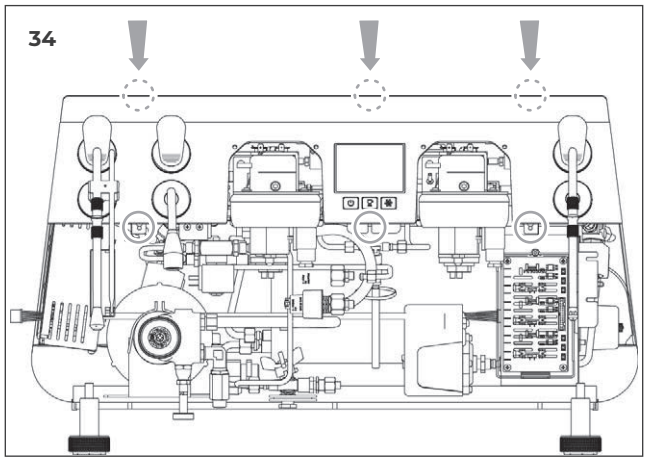
32



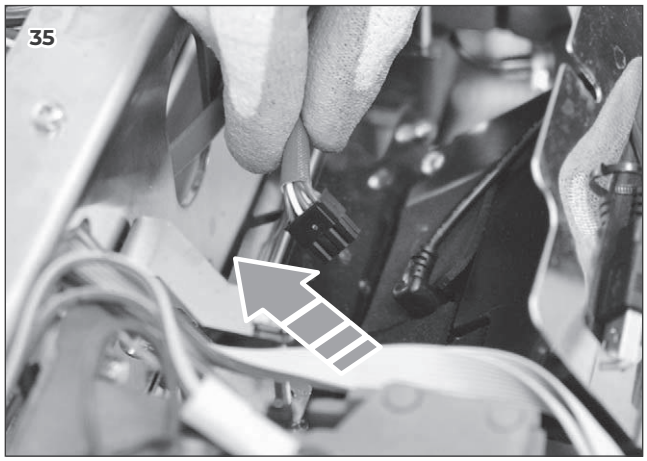
4 Utilizing a 24 mm (**A**) wrench and a 20 mm one (**B**), block the front fitting and unscrew the copper pipe.
Proceed for all the wands.



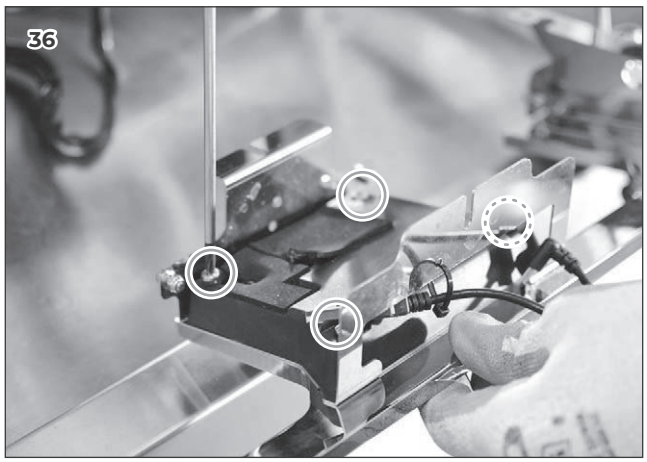
5 Utilizing a Philips screwdriver, remove the six (for 2 groups machine) or the eight (for 3 groups machine) screws fixing the front higher panel.



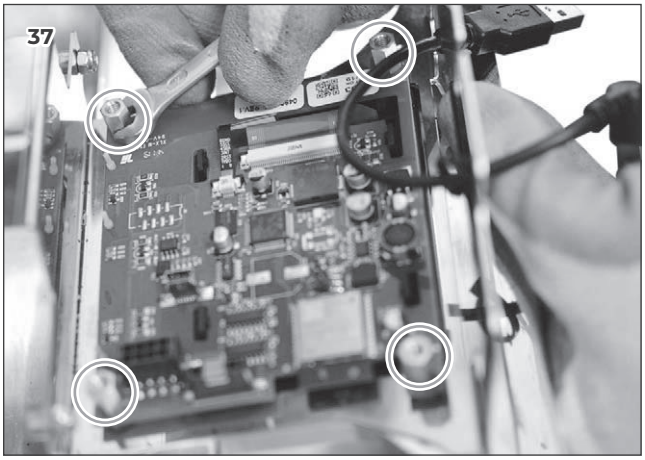
6 Disconnect the touch screen electrical connection.



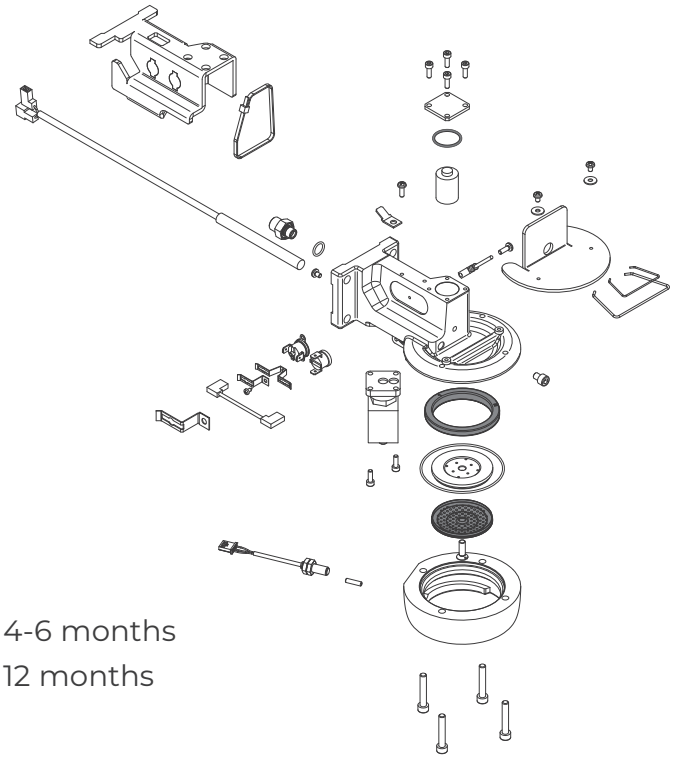
7 Utilizing a Philips screwdriver, remove the four screws fixing the touch screen cover.



8 Utilizing a 7 mm wrench, remove the four locking pins.



4 INFUSION GROUP












Replace every 4-6 months

Replace every 12 months

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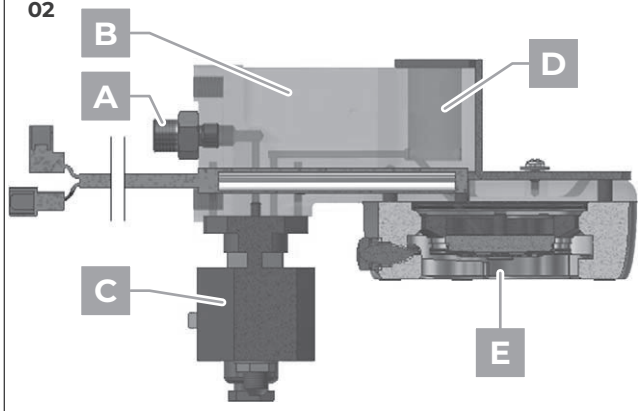
The infusion group is part of the NEO (New Engine Optimization), that guarantees high performance while reducing the energy consumption of the machine. Hence this group is different from common systems with thermosiphon circulation. In fact, the temperature of the group is ensured by the presence of a heating element cartridge. In addition, the thermal insulation prevents heat dispersion.

Each group is equipped with:
- A heating element cartridge of 300 W;
- A temperature probe that communicates with the control unit via the T3 card;
- A high-limit thermostat connected in series with the heating element;
- A three-way solenoid valve called coffee valve.

01

The group section shows:
- A Water supply into the group
- B Heating element
- C Coffee valve
- D Pre-infusion chamber
- E Water outlet

02

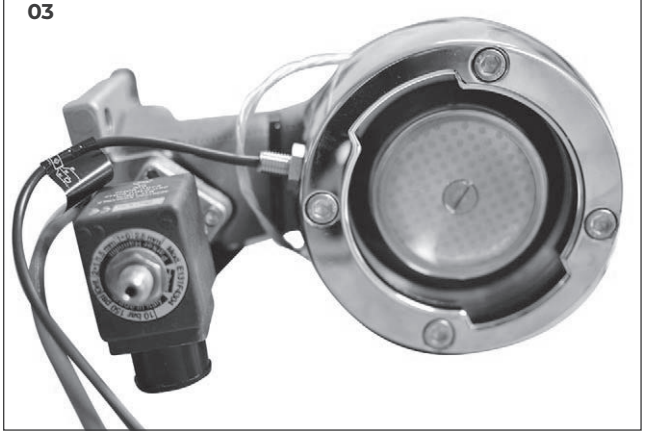


The machine is provided by the SIS (Soft Infusion System). It optimizes the extraction and compensates any tamping errors so that it reduces waste and makes regularly perfect coffees. It is based on the pre-infusion chamber, that increases the time in which water without pressure wets the coffee cake to provide a uniform extraction. A cylinder in the chamber limits the space and the dripping of water after the end of extraction.

How does the water flow work? The water enters the group (**A**) and the coffee valve lets it pass through (**C**). Then the water fills the pre-infusion chamber in about 3 seconds (**D**) and, in the meantime, the coffee cake is reached by the water (**E**) and is naturally wet. Once the chamber is filled, the pressure of 9 bar reaches the coffee, initiating the extraction into the cup.

The last part of the infusion group is houses a pavilion, a shower and underpan seal.
The pavilion distances the shower from the coffee, according to the need for different thicknesses.
The standard machine comes with 3 mm pavilions; pavilions 4 mm or 5 mm are also available as original spare parts.

03



The shower is the interface between the coffee and the machine, preventing the coffee from rising inside the machine.

Shower and pavilion tend to get dirty and must be removed and cleaned at least weekly. Furthermore, they must be replaced periodically.

04

The underpan seal prevents water from coming out from the sides of the pavilion and reach the capsule unevenly or spill from the filter holder.
Since the material is plastic and exposed to high temperatures, the seal must be replaced regularly because it tends to deform and lose elasticity.

05

DANGER

Before proceeding with the operations described in the chapter make sure that the machine is turned OFF.

WARNING

If the machine was turned OFF recently, protect yourself with terminal insulation gloves.

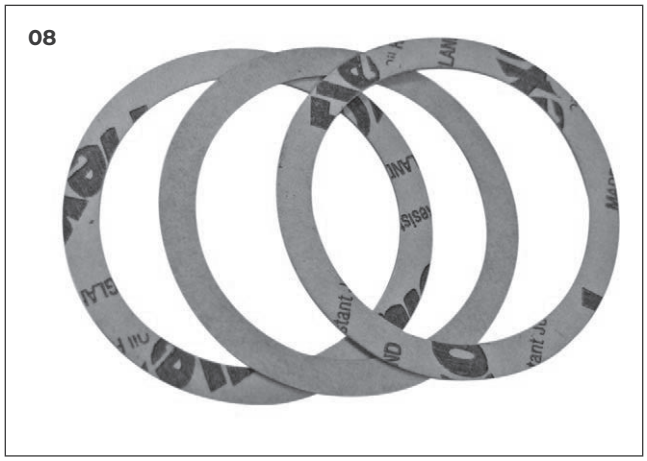
06

4.1 REMOVAL OF SHOWER, PAVILION AND SEAL

To remove the shower and pavilion it is sufficient to loosen the central screw under the group.


07

To change the seal use an awl or a slim flat-head screwdriver and at first remove one edge of the seal and then remove it entirely. If the group is worn out just insert shims under the seal so as to reduce the stroke of the filter holder.


08

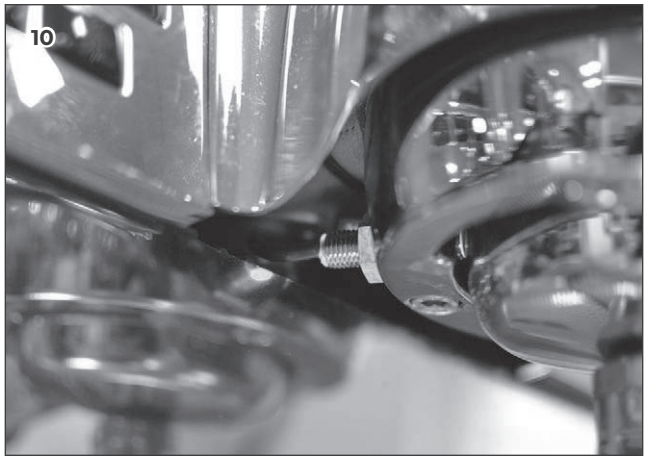
4.2 FILTER HOLDER PRESENCE SENSOR

The filter holder presence sensor informs the control unit about the presence, or not, of the filter holder in the infusion group. In this way it permits the auto-purge feature. It is visible in the back of the group head and comes out in the inner of the group head.


09

NOTE

When the filter holder sensor is functioning, an orange light means the presence of the filter holder, while no light means its absence.


10

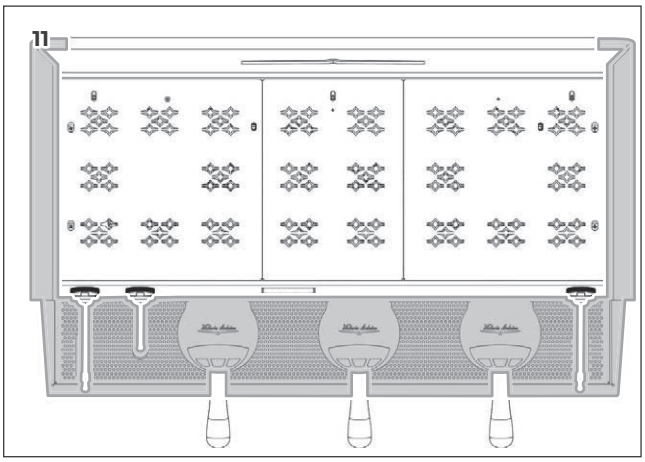
PROBLEMS

The sensor could not work properly.

Example:
1 The light is always orange, as the sensor feels the filter holder presence, also in absence of it: sensor in short circuit, needs to be replaced.
2 The light is mostly OFF, and it is on only with some movement of the filter holder. It could mean that the sensor is not properly flush with the inner of the group head: needs to be moved closer.

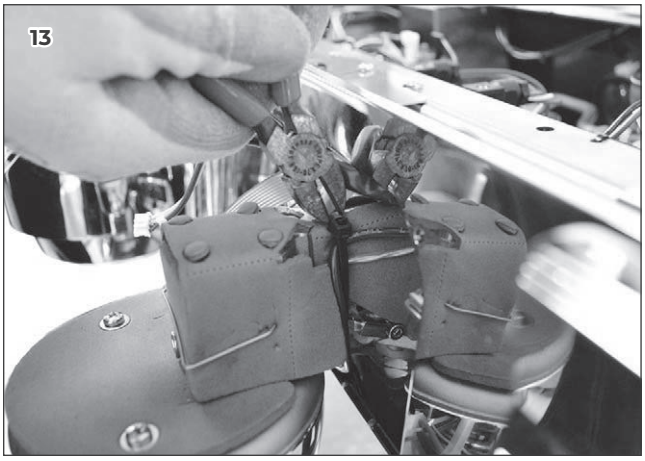
4.2.1 REMOVAL OF THE FILTER HOLDER PRESENCE SENSOR

To remove the sensor, it is necessary to:
1 Remove the side panels, the cup holder surface, the water collection pan, the lower front panel and the proper group cover, as explained in Chapter 3.



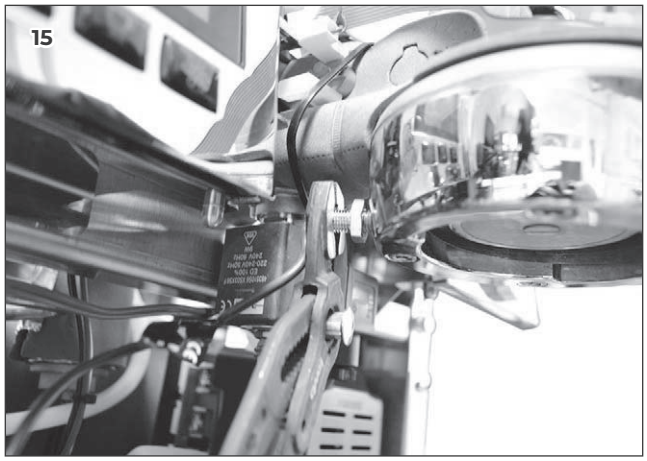
2 Unplug the sensor wire from its extension.

3 Cut the clamp of the sensor wire and extract the wire.



4 Utilizing a 13 mm wrench, loosen the sensor fixing nut.

5 Utilizing an adjustable wrench, slide out the sensor.



WARNING

When the filter holder sensor is reinserted, make sure it is flush with the inner of the group head and verify the proper functioning.

NOTE

To move the sensor closer, in order it is flush with the inner of the group head, follow steps 4 and 5 of the removal procedure and, when the position is fine, tighten the sensor fixing nut.

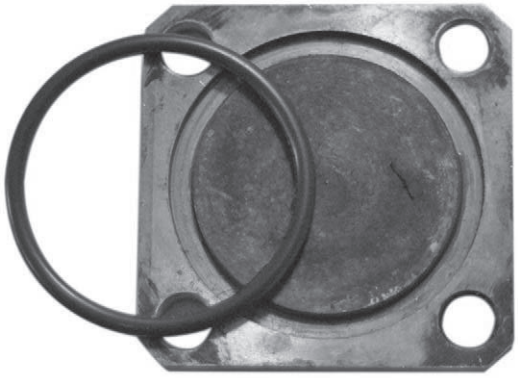
4.3 REPLACING THE SEAL IN THE PRE-INFUSION CHAMBER

The pre-infusion chamber is sealed by a cover fixed with four hex screws.
Under the cover there is a seal that should be changed annually, in fact, like all seals, it may deteriorate in time and lose elasticity.

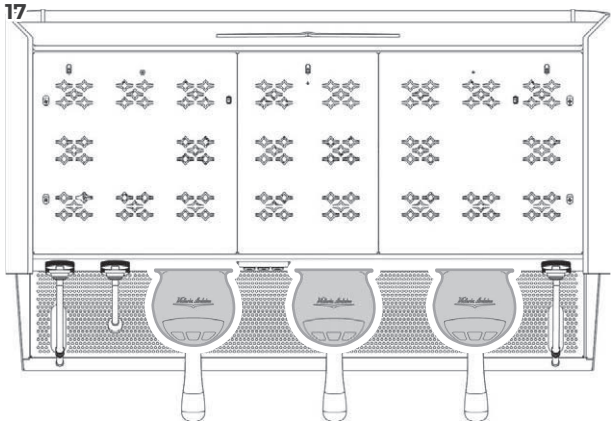
WHEN TO REPLACE IT
The seal must be replaced annually or when there is a leak from the pre-infusion chamber.

HOW TO REPLACE
1 Remove the group cover, as described in Chapter 3.

16



17

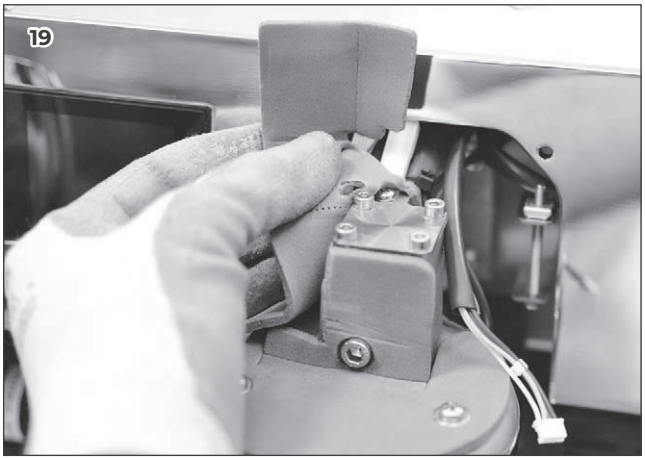


2 Remove the clip of the insulating cover.

18

3 Cut the insulation cover.

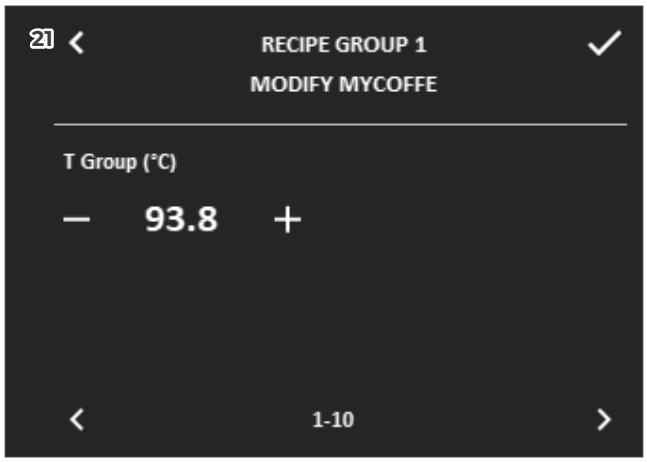
19



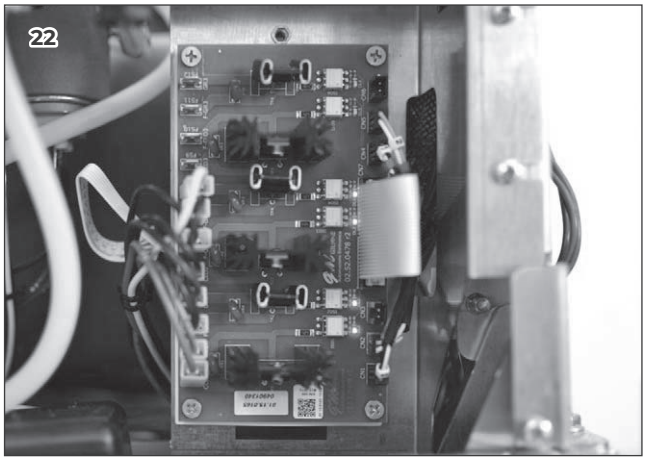
4 Utilizing a 3 mm Allen key, remove the four screws and open the chamber.

4.4 HEATING ELEMENT

The NEO technology manages temperatures of the "infusion group and coffee boiler" system, to give a proper extraction water temperature, in accord with what has been set in the programming as **MYCOFFEE T Group**.



When the group heating element cartridge of 300 W needs to be powered ON, the control unit actives it via the T3 card. To know when it is activated, it is possible to monitor LED's placed on the control unit and on the T3 card.

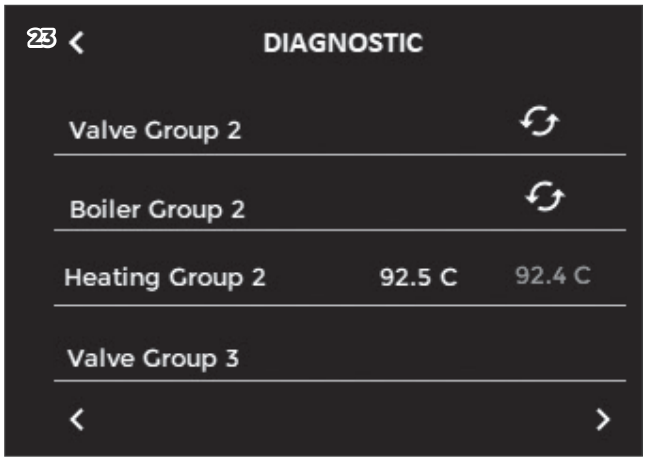


NOTE

For further information about the control unit and the T3 card, refer to Chapter 8.

NOTE

It is possible to read the current temperature of the infusion group in the Diagnostic menu. For further information about this feature, refer to Chapter 9.

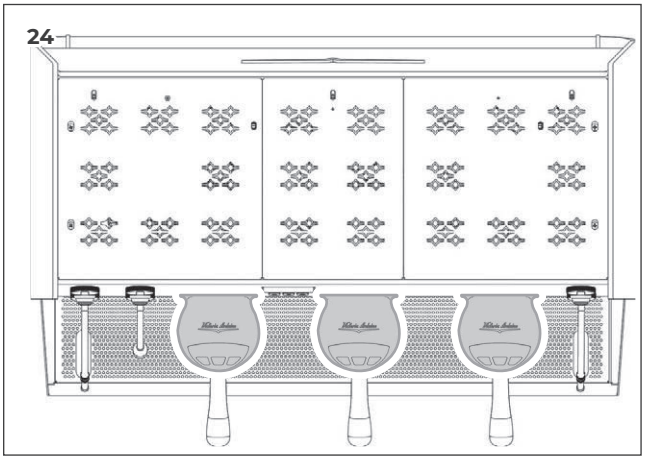


Typical value of the heating element is approximately 185 ± 25 Ohm. If the infusion group is not hot, use a tester to verify the heating element resistivity or its continuity.

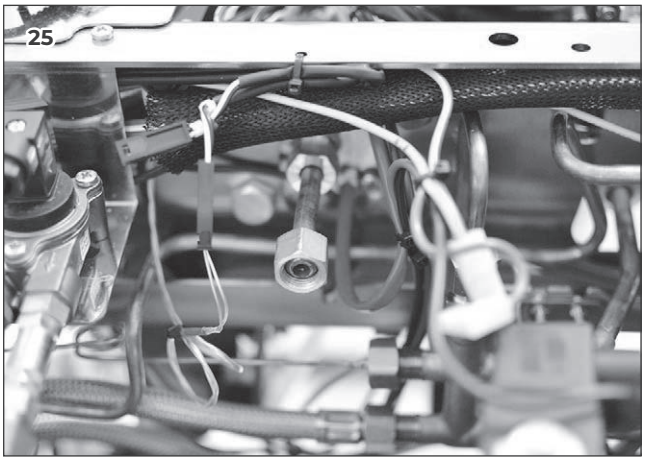
4.4.I REMOVAL OF THE HEATING ELEMENT

The heating element cartridge is accessible from the rear wall that holds the infusion group.
To remove it, proceed as it follows.

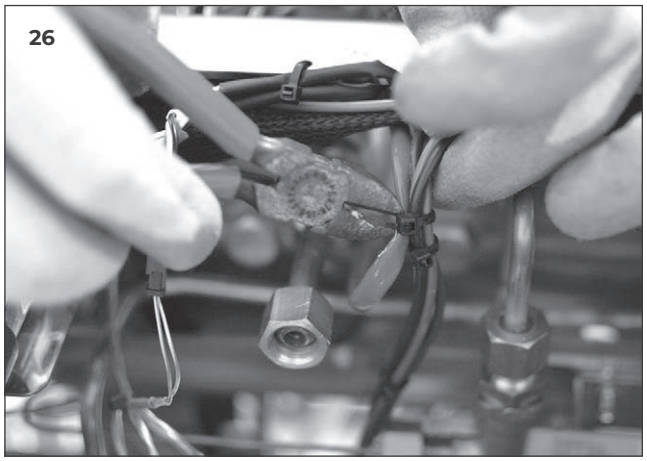
1 Remove the group cover as described in Chapter 3.


24

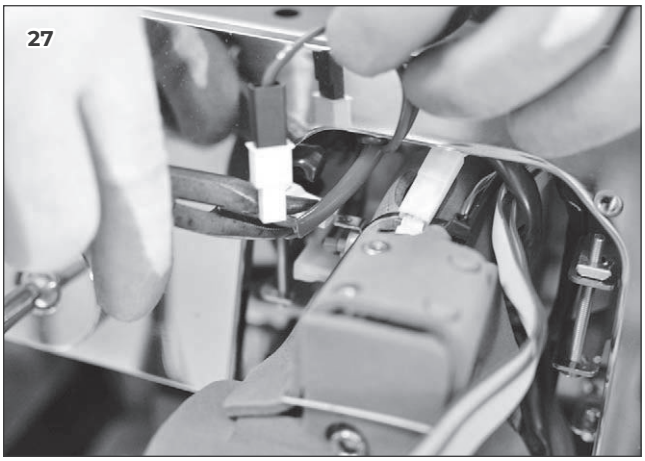
2 Remove the coffee boiler as described in Chapter 6.


25

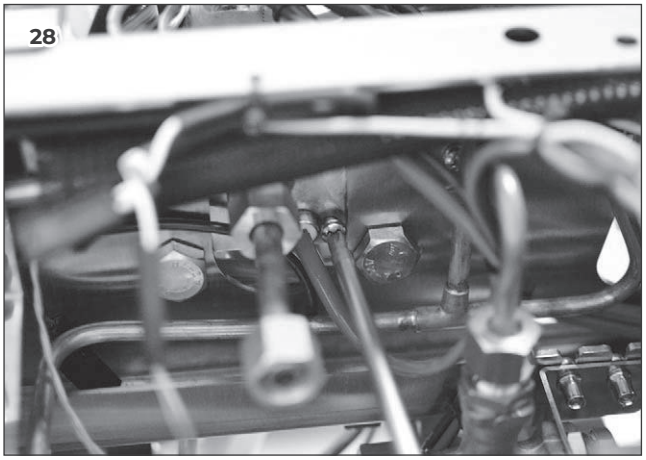
3 Following the orange cable, cut the clamps to release the cable.


26

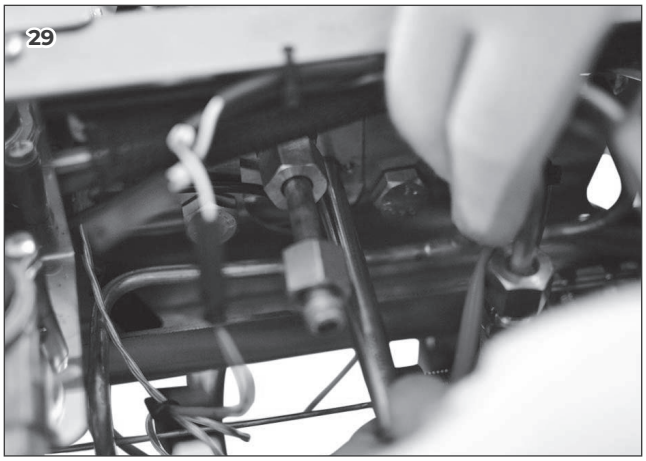
4 Following the orange cable, disconnect the heating element from the neutral and from the high-limit thermostat.


27

5 Utilizing a Philips screwdriver, loosen the screw that block the heating element.



6 Pull out the heating element.



4.5 TEMPERATURE PROBE

The temperature probe of the infusion group interfaces with the control unit via the T3 card. Moreover, it is equipped with an extension, so it is possible to replace it without accessing the T3 card.

NOTE

For further information about the control unit and the T3 card, refer to Chapter 8.

Typical values of the temperature probe are approximately 1,1 kOhm at 25°C (room temperature) and approximately 1.4 kOhm at 90°C.

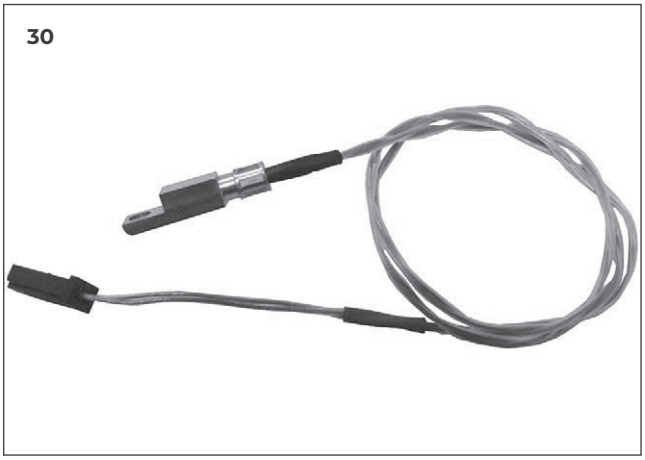
Eagle One software can detect possible malfunctions of the temperature probe. If alarms **4** or **5** are shown on the touch screen, check the exact alarm in the **Alarm History** menu. If the error indicates a group temperature probe issue, possible solutions are:

1 Check the probe cable and its connection.
2 Check the probe extension cable and its connection to the T3 card.
3 Check the T3 card connection flat cable to the control unit
4 Replace the probe.

NOTE

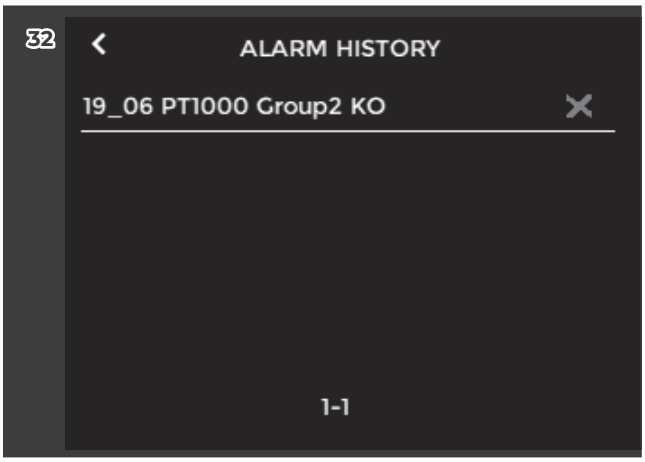
For further information on the temperature probe errors, refer to Chapter 10.

30



31

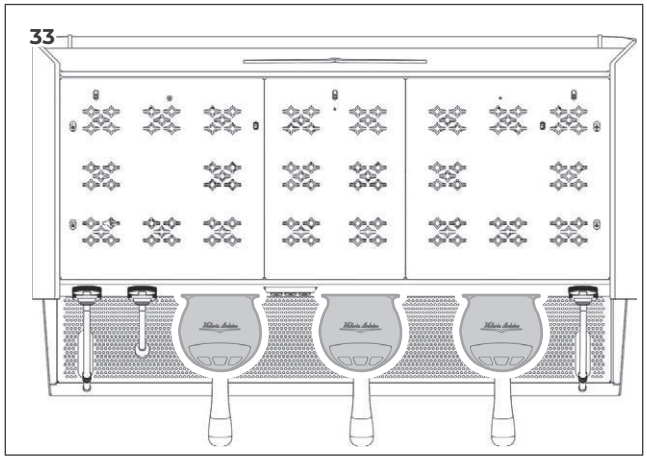
32



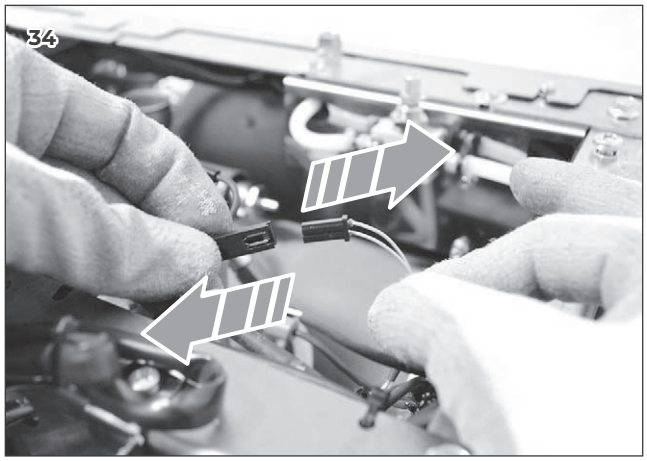
4.5.I REMOVAL OF THE TEMPERATURE PROBE

To remove the temperature probe it's necessary to:

1 Remove the group cover and the cup holder surface, as described in Chapter 3.


33

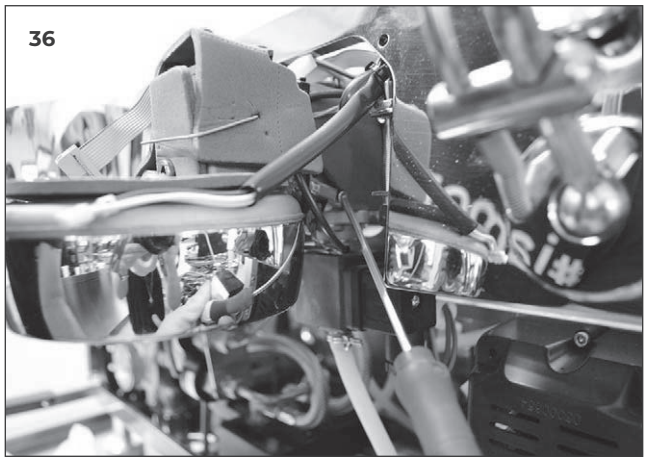
2 Disconnect the temperature probe from its extension.


34

3 Cut the clamps to release wires.

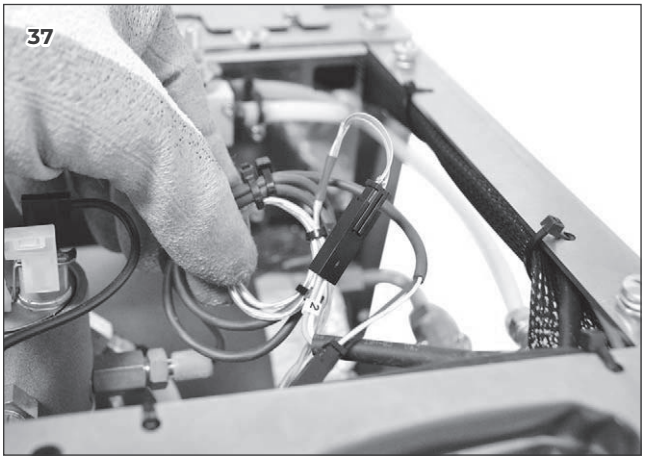

35

4 Utilizing a 3 mm Allen Key, remove the screw holding the probe to the group.


36

NOTE

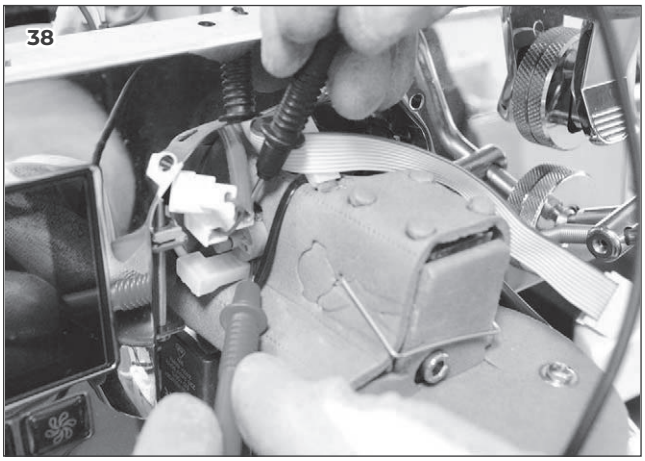
It is useful, at the end of replacement operations, to collect and to clamp the wires together to me accessing easier and to avoid contact with high temperature surfaces.



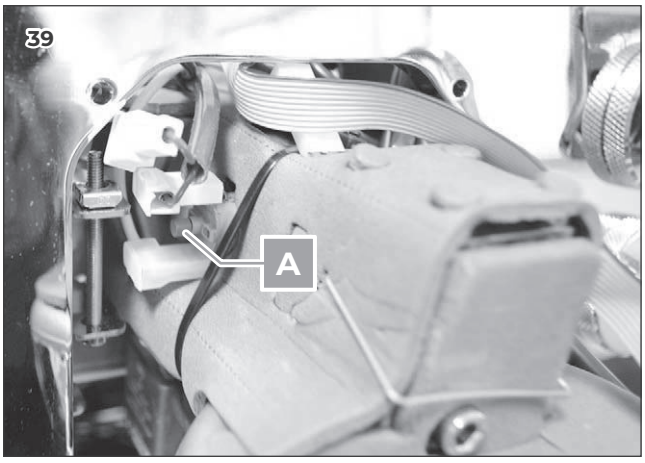
4.6 HIGH-LIMIT THERMOSTAT

The high-limit thermostat is connected in series with the heating element and opens the electrical circuit once the temperature limit of 135°C in the infusion group has been exceeded.

- If the heating element does not turn ON, check the continuity of the high-limit thermostat.



- If there is not continuity, rearm the high-limit thermostat by pushing the small red button (**A**).



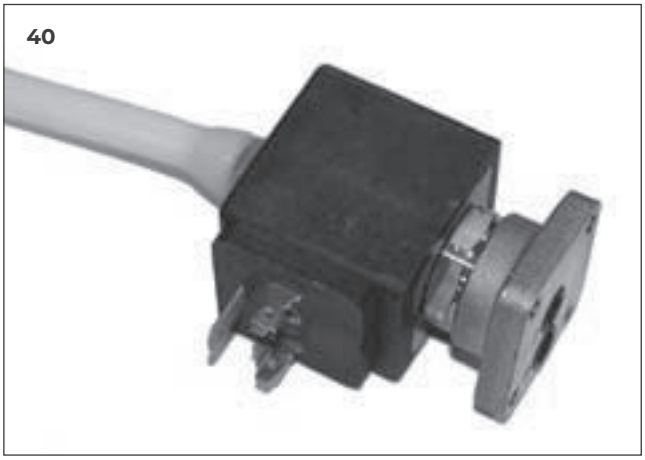
NOTE

If the small red button is not present, rearm the high-limit thermostat by pushing into the hole by a small screwdriver.

4.7 COFFEE VALVE

Each infusion group is provided with a three-way valve called coffee valve. It's a solenoid valve that is normally closed and opens when it receives a command to dispense coffee. When this valve is closed, the liquid remaining in the group is pushed by pressure towards the third outlet of valve, that is connected, together with third outlets of other coffee valves, to the T.E.R.S by a unique Teflon pipe. When this occurs, the water under pressure in the group, that cannot pass through the coffee cake, is pushed towards the third outlet of the valve, thereby drying the cake.

40



TYPICAL PROBLEMS

If there are problems connected to the coffee cake being completely soaked, three hypotheses can be evaluated:

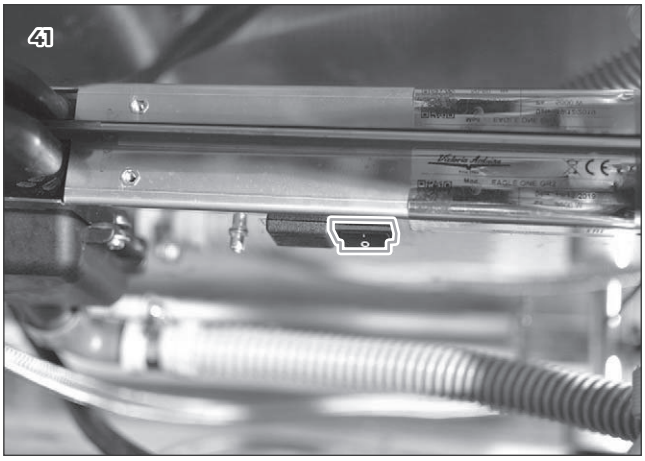
1. The third outlet of the valve is obstructed, therefore the final section is less than it should be.
2. Shower and pavilion are blocked because of poor machine cleaning.
3. The group always drips, therefore soaks the cake.

4.7.1 REDUCING OF THE COFFEE BOILER INNER PRESSURE

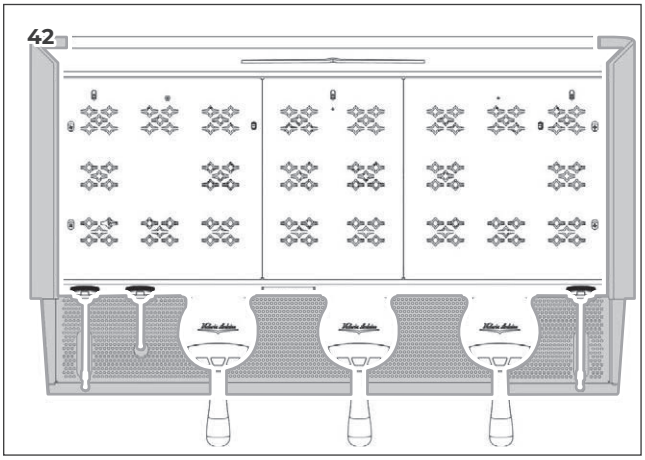
Before to proceed with some operations, if the machine is hot, it is suggestible to reduce the inner pressure of the coffee boiler, to avoid spurts of hot water.
Proceed as it follows.

1. Turn the machine OFF.

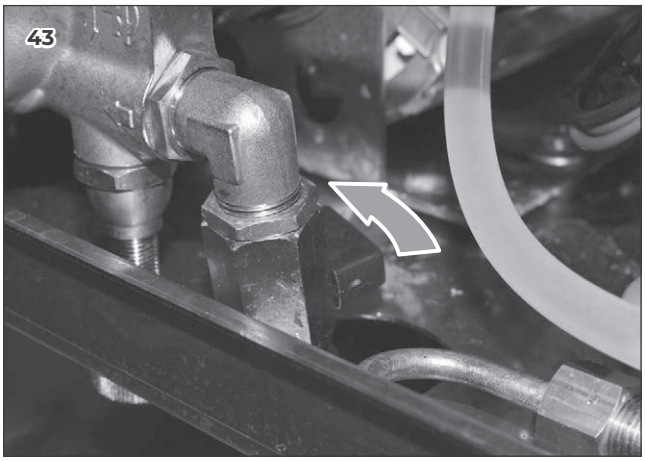
41



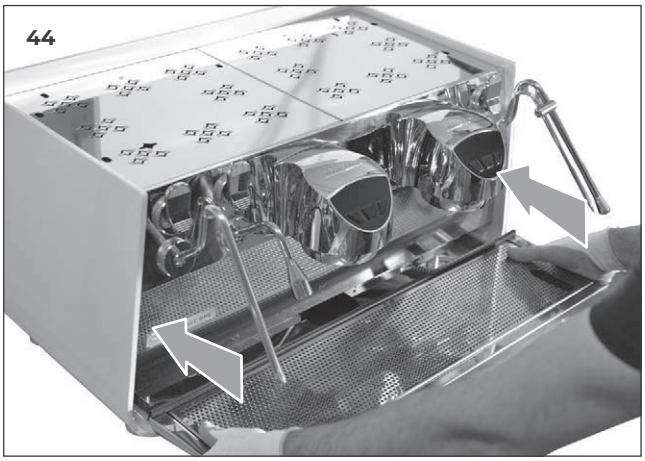
2 Remove the side panels, the water collection pan and the lower front panel, as explained in Chapter 3.



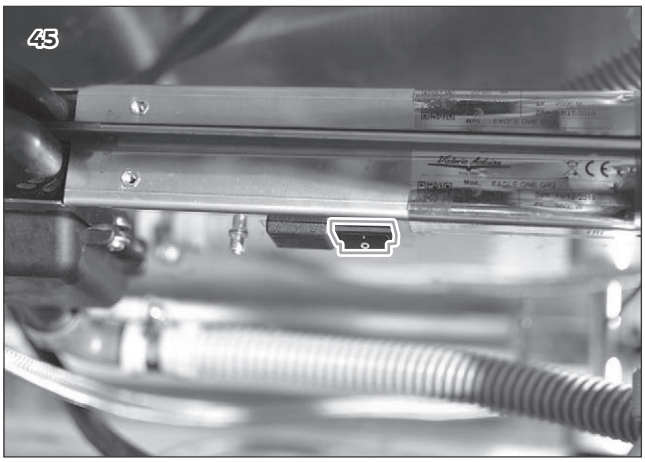
3 Close the pump tap.



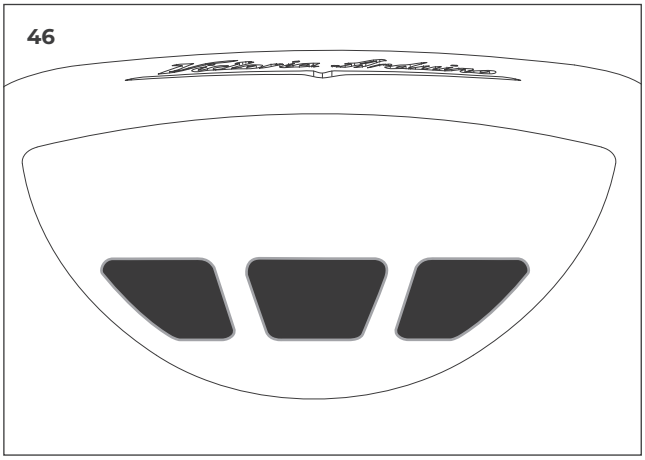
4 Put back the water collection pan.



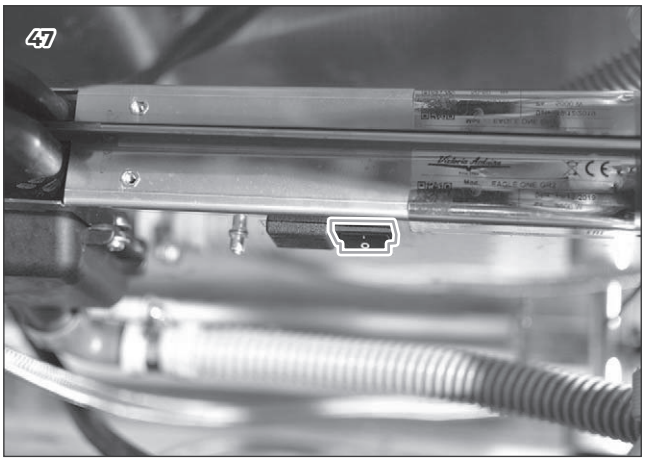
5 Turn the machine ON.



6 Push and stop after a few seconds a coffee dispensing button of the interesting infusion group, to partially empty the coffee boiler and reduce its inner pressure.


46

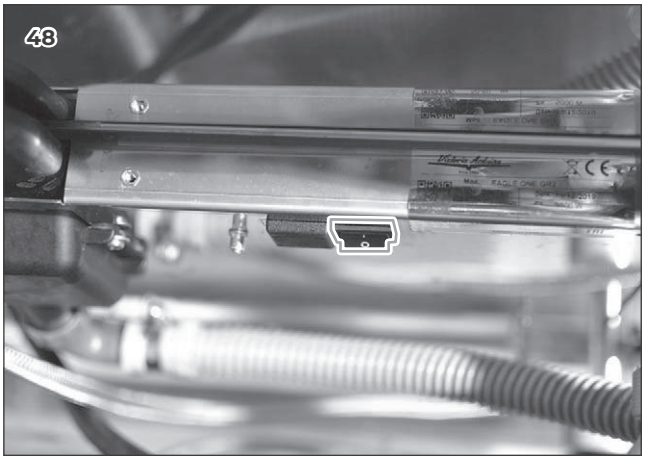
7 Turn the machine OFF.


47

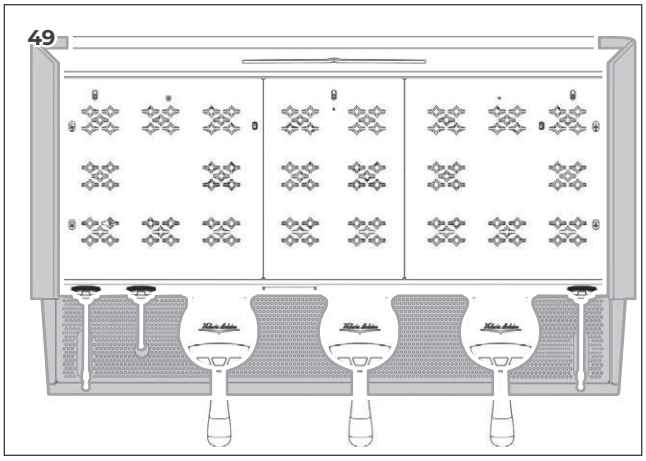
4.7.2 REMOVAL OF THE COFFEE VALVE

To replace the coffee valve, if the machine is hot, it is suggestible to reduce the inner pressure of the coffee boiler, as explained in the previous paragraph. Then it is necessary to:

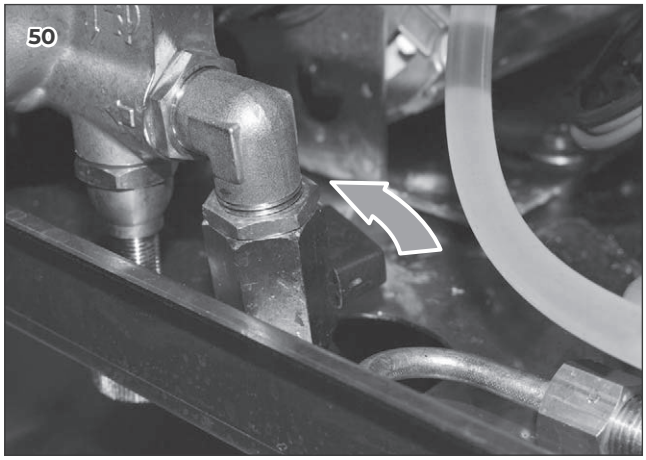
1 Turn the machine OFF.


48

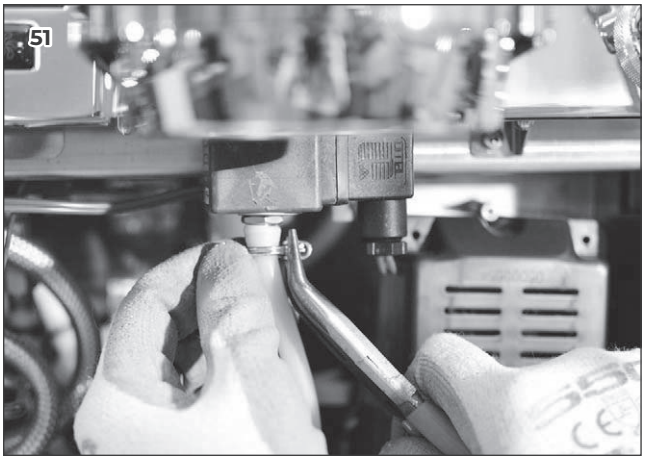
2 Remove the side panels, the water collection pan and the lower front panel, as explained in Chapter 3.


49

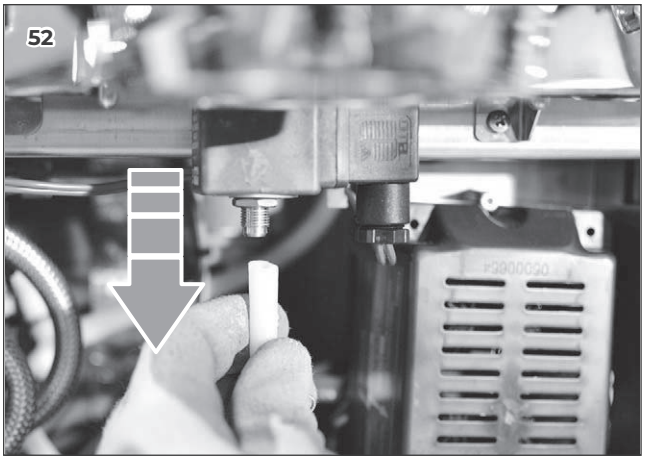
3 Close the pump tap.



4 Utilizing pliers, remove the clip keeping the Teflon pipe of the third outlet.

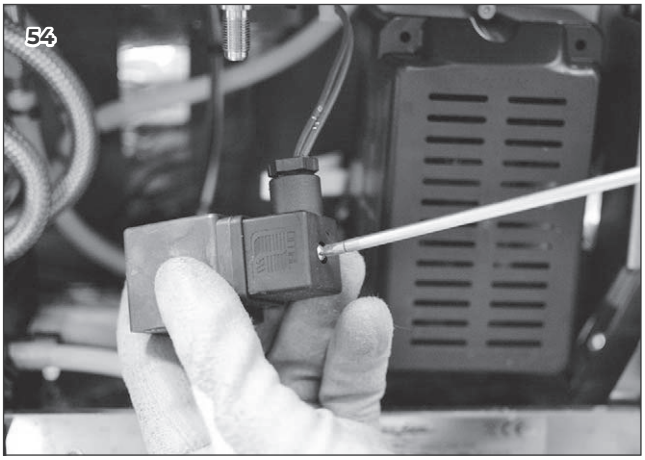


5 Disconnect the Teflon pipe of the third outlet.

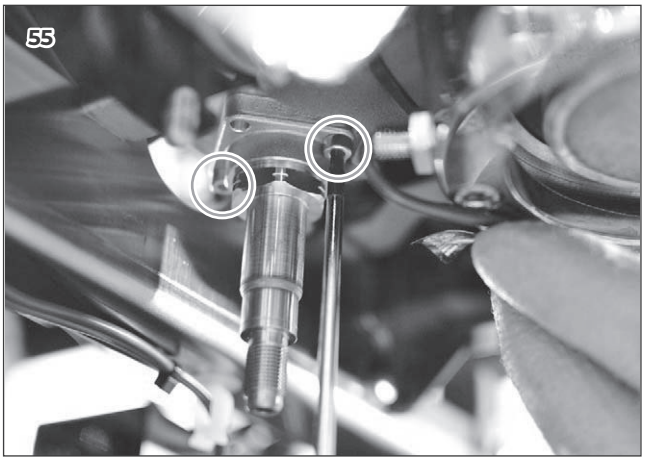


6 Utilizing a 14 mm wrench, unscrew the fixing nut of the coil.

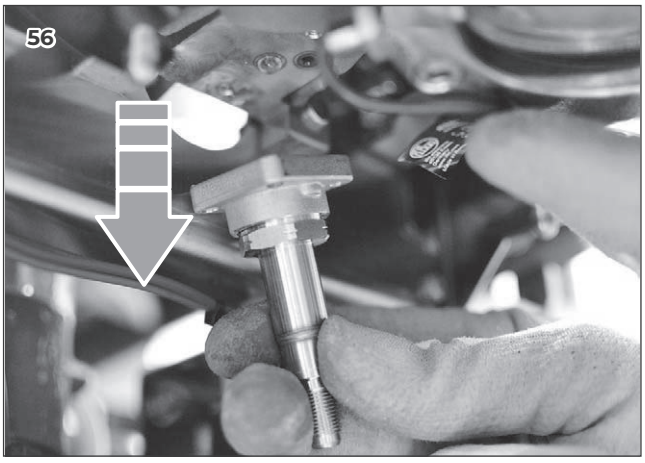
7 Utilizing a Philips screwdriver, remove the head screw.



8 Place a cloth or absorbent paper underneath the valve and, utilising a 3 mm Allen key, remove the two screws that fix the body to the group.



9 Remove the body of the valve.
Check the contact points that often can be full of limescale.
Clean utilising an adequately pointed tool.



10 Utilizing a vise and a 24 mm wrench, unscrew the valve base and check for the presence of limescale or oily residues.

These residues could obstruct the free circulation of the water to the third outlet, thereby by favouring stagnation of the water in the filter holder.

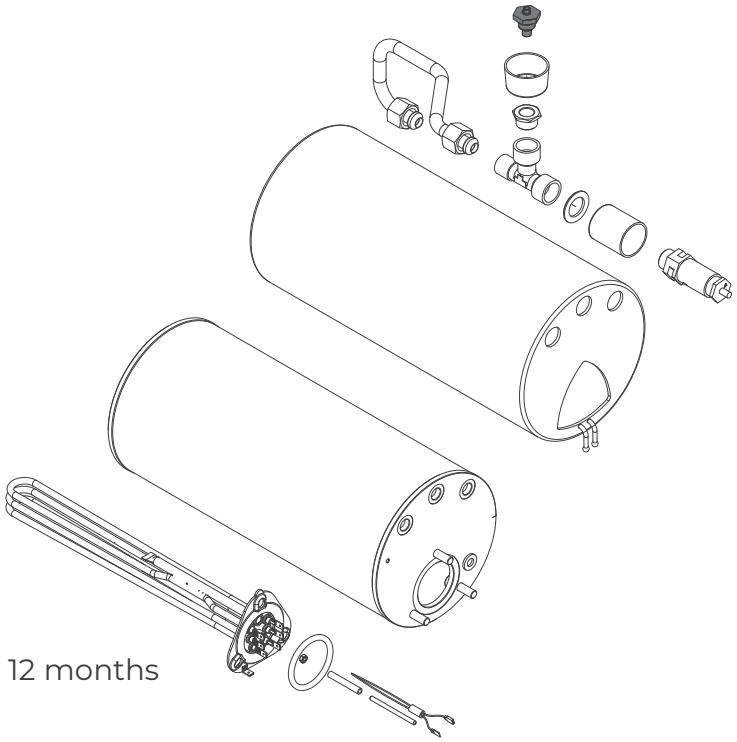
NOTE

In case of oily residues, properly instruct the staff using the machine to perform a regular, deep cleaning with suitable detergents.

WARNING

Once the coffee valve has been reinstalled, remember to open the pump tap.

5 STEAM BOILER



■ Replace every 12 months

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DANGER

Except for paragraph 5.1, before proceeding with the operations described in the Chapter, make sure that the machine is turned OFF and unplugged from the mains. Discharge any residual pressure present in the steam boiler.

01

WARNING

If the machine was turned OFF recently, protect yourself with thermal insulation gloves.

02

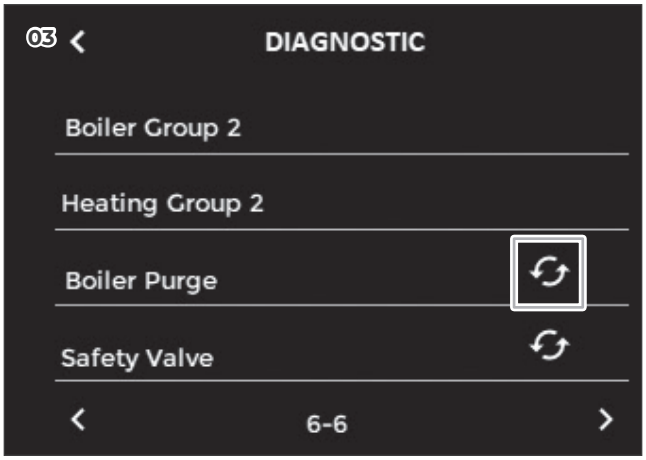
5.1 REDUCING STEAM BOILER PRESSURE

Before to work on steam boiler and relative parts, it is mandatory to reduce its inner pressure. **Eagle one**, compared to the other traditional machines, does not have manual steam levers, but electronic ones. Hence, to reduce steam boiler pressure it is needed to run a software procedure, as described below:

1 With the machine ON, in the programming, select the **DIAGNOSTIC** menu following the path:

MENU
> **TECHNICAL SETTINGS**
> Enter Maintenance PIN **1936**
> **MAINTENANCE**
> **DIAGNOSTIC**
> **Boiler Purge**

03

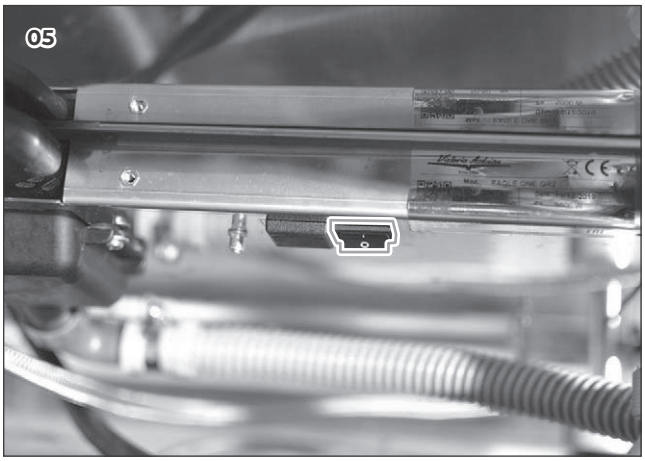


WARNING

With the boiler purge command the machine will automatically open the steam valves and the steam will come out of the steam wands.

2 If the **Boiler Purge** command is completed and steam is still present, repeat the Boiler Purge command more times.

3 As the **Boiler Purge** command is completed and the inner pressure has been completely reduced, turn OFF the machine utilizing the main switch.

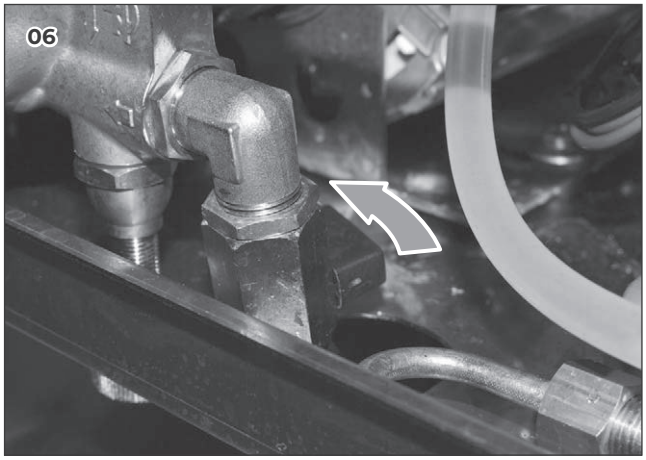


5.2 EMPTYING THE STEAM BOILER

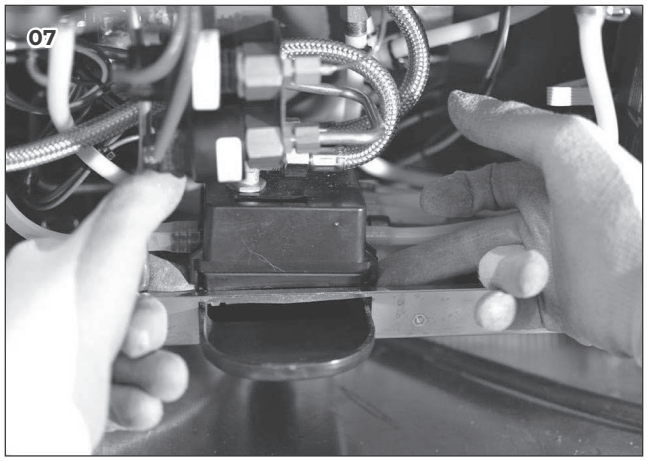
To empty the steam boiler, is necessary to firstly reduce its inner pressure, as described in the previous paragraph. As the inner pressure has been completely reduced and the machine has been turned OFF, proceed as follow:

1 Remove the side panels, the water collection pan and the lower front panel as described in Chapter 3.

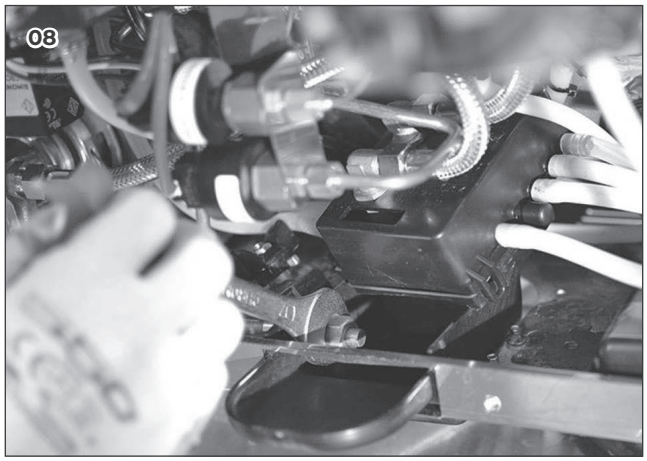
2 Close the pump tap.



3 Lift the lid of the drain box.



4 Utilizing a 17 mm wrench, unscrew the bolt inside the drain box.



5 Let the water completely drain out.

WARNING

When completed, remind to tighten the bolt inside the drain box and to open the pump tap.

NOTE

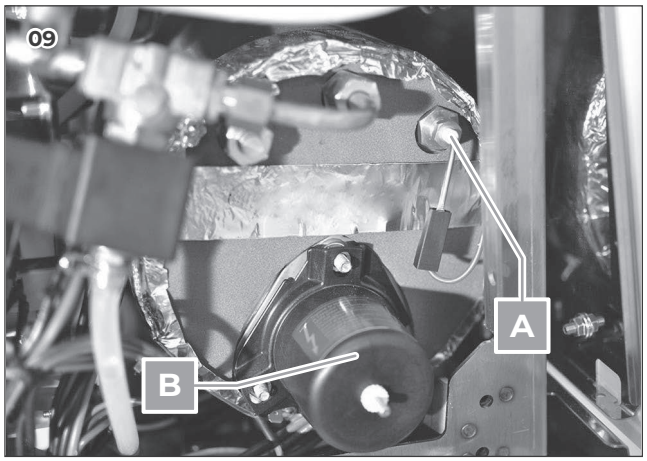
When switching ON again, the auto-filling function will fill the boiler with water in 90 seconds. If the alarm 2 appears, switch the machine OFF/ ON again utilizing the main switch.

5.3 ACCESS TO HEATING ELEMENT

To access the heating element and its connection terminals, remove the right side panel, as described in Chapter 3.
The visible parts on the boiler are:

A The level probe.
B The cover of the heating element connection terminals.

To access the connection terminals, simply unscrew by hand the small white nut in the middle of the cover.



5.4 HEATING ELEMENT AND SAFETY THERMO-FUSE

The steam boiler is equipped with the following heating elements:

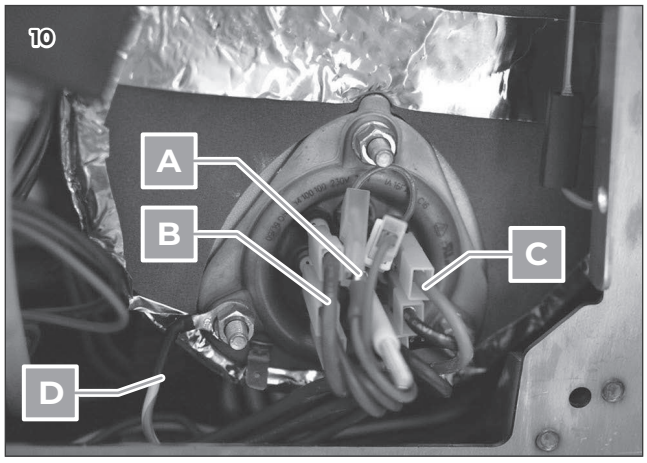
- 5000 W for the 2 groups version;
- 6500 W for the 3 groups version.

The resistor is composed of three single heating elements, one for each phase, therefore, in the connection terminals we find three neutrals and three phases, which arrive each to a different element, perfectly distributing the absorption of the current.
Since the steam boiler is equipped with a safety thermo-fuse too, in the connections we also see it.

Looking at the connection terminals the visible parts are:

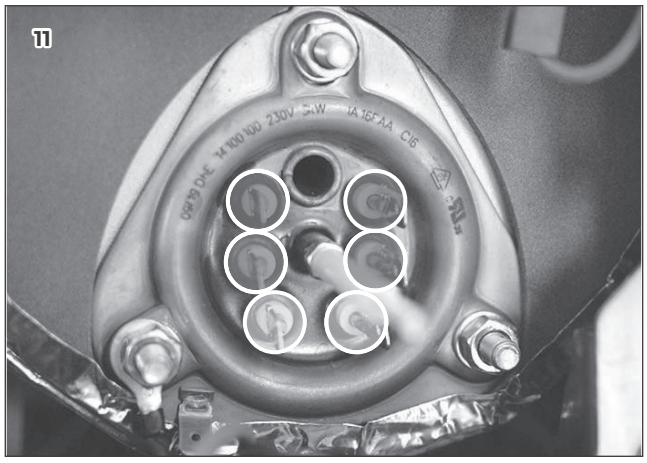
A The red wires, connections of the thermo-fuse;
B The blue wires, connections of the neutrals;
C The brown and black wires, connection of the phases;
D The green-yellow wire, connection of the ground.

10



The three heating elements, in conditions of perfect operation, give typical values of 52 ± 3 Ohm for the 2 groups version and 44 ± 3 Ohm for the 3 groups version. To detect whether there are damaged elements, place the tester probes on the elements of the same colour as shown in the figure.

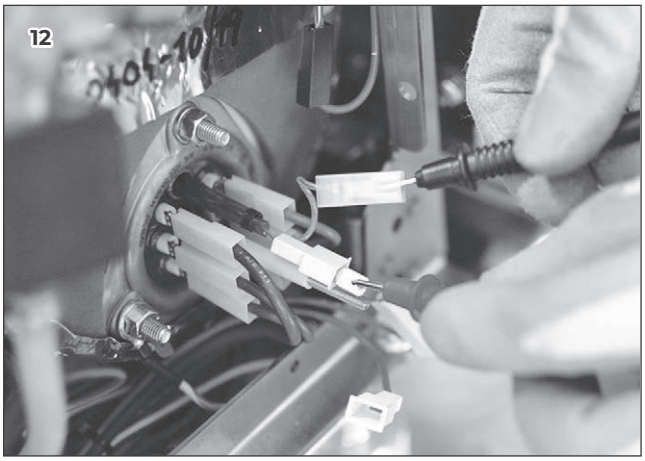
11



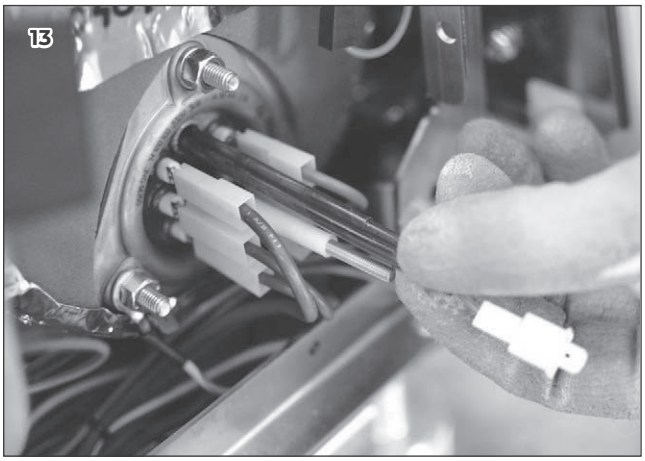
5.4.I REMOVAL OF THE SAFETY THERMO-FUSE

The safety thermo-fuse is connected in series with the control unit and opens the electrical circuit once the temperature limit of 184°C in the steam boiler has been exceeded.

If the machine does not turn ON, check the continuity of the safety thermo-fuse.



If there is not continuity, disconnect, pull out and change the thermo-fuse.

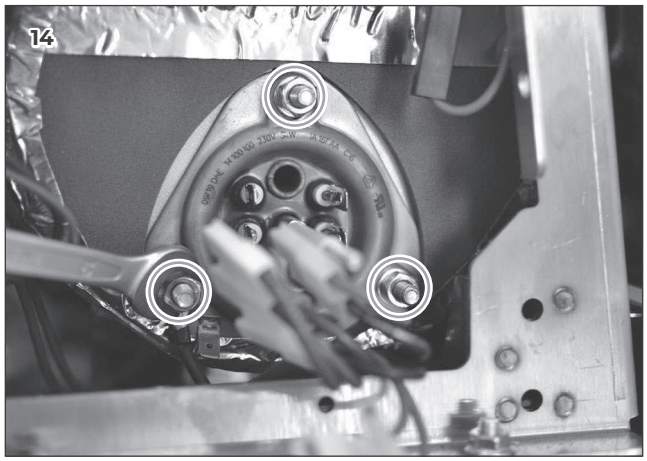


5.4.2 REMOVAL OF THE HEATING ELEMENT

If you need to remove the heating element to be cleaned from limestone or replaced, proceed as it follows.

1 Disconnect all the wires and pull out the safety thermo-fuse.

2 Utilizing a 10 mm wrench, remove the 3 nuts.


14

3 Remove the ground connection and the 3 washers.

4 Remove the heating element out of its slot.


15

NOTE

Each time you replace the heating element is also necessary to change the viton O-ring that isolates it from the boiler because it is a part subject to wear, therefore the component must be ordered together with the heating element.


16

5.5 REPLACEMENT OF THE LEVEL PROBE

The water inside the steam boiler is maintained at a constant level through the use of a level probe inserted inside the boiler.
This probe is connected to the electronic control unit that continuously polls the probe.
Being always exposed to high temperatures and steam/water it is subject to encrustations which can inhibit operations.

WHEN TO INTERVENE

- In case it is verified that there are no problems upstream from the probe you can easily access the component and perform careful cleaning with abrasive or descaling agents.
- Make sure that the Teflon coating of the probe is not damaged. If it is, there would be a loss of steam and electric insulation and the probe should be replaced.

To remove the probe simp ly disconnect the red wire and unscrew the bolt with a 17 mm wrench.

NOTE

When replacing the probe it is necessary to cover the threads with Teflon tape or liquid sealant and to tighten it not too much.

PROBE SENSITIVITY

In the case of particularly demineralized water it is possible to increase the sensitivity of the probe, as described in Chapter 9.

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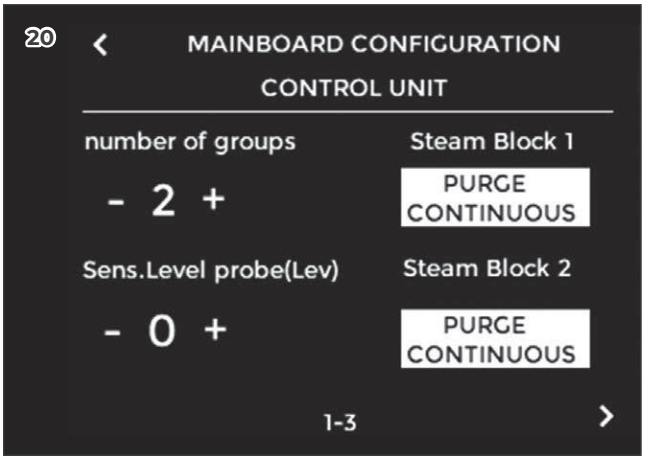
18

19

20



5.6 ANTI-SUCTION VALVE

The anti-suction valve ensures that air enters the heater during the machine cooling phase. In this way the reduction of water volume due to cooling does not create decompressions that may give rise to drawbacks such as the suction of milk through the steam wand.

21

WHEN TO REPLACE

You can assume that there are problems with the anti-suction valve when:

A There is a strong smell of rot when making steam or water is extracted from the heater.
B The water leaving the heater is dirty.

In these cases the valve is closed and is locked in this condition.

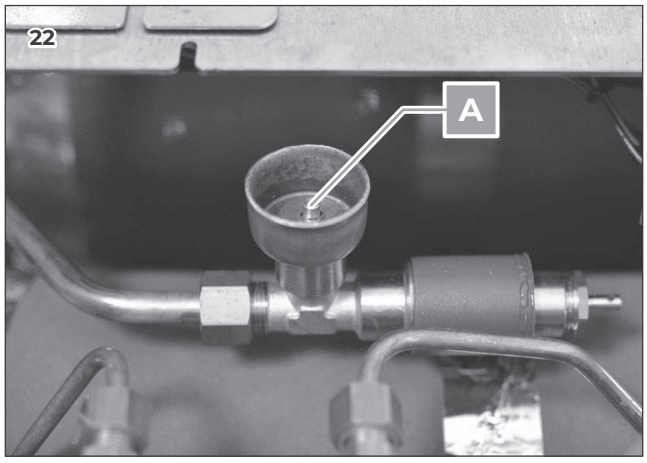
If the valve blocked open because of limestone the signs would be:

A A continuous slight whistling sound coming from the valve.
B Condensation drops near the valve.

NOTE

We suggest that the valve (A) be replaced annually to ensure proper function and excellent sealing.

22



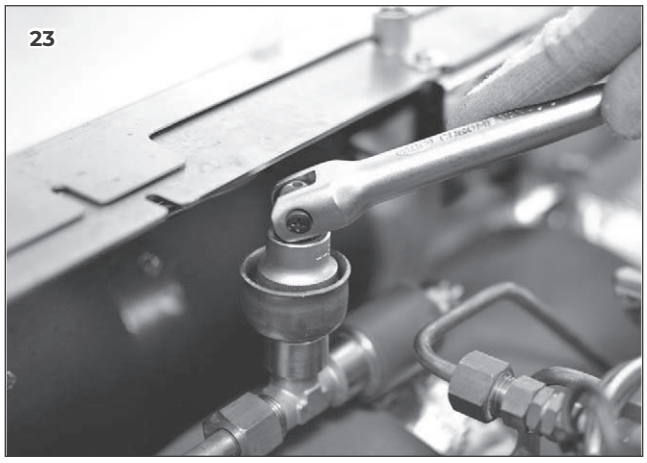
WARNING

Operation to be carried out with the pressure in the boiler at zero (0 bar).

HOW TO REPLACE

Using a 19 mm cup hex wrench unscrew the valve from its housing.
When inserting the new one, coat the threads with Teflon tape or with a few drops of Loctite.

23

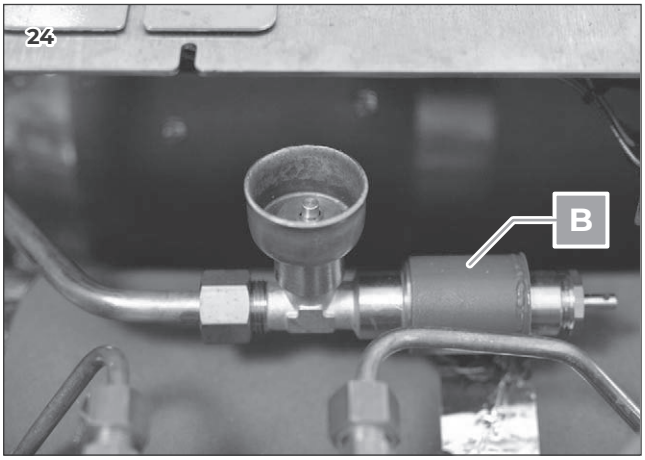


5.7 SAFETY VALVE

The steam safety valve (**B**) is made to open at the pressure of 3 bar.

WHEN TO REPLACE

For safety reasons each time the valve comes into **operation it should be replaced** to ensure perfect operation.
So if the heater floods or there is excess steam it is necessary to secure the machine by replacing the entire valve.



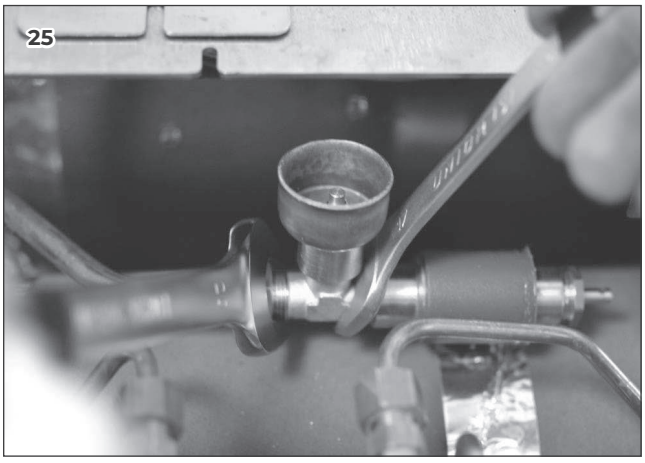
WARNING

Operation to be carried out with the pressure in the boiler at zero (0 bar).

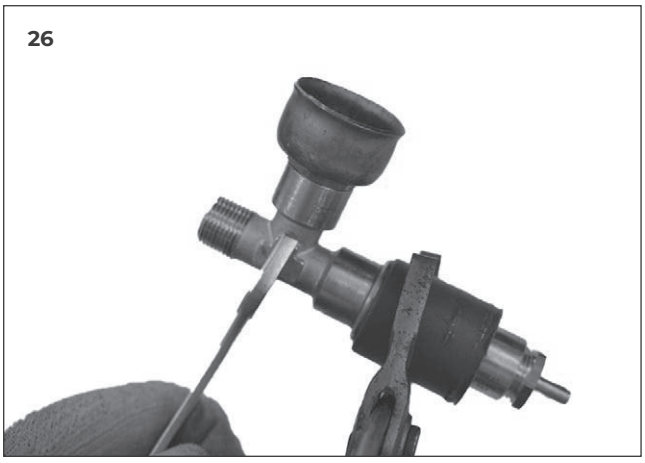
HOW TO REPLACE

To replace the safety valve proceed as it follows.

1 Utilizing a 17 mm wrench keep blocked the assembly comprising the safety valve and anti-suction valve and utilizing a 20 mm wrench disconnect it from the copper pipe.



2 Utilizing a 17 mm wrench keep blocked the assembly and utilizing an adjustable clamp unscrew the valve.

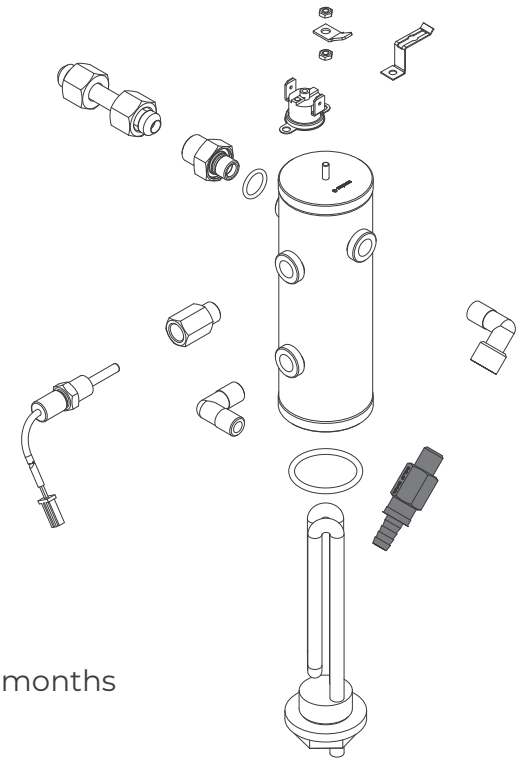


6 COFFEE BOILERS







■ Replace every 12 months

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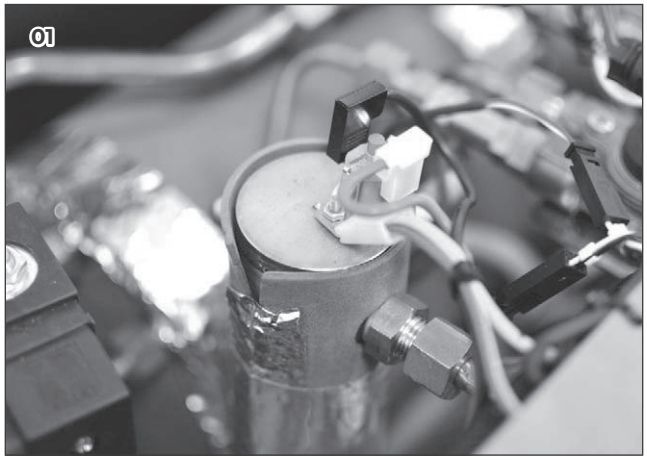
6.5.1 REMOVAL OF THE EXPANSION VALVE 85
6.6 PROCEDURE FOR AUTOMATICALLY FILLING THE COFFEE BOILER 87

Eagle One providers for each group a Stainless-Steel coffee boiler of 0.14 litre.
The coffee boilers are part of the NEO (New Engine Optimization), that guarantees high performance while reducing the energy consumption of the machine. They are covered by thermal insulation to prevent heat dispersion.

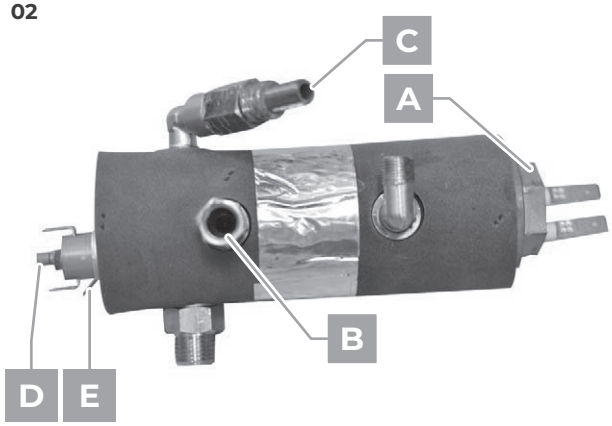
01



Each coffee boiler is equipped with:

- A A heating element of 600 W;
- B A temperature probe that communicates with the control unit via the T3 card;
- C An expansion valve at 16,5 bar;
- D An high-limit thermostat connected in series with the heating element;
- E A ground connection.

02



DANGER

Before proceeding with the operations described in the Chapter make sure that the machine is turned OFF and unplugged from the mains.

03

WARNING

If the machine was turned OFF recently, protect yourself with thermal insulation gloves.

04

6.1 REMOVAL OF THE COFFEE BOILER

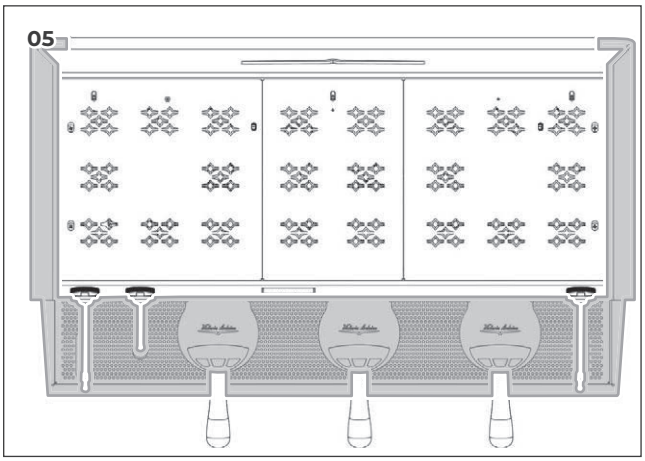
WARNING

The coffee boiler contains just 0.14 litre of water, therefore it is not necessary to empty it when it is needed to remove it or its components. If the machine is hot, it is suggestible to reduce the inner pressure of the coffee boiler, as explained in paragraph 4.7.1.

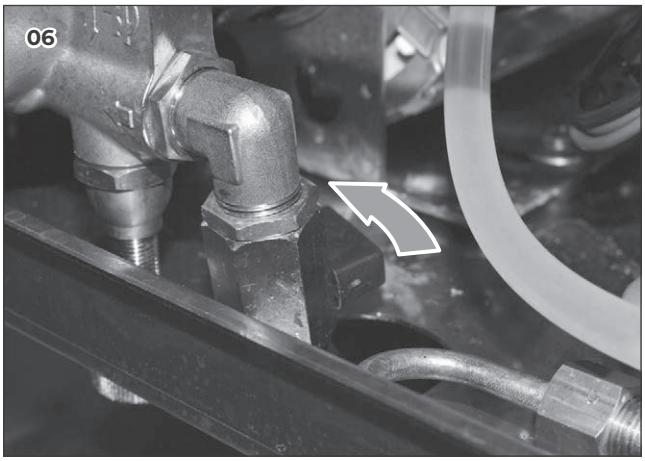
Moreover, it is always a good idea to place a cloth or absorbent paper underneath the coffee boiler pipes to avoid potential electrical damages.

To remove a coffee boiler, it is necessary to:

1 Remove the side panels, the cup holder surface, the water collection pan and the lower front panel, as described in Chapter 3.



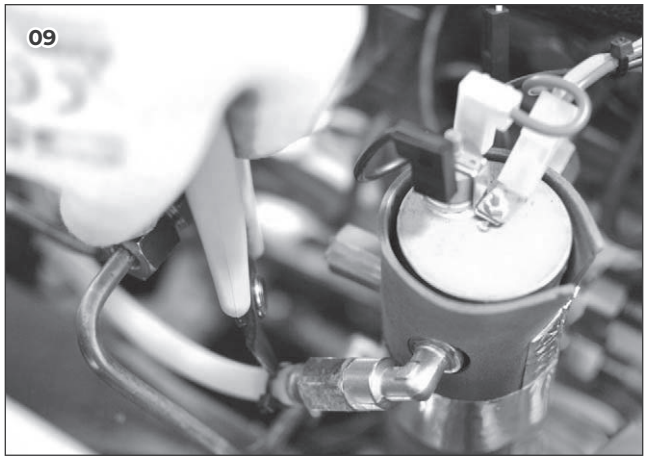
2 Close the pump tap.



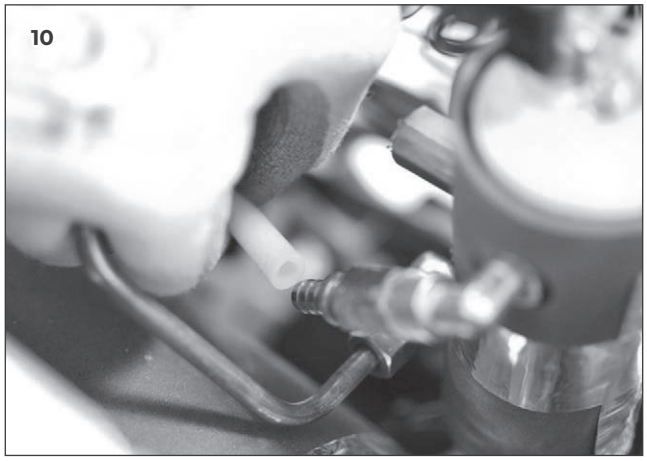
3 On the lower side of the coffee boiler, disconnect the heating element.

4 On the higher side, disconnect the ground and the high-limit thermostat.

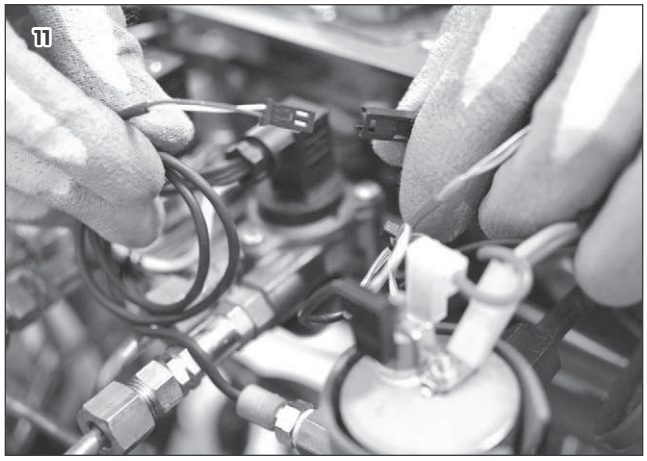
5 Cut the clamp of the exhaust pipe of the expansion valve.



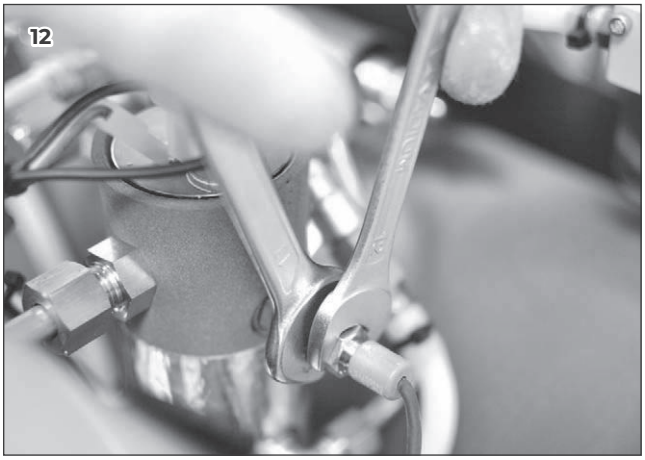
6 Disconnect the exhaust pipe of the expansion valve.



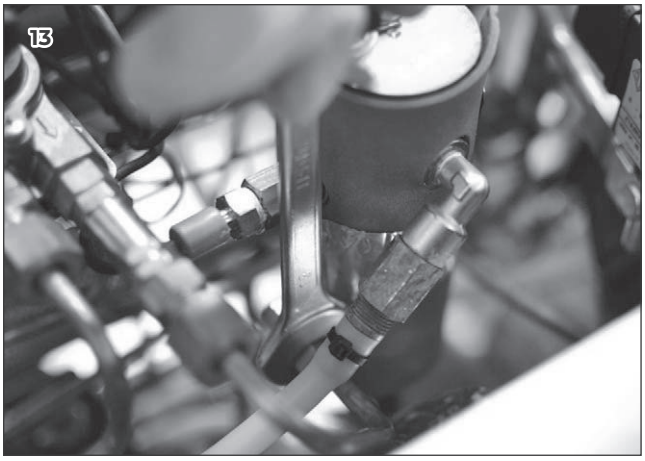
7 Disconnect the temperature probe from its extension.



8 Utilizing a 12 mm wrench and a 13 mm one, remove the temperature probe.

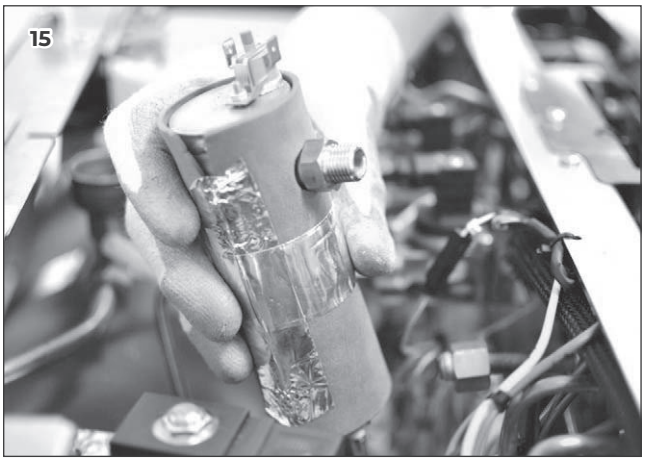


9 Utilizing a 13 mm wrench, remove the water input copper pipe.



10 Utilizing two 17 mm wrenches, remove the water output copper pipe.

11 Take off the boiler paying attention to water spilling.



WARNING

After replacing the coffee boiler, proceed with restoring water inside the coffee boiler as described in paragraph 6.6.

NOTE

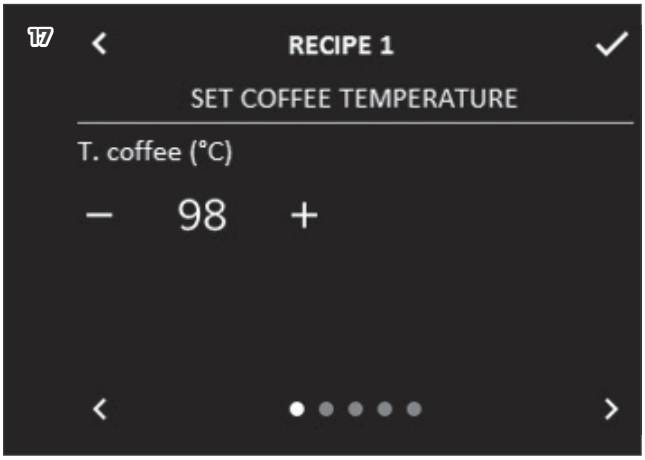
It is useful, at the end of replacement operations, to collect and to clamp the wires together to make accessing easier and to avoid contact with high temperature surfaces.

16

6.2 HEATING ELEMENT

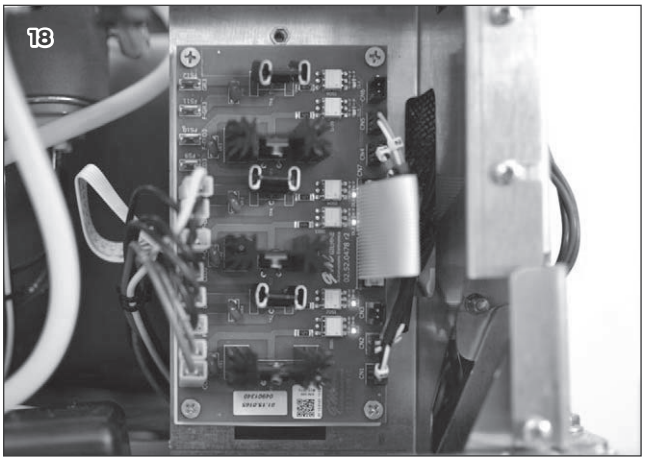
The NEO technology manages temperatures of the "infusion group and coffee boiler" system, to give a proper extraction water temperature, in accord with what has been set in the programming as **MYCOFFEE T Group**.

17



When the heating element of the coffee boiler needs to be powered on, the control unit actives it via the T3 card. To know when it is activated, it is possible to monitor LED's placed on the control unit and on the T3 card.

18



NOTE

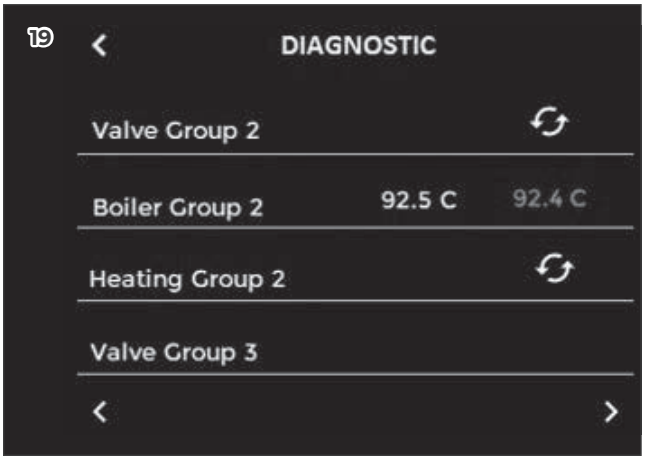
For further information about the control unit and the T3 card, refer to Chapter 8.

NOTE

It is possible to read the current temperature of the coffee boiler in the Diagnostic menu.

For further information about this feature, refer to Chapter 9.

19



Typical value of the heating element is 90 ± 7 Ohm. To detect if it is damaged, it is possible to verify its value with a tester.

If the breaker of the electric panel in the bar interrupts the power, the cause could be the heating element in short circuit. Use a tester to verify continuity of the heating element with the ground: continuity would mean the heating element is damaged.

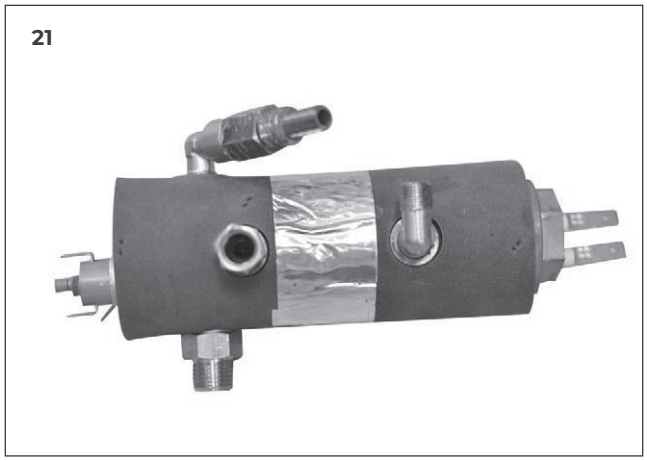
If the power does not interrupt but the water of the coffee boiler is cold, the cause could be the heating element in open loop. Use a tester to verify continuity of the heating element itself: continuity would mean the heating element is fine.


20

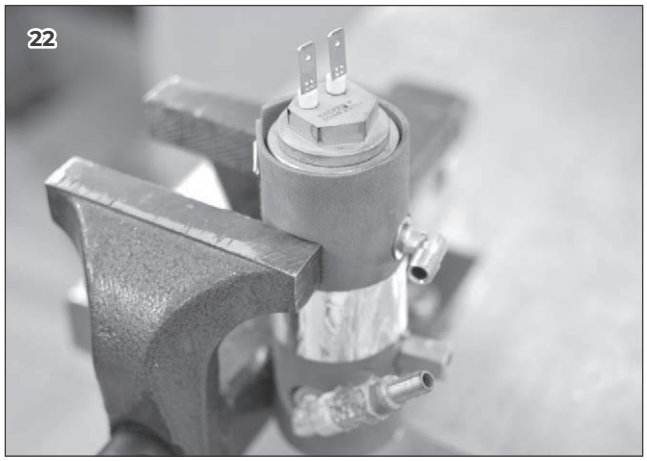
6.2.1 REMOVAL OF THE HEATING ELEMENT

To remove the heating element, it is necessary to:

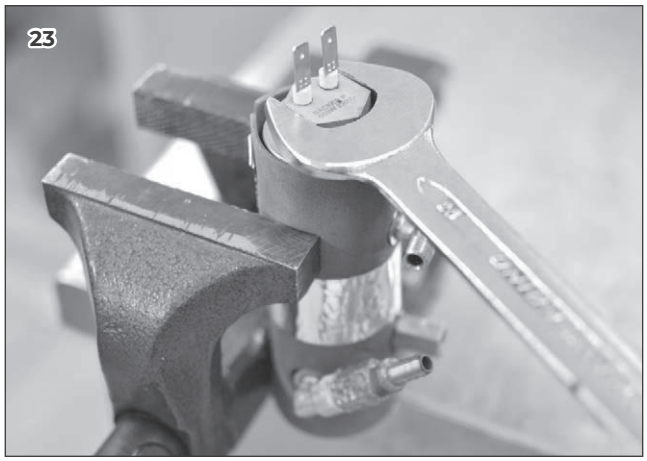
1 Remove the coffee boiler as described in the previous paragraph.


21

2 Secure the coffee boiler to a vice.


22

3 Using a 26 mm wrench, remove the heating element.


23

NOTE

When replacing the heating element, it is mandatory to utilize a new O-ring.

WARNING

After replacing the coffee boiler, proceed with restoring water inside the coffee boiler as described in paragraph 6.6.

6.3 TEMPERATURE PROBE

The temperature probe of the coffee boiler interfaces with the control unit via the T3 card. Moreover, it is equipped with an extension, so it is possible to replace it without accessing the T3 card.

NOTE

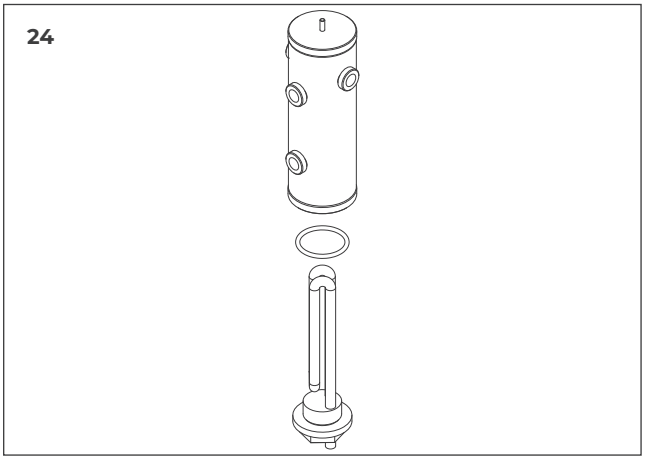
For further information about the control unit and the T3 card, refer to Chapter 8.

Typical values of the temperature probe are approximately 40 kOhm at about 25°C (room temperature) and 5 kOhm at about 90°C.

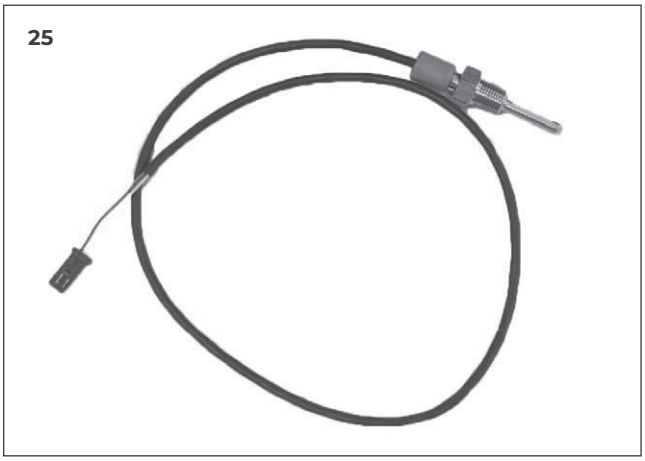
Eagle One software can detect possible malfunctions of the temperature probe. If alarms **4** or **5** are shown on the touch screen, check the exact alarm in the Alarm History menu. If the error indicates a coffee boiler temperature probe issue, possible solutions are:

1. Check the probe cable and its connection to the extension.
2. Check the probe extension cable and its connection to the T3 card.
3. Check the T3 card connection flat cable to the control unit.
4. Replace the probe.

24

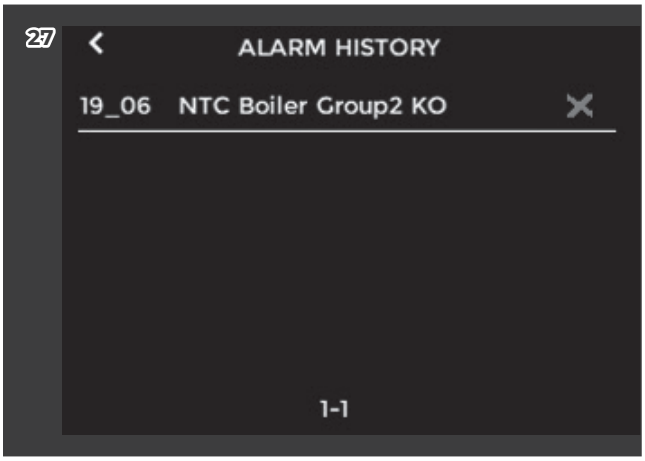


25



26

27



NOTE

For further information on the temperature probe errors, refer to Chapter 10.

If the temperature displayed is extremely high or quite unstable despite the smooth operations, remove and replace the probe with a new one.

Since the coffee boiler is always, full of high temperature water, common limestone problems do not excessively affect the temperature probe. In fact, it is unlikely that the limestone will inhibit the operation on the probe, but more likely it will slow its capacity: a probe covered with limestone becomes less sensitive to temperature changes. In cases like this in which there are no significant changes that place the coffee boiler under stress, the probe must be removed and controlled for the presence of limestone.

6.3.1 REMOVAL OF THE TEMPERATURE PROBE

WARNING

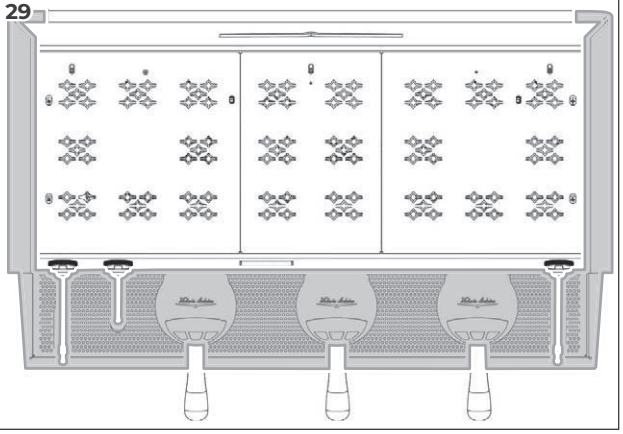
If the machine is hot, reduce the inner pressure of the coffee boiler, as explained in paragraph 4.7.1.

28

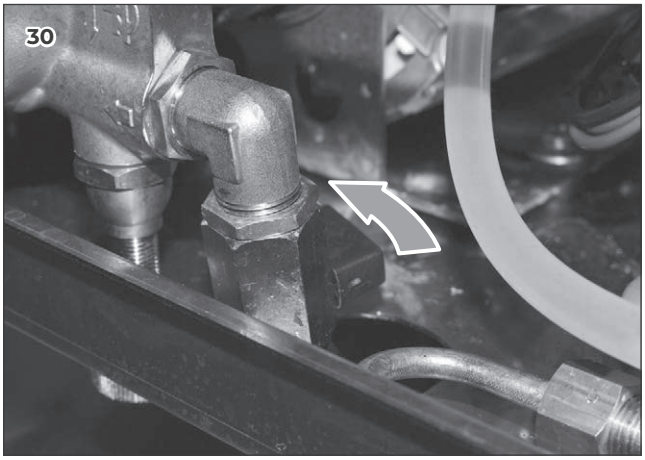
To remove temperature probe, it is necessary to:

1 Remove the side panels, the cup holder surface, the water collection pan and the lower front panel, as described in Chapter 3.

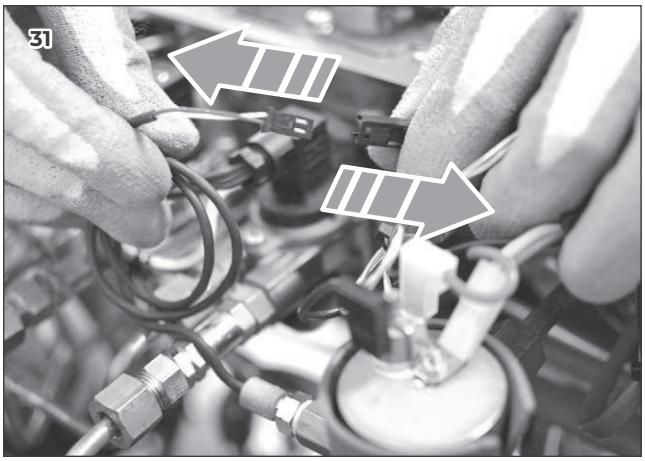
29



2 Close the pump tap.



3 Disconnect the temperature probe from its extension.

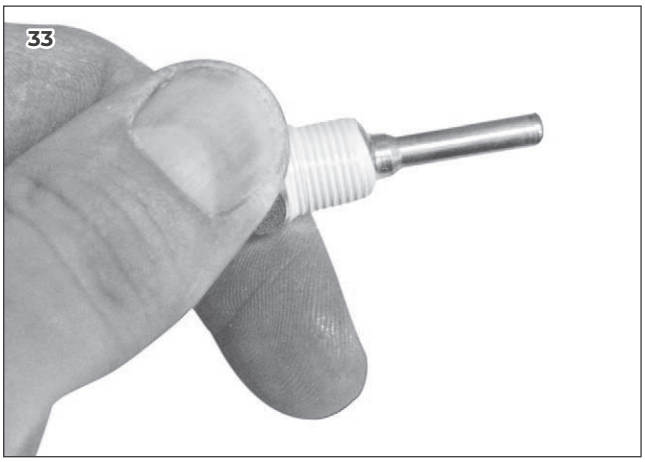


4 Utilizing a 12 mm wrench and a 13 mm one, remove the temperature probe.

Remove calcification with appropriate products.

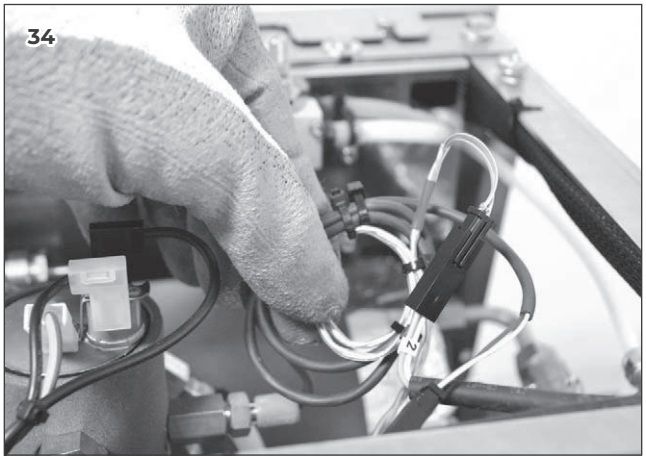
NOTE

When replacing the temperature probe, wrap its threading with Teflon tape or use liquid Loctite to prevent leakage.



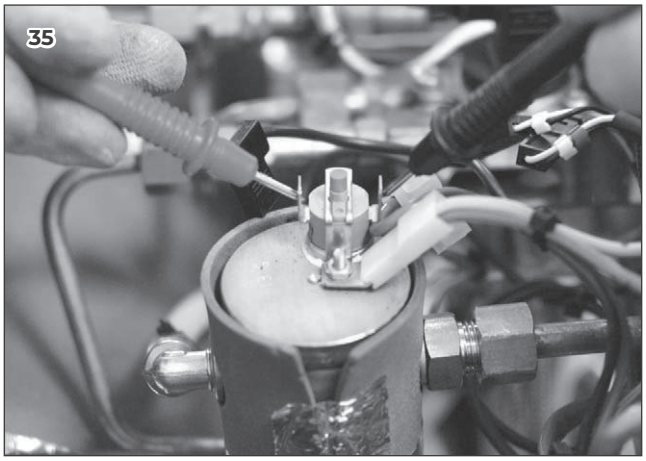
NOTE

It useful, at the end of replacement operations, to collect and to clamp the wires together to make accessing easier and to avoid contact with high temperature surfaces.



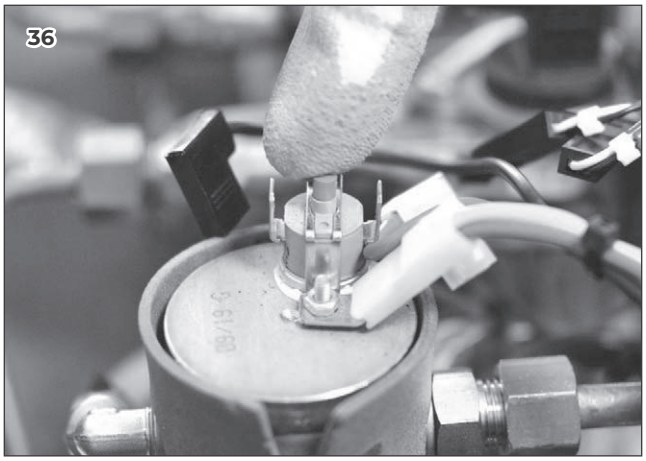
6.4 HIGH-LIMIT THERMOSTAT

The high-limit thermostat is connected in series with the heating element and opens the electrical circuit once the temperature limit of 135°C in the coffee boiler has been exceeded.



If the heating element does not turn ON, check the continuity of the high-limit thermostat.

If there is not continuity, rearm the high-limit thermostat by pushing the small red button.



NOTE

If the small red button is not present, rearm the high-limit thermostat by pushing into the hole by a small screwdriver.

6.5 EXPANSION VALVE

The expansion valve releases water once the pressure limit of 16,5 bar in the coffee boiler has been exceeded.
If, when the machine was in stand-by, the first coffee dose is lower than the next, a reason could be the expansion valve damaged and opening before 16.5 bar.

6.5.1 REMOVAL OF THE EXPANSION VALVE

WARNING

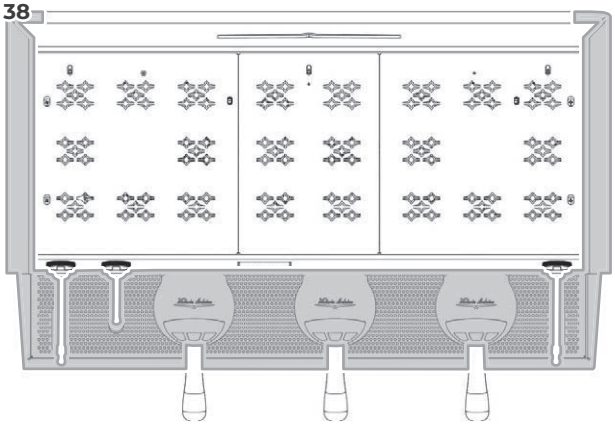
If the machine is hot, reduce the inner pressure of the coffee boiler, as explained in paragraph 4.7.1.

37

To remove the expansion valve, it is necessary to:

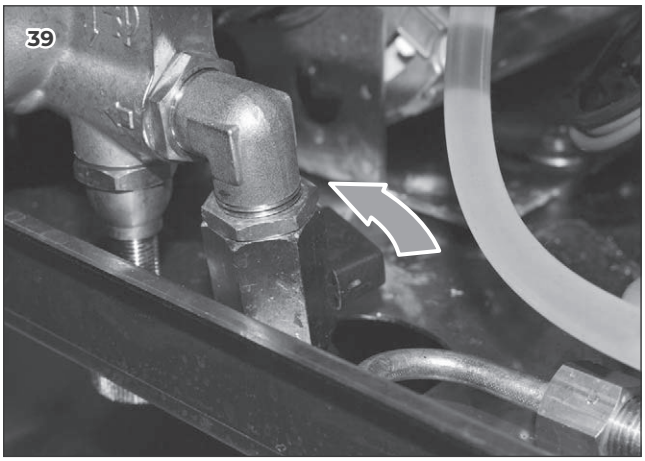
1 Remove the side panels, the cup holder surface, the water collection pan and the lower front panel, as described in Chapter 3.

38



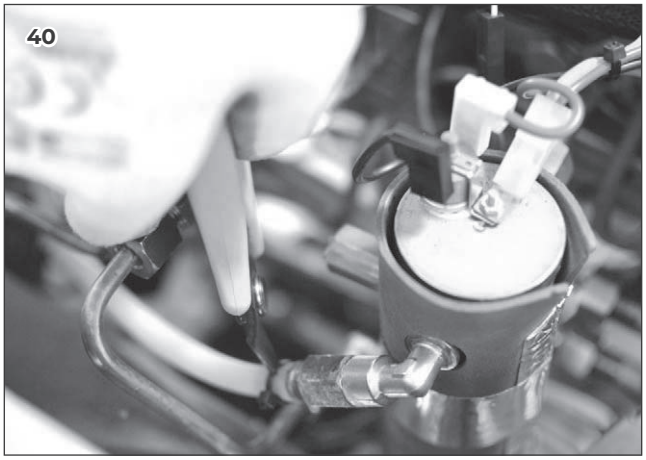
2 Close the pump tap.

39



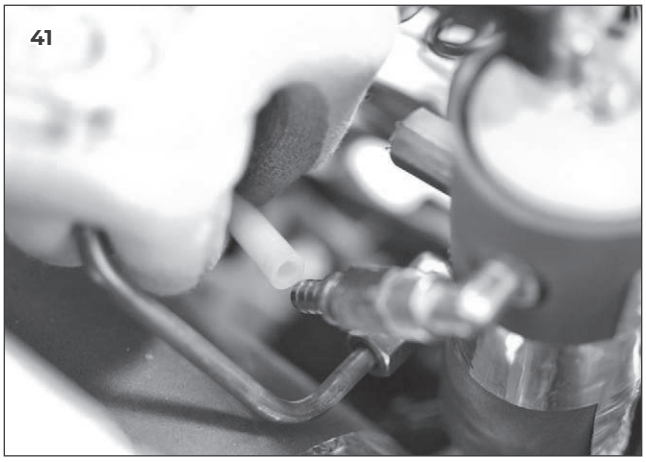
3 Cut the clamp of the exhaust pipe of the expansion valve.

40



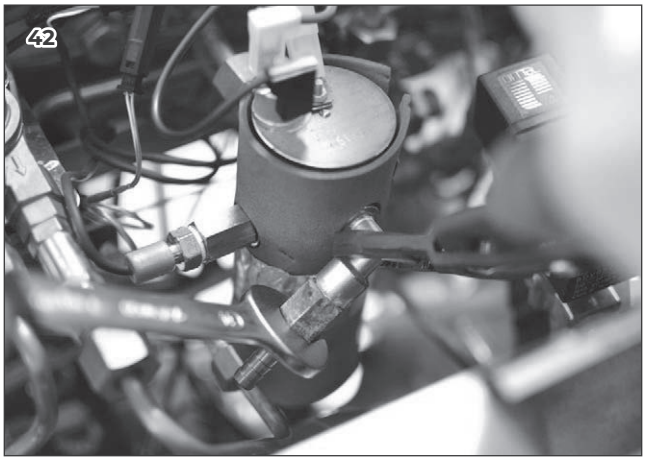
4 Disconnect the exhaust pipe of the expansion valve.

41



5 Utilizing a 14 mm wrench, remove the expansion valve.

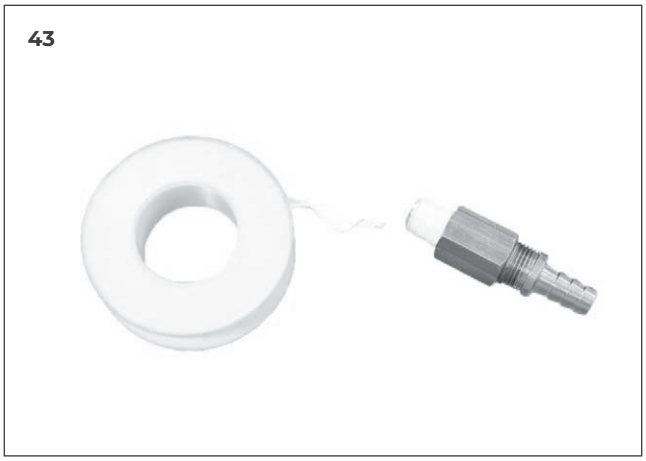
42



NOTE

When replacing the expansion valve, wrap its threading with Teflon tape or use liquid Loctite to prevent leakage.

43

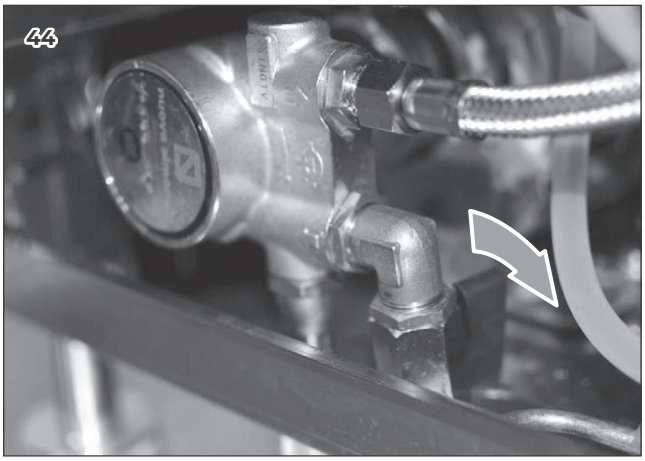


6.6 PROCEDURE FOR AUTOMATICALLY FILLING THE COFFEE BOILER

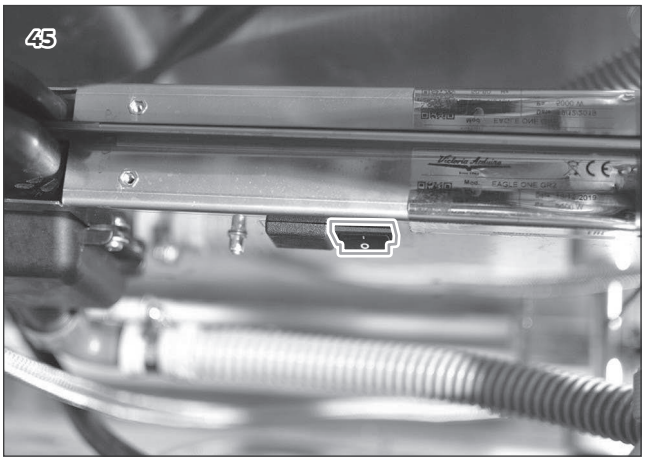
Once the various parts of the coffee boiler, or the boiler itself, have been replaced, it is necessary to carefully fill it to prevent it from starting to heat in the absence of water.
If this were to happen the high-limit thermostat would open the electrical circuit to protect the heating element.

The steps are:

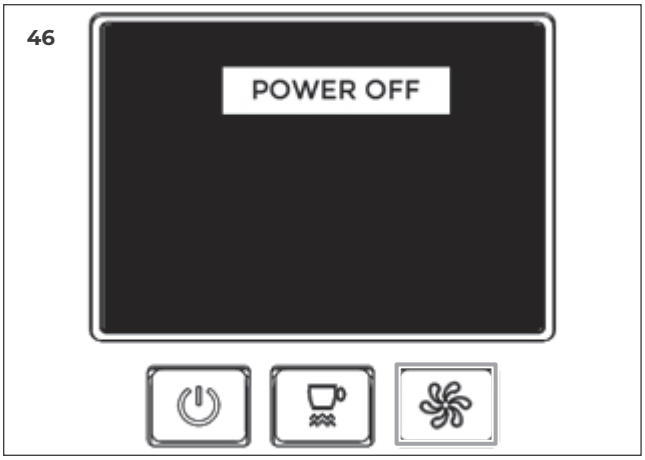
1 Re-open the pump tap.



2 Switch ON (I) the machine by the main switch positioned to the bottom on the right.

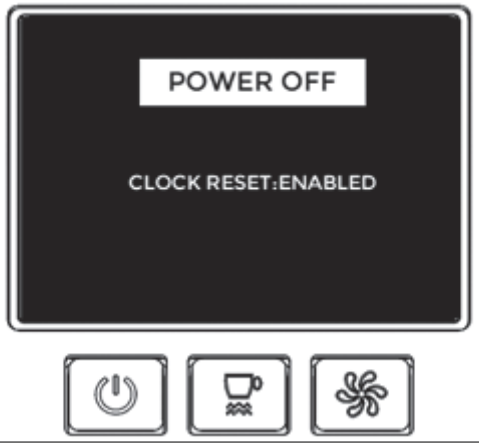


3 When the message **"POWER OFF"** appears on the touch screen, press the key for at least 10 seconds, then leave it.



4 The touch screen will show **"POWER OFF - CLOCK RESET: ENABLED".**

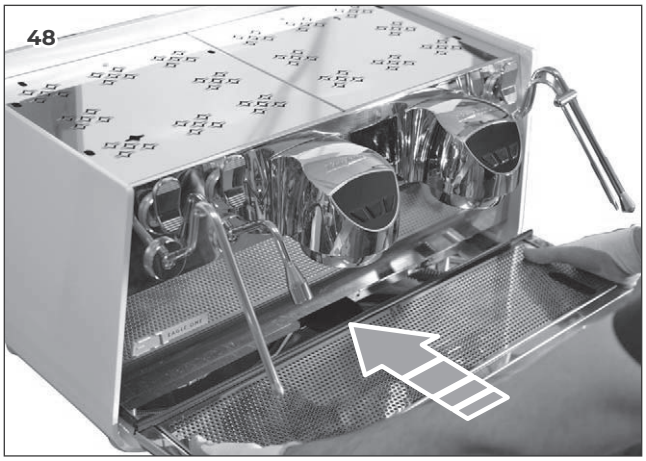
47



WARNING

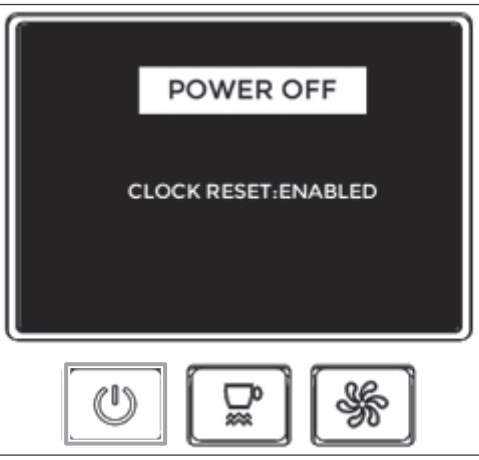
Insert the water collection pan in order to avoid flooding the machine.

48



5 Turn the machine ON by pressing the power button : in this way the operation mode will be that entered at first installation which will properly fill a coffee boilers for about 20 seconds. Wait until the water is uniformly delivered by all groups. If it does not happen, something is not correct. Check and repeat procedure from point 1.

49



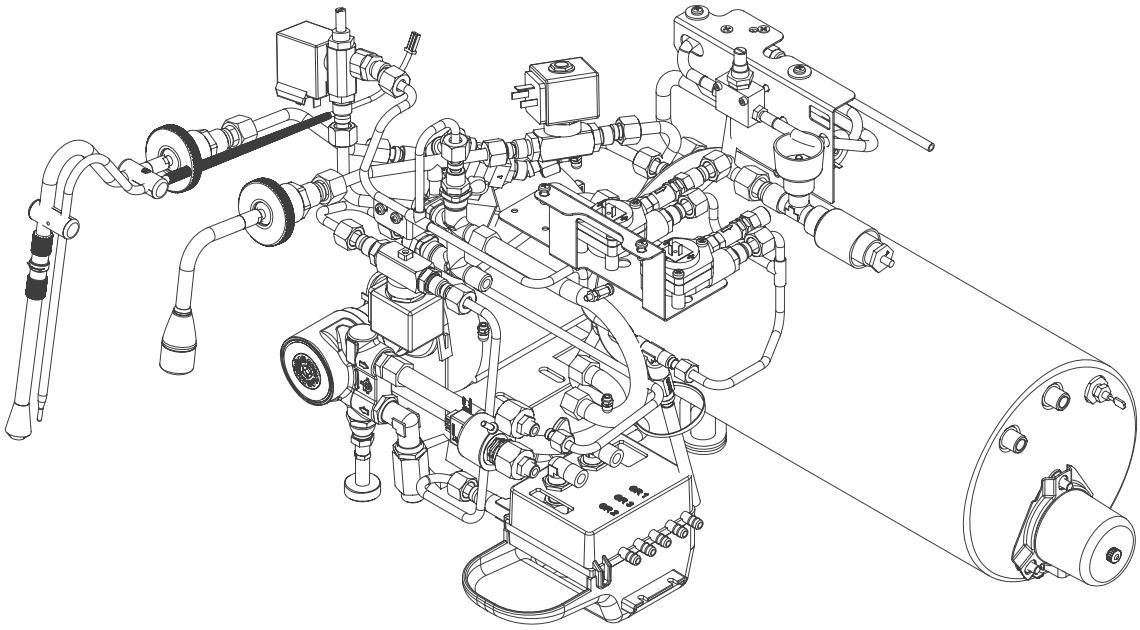
NOTE

If alarm 7 appears on the touch screen, the machine recognizes that there is a problem. Refer to Chapter 10 to know how to proceed.

WARNING

If the boilers are not completely filled with water, this could damage the coffee boilers.

7 HYDRAULIC CIRCUIT



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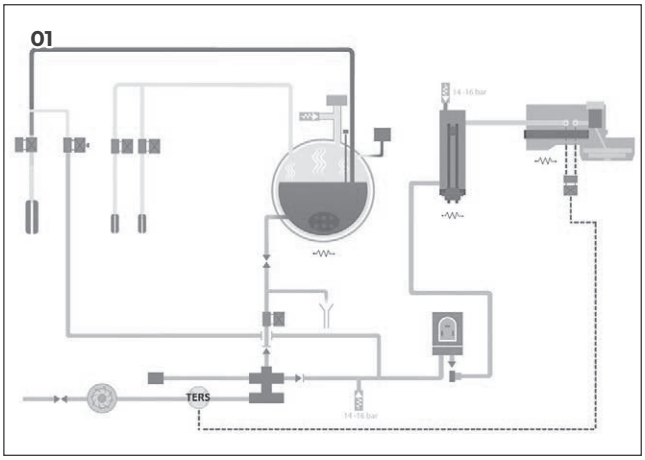
The hydraulic circuit of **Eagle One** follows a new technology: NEO (New Engine Optimization).

The NEO engine uses an instant heating system allowing only the necessary amount of water for the extraction.

To be heated, thus using less amount of water and boilers optimization. Productivity and performance remain constant, while energy efficiency increases.

The hydraulic circuit adds another new technology: TERS (Thermal Energy Recovery System). The TERS uses the discharged water to pre-heat the incoming water. The result is an 8% saving on total machine consumption.

01

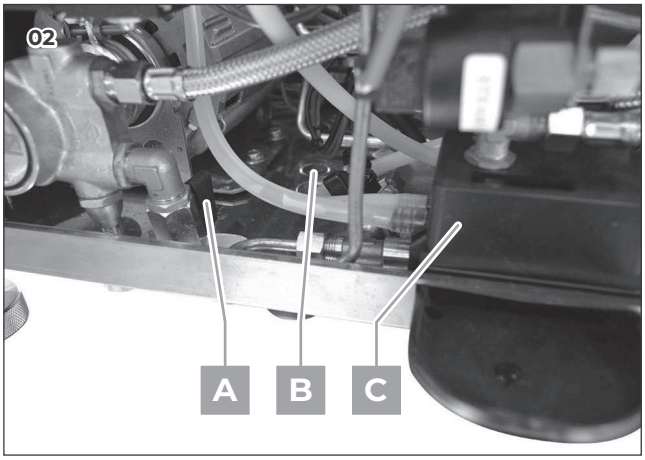


7.1 DRAIN BOX, TERS AND TAPS

To access the hydraulic part at the base of the machine, it is necessary to:

1. Remove the side panels, the water collection pan and the lower front panel, as explained in Chapter 3;
2. Once removed, it is possible to see:
   - A The pump tap to close incoming water;
   - B The service tap to stop the water in the boiler from returning into the circuit;
   - C The drain box and the TERS.

02

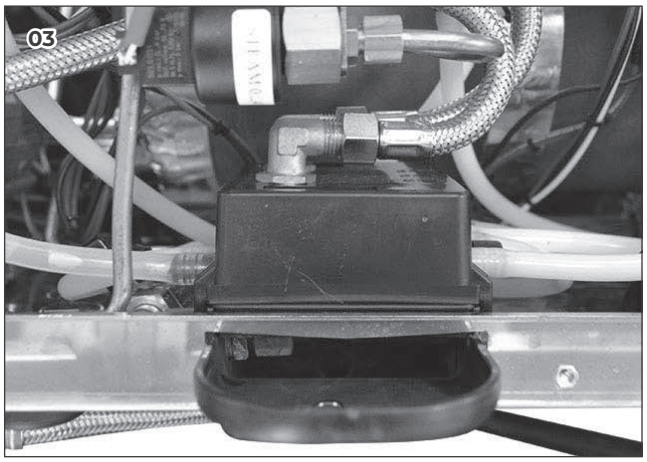


The drain box has a lid to which are connected:

- Two or three silicone pipes from the third outlet of the coffee valves;
- Two silicone pipes from the third outlet of the steam or easy cream valves;
- One silicone pipe from the expansion valve;
- One silicone pipe from the safety valves of the coffee boilers, together in a unique pipe;
- Two stainless steel flexible pipes.

The TERS is under the lid.

03

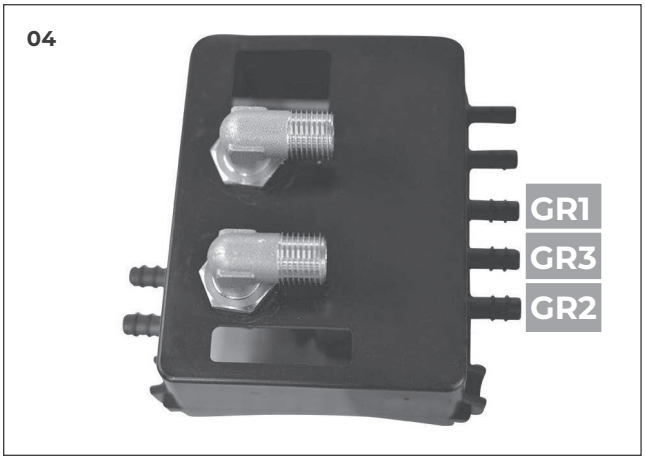


NOTE

The silicone pipes from the third outlet of the coffee valves are connected to specific entries of the lid, labelled with the group number. These pipes bring the exhaust hot water into the TERS.

The stainless steel flexible pipes are the water input and output of the TERS. The cold water enters the TERS and exits it, pre-heated. The order of theses pipes is not important.

04

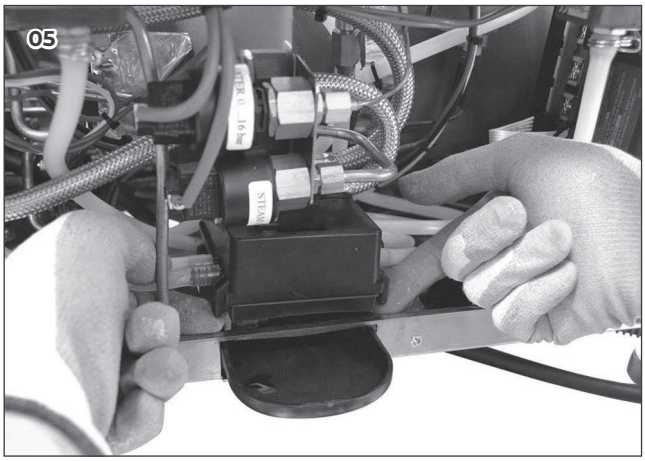


7.I.I OPEN THE DRAIN BOX AND THE TERS

To open the drain box and the TERS, proceed as it follows.

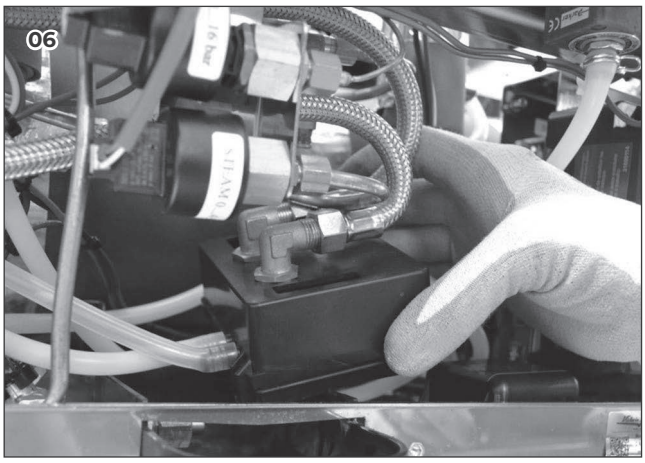
1 Raise the lid by the lateral little wings.

05



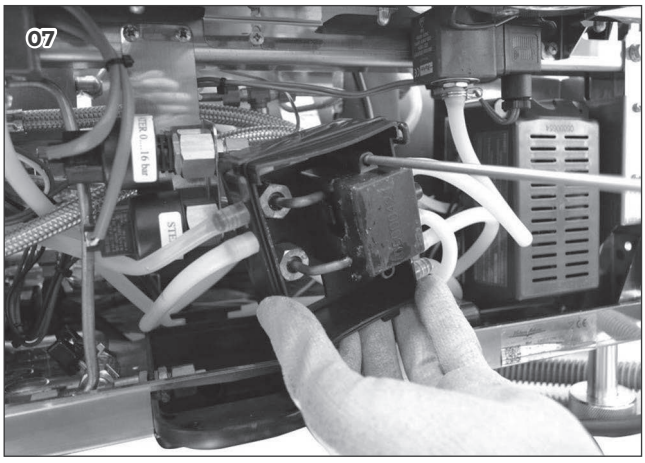
2 Extract the lid from its seat.

06

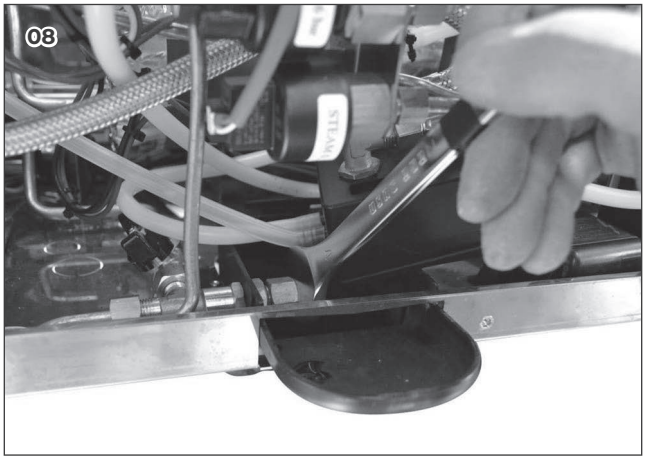


3 The TERS is under the lid. Utilizing a Philips screwdriver, remove the two screws.

07

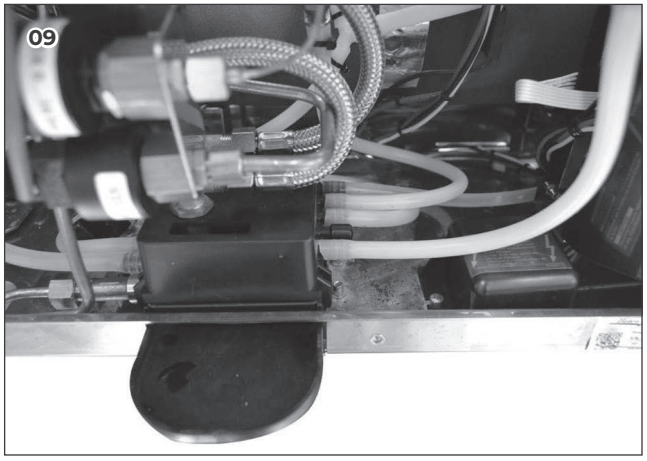


The nut used to empty the boiler is located inside the drain box. Utilize a 17 mm wrench to remove it.



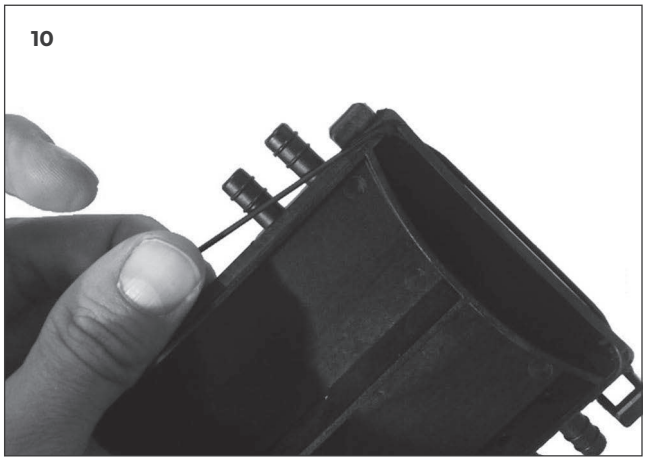
NOTE

The lid of the drain box can have unused rubber fittings. These must be appropriately obstructed.



NOTE

The o-ring of the lid must be perfectly positioned in its seat to ensure maximum grip.



NOTE

To close the drain box, start by placing the back of the lid, than push the lateral little wings.

7.2 THE PUMPING ELEMENT

The pump is located on the left side of the machine. The duration of the pump depends on the amount of daily work and the quality of the water. The machine pressure set by the factory is ideal for the extraction of the coffee: 9 bar.

When to replace the pump

- **It is noisy:** if the impurities enter inside the pump, the blades of the impeller may block, therefore making it impossible to load water.
- **Pressure not adjustable:** with time the impeller blades can wear out, therefore if it is not possible to adjust the pressure with the appropriate wheel it would be necessary.
- **Pressure fluctuation during dispensing:** the bypass or the impeller are damaged.

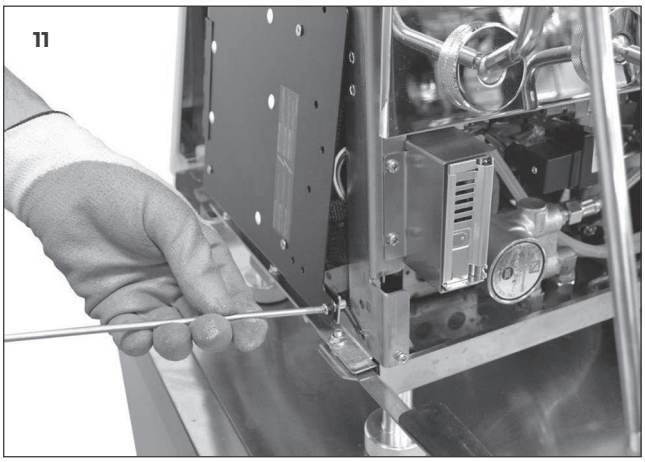
7.3 REMOVAL OF THE PUMP

If the pump needs to be removed, it is necessary to:

1 Remove the side panels, the water collection pan and the lower front panel as described in Chapter 3.

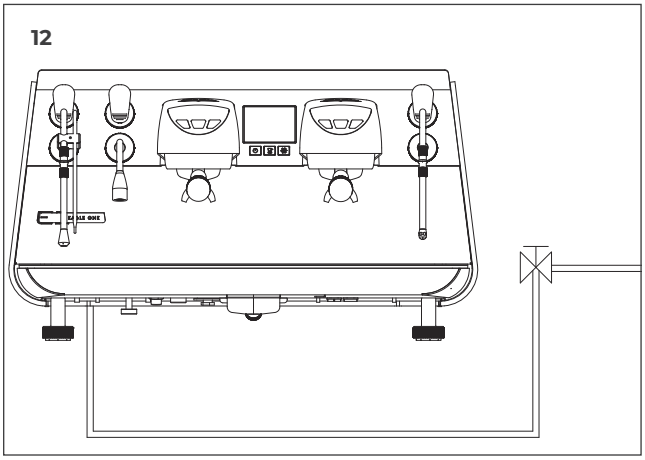
2 Utilizing a Philips screwdriver, remove the screw and open the panel that blocks the control unit box.

11

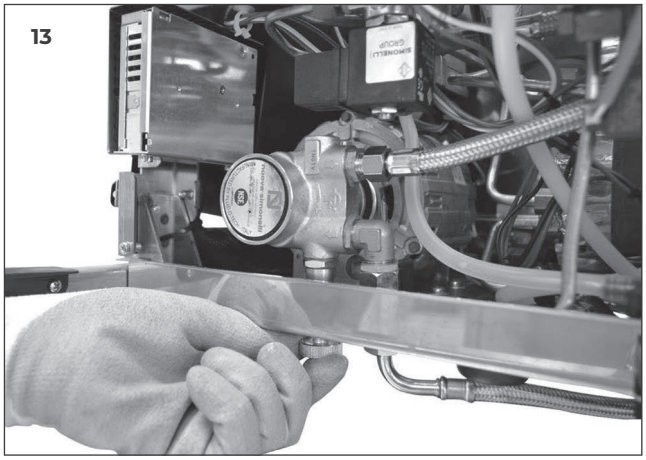


3 Close the water inlet tap upstream of the machine.

12



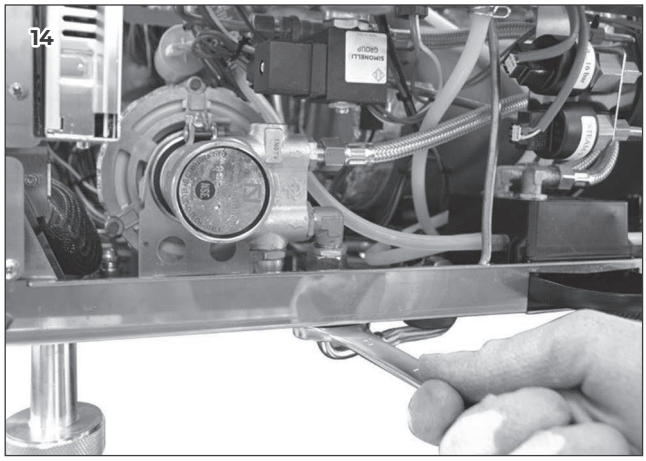
4 Completely unscrew and remove the pressure control wheel.



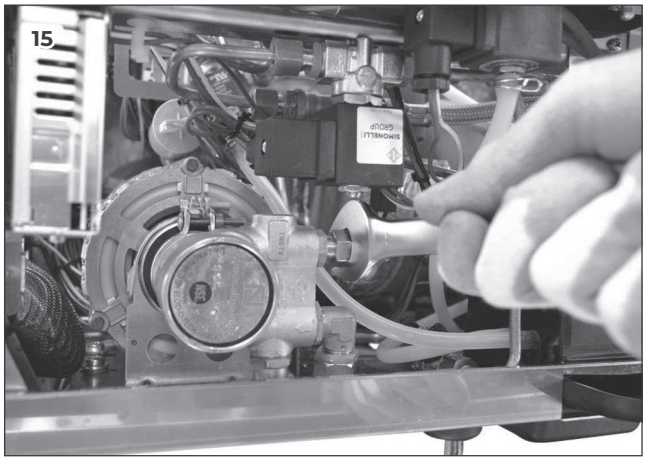
NOTE

Notice that the pressure control wheel contains a spring.

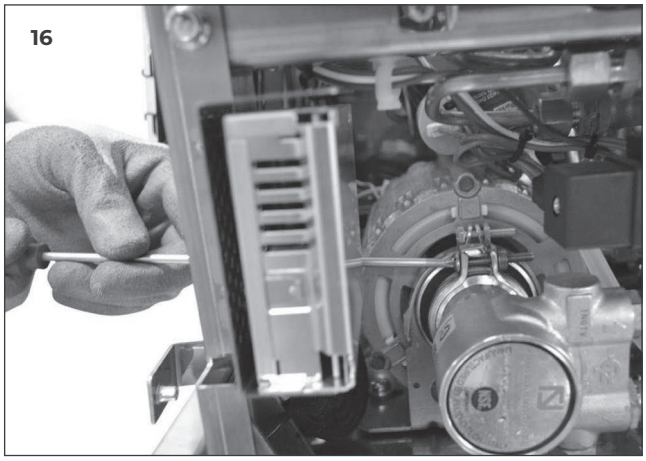
5 Utilizing a 20 mm wrench, disconnect the water inlet pipe.



6 Utilizing a 17 mm wrench, disconnect the outgoing flexible pipe from the pump.

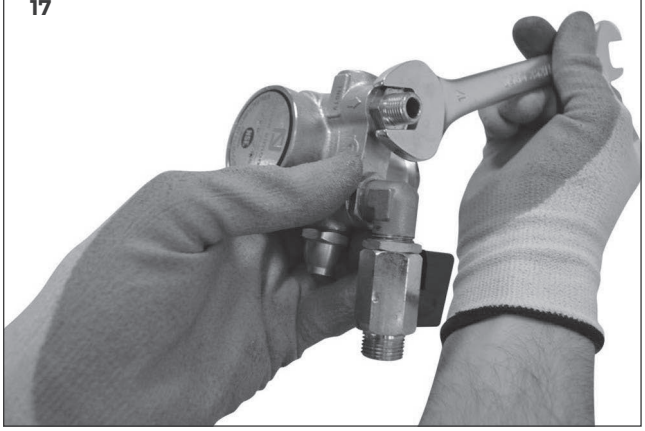


7 Unscrew the metal hose clamp that keeps the pump attached to the motor and remove it.



8 Utilizing a 21 mm wrench and a 17 mm one, unscrew the unions and adapt them to the new pump utilising Teflon tape to seal the part.

17



7.4 REMOVAL OF THE CONDENSER

DANGER

Before proceeding with the operations described in the Chapter make sure that the machine is turned OFF and unplugged from the mains.

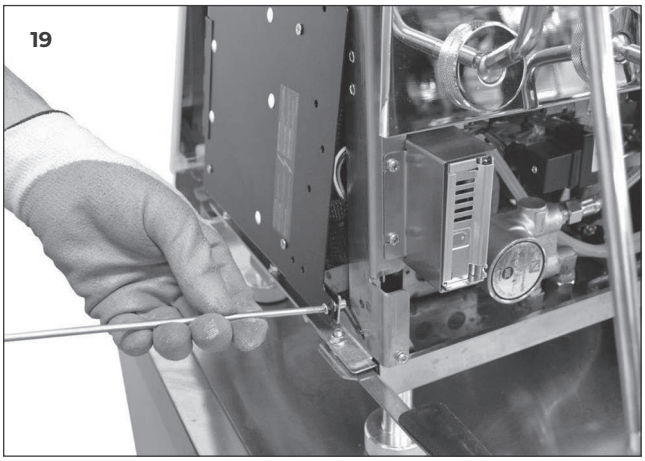
18

To remove the condenser, proceed as it follows.

1 Remove the left side panel, as described in Chapter 3.

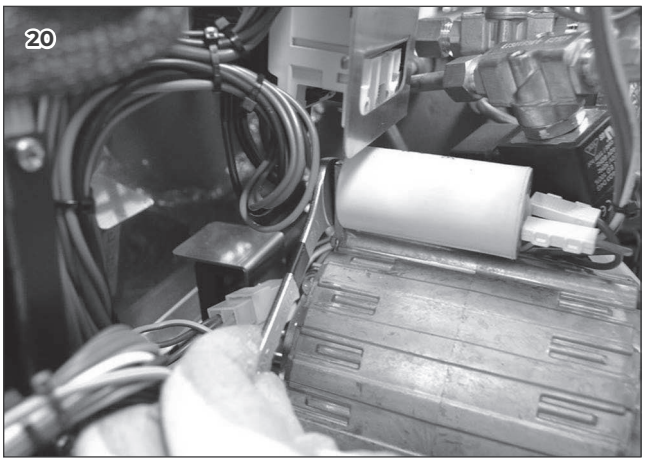
2 Utilizing a Philips screwdriver, remove the screw and open the panel that blocks the control unit box.

19



3 Utilizing a 13 mm wrench, remove the bolt that holds it to the motor.

20



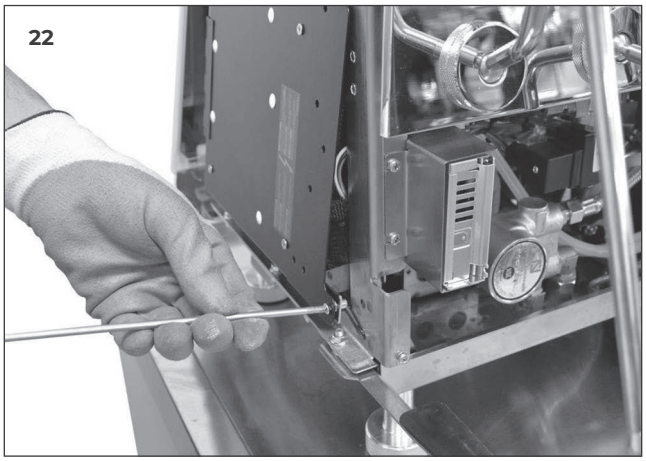
4 Disconnect the sockets and remove the capacitor.

7.5 REMOVAL OF THE MOTOR

To remove the motor, proceed as it follows:

1 Remove the left side panel, the water collection pan and the lower front panel as described, in Chapter 3.

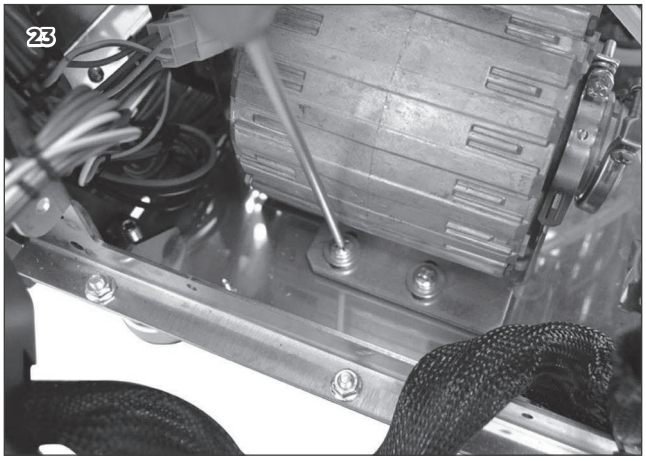
2 Utilizing a Philips screwdriver, remove the screw and open the panel that blocks the control unit box.



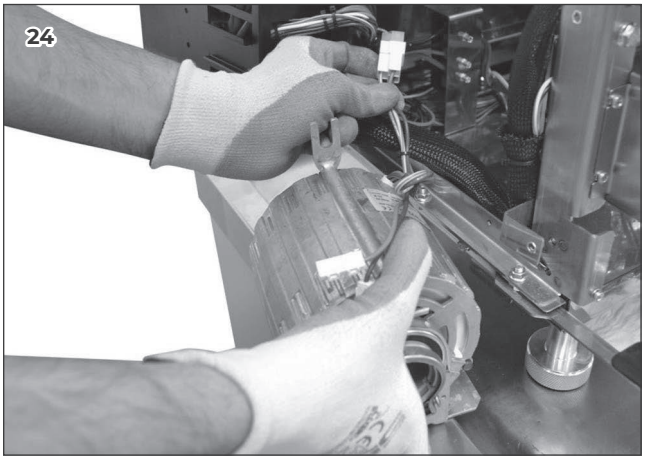
3 Remove the pump as illustrated in the paragraph 7.3.

4 Remove the condenser as described in the paragraph 7.4.

5 Unscrew the four screws that hold the motor.



6 Carefully remove the motor from the left side and disconnect power connections.

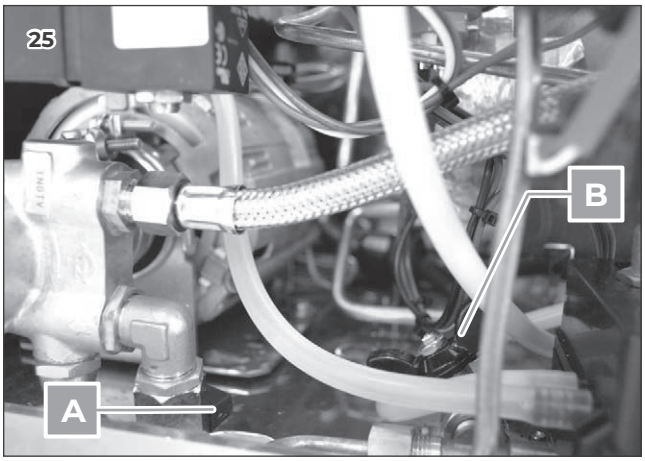


7.6 REMOVAL OF THE AUTO-FILL VALVE

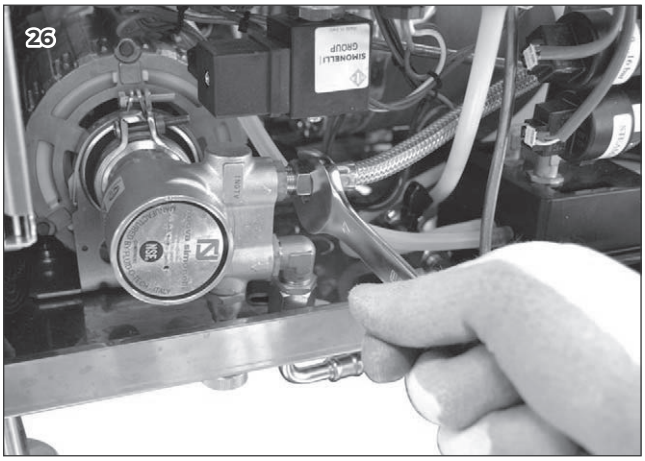
The auto-fill valve is positioned on the front side of the machine, over the pumps. Its operation regulates the amount of water that flows inside the heater during all phases of machine operation. The control unit continuously interrogates the level sensor and opens the valve if the level of water in the boiler is not sufficient to cover the heating element.

To remove the auto-fill valve it is necessary to:

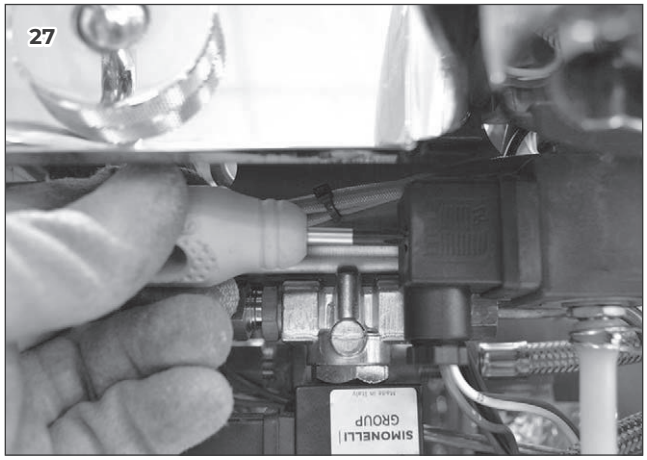
1 Remove the side panels, the water collection pan, the lower front panel and the cup holder surface as described in Chapter 3.
2 Close the pump tap (**A**) and the service tap (**B**).



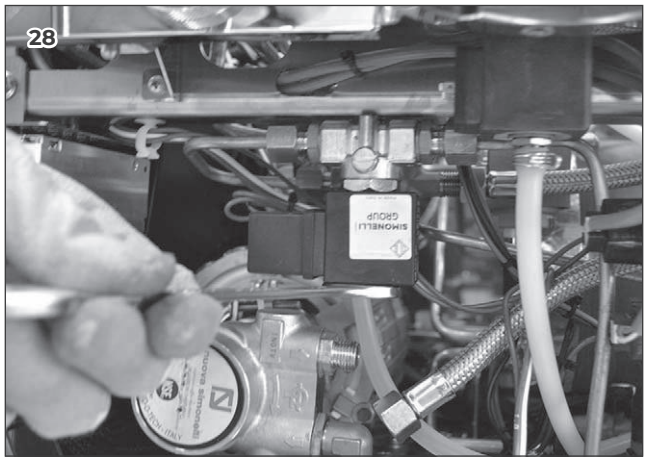
3 Utilizing a 17 mm wrench remove the outgoing flexible pipe from the pump.



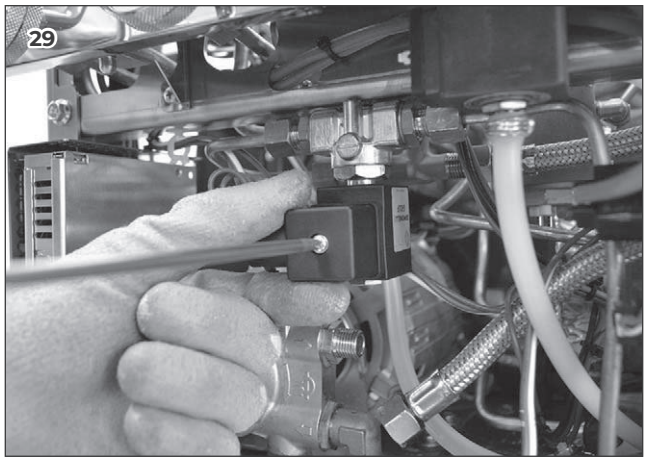
4 Utilizing a Philips screwdriver, unscrew and remove the head of the coffee valve of the first group.



5 Utilizing a 14 mm wrench, loosen the nut and rotate the coil of the auto-fill valve.

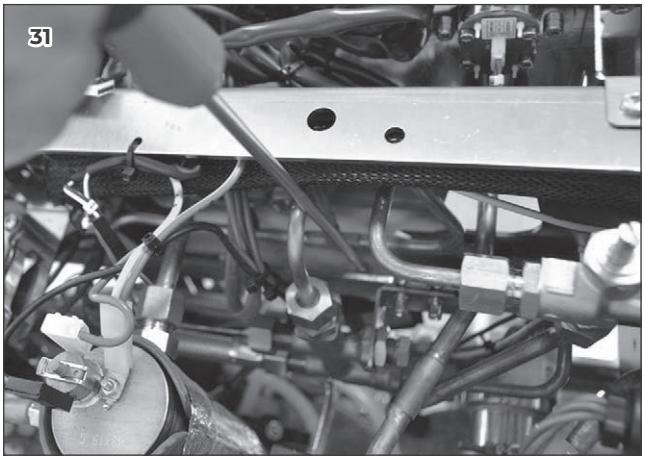


6 Utilizing a Philips screwdriver unscrew and remove the head of the auto-fill valve.



7 Utilizing two 17 mm wrenches, disconnect the incoming and outgoing pipes from the auto-fill valve.

8 Utilizing a Philips screwdriver, from the top of the machine remove the screw fixing the auto-fill valve to the frame.



NOTE

When reassembling the auto-fill valve, start by fixing the valve to the frame with the screw, but not by tighten it completely, otherwise to fix the copper pipes to the valve could be difficult.

NOTE

When reassembling the auto-fill valve, once everything has been connected, do not forget to open the pump tap and the service tap.

7.7 FLOWMETER AND NOT RETURN VALVE

For each group there is a flowmeter, also called fan.

They are located on the top of the machine, under the cup holder surface.

The issues related to the flowmeter are those that can be found when dosing coffee, therefore only when using the pre-set dosage buttons.

WHEN TO INTERVENE

The most common errors that you may encounter are:

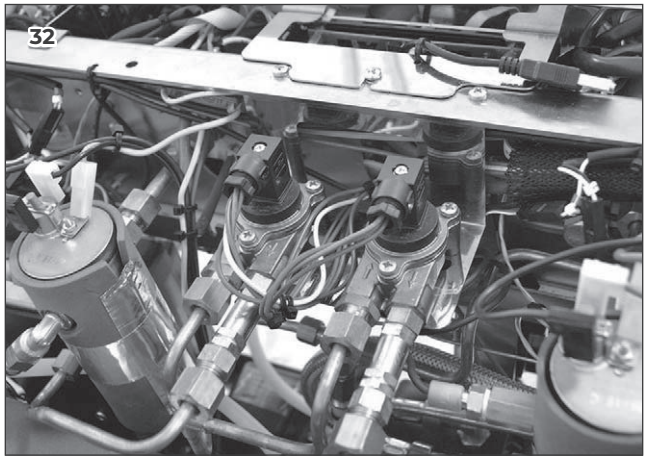
1. Wires disconnected accidentally or unintentionally (e.g. after replacing a card).
2. There are impurities in the filter at the entrance of the fan.
3. The coil of the magnetic sensor has deteriorated and no longer reads the values correctly.
4. The not return valve is blocked.
5. By pressing a button on one group dispensing begins on another group or on multiple group simultaneously.

If one of these cases occurs, pressing one of the settable buttons, the machine does not make coffee and does not stop (obstruction to the limit), or it can happen that the delivery does not stop as planned.
In these cases the machine could signal alarm 1.
Moreover, the key pressed with the settable button will flash to highlight a malfunction.

NOTE

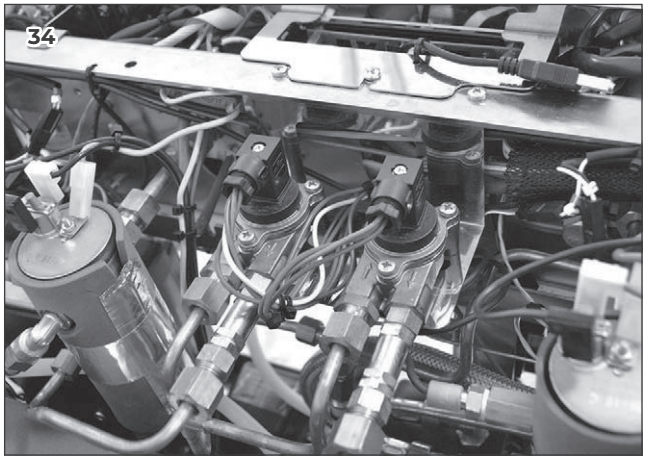
For further information on the flowmeter alarm, refer to Chapter 10.

32



33

34



Even if the programmed doses do not work, the machine will always operate in semi-automatic mode using only the start/stop button until the arrival of the technician.

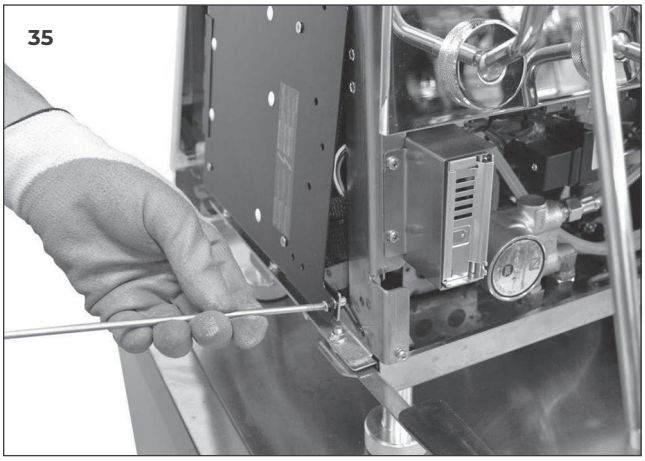
To verify that the fan is effectively locked you can:

1 Check function by measuring the voltage supplied to the control unit during a delivery.
2 Directly inspect the part.

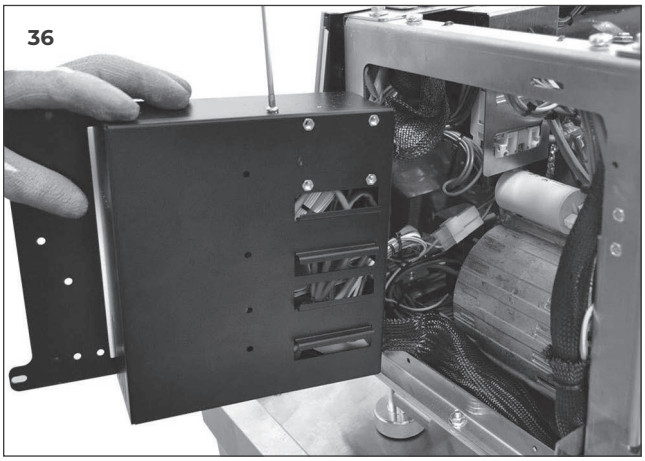
HOW TO VERIFY THE SIGNAL OF THE FLOWMETER

To measure the signal it is necessary to access to the electronic board located on the left side.

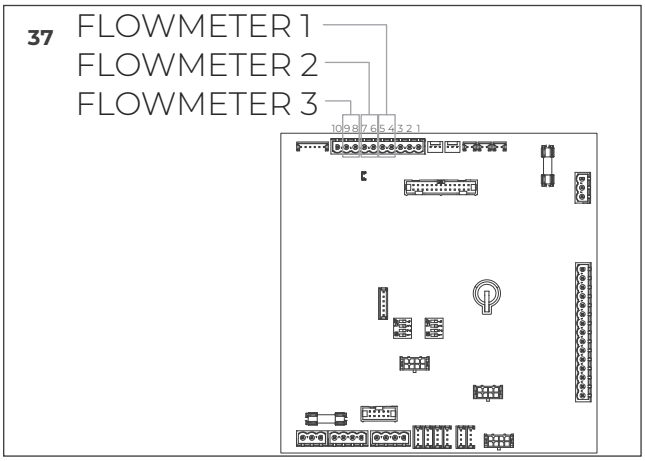
1 Remove the left side panel as shown in Chapter 3.
2 Remove the screw to open the flap.


35

3 Access the board by loosening the top and bottom screws with a Phillips screwdriver.


36

4 With a tester measure the voltage alternating between the ends of the faulty flowmeter (see figure). Place the tester caps at the terminals of the doser using the references in the image.



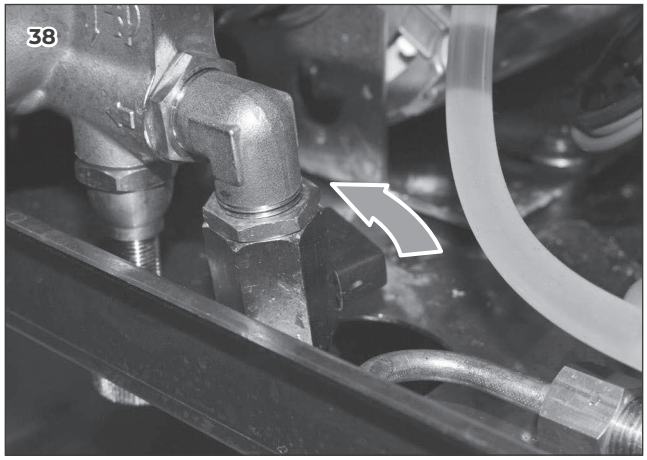
The signal generated by the fan is a square wave of about 5V.
If the dispenser is damaged we cannot read anything.

7.7.1 REMOVAL OF THE FLOWMETER

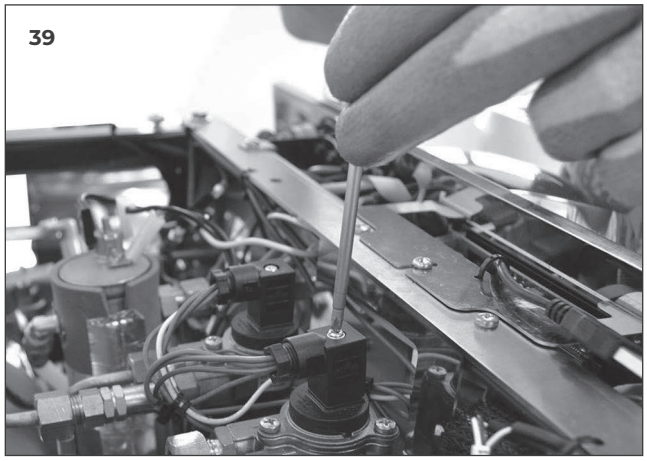
Operate as follows if it is necessary to inspect or remove the flowmeter:

1 Remove the side panels, the cupholder surface, the water collection pan and the lower front panel, as described in Chapter 3.

2 Close the pump tap.



3 Utilizing a Philips screwdriver, unscrew and remove the head from the flowmeter.



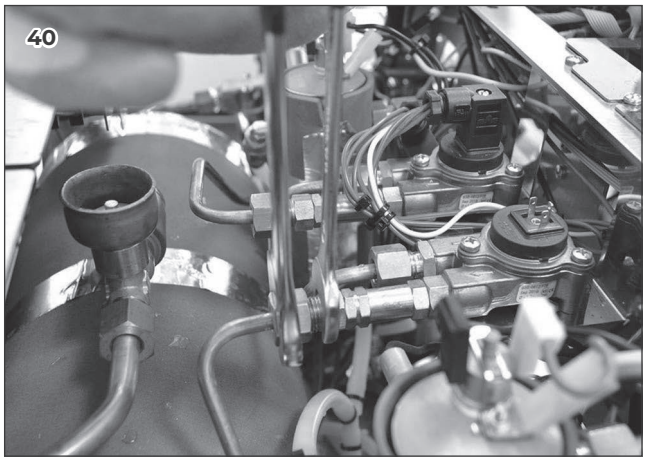
NOTE

Even if it is needed to remove only one flowmeter, it is necessary to disconnect copper pipes from all flowmeters.

NOTE

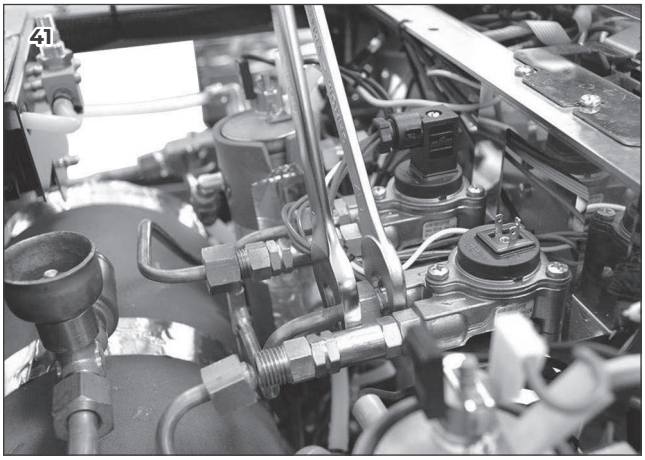
Position a cloth or absorbent paper underneath the small fan.

4 Utilizing a 17 mm wrench and a 14 mm one, remove the outgoing copper pipes from all flowmeters.



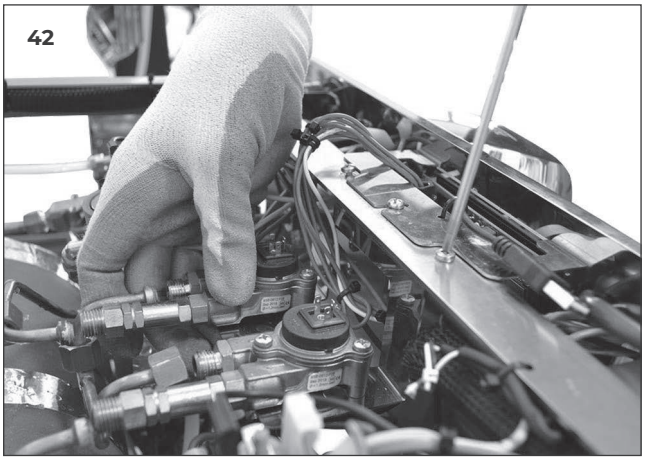
5 Utilizing two 17 mm wrenches, remove the incoming copper pipes from all flowmeters.

41



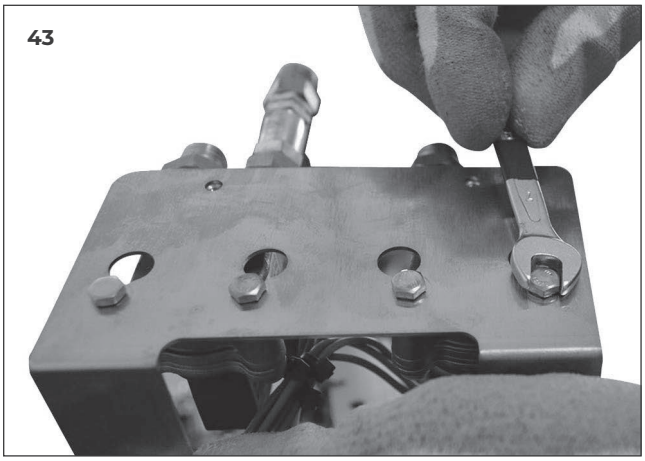
6 Keep the plate where flowmeters are located and, utilizing a Philips screwdriver, remove the two screws fixing the plate to the frame.

42



7 Utilizing a 7 mm wrench, remove the two screws fixing the flowmeter to the plate.

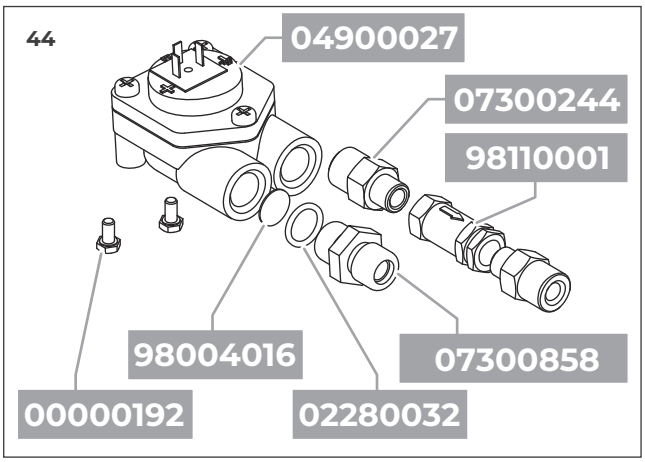
43



The flowmeter is made of various parts, as shown in the picture.

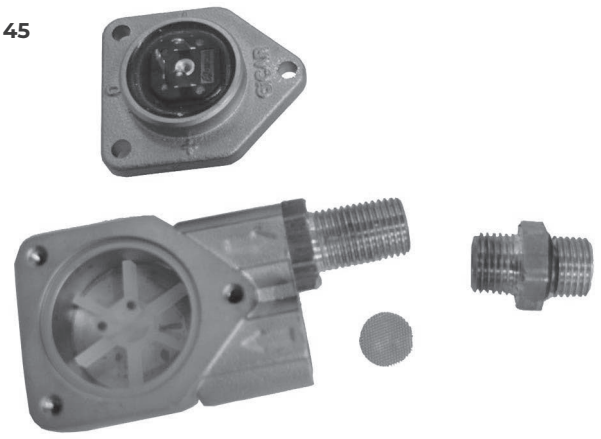
It is good practice to substitute the gaskets each time it is completely inspected.

44



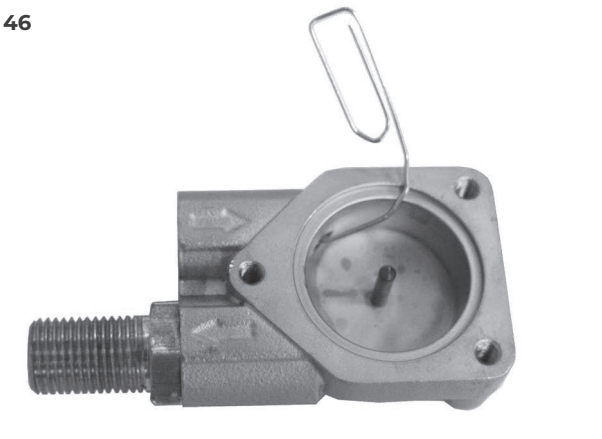
Check that there is no limestone in the fan input grid, unscrew the three screws that hold the cover and check that there is nothing to obstruct the regular operation.

45



To remove the filter, if it is particularly clogged, you can use a simple piece of wire to push the filter, if necessary even a common clip is sufficient.

46



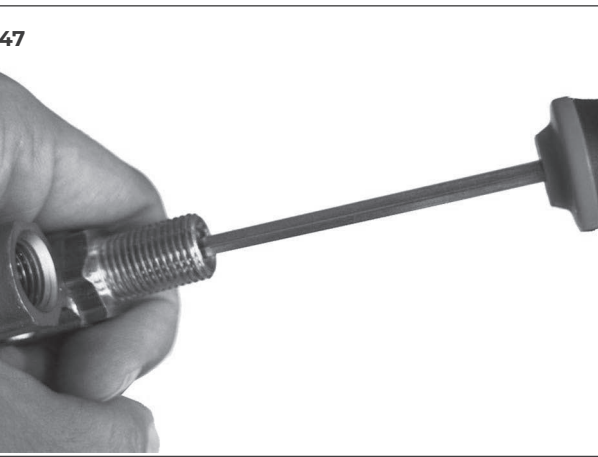
7.7.2 REMOVAL OF THE PRE-INFUSION RESTRICTOR

Attention must be given to the restrictor at the exit from the flowmeter. It is called pre-infusion restrictor, since its size effects the pre-infusion time: bigger is the size, shorter is the pre-infusion.

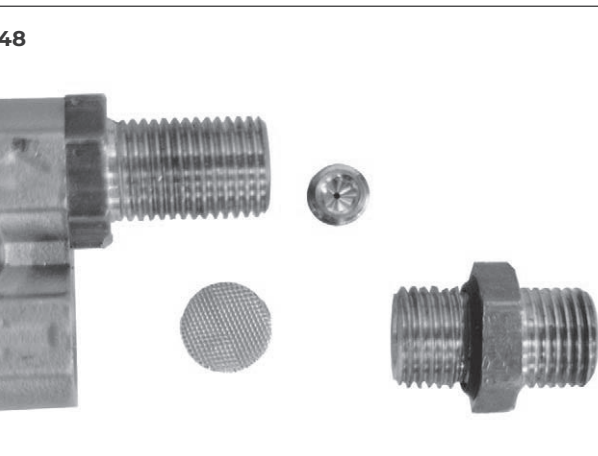
The default restrictor is 0.5 mm and an optional one of 0.8 mm is available.

Impurities of the water can obstruct the restrictor and clog the brewing. To remove, clean or change it, use a 4 mm Allen key.

47



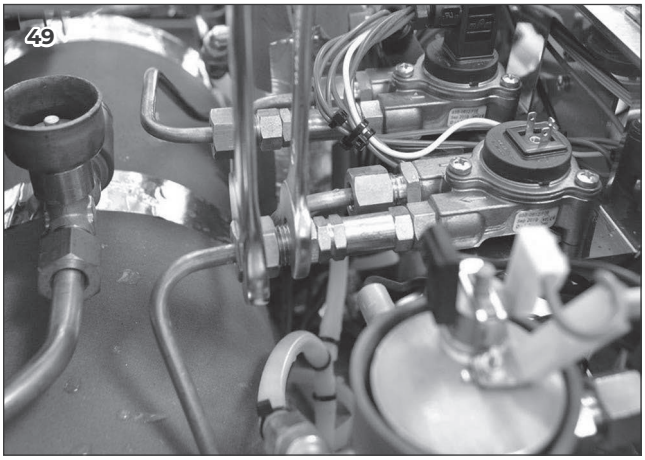
48



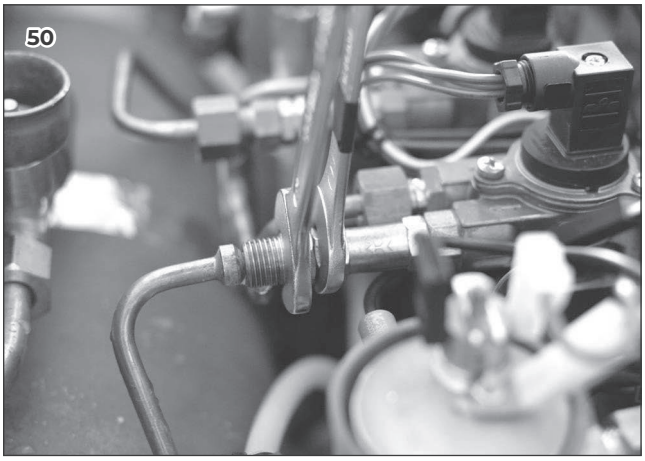
7.7.3 REMOVAL OF THE NOT-RETURN VALVE

The not return valve is accessible once the flowmeter has been removed, but is possible to access it also without to remove the flowmeter, in the following way:

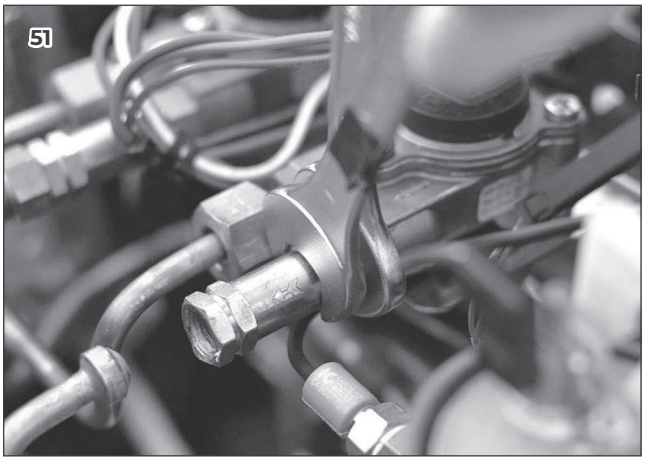
1 Utilizing a 17 mm wrench and a 14 mm one, remove the outgoing pipe from the flowmeter.



2 Utilizing a 13 mm wrench and a 14 mm one, remove the fitting.



3 Utilizing a 14 mm wrench and a 13 mm one, remove the not return valve.



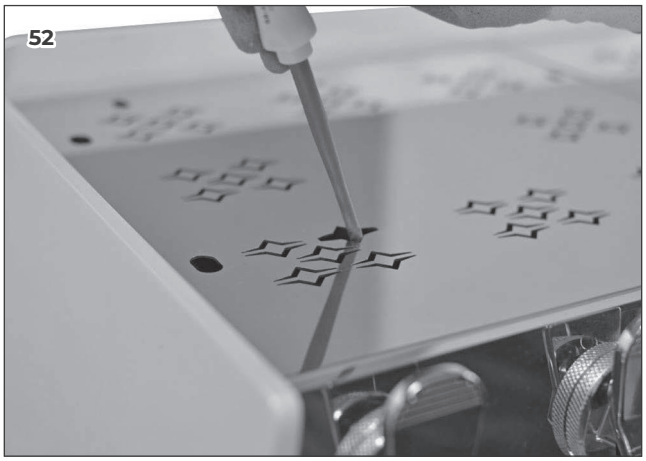
NOTE

We recommend changing the not return valve located down-stream of flowmeter at least once a year.

7.8 HOT AND COLD WATER VALVE

The **Eagle One** is provided with a cold water valve with adjustable mixer.
In this way the outlet water temperature can be lowered by mixing hot water from the boiler with cold water from the network, thus reducing the levy in the boiler and consequently saving on heating.
For this reason it is commonly called economizer of hot water.

HOW TO ADJUST THE TEMPERATURE
To adjust the temperature, simply use a flat screwdriver while the water is running.
To reduce the temperature, rotate the screw positioned on the left side of the cup holder surface in an anticlockwise direction. To increase the temperature, turn the screw in a clockwise direction.


52

NOTE

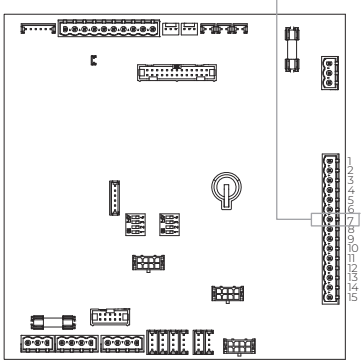
Do not reduce the temperature too much, otherwise the valve could emit an annoying noise.

WHEN TO INTERVENE
Problems that can be encountered in the economizing unit are:
1 Failure to deliver water.
2 Delivers only hot or only cold water.
3 Continuous dripping.
4 Erroneous programming.

Cases **1**, **2** and **3** are due to malfunction of the valves so you need to access them and verify that they are working properly.
The valve may stop operating due to electrical problems or is not working properly due to obstructions for example caused by pieces of limestone that detach from the boiler and clog the valve.
If both valves do not work and the classic opening and closing noise is not heard, there could be a problem with the relay in the control unit, therefore it is necessary to directly measure the voltage with a tester while water is being dispensed.

Position the tip at the point shown in the figure during delivery, considering that the hot water and cold water valves are parallel, simply verify the operation of this relay to check both valves.

53



7.8.1 REMOVAL OF THE HOT WATER VALVE

To remove the hot water valve, it is necessary to:

1 Lower the steam boiler pressure by following the procedure described in paragraph 5.1.

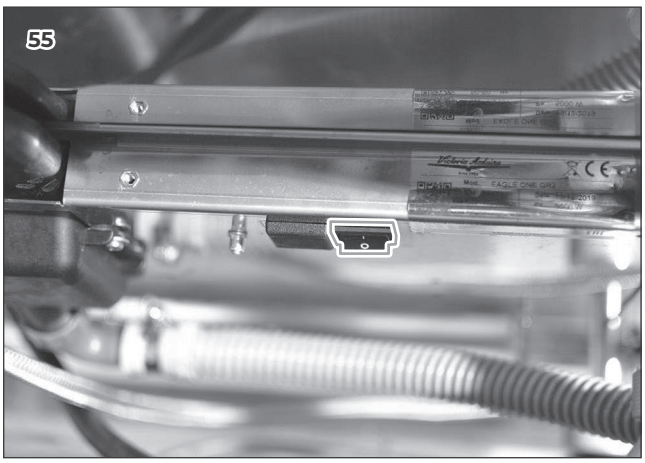
54

NOTE

It is not possible to operate with pressure in the steam boiler.

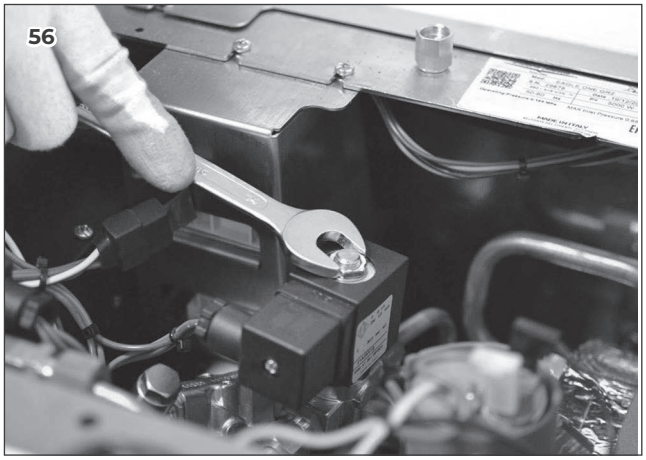
2 Turn the machine OFF.

55

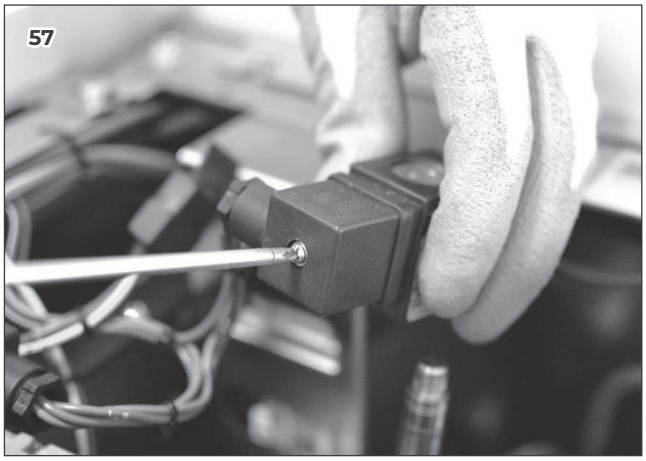


3 Remove the first module of the cup holder surface, as described in Chapter 3.

4 Utilizing a 14 mm wrench, unscrew the nut and remove the coil of the valve.



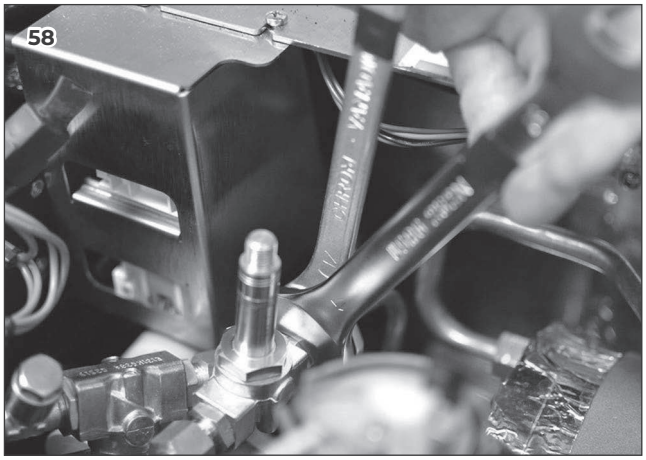
5 Utilizing a Philips screwdriver, unscrew and remove the head.



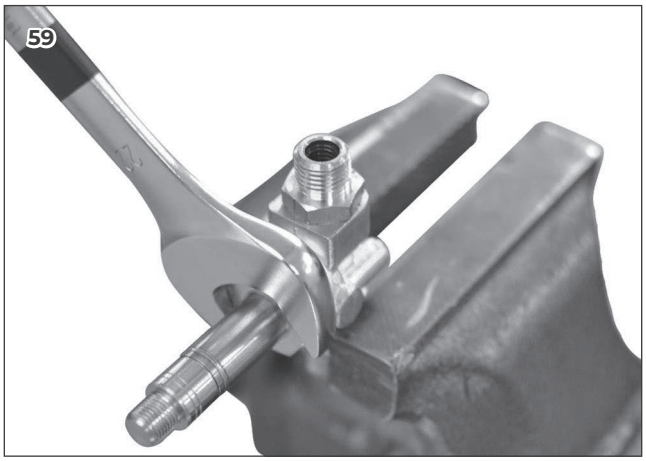
NOTE

It is advisable to place a cloth or absorbent paper underneath the valve to avoid potential electrical damages.

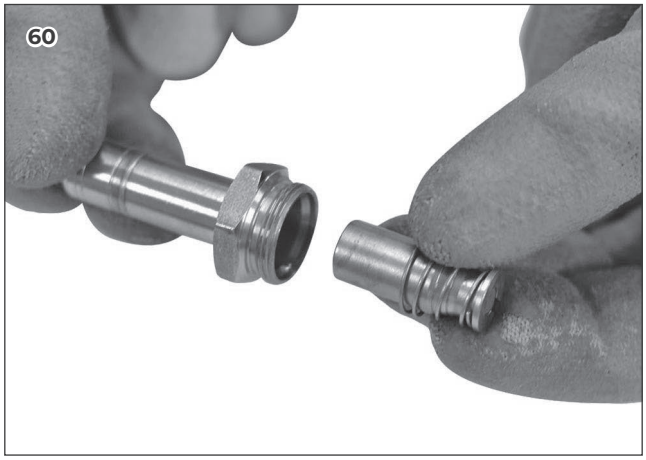
6 Utilizing two 17 mm wrenches, disconnect the incoming and outgoing copper pipes from the valve.



7 Utilizing a vice and a 22 mm wrench, unscrew the valve base.



8 Check that the spring is working properly and that the inner cylinder is clean.



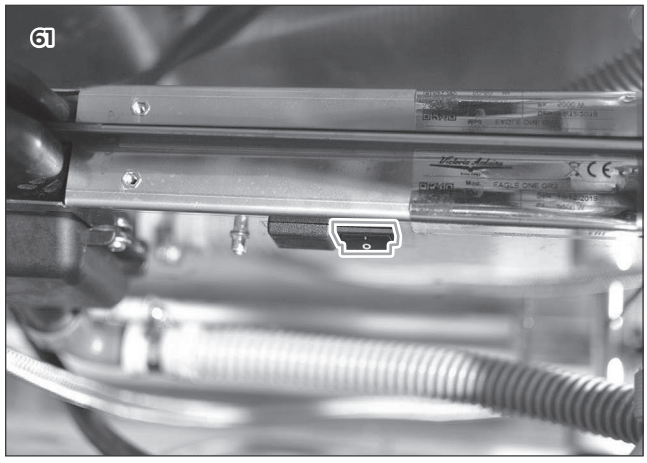
NOTE

If there is nothing visible that affects its use, replace the valve completely.

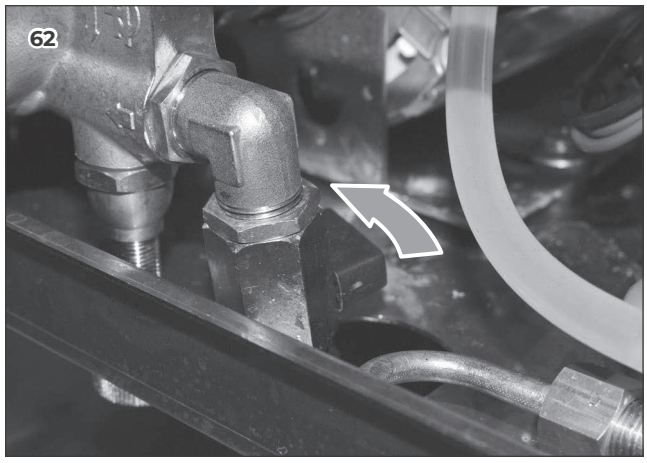
7.8.2 REMOVAL OF THE COLD WATER VALVE

To remove the cold water valve, it is necessary to:

1 Turn the machine OFF.
2 Remove the side panels, the first module of the cup holder surface, the water collection pan and the lower front panel, as described in Chapter 3.



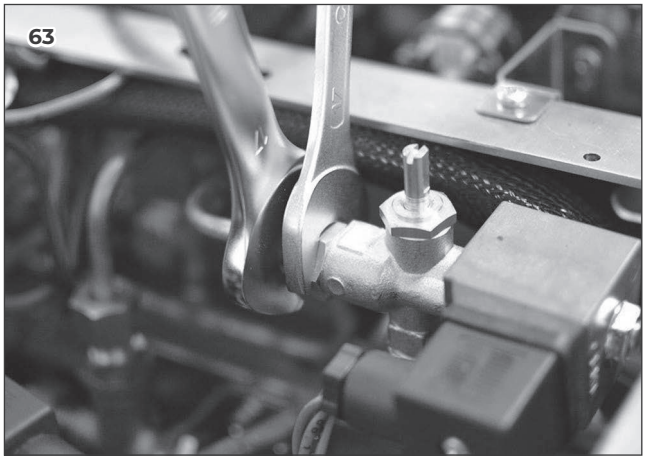
3 Close the pump tap.



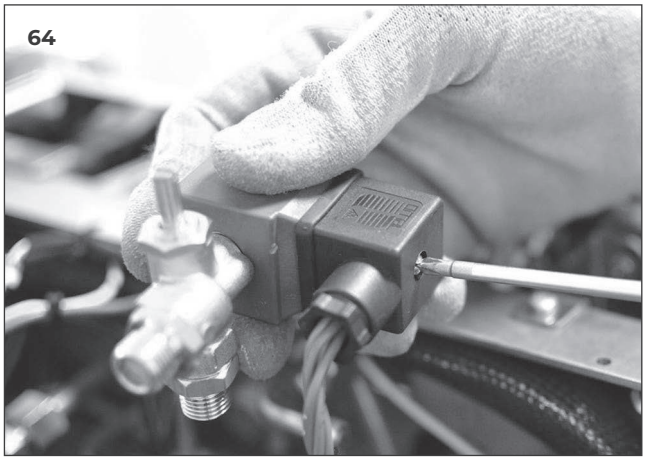
NOTE

It is advisable to place a cloth or absorbent paper underneath the valve to avoid potential electrical damages.

4 Utilizing two 17 mm wrenches, disconnect the incoming and outgoing copper pipes from the valve.


63

5 Utilizing a Philips screwdriver, unscrew and remove the head.


64

Since the cold water valve is connected with a tap, it may be necessary to replace the whole part.

7.9 STEAM VALVE

Eagle One is not provided with a mechanical steam tap controlled by a manual lever, but with a three-way solenoid valve controlled electronically. This will reduce the needed maintenance to maintain a constant functioning of the steam service.

NOTE

The same steam valve, in the same position, is used for the Easycream (optional).

WHEN TO INTERVENE

Problems that can be encountered in the steam service are:

1 Failure to deliver steam.
2 Continuous low steam flow.
3 Erroneous programming.

Cases **1** and **2** are due to malfunction of the valve so you need to access it and verify that it is working properly.
The valve may stop operating due to electrical problems or is not working properly due to obstructions for example caused by pieces of limestone that detach from the boiler and clog the valve.

If the valve does not work and the classic opening and closing noise is not heard, there could be a problem with the relay in the control unit, therefore it is necessary to directly measure the voltage with a tester while steam is being dispensed, positioning the tip at the point shown in the figure during delivery.

7.9.1 REMOVAL OF THE STEAM VALVE

To remove the steam valve, both the left and the right one, proceed as it follows.

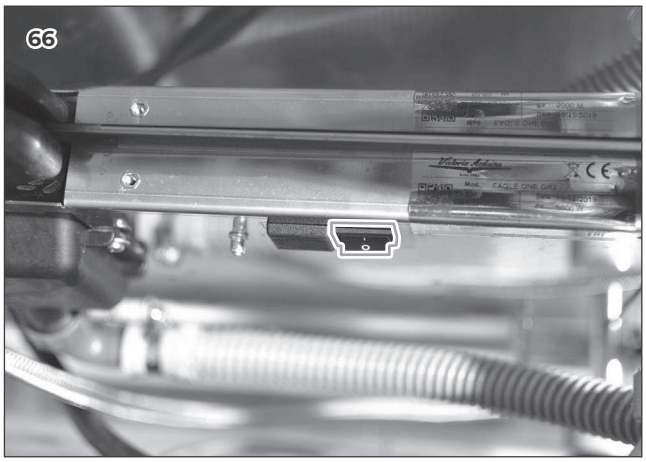
1 Lower the steam boiler pressure by following the procedure described in paragraph 5.1.

NOTE

It is not possible to operate with pressure in the steam boiler.

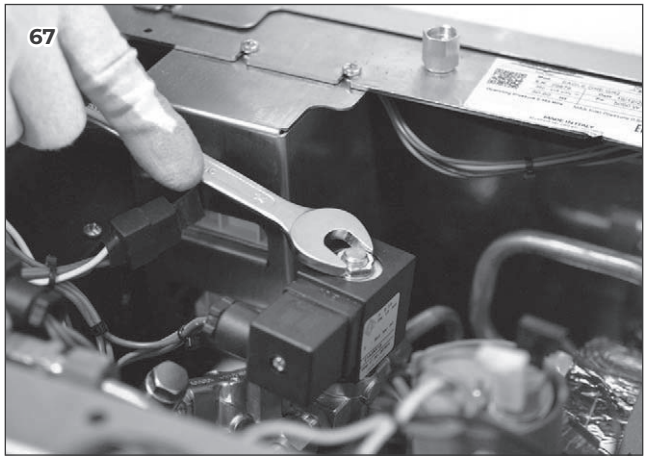

65

2 Turn the machine OFF.



3 Remove the first module of the cup holder surface, in case of the left steam valve, or remove the right side panel, in case of the right steam valve, as described in Chapter 3.

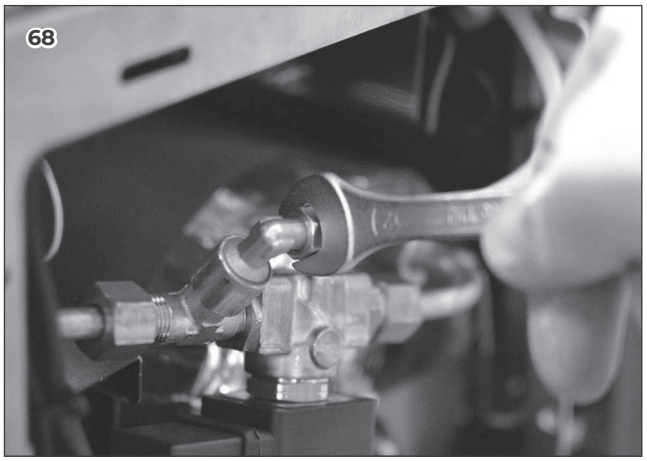
4 In case of the left steam valve, utilizing a 14 mm wrench, unscrew the nut and remove the coil of the hot water valve. This is necessary to reach the steam valve more easily.



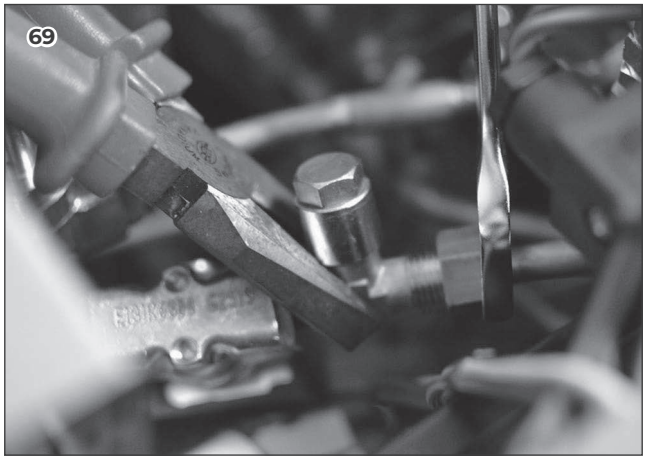
NOTE

It is advisable to place a cloth or absorbent paper underneath the valve to avoid potential electrical damages.

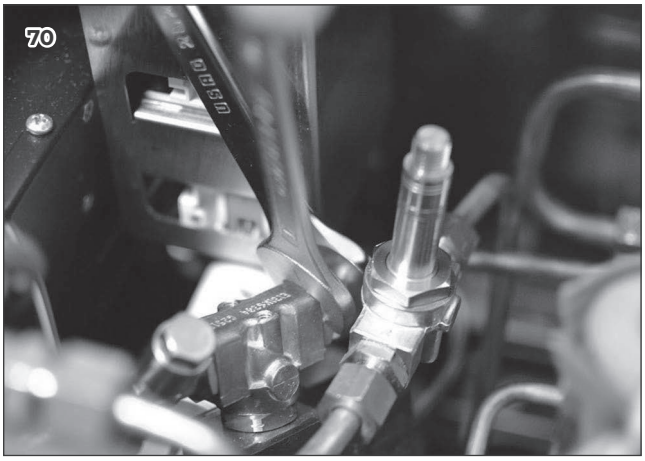
5 In case of Easycream (optional), utilizing a 12 mm wrench, disconnect the Teflon pipe from the T connection.



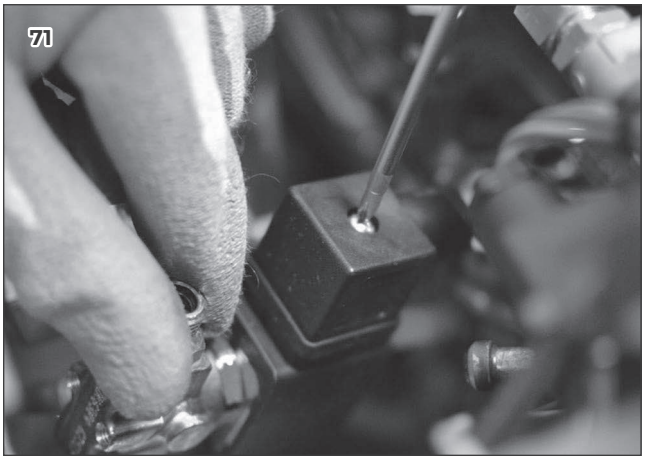
6 Utilizing pliers and a 17 mm wrench, keep the **T** connection and remove the outgoing copper pipe.



7 Utilizing two 17 mm wrenches, disconnect from the valve the incoming copper pipe from the boiler.

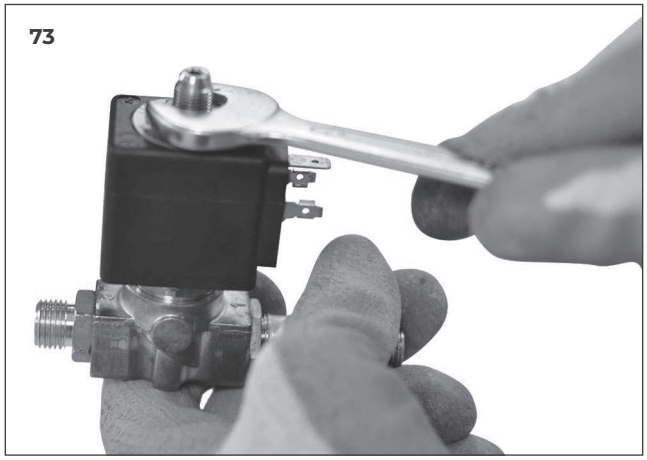


8 Utilizing a Philips screwdriver, unscrew and remove the head.

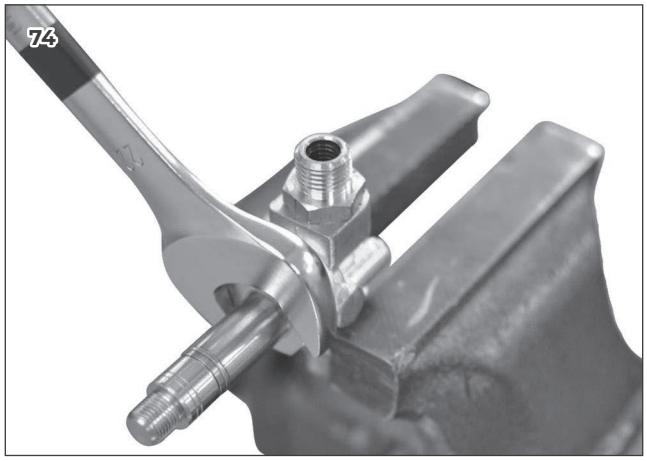


9 Utilizing pliers, remove the clip and the Teflon pipe of the third outlet.

10 Utilizing a 14 mm wrench, unscrew the nut and remove the coil of the valve.



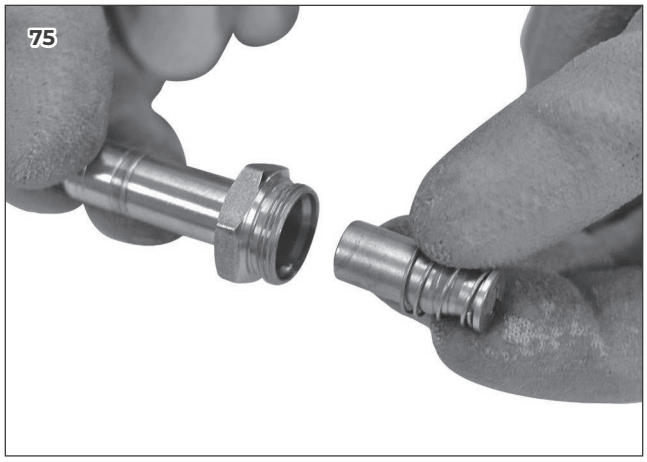
11 Utilizing a vise and a 22 mm wrench, unscrew the valve base.



12 Check that the spring is working properly and that the inner cylinder is clean.

NOTE

If there is nothing visible that affects its use, replace the valve completely.



7.10 STEAM, HOT WATER AND EASYCREAM (OPTIONAL) WANDS

All wands are composed of a joint, a junction and a nozzle. These parts are equipped with o-rings to avoid leaks.

Steam and Easycream (optional) wands are "**cool touch**" type. Thanks to the presence of an internal Teflon pipe, do not heat up quickly. In this way, the barista has the chance to work more comfortably even on an ongoing basis, without the fear that the steam wand may reach excessive temperatures.

WHEN TO INTERVENE
In case of leaks or of low flow it can be necessary to dismantle the wand to replace o-rings, or the Teflon pipe, or to clean the water diffuser head.

NOTE

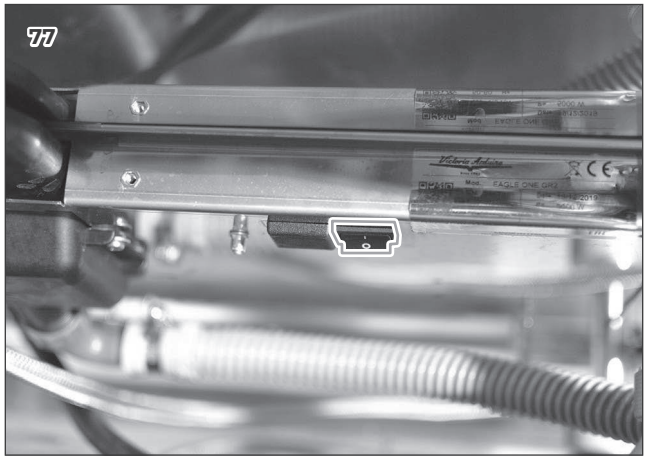
To know standard suggested maintenance on the wands, refer to Chapter 11.

7.10.1 DISMANTLING THE WAND

The procedure to dismantle steam, hot water and Easycream wands, is basically the same. Proceed as it follows.

1 Turn the machine OFF.

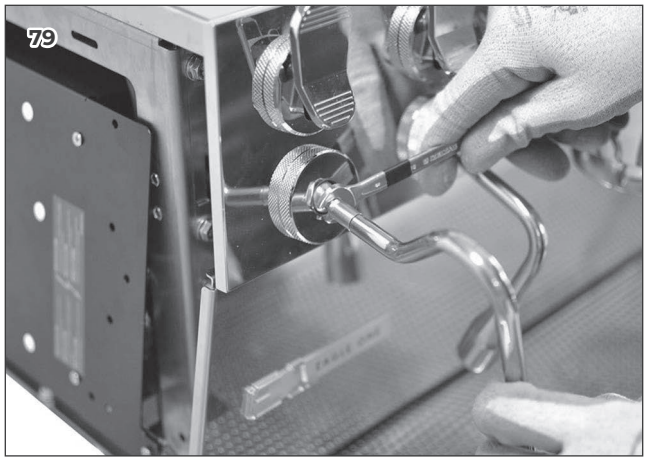
2 Remove the left side panel, in case of the left steam wand, or remove the first module of the cup holder surface, in case of the hot water wand, or remove the right side panel, in case of the right steam wand, as described in Chapter 3.


77

3 Using pliers and cloth or paper to avoid damage, or simply by hand, unscrew the final part of the nozzle.


78

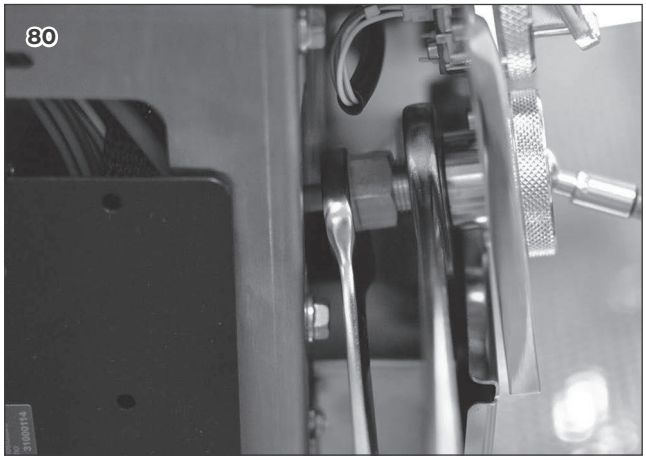
4 Utilizing a 9 mm wrench, block the upper part of the wand and, by hand, unscrew the middle part of the nozzle.


79

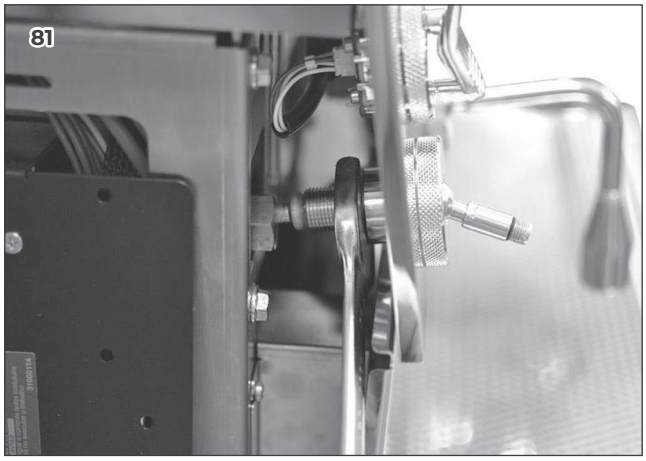
NOTE

Disconnect the button cabling if disturb.

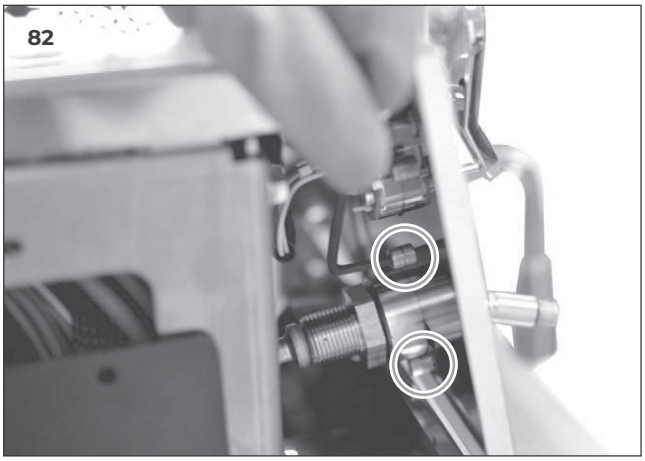
5 Utilizing a 24 mm wrench and a 20 mm one, block the front fitting and unscrew the copper pipe.



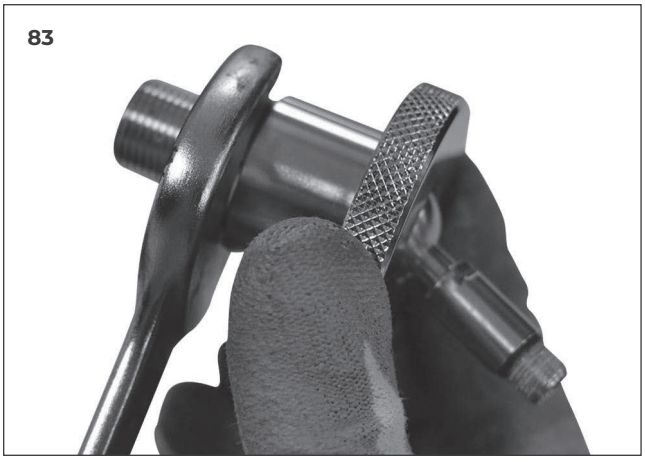
6 Utilizing a 24 mm wrench, loosen the fitting.



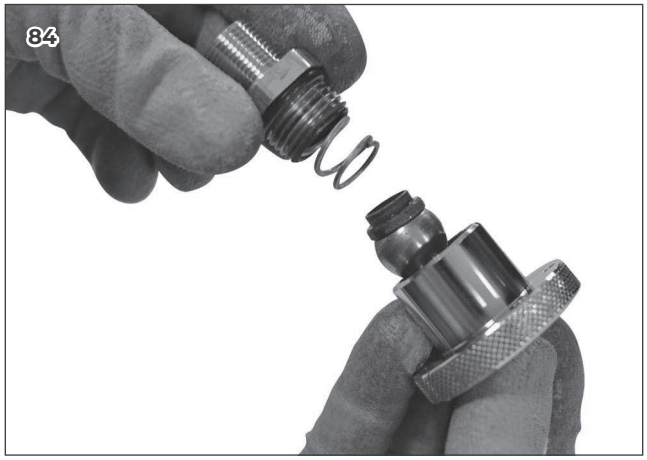
7 Utilizing a 3 mm Allen key, remove the two screws keeping the joint of the wand.



8 Utilizing a 24 mm wrench or simply by hand, remove the fitting.

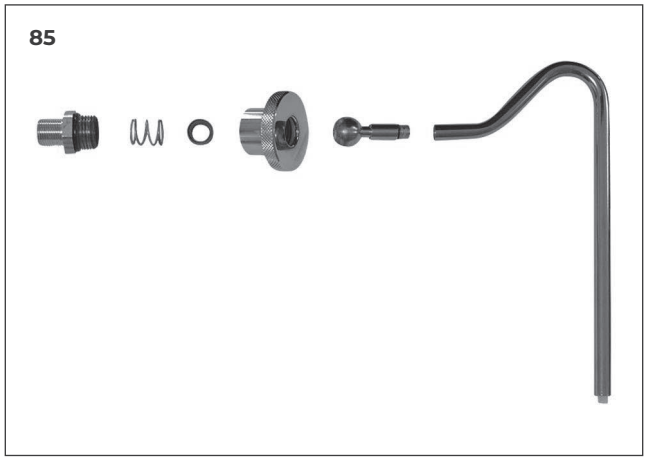


9 The junction is visible now, with its spring. Notice that there is a white Teflon o-ring inside the joint.



NOTE

The steam wand is composed by many parts equipped with different o-rings and Teflon pipe. It can be needed to change o-rings in case of leaks and to change the Teflon pipe in case of low steam flow.



NOTE

To remove the Easycream wand, it is necessary to disconnect the temperature probe wire too.

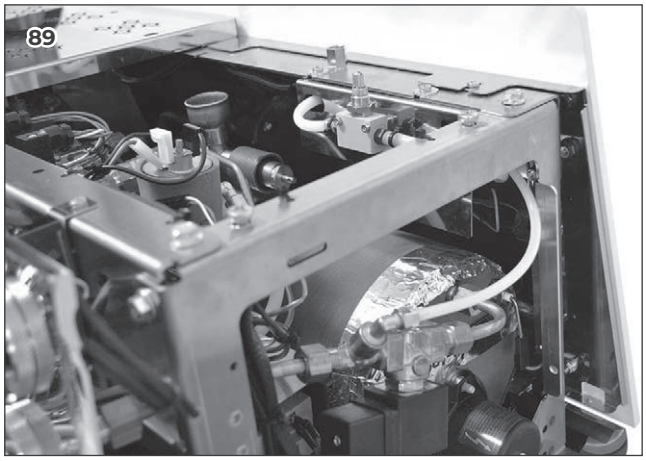
NOTE

The final part of the hot water wand includes the water diffuser head. It can be needed to clean it if the water flow is not regular.

7.II EASYCREAM (OPTIONAL)

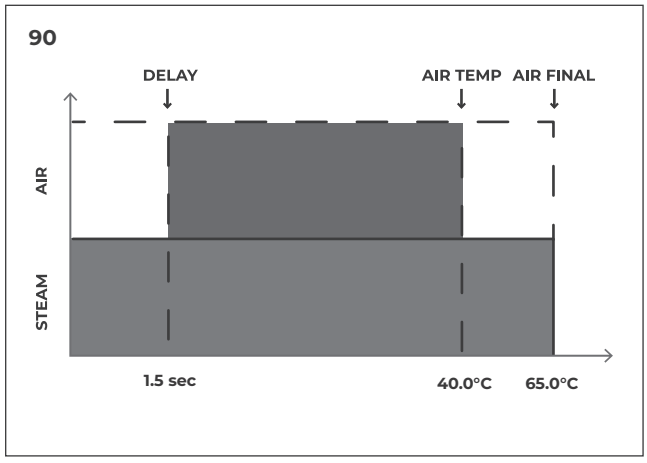
Eagle One is also available with the Easycream system, which allows the barista to obtain a dense, velvety milk cream quickly and automatically.
Easycream is composed by a steam wand and a temperature probe.

The steam wand is connected to steam boiler and to an air compressor, so that it can dispense steam and air.



Easycream needs two kind of settings.
One is software and one is mechanical.
As software setting, in the programming there are three parameters to set:

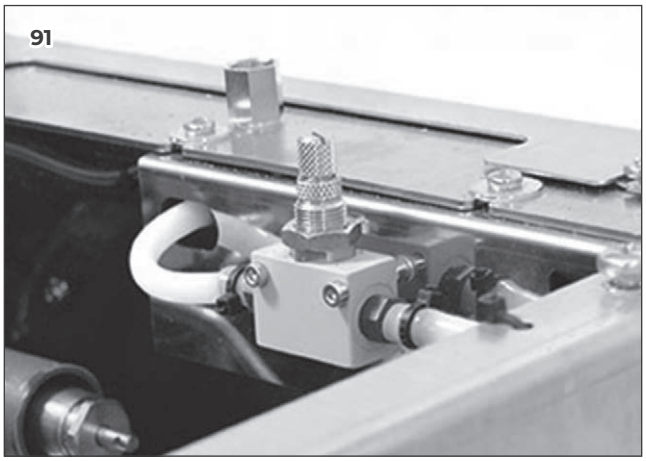
- **Delay (sec):** is a delay for the air. When Easycream begins, steam comes out without air to start the rolling phase, then after the delay time the air solenoid valve opens and the compressor starts to push air into the circuit together with steam, foaming the milk. This time is to avoid the big bubbles creating at the beginning. Suggested value is 1.5 sec, as in the example.
- **AirTemp (°C):** is the temperature when the air stops. The temperature probe checks continuously the milk temperature. Air is injected by the compressor into the circuit till the AirTemp parameter, and then only steam comes out to roll the milk with the foam creating the micro-bubbles. Increasing this parameter gives more quantity of foam, decreasing it gives less quantity of foam. Value is 40.0°C in the example.



- **FinalTemp (°C):** is the temperature when the Easycream stops. The temperature probe checks continuously the milk temperature and the Easycream stops when the milk temperature reaches the FinalTemp. Value is 65.0°C in the example.

The mechanical setting consists in to adjust the air tap on top of the machine to get a proper foam quality. It is a flat screw to open and close the air. The machine arrives with a basic setting, but if a maintenance has been done, the starting point is to close completely the screw clockwise and then open anti-clockwise about 2 complete turns.

91



HOW TO SET

DANGER

This operation is carried out with the machine switched ON so as to perfectly fine tune the air valve.

92

To set the Easycream, proceed as it follows.

1 In the programming of the **MYCOFFEE** recipe, enable Easycream and steam.

NOTE

If Easycream or steam are not enabled in the MYCOFFEE recipe, the Easycream button will not work. There are two different pages since Easycream can be left or/and right.

93

2 In the programming of the **MYCOFFEE** recipe, set the Easycream parameters and exit the programming.

94

NOTE

There are two different pages for each Easycream, since Easycream button can be pushed up or down to have two different Easycream recipes.

3 Put milk in a frothing jug under the Easycream wand and start the button.

95

4 Utilizing a flat screwdriver, while the Easycream is running, set the air screw.

96

NOTE

To dismount the wand, follow the procedure as explained in previous paragraph 7.10.1.

7.12 SMART WATER BOX (OPTIONAL)

The Smart Water Box allows to check the conductibility, the temperature and the pH of the inlet water from the mains.

97

The kit is composed by:

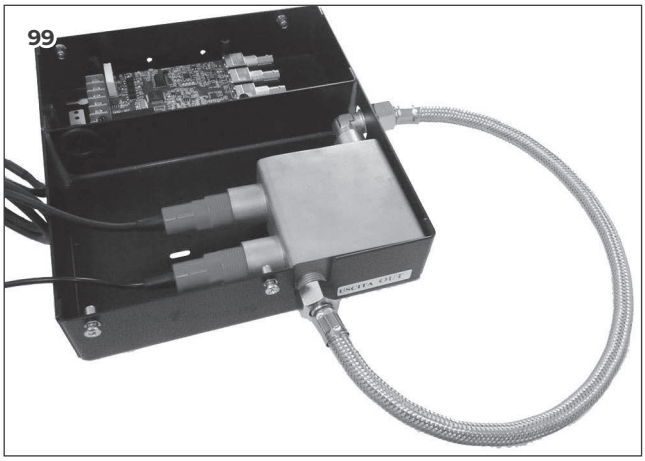
- The box, with fittings and control unit.
- The conductibility probe.
- The pH probe.
- A washer.
- A 90° fitting.
- An hexagonal key.

98

NOTE

The probes have 1 year of life, after that they need to be replaced to ensure the correct functioning.

99

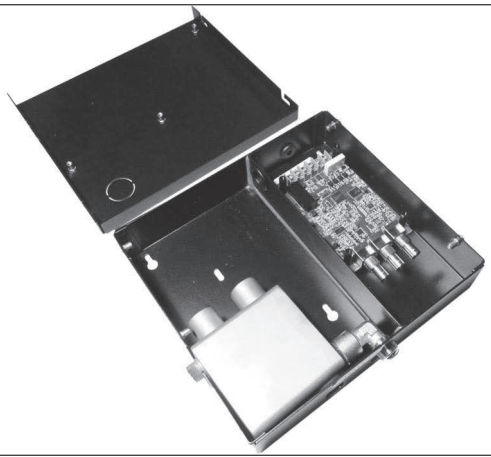


WARNING

The probes must always stay in a wet place, otherwise they will be damaged.

In the machine has to be moved to another installation, a recirculation of liquid has to be insured. Connect the inlet "IN" and "OUT" fitting setting water in one of the pipes.

100

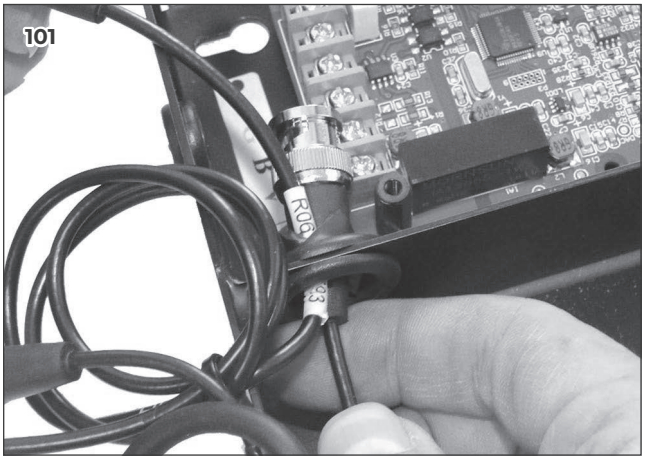


HOW TO INSTALL

When the machine is new, the smart water box is not connected and it needs to be installed. Proceed as it follows.

1 Open the box.

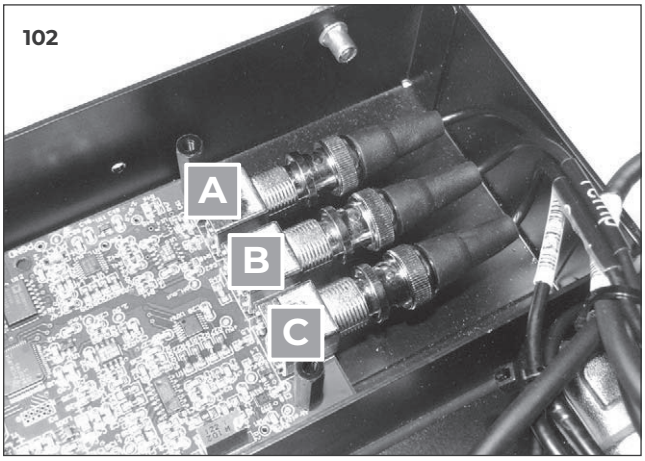
2 Take the connection of the probes and pass then from the rubber hole in the box.



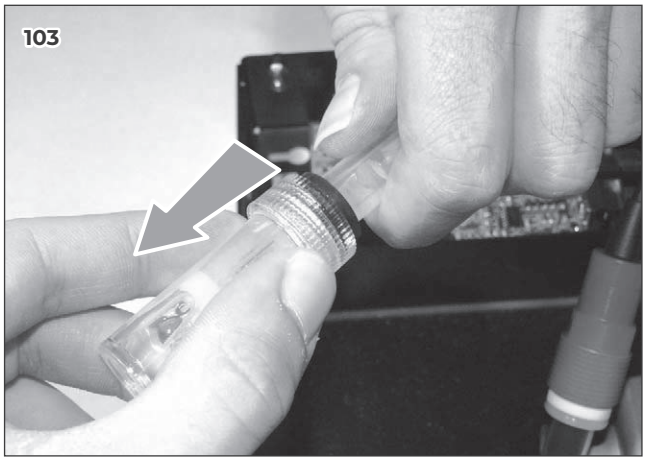
3 Connect the probe to the electric board:
A ph
B Temperature (TEMP)
C Conductibility (COND)

NOTE

On the probes cables there are labels to avoid connection errors.



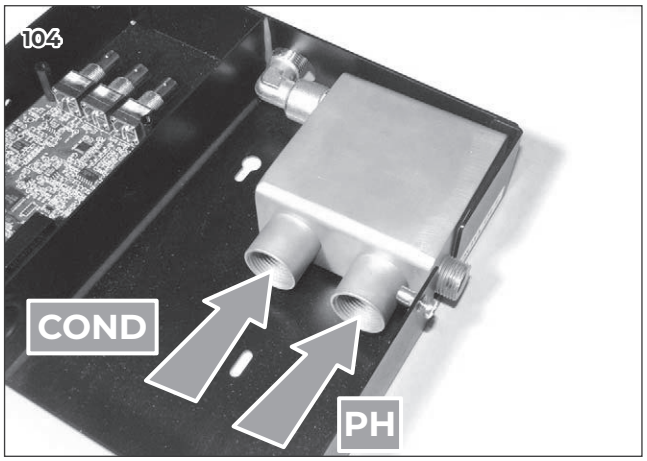
4 Slide out the caps from the probes.



5 Connect the probes into the internal fitting, in the box.

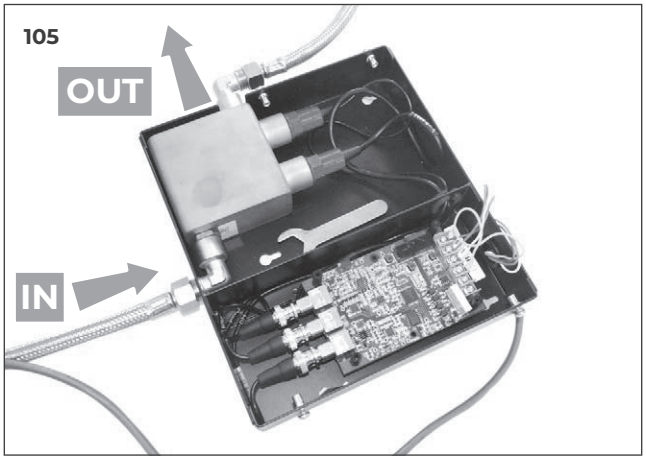
NOTE

Follow the labels on the probes cables to avoid connection error.



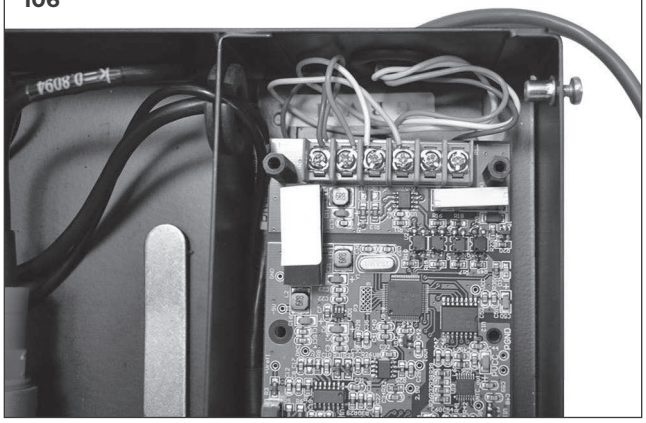
6 Install the washer and the 90° fitting to the "OUT" connection.
7 Connect the water pipes:
- **IN**: from main to box.
- **OUT**: from box to the machine.

105



8 Insert the cabling from the machine into the box and connect it following the colours: brown, green, white and yellow.

106



9 Set the smart water parameters in the programming, following the path:

MENU
> **TECHNICAL SETTINGS**
> Insert PIN **1936**
> **MAINTENANCE**
> **SMART WATER**

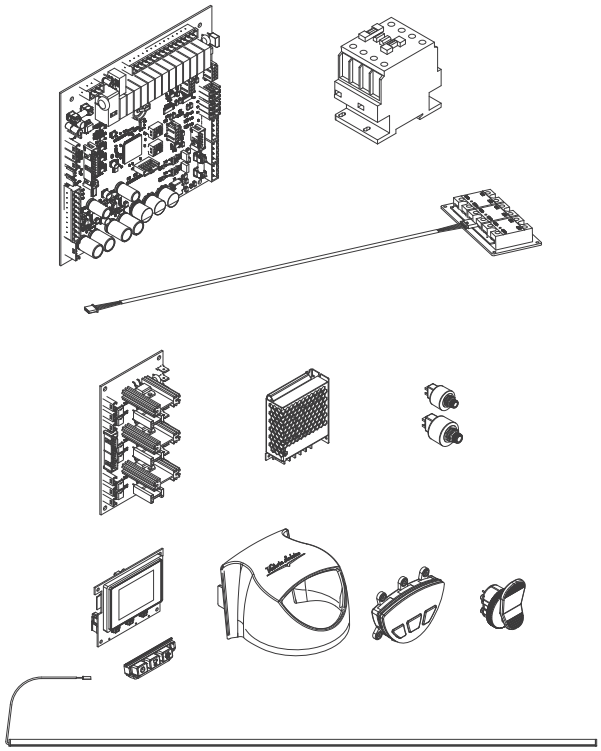
107

NOTE

Suggested parameters are:

- **PH Min 6.0 - PH max 8.0**
- **TDS Min 50 - TDS Max 250**

8 ELECTRIC COMPONENTS



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DANGER

Before proceeding with the operations described in this Chapter, make sure that the machine is turned OFF and unplugged from the mains.

01

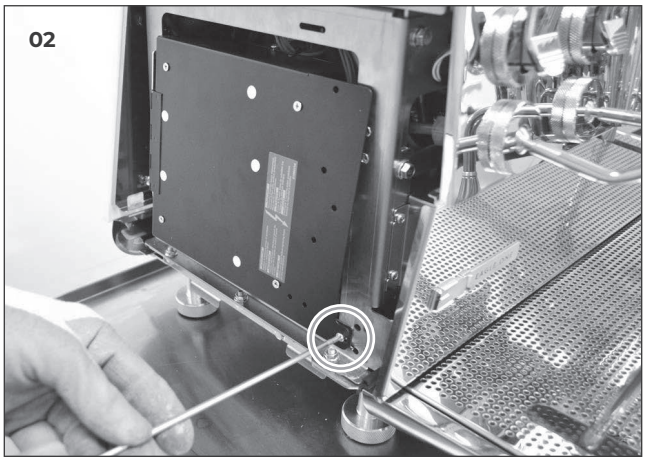
8.1 CONTROL UNIT

To access the control unit it is necessary to:

1 Remove the left side panel, as described in Chapter 3.

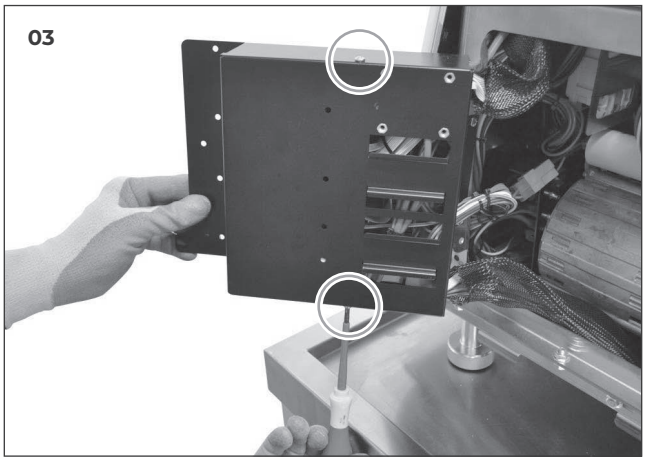
2 Utilizing a Philips screwdriver, remove the screw and open the panel that blocks the control unit box.

02



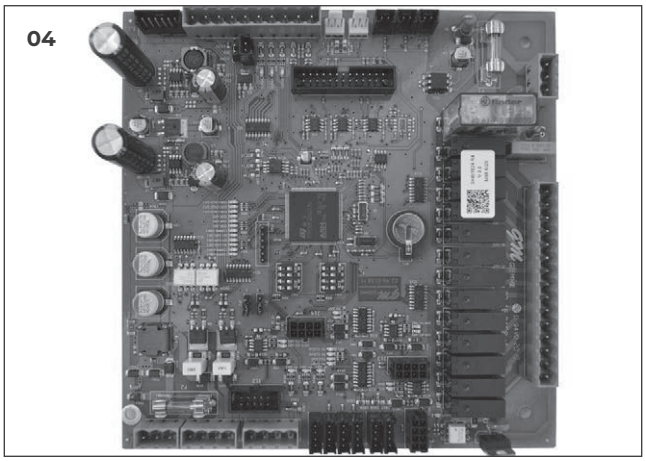
3 Utilizing a Phillips screwdriver, loosen the two top and bottom screws and remove the cover.

03



The control unit without connections appears as shown in the figure.

04

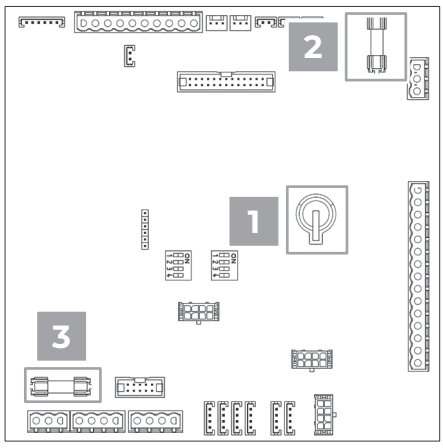


FOCUS ON THE VARIOUS PARTS

Battery and fuses:

1 CR1220 3 Volt battery: to store date and time.
2 6.3 Ampere fuse: power IN (+220V) fuse.
3 2 Ampere fuse: low power IN (+24V) fuse.

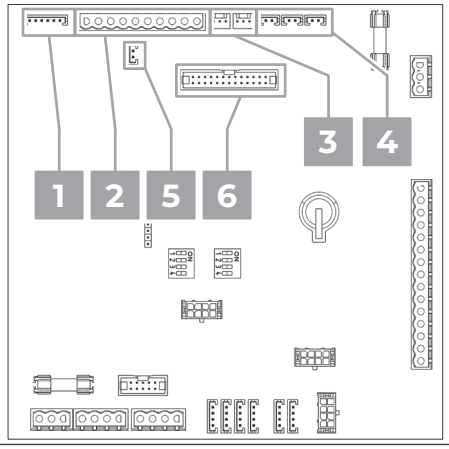
05



Connections on the upper side are:

1 Static relays.
2 10 pins green terminal for level probe and flowmeters, see details below.
3 Pressure transducers, see details below.
4 Easycream and cupwarmer temperature probes, see details below.
5 Lights.
6 T3 card flat cable.

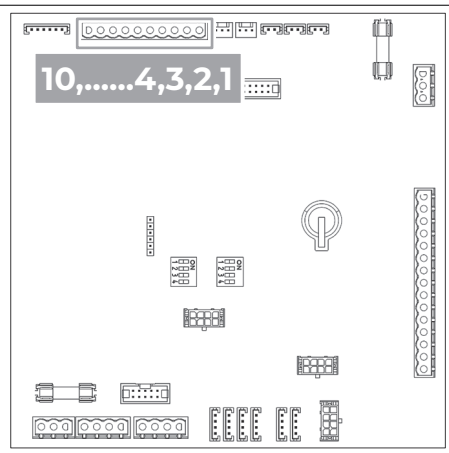
06



In details, regarding to the 10 pins green terminal for the level probe and flowmeters.

PIN	CABLE COLOUR	DESCRIPTION
1	Red	Level Probe
2	Yellow	Ground
	Green	
3	-	None
4	Grey	Flowmeter 1 impulses
5	Blue	Flowmeter 1 ground
6	White	Flowmeter 2 impulses
7	Blue	Flowmeter 2 ground
8	Black	Flowmeter 3 impulses
9	Blue	Flowmeter 3 ground
10	Red	Flowmeters power supply (+12V)

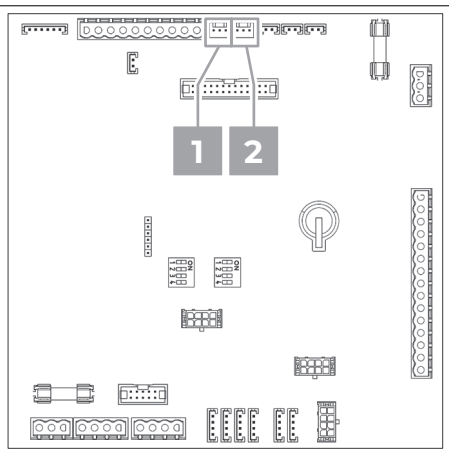
07



In details, regarding to pressure transducers:

1 Steam boiler pressure transducer.
2 Water pressure transducer.

08



In details, regarding to Easycreams and cupwarmer temperature probes:

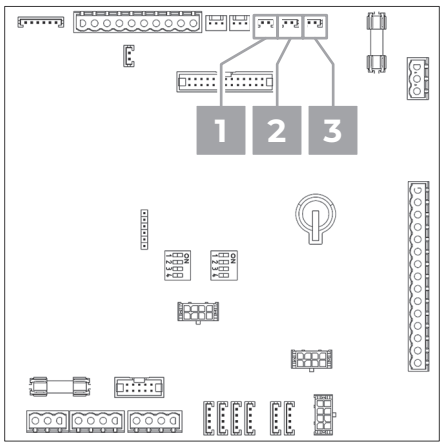
NOTE

Easycreams and cupwarmer are optional. Easycreams cabling is present only in that case. Cupwarmer cabling is always present.

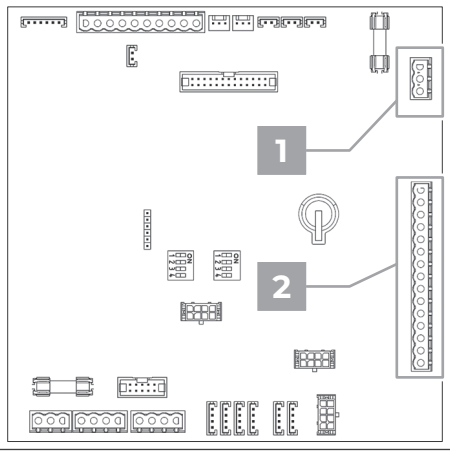
1 Right Easycream temperature probe.
2 Left Easycream temperature probe.
3 Cupwarmer temperature probe.

Connections on the right side are:
1 Power IN (+220V) with bridge to the transformer.
2 15 pins green terminal for pump, contactor, solenoid valves and cupwarmer, see details below.

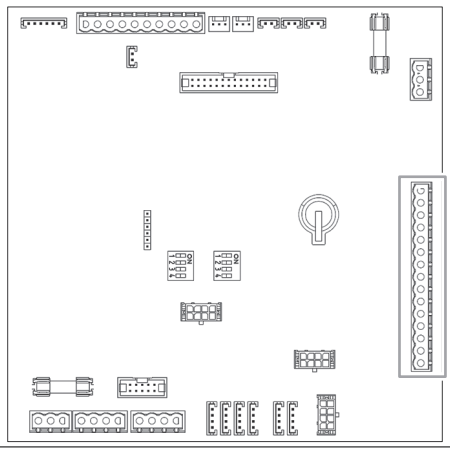
09



10



11

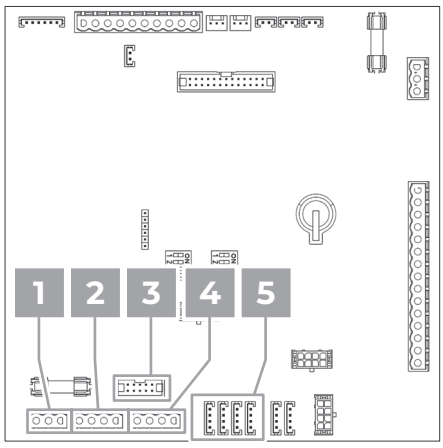


In details, regarding to the 10 pins green terminal for the level probe and flowmeters:

PIN	CABLE COLOUR	DESCRIPTION
1	Orange	Pump
2	Red	Contactor
3	-	None
4	-	None
5	-	None
6	Brown	Auto-fill valve
7	Grey	Hot and cold water valves
8	Brown	Right Easycream air valve (optional)
9	Brown	Left Easycream air valve (optional)
10	Violet	Right steam valve
11	Yellow	Left steam valve
12	Red	Group 3 coffee valve
13	Green	Group 2 coffee valve
14	White	Group 1 coffee valve
15	Red	Cupwarmer

Connections on the lower side are:
1 Low power IN (+24V) from the transformer.
2 Easycreams compressors, see details below.
3 Groups service boards flat cable.
4 Filter holder presence sensors, see details below.

12



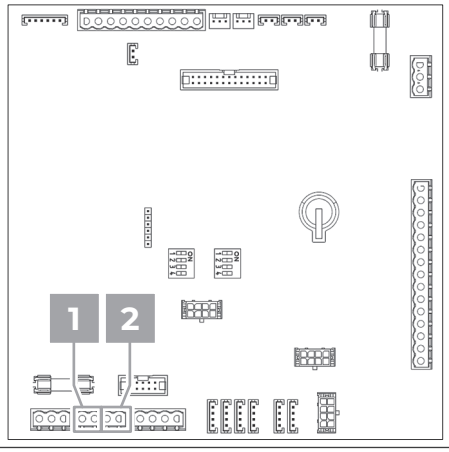
In details, regarding to Easycreams compressors.

NOTE

Easycreams are optional. Hence this cabling is present only in that case.

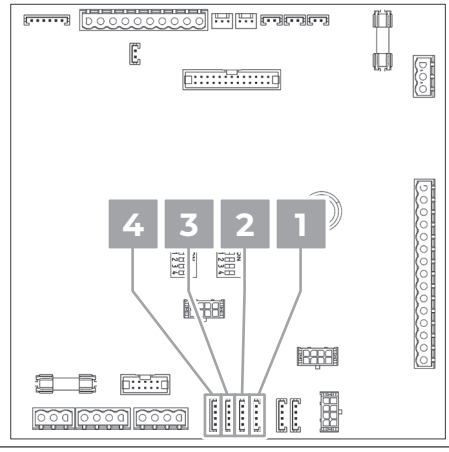
1 Left Easycream compressor.
2 Right Easycream compressor.

13



In details, regarding to filter holder presence sensors:
1 Group 1 filter holder presence sensor.
2 Group 2 filter holder presence sensor.
3 Group 3 filter holder presence sensor.
4 None.

14

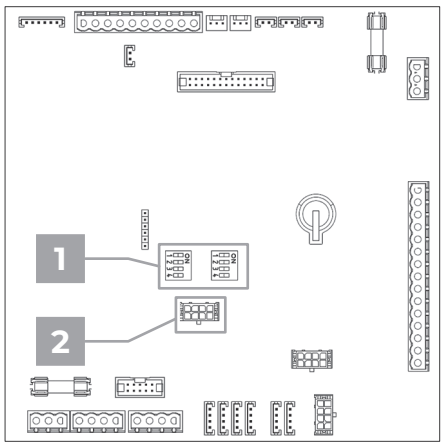


In the middle of the control unit:
1 DIP switch, all to OFF, used only by the manufacturer.
2 Touch screen.

NOTE

For further information on electrical connections, follow electrical diagrams on Chapter 13.

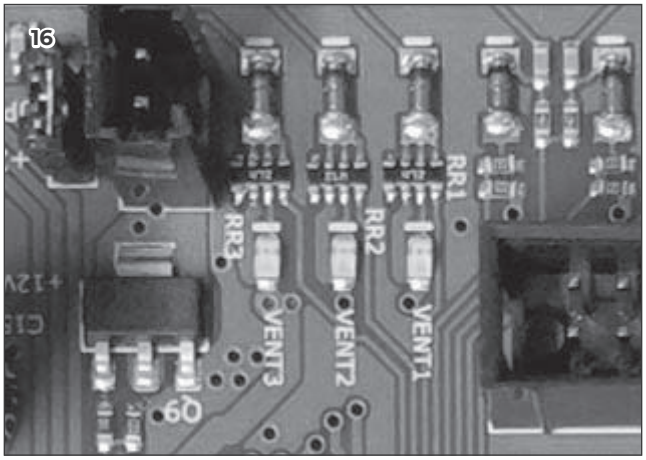
15



8.I.I CONTROL UNIT LEDS

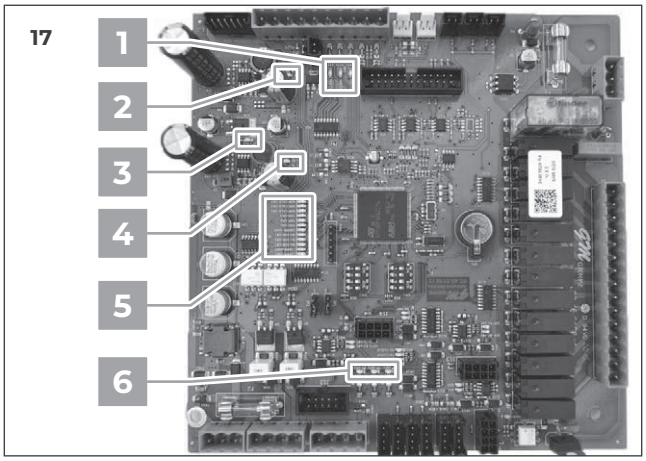
The control unit contains LEDs, useful to recognize the functioning of parts of the machine.
There is a writing next to each LED to indicate what it refers to. For example, the focus on the picture show the writings **VENT1, VENT2,** and **VENT3,** that indicate the flowmeters of, respectively, group **1, 2** and **3.**

16



Every LED can have a different meaning, based on the part it refers to. It can mean for example: that function is fine, or the control unit is turning ON that part, or the control unit is receiving signal from that part.

17



The most useful LEDs are:

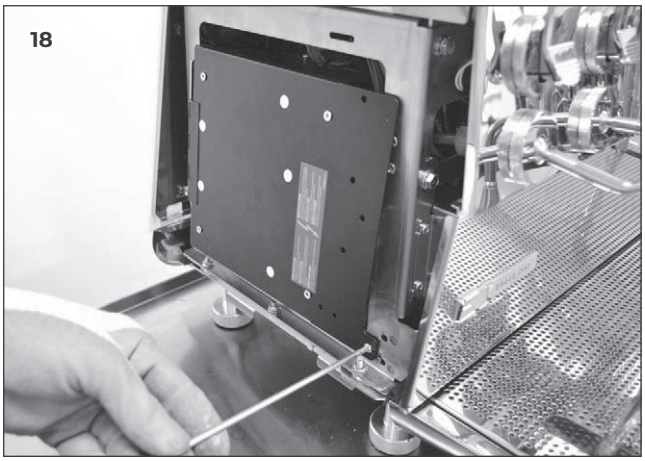
POSITION ON THE IMAGE	WRITING NEXT TO LED	RELATIVE TO
1	VENT1	Group 1 Flowmeter
	VENT2	Group 2 Flowmeter
	VENT3	Group 3 Flowmeter
2	+12V	Power supply +12V
3	+3V	Power supply +3.3V
4	+5V	Power supply +5V
5	COMPR-VAP1	Left Easycream compressor
	COMPR-VAP2	Right Easycream compressor
	SH-SSR-GR3	Static relay n.3
	SH-SSR-GR2	Static relay n.2
	SH-SSR-GR1	Static relay n.1
	COMPR-VAP3	None
	SSR-GR1	Group 1 heating element
	SSR-GR2	Group 2 heating element
	SSR-GR3	Group 3 heating element
	SSR-CALD-GR1	Group 1 coffee boiler heating element
	SSR-CALD-GR2	Group 2 coffee boiler heating element
	SSR-CALD-GR3	Group 3 coffee boiler heating element
6	PF-GR1	Group 1 filter holder presence sensor
	PF-GR2	Group 2 filter holder presence sensor
	PF-GR3	Group 3 filter holder presence sensor

8.2 CONTACTOR

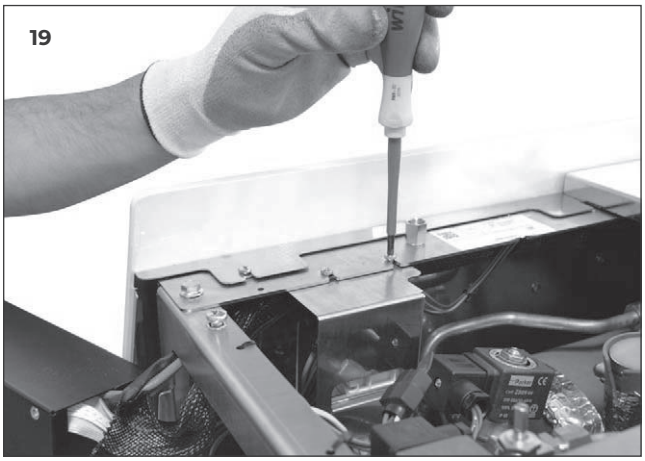
The contactor is placed on the rear side of the machine, so it possible to access it by removing the rear panel, as described in Chapter 3. Sometimes to access the rear side is not easy, so it is possible to reach the contactor from the left side, as described below:

1 Remove the left side panel and the left module of the cup holder surface, as described in Chapter 3.

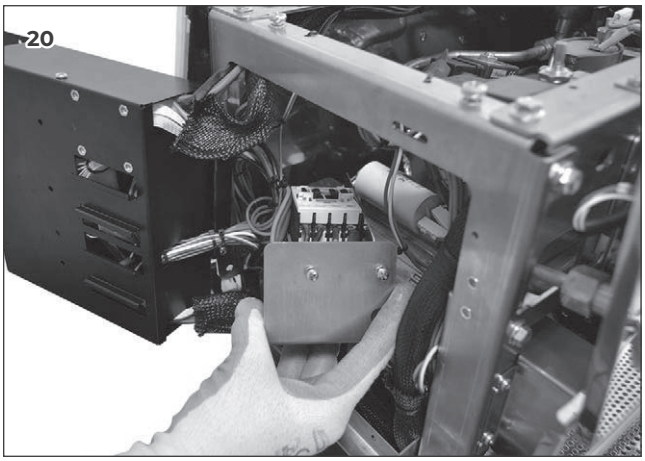
2 Utilizing a Philips screwdriver, remove the screw and open the panel that blocks the control unit box.


18

3 Utilizing a Phillips screwdriver, loosen the two screws holding the metal plate that keeps the contactor.

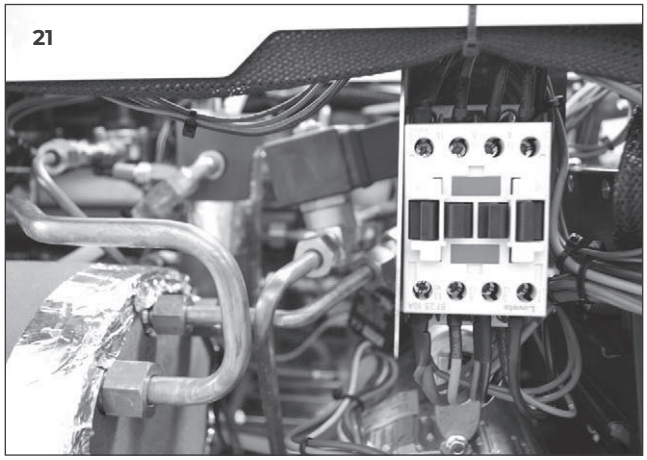

19

4 Remove the metal plate with the contactor.


20

The contactor is a relay that supplies power to the heating elements of the machine.
It interrupts the neutral and the three phases and the enabling is established by the control unit. In fact, when the machine is switched ON, the water level is controlled and, after the positive results, the contactor is enabled by the control unit.

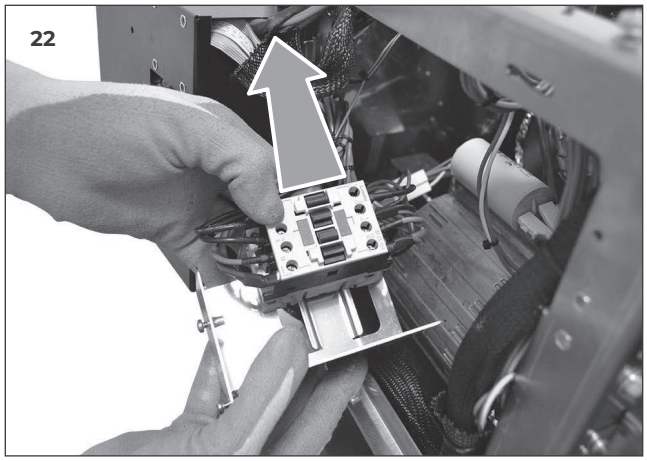
21



PROBLEMS
Normally, the contactor makes a characteristic noise when it closes the circuit, so if you cannot hear the typical noise, it is possible that the problem is upstream (level probe) or with the contactor itself.

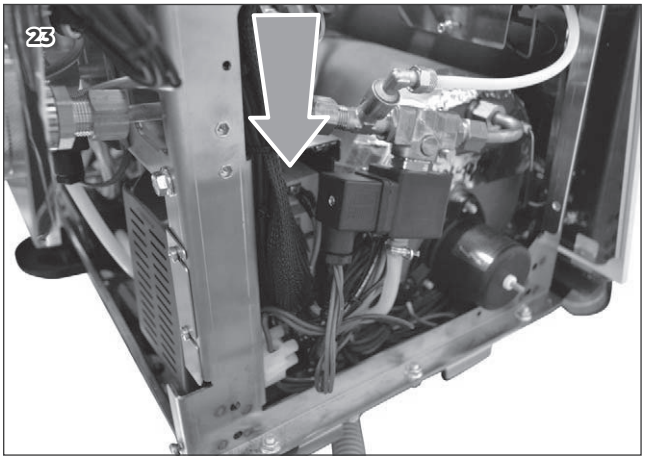
REPLACEMENT
To replace the contactor, simply remove the element from the side and unplug all the cables with the help of a Phillips screwdriver. Insert the new contactor in the upper guide, pressing it into the lower guide until a click is heard.

22

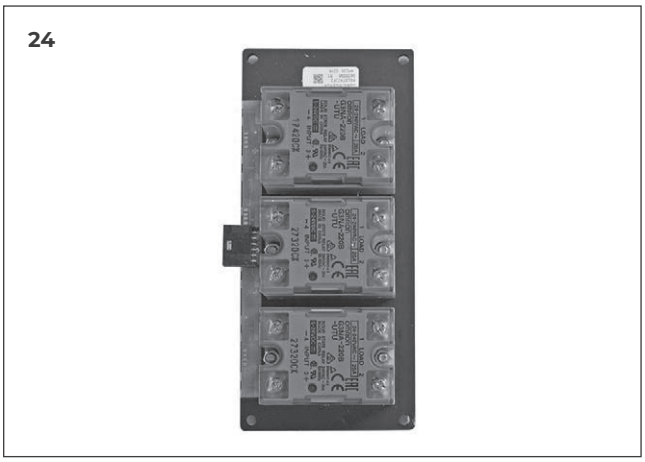


8.3 STATIC RELAYS

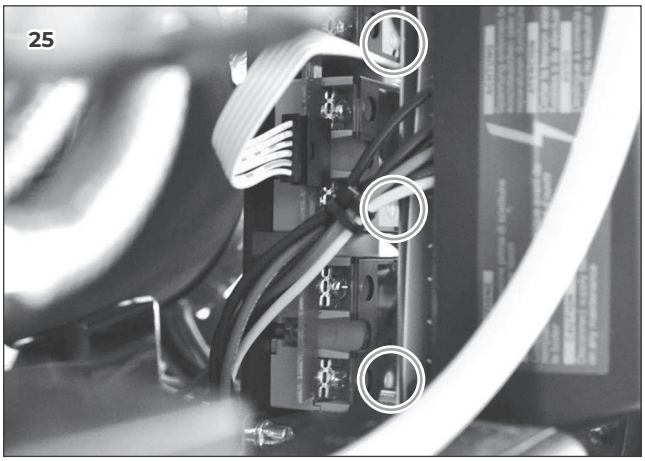
To access the three static relays, remove the right side panel, as described in Chapter 3. They are placed between the front panel and the steam boiler, next to the steam valve.



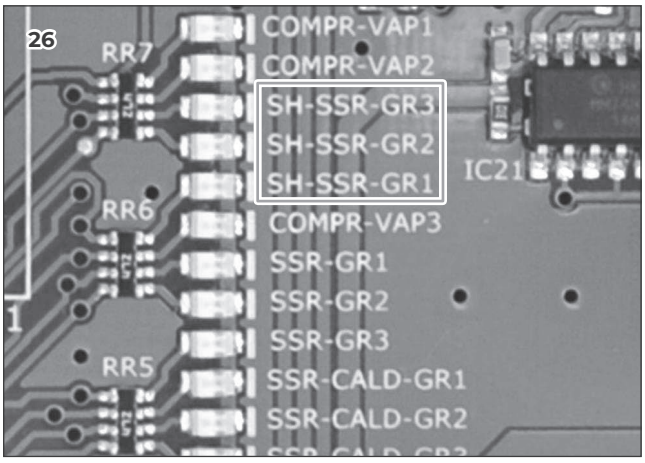
The static relays control the heating element of the steam boiler. They are activated when the pressure switch detects a pressure lower than that set.
Each relay manages a different phase and the voltage availability is enabled by the contactor. The switch ON/OFF command is piloted by the control unit.
The right connections, LOAD, are those of the phases. The left ones, INPUT, are the commands of the relays, and are connected to the control unit by a single connector.



The operation is checked by means of LEDs that light up in the heating phase of the machine. To test, simply let out a lot of steam from a steam wand until the heating element starts again. Optimum operation will be when impulses are spaced at varying intervals.



It is possible to verify LEDs on the control unit too. The three static relays' LEDs are labelled with SH-SSR-GRx.



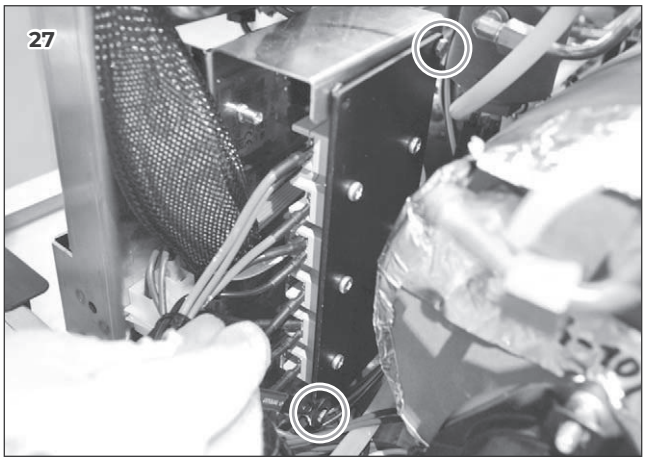
PROBLEMS
The static relays can be damaged in ON or OFF status, thereby giving high or low pressure in the steam boiler.

REPLACEMENT

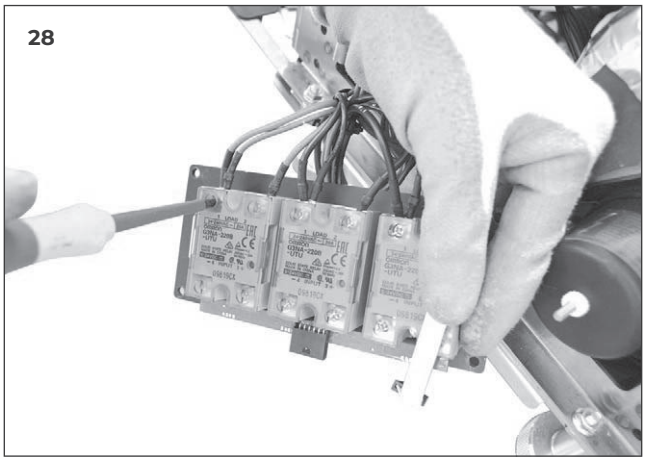
To replace the three static relays, proceed as it follows.

1 Remove the right steam valve, following first 7 steps of the procedure described in paragraph 7.9.1.

2 Utilizing a 7 mm wrench, remove the two screws holding the plate.


27

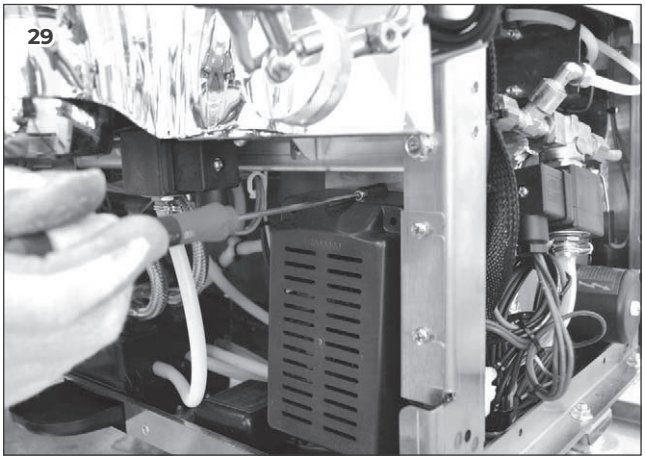
3 Unplug the connector by hand and all the cables with the help of a Phillips screwdriver.


28

8.4 T3 CARD

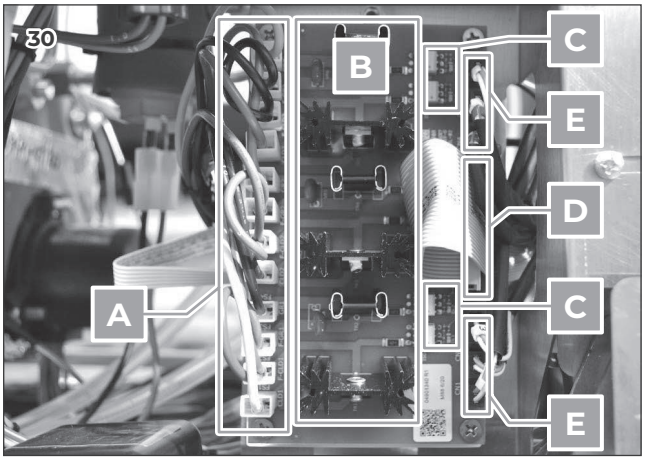
To access the T3 card:

1 Remove the side panels, the water collection pan and the lower front panel, as described in Chapter 3.
2 Utilizing a 3 mm Allen key, remove the screw and remove the T3 card cover.



The T3 card is the interface between the coffee boilers, the groups and the control unit. Looking at it, the visible parts are:

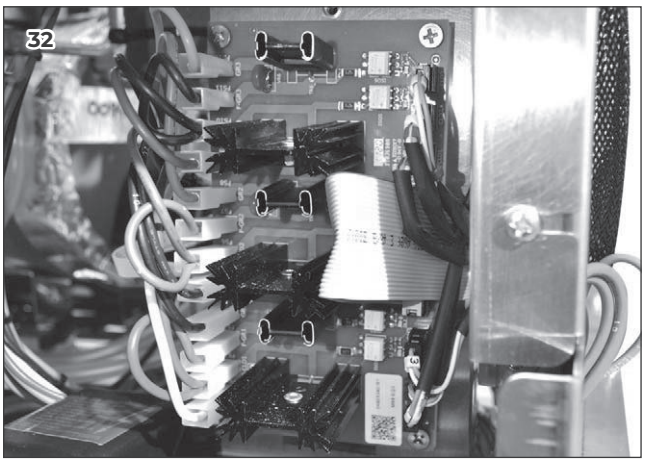
A The phases connections, incoming from the Static Relays, outgoing to heating elements of coffee boilers and groups.
B The Triacs, to start and to stop the heating phase of each element.
C The LEDs, to show if the heating phase of each element is ON.
D The flat cable to control unit.
E The temperature probes to groups.



The T3 card receives data from the temperatures probes and transfers them to the control unit. The control unit knows the temperatures set on the programming as MYCOFFEE T Group.

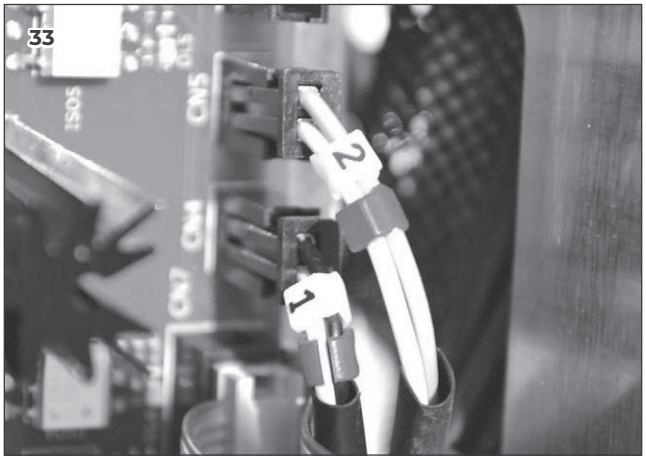
Using the NEO algorithm, it elaborates the incoming data from the T3 card and establishes if to turn ON each single element of the coffee boilers and of the groups. When a single element should be ON, the control unit enables the respective Triac on the T3 card, so that the phase reaches the heating element, and the respective LED on the T3 card lights up.

Each temperature probe has a label which identifies it.
1 or **2** or **3** identify coffee boiler and group number. Red or nothing identify respectively coffee boilers or groups.



For example, 2 and RED means coffee boiler 2.

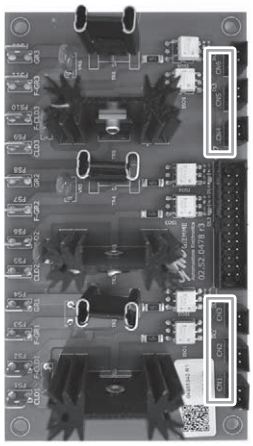
33



Moreover, writings on the T3 card next to temperature probes connectors identify respectively:

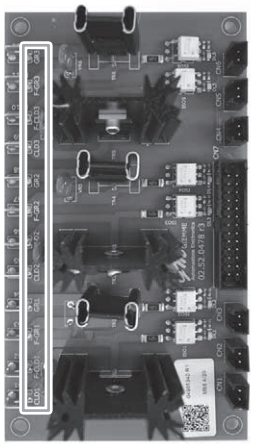
- CN1: group 1
- CN2: group 2
- CN2: group 3
- CN4: coffee boiler 1
- CN5: coffee boiler 2
- CN6: coffee boiler 3

34



On the other side of the card, writings next to phases connections identify each phase. GRx means group x and CLDx means coffee boiler x. F means incoming phase.

35



NOTE

For further information on electrical connections, follow electrical diagrams on Chapter 13.

The LEDs are helpful to check the heating phase. Each LED corresponds with a heating element of the coffee boilers or of the groups. Optimum operation will be when impulses are spaced at varying intervals. Writings near the LEDs identify respectively:

- DL1: coffee boiler 1
- DL2: group 1
- DL3: coffee boiler 2
- DL4: group 2
- DL5: coffee boiler 3
- DL6: group 3

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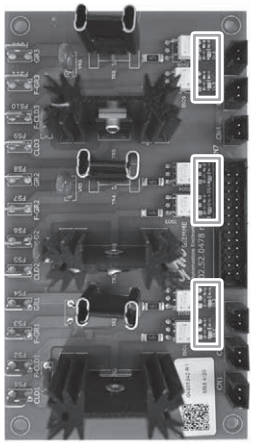

It is possible to verify LEDs on the control unit too. The three groups' LEDs are labelled with SSR-GRx, while the three coffee boilers' LEDs are labelled with SSR-CALD-GRx.

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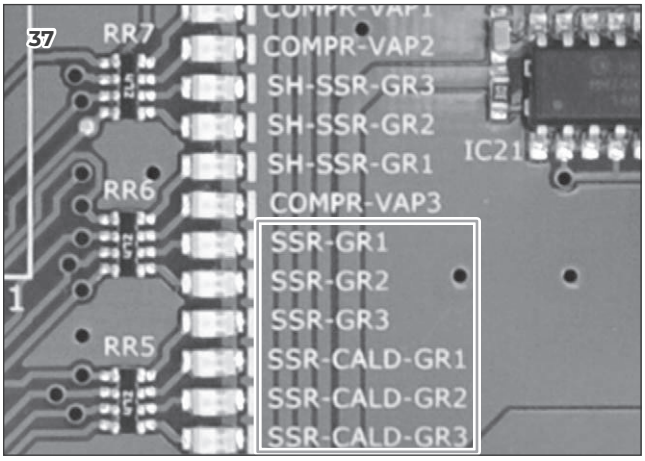

PROBLEMS

It is possible to check and understand if there are problems in the Triacs or in the temperature probes or in the heating elements.

Example:

1. The probe does not read values, but the boiler/group is functioning: the problem is in the probe.
2. The Triac is energised but the corresponding heating element does not heat up: problems with the heating element or with its high-limit thermostat.
3. It is needed to rearm the high-limit thermostat of a heating element: the relative Triac is stuck in the ON state.

To replace the T3 card, remove the four screws fixing it and unplug all the connectors by hand.

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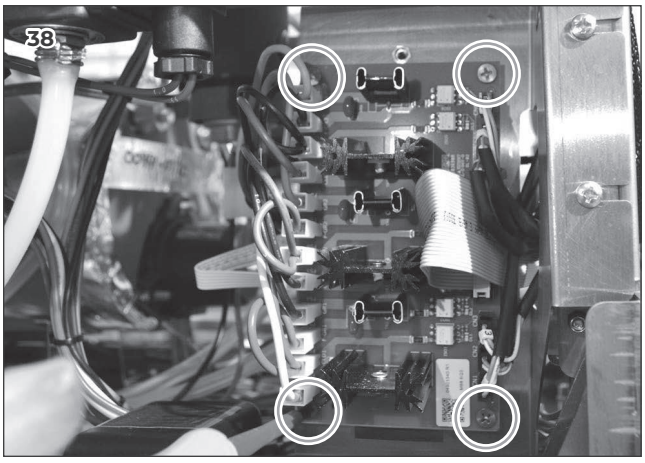
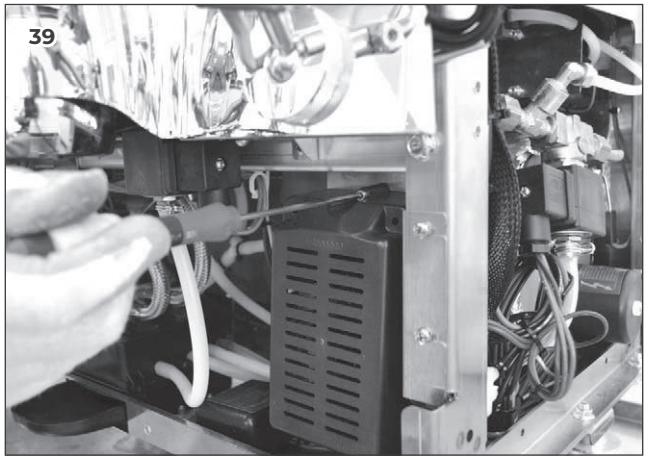


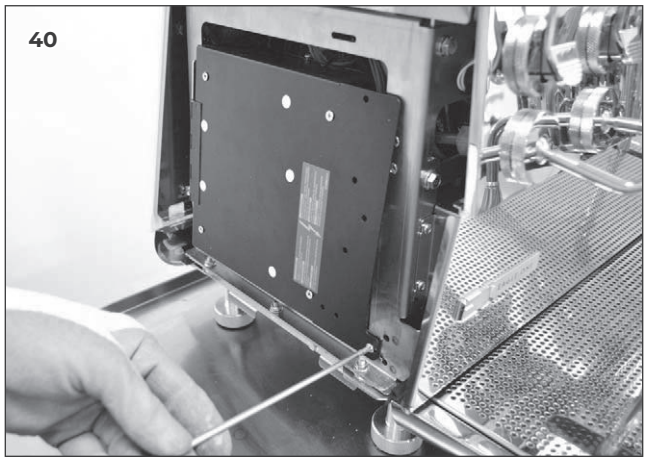
8.5 TRANSFORMER

The machine provides VDC to the control unit and to some components thanks to a transformer, not included in the control unit, but separated.
From the left side of the machine it is possible to access the transformer, but not to remove it. Proceed as it follows.

1 Remove the left side panel, as described in Chapter 3.

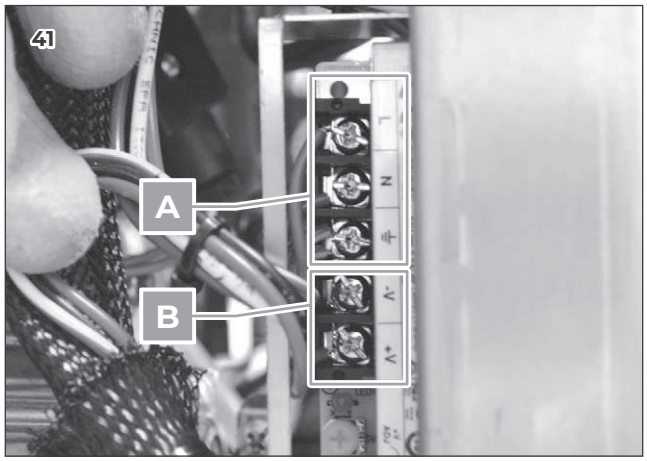


2 Utilizing a Philips screwdriver, remove the screw and open the panel that blocks the control unit box.



Looking at the connections the visible parts are:

A Inputs
B Outputs



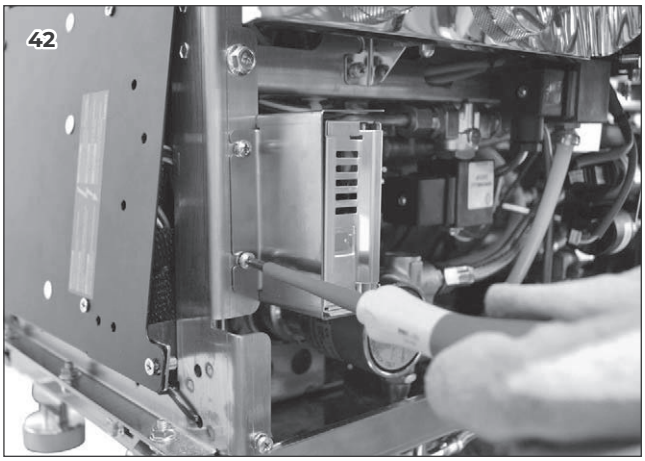
The outputs are connected to the control unit, as explained in paragraph 8.1.

REPLACEMENT

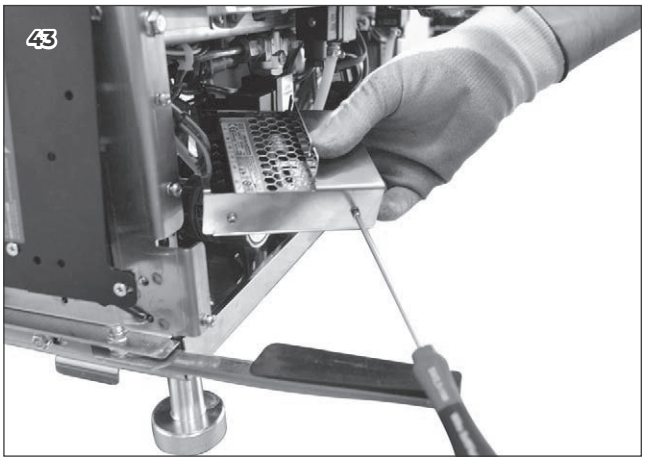
If the outputs do not give +24V the transformer is broken. In this case the control unit and the machine will appear completely OFF. To replace the transformer, proceed as it follows.

1 Remove the side panels, the water collection pan and the front lower panel as described in Chapter 3.

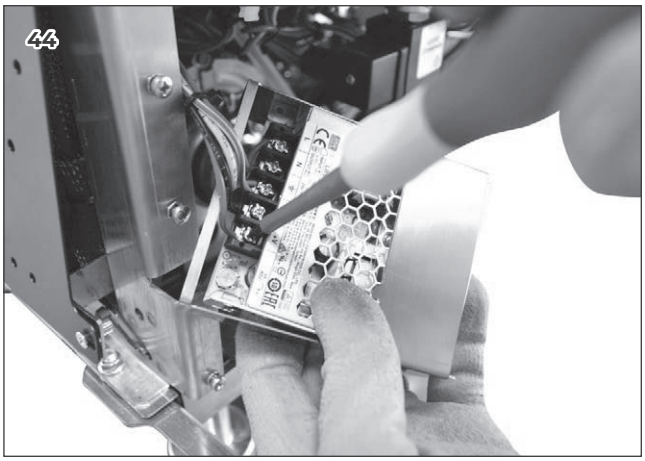
2 Utilizing a Philips screwdriver, loosen the two screws and remove the plate with the transformer.



3 Utilizing a 2,5 mm Allen key, remove the two screws and pull out the transformer.



4 Utilizing a Philips screwdriver, disconnect all cables.

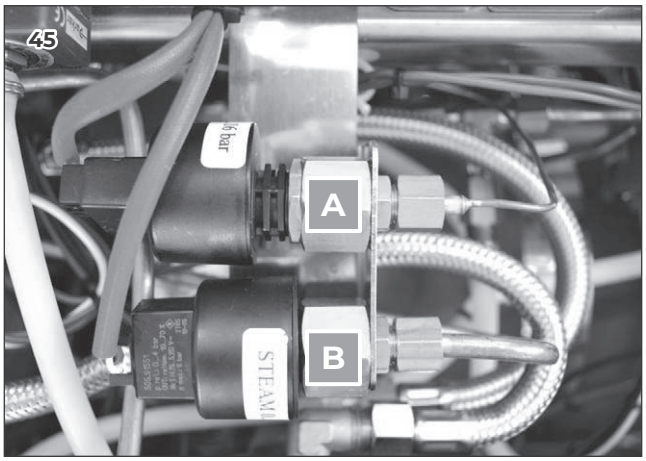


8.6 PRESSURE TRANSDUCERS

Eagle One is equipped with two pressure transducers. To access them, remove the side panels, the water collection pan and the lower front panel, as described in Chapter 3.

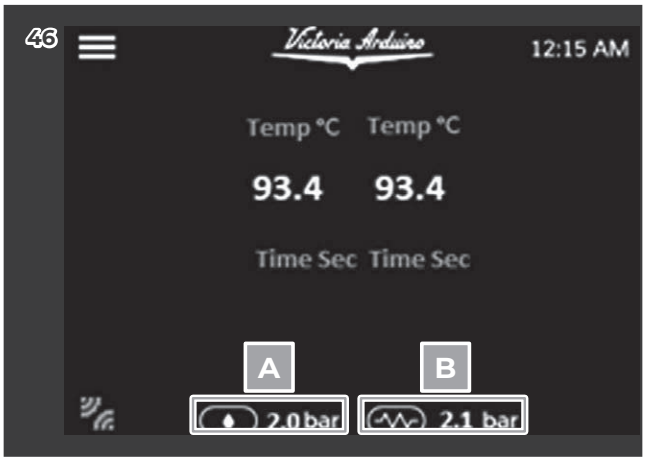
The upper pressure transducer reads the pressure of the water after the pump, shown on the touch screen as the left one (**A**).

45



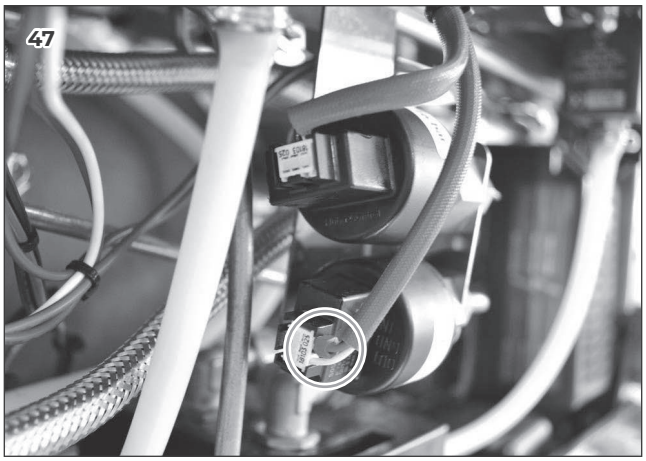
The lower one reads the steam boiler pressure, shown on the touch screen as the right one (**B**).

46



Two different cables connect the two pressure transducers to the control unit, as explained in paragraph 8.1.
Notice that the cable of the steam boiler pressure transducer has a red label to recognise it.

47

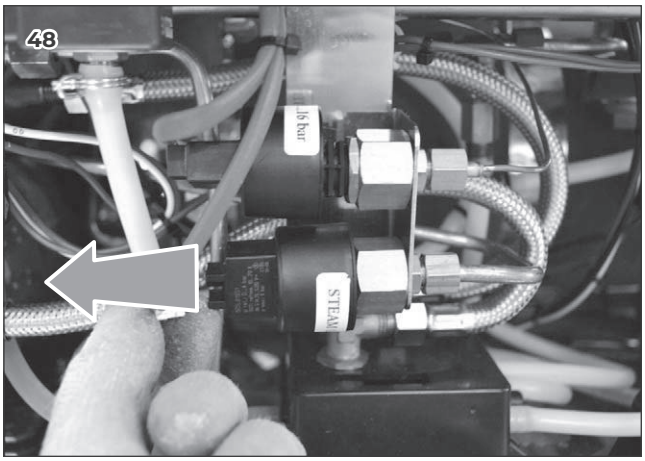


REPLACEMENT

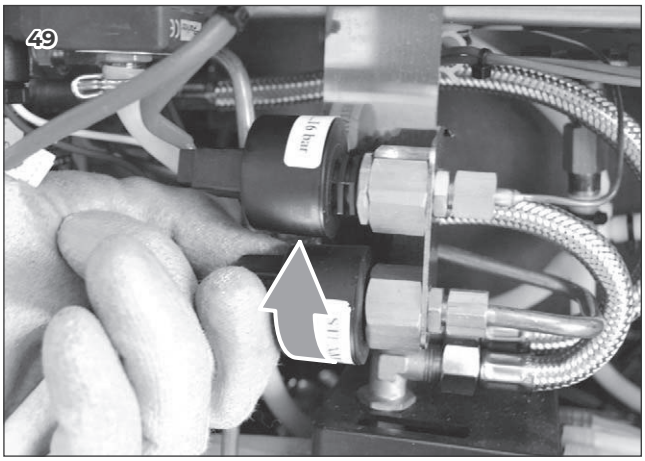
If the pressure is unshown or certainly wrong, check the cabling or replace the proper pressure transducer, as it follows.

1 For the water pressure transducer, close the pump tap. For the steam boiler pressure transducer, lower the steam boiler pressure by following the procedure described in paragraph 5.1.

2 Unplug the connector.



3 Unscrew and remove the pressure transducer by hand.



8.7 TOUCH SCREEN AND MAIN KEYPAD

Touch screen and main keypad are installed on a unique board. To replace it:

1 Follow the procedure described in paragraph 3.7 to remove the board.

2 Take away the silicone keys.

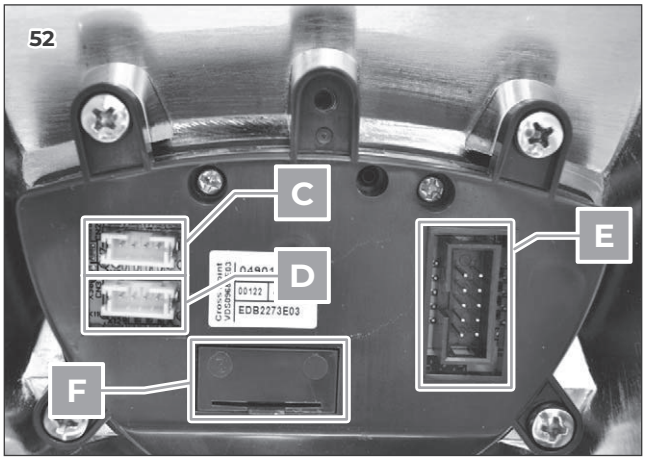
8.8 GROUP COVER AND SERVICE BOARD

Each group has its cover, where the service board is installed. To access it, remove the group cover as described in paragraph 3.6.
The service board includes:
A The ghost display.
B The 3-buttons keypad.

51

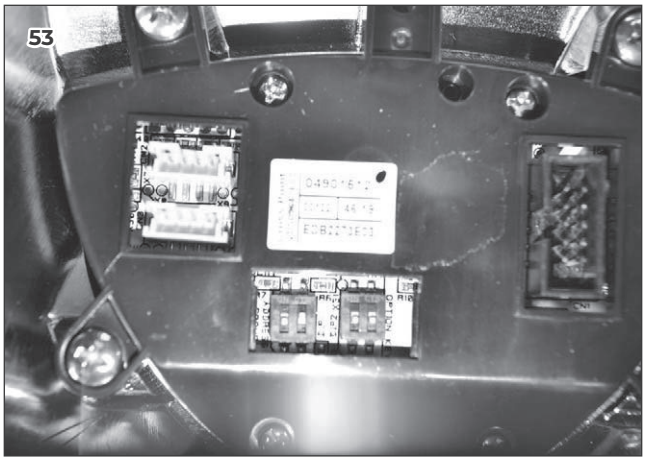
C A connection for steam/Easycream service, with writing CN2.
D A connection for hot water service, with writing CN3.
E The connection for the control unit.
F The DIP switch (under the small cover).

52



The service boards of all groups are connected to the control unit by a unique flat cable. Therefore, each group has a univocal address that is set by utilizing the DIP switch. The DIP switch is accessible by removing its small cover.

53



Steam/Easycream (left or right) and hot water (only left) must be connected to the proper group.
In accord with this information, each group must be configured and connected as it follows.

	SERVICES	DIP SWITCH 1	DIP SWITCH 2
GROUP1	**CN2**: left steam/ Easycream **CN3**: hot water		
GROUP2	**CN2**: right steam/ Easycream **CN3**: none		
GROUP3	**CN2**: none **CN3**: none		

NOTE

It is possible to check the functioning of all segments of the ghost display. Press and hold together the 3-buttons of the keypad.

PROBLEMS

Possible issues on the service board are:

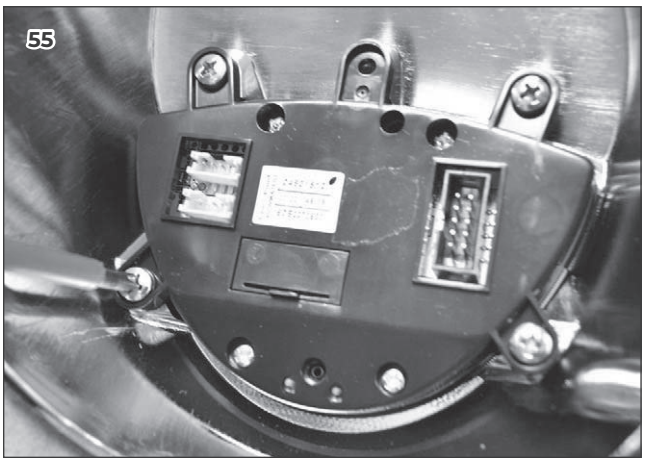
1. Two groups deliver by pressing only one key: check the DIP switch and the flat cable.
2. Some keys do not work anymore: replacement due to wear.
3. All keys do not work anymore: check the flat cable or replace the service board.
4. Faulty segment in the ghost display: replace the service board.

REPLACEMENT

Once the group cover has been removed, unscrew the four screws keeping the service board and take it away.

WARNING

When a service board is replaced, it is necessary to set it with the same configuration.

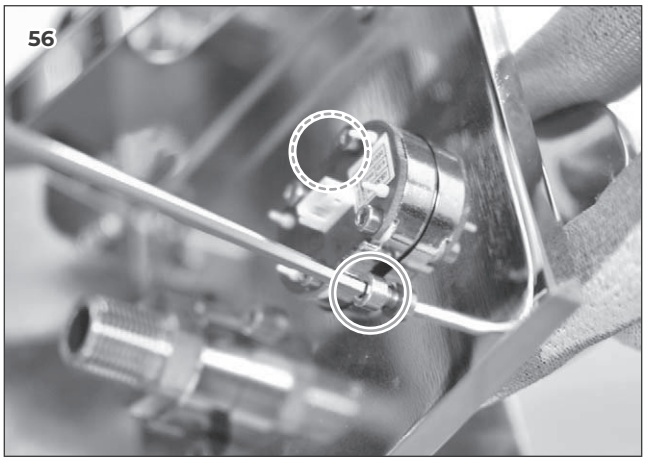


8.9 SERVICE KNOB

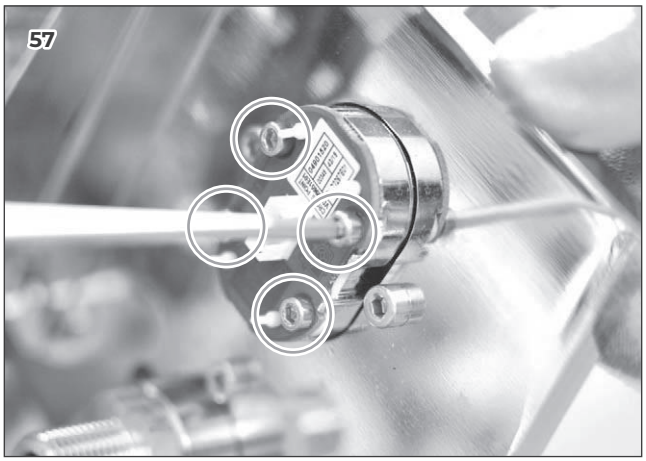
Each steam, Easycream and hot water wand, has its knob to start its service. It is possible to push the knob up and down, to have two different doses, in accord with the programming.
If any knob is not working, check the cabling or replace it, as it follows.

1 Remove the front higher panel, following first 5 steps of the touch screen removal procedure, as described in paragraph 3.7.

2 Utilizing a 3 mm Allen key, remove the 2 screws to replace the whole knob assembly.


56

3 Utilizing a 2,5 mm Allen key, remove the 4 screws to replace only the knob board.


57

8.10 LIGHTS (OPTIONAL)

Eagle One can be equipped with lights: a LED on each side of the coffee groups and a LED bar on the back side of the machine. All lights are connected with the same cabling in parallel to the control unit and their status can be managed in the programming, following the path:

MENU
> **KEYS AND DISPLAY**
> **BRIGHTNESS**.

In case of needs, to replace the groups LED, proceed as it follows.

1 Remove the group cover, as described in Chapter 3.
2 Utilizing a plies or by hand, disconnect the cabling.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3 Utilizing a small flat screwdriver, press the three little wings and push down the led.


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To replace the LED bar on the back side, proceed as it follows.

1 Remove the rear panel, as described in Chapter 3.

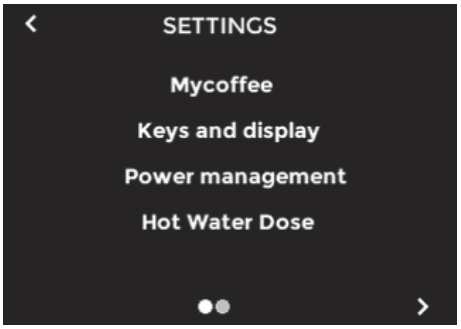
2 Cut the clamp of the wire.

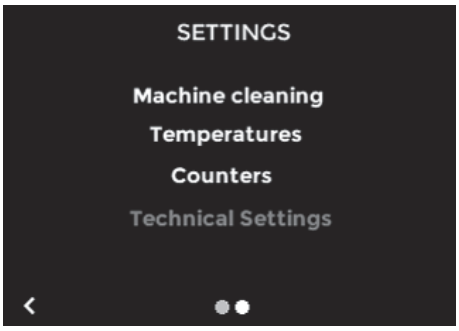

60

3 Utilizing a 5,5 mm wrench, remove the two lateral screws fixing the bar.


61

9 PROGRAMMING





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Please note that the programming could vary from certain firmware release on.
This Service Manual is based on firmware release 4.0.

The **HOME PAGE** shows:
1 Time
2 Coffee group temperature
3 Coffee dose delivery time
4 EasyCream wand temperature (optional)
5 Steam boiler pressure
6 Input water pressure
7 Bluetooth switching ON

Press ☰ to access the main menu:
- Mycoffee
- Keys and Display
- Power Management
- Hot water Dose
- Machine Cleaning
- Temperatures
- Counters
- Technical Settings

NOTE

In all the programming menus, the following rules are valid:

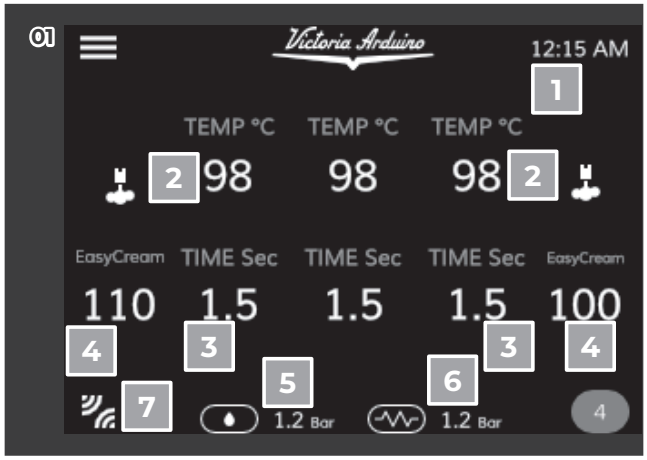
☰ **To the main menu.**

✓ **Save the settings.**

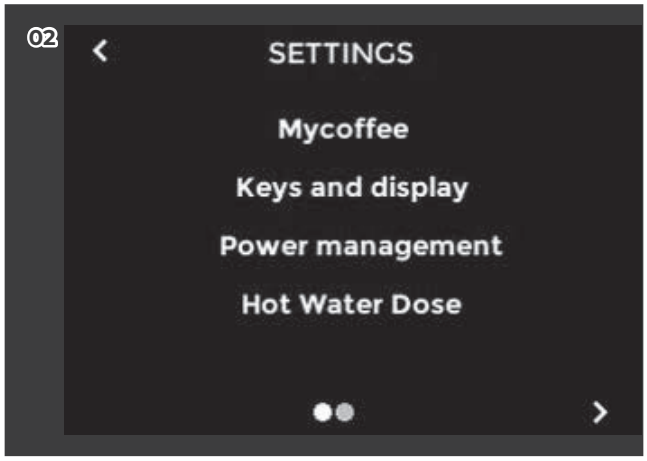
− + **Decrease/increase values.**

< > **Previous/next page.**

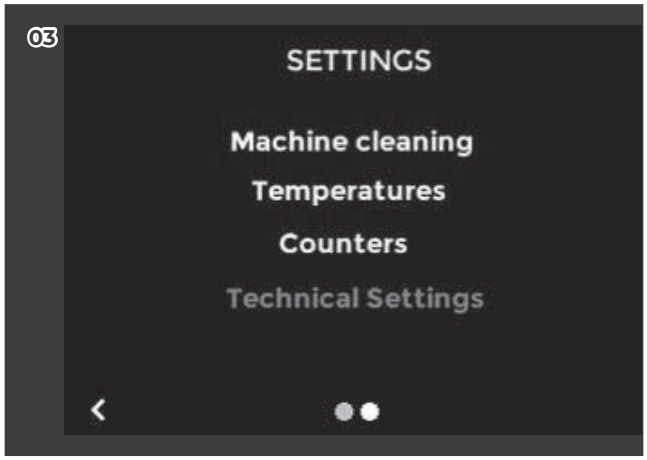
01



02



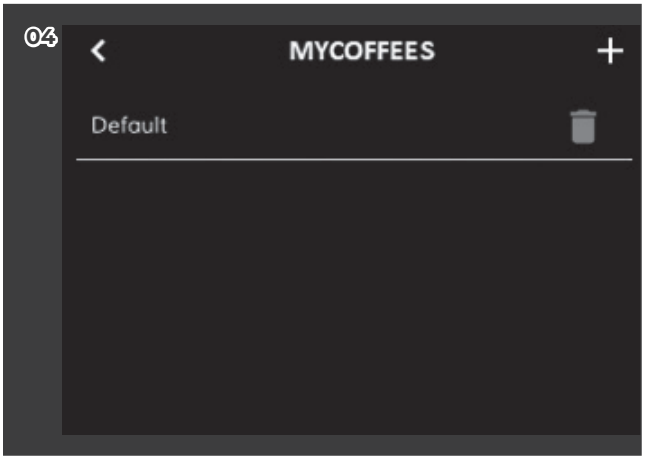
03



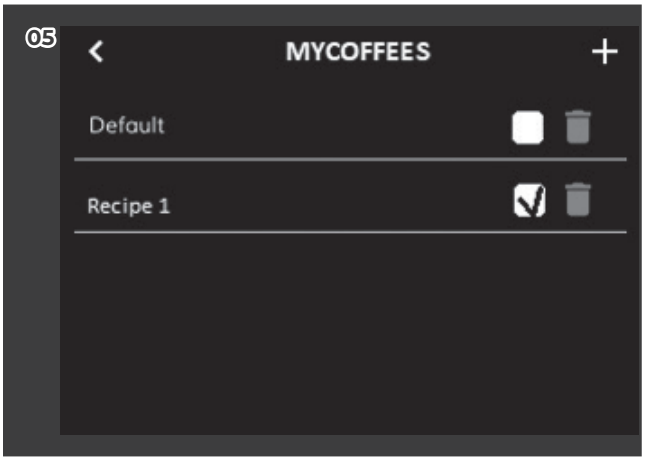
9.1 MY COFFEE

In this menu it is possible to see all the recipes present in the machine.

At the first power ON, in the menu it is present only the **"Default"** item, that is a recipe with default settings. To add a new recipe, click on the + on the top right of the screen, to come back to the main menu press the < on the top left and to delete a recipe, press on the red bin near the recipe name.



CHOOSE OR MODIFY A RECIPE
To choose a recipe, deselect the one active and select the one chosen.
To modify a recipe, push on it and enter inside the menus.



The following paragraphs describes the functions the **MY COFFEES** menu allows to set for each single group.

9.1.1 SET COFFEE TEMPERATURE

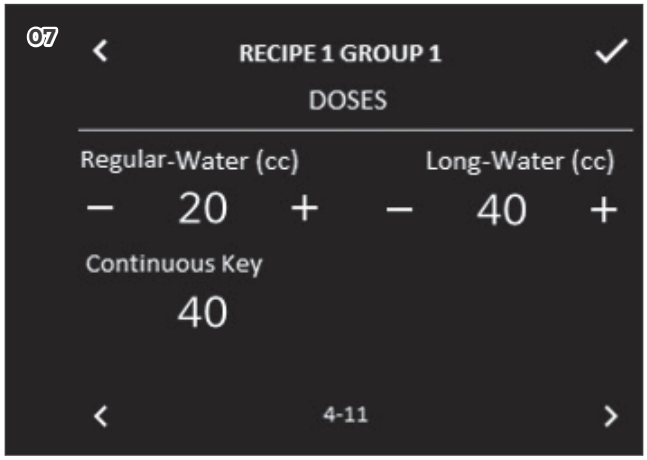
Thanks to the **NEO** technology it is possible to set just one temperature for each group and the machine will automatically manage the group heating and the coffee boiler heating.

9.I.2 SET DOSES

In this section it is possible to set the water doses (cc) relating the keys of each single group. When entering inside this page, the keys of the group considered start to flash.

The button on the left represents the regular dose, the central one represents the continuous dose and the button on the right represents the long dose.

07

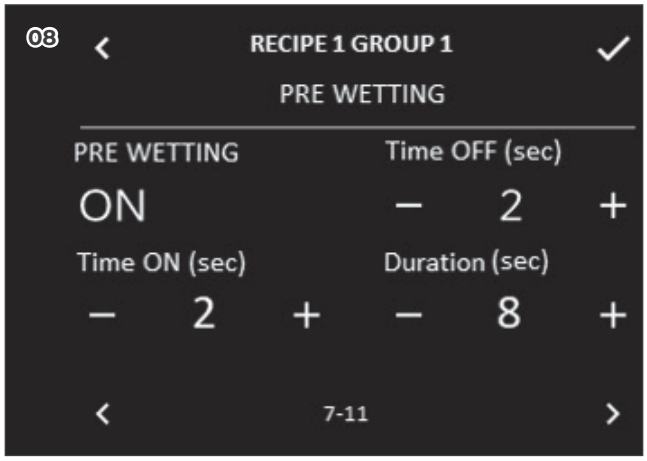


9.I.3 PREWETTING

It allows to enable, disable and/or set the prewetting function.
The prewetting parameters are:

- **Time ON**: this parameter represents for how much time the coffee valve is open and lets the water wet the coffee cake;
- **Time OFF**: this parameter represents for how much time the coffee valve is closed and stops the water to wet the coffee cake;
- **Duration**: it is the overall period in which the prewetting function repeats the parameters set before. Example: if it is set that the Time ON is 2 seconds, the Time OFF is 2 seconds and the duration is 8 seconds, it means that for 2 sec the coffee valve is open; for other 2 sec the coffee valve closes, for other 2 seconds it opens and then it closes again for other 2 sec for a total of 8 seconds. After this time, the prewetting phase ends and the brewing continues in a normal way.

08



9.I.4 EASY CREAM

In this section it is possible:

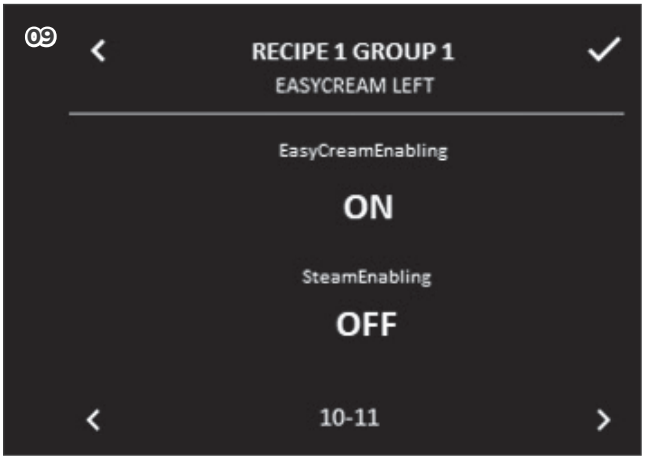
- In the first page to activate the Easycream and the steam for the left and right wand.
- In the second page to set the Easycream parameters, if the Easycream function was activated.

The parameters that can be set are:

- Delay.
- Air Temperature.
- Final temperature.

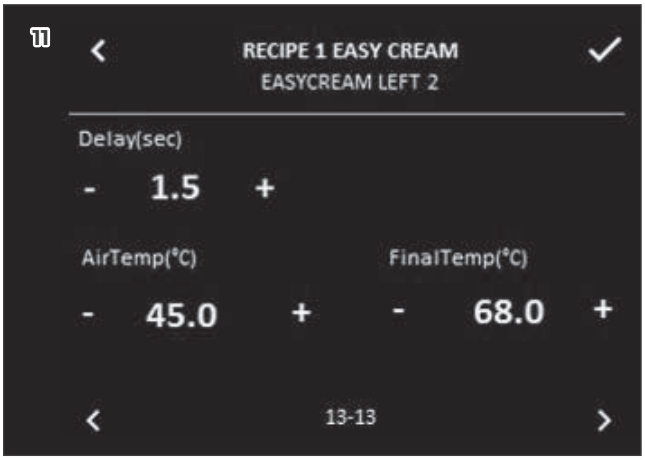
For a complete explanation of the Easycream function see Chapter 7.

09



10

11



9.I.5 SAVING RECIPES

After having set the parameters, press ✓ to save the recipe:

1 Confirm saving
2 Delete saving
3 Recipe name
4 Alphanumeric keyboard

After having entered the recipe name, press again ‹ to go back to the main menu.

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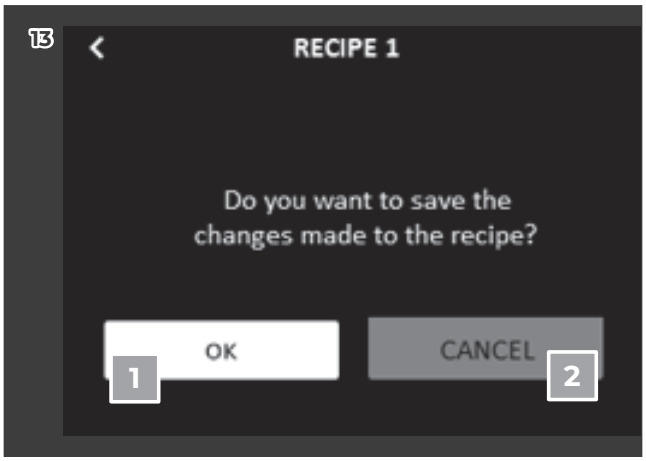
13



After having entered the recipe name, press ✓ and then ‹ to go back to the main menu.

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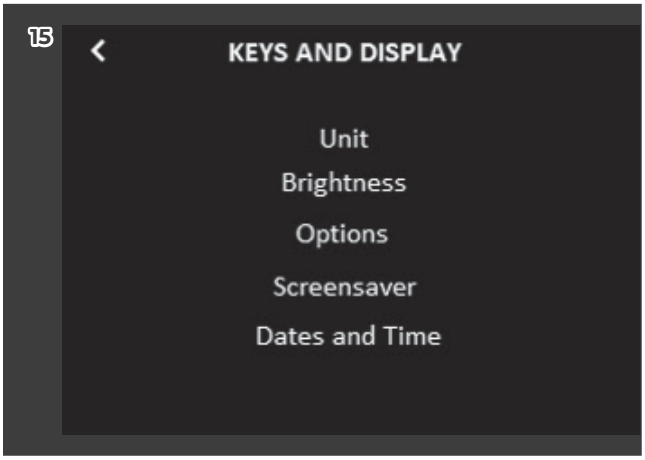
9.2 KEYS AND DISPLAY

In this menu it is possible to select:
- Unit;
- Brightness;
- Options;
- Screensaver;
- Dates and Time.

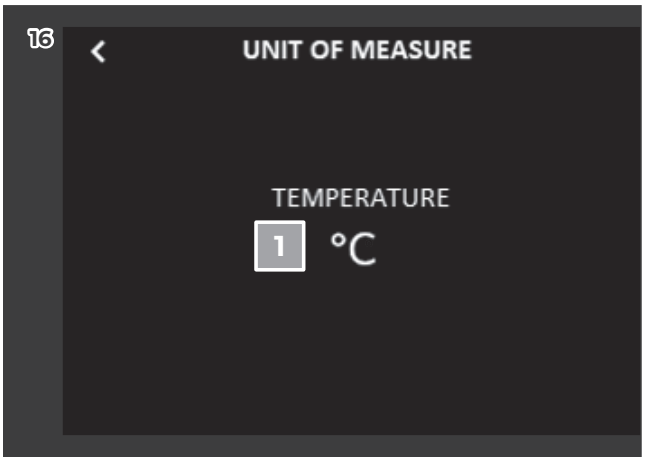
The following paragraphs describe the above-mentioned functions in detail.



9.2.1 UNIT OF MEASURE

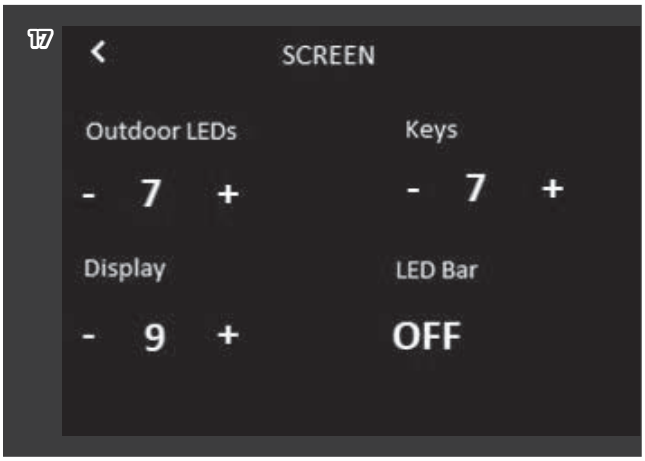
It allows to set the unit of measurement.

Press the “Temperature” field (**1**) to change the unit of measurement:
- Degree Celsius (°C);
- Degree Fahrenheit (°F).



9.2.2 BRIGHTNESS

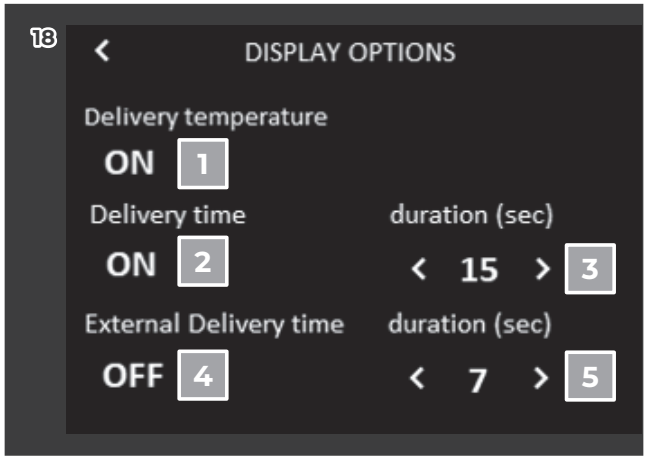
In this menu it is possible to set the brightness of:
- Outdoor LED, which are the LEDs situated underneath the delivery groups.
- Keys of the groups.
- Touch screen display.
- LED bar: it let you activate the rear LED bar.



9.2.3 DISPLAY OPTIONS

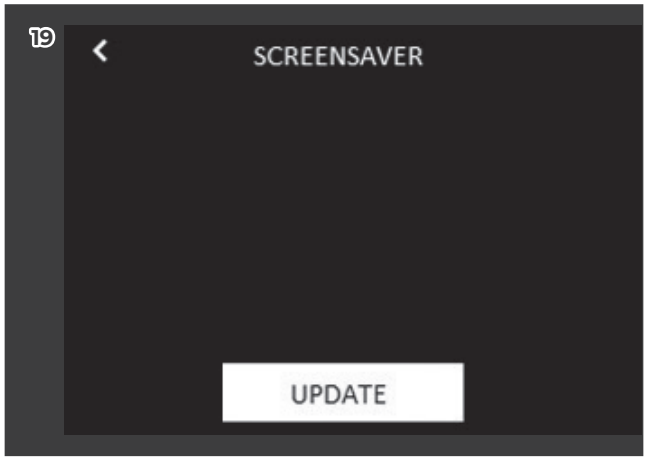
In this page it is possible to:

1 Enable/disable the visualization on the touch screen of the delivery temperature.
2 Enable/disable the visualization on the touch screen of the delivery time.
3 Set the duration of the visualization of the delivery time on touch screen.
4 Enable/disable the visualization of the delivery time on the groups display.
5 Set the duration of the visualization of the delivery time on the groups display.

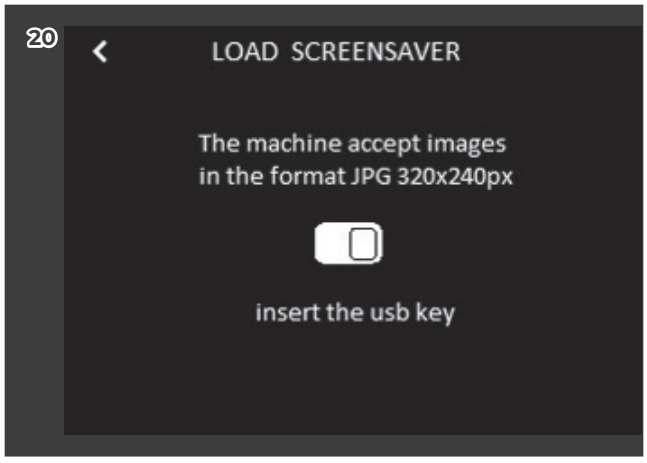


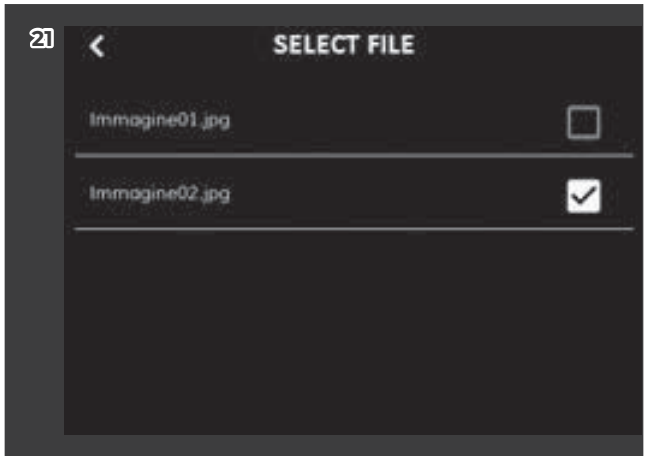
9.2.4 SCREEN SAVER

It allows to upload and to select the screensaver, which is visualized on the touch screen during standby.
Press **UPDATE** to start the procedure for inserting the images to be used as screensaver.



Insert the USB key and select the image.

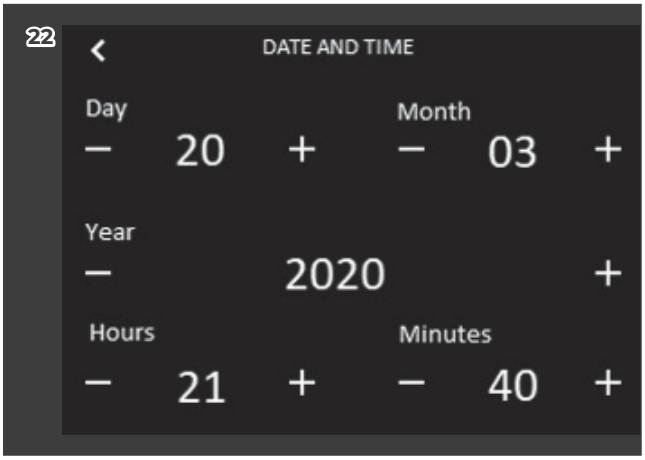




9.2.5 DATE AND TIME

It allows to set date and time shown on the touch screen:
- Day;
- Month;
- Year;
- Hours;
- Minutes.

22



9.3 POWER MANAGEMENT

The power management helps the baristas to activate functions to an eco-friendly management of the machine power consumption.

In the menu of this page it is possible to find:
- Power management;
- Weekly programming.

The detailed function will be explained in the next paragraphs.

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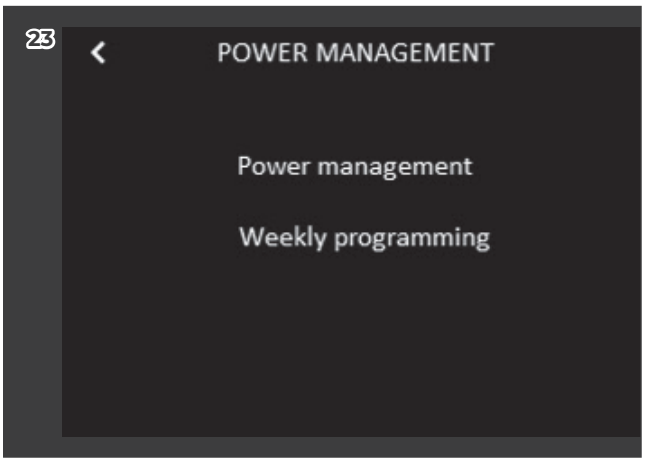
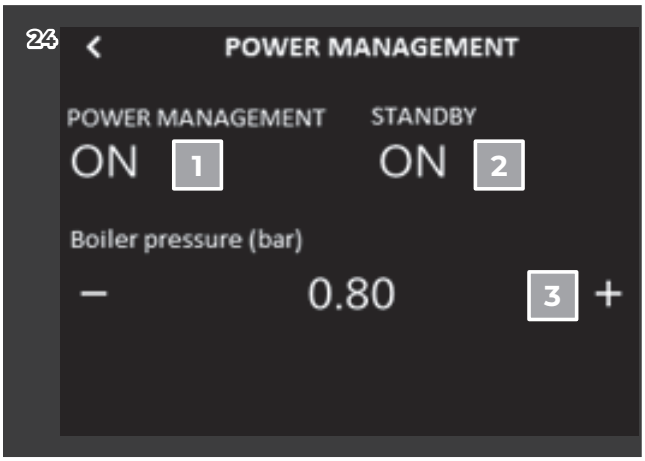


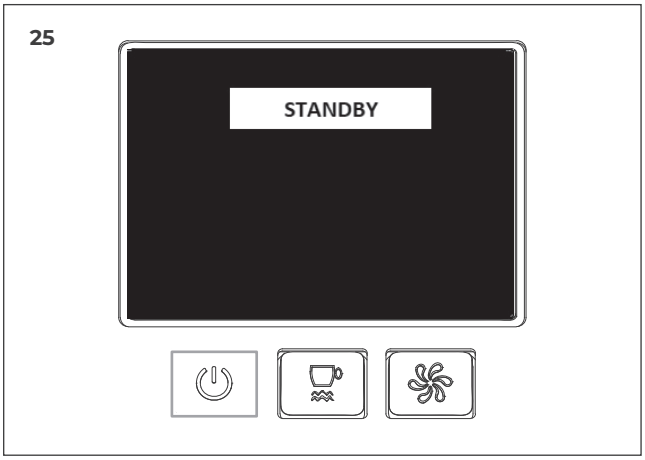
9.3.I POWER MANAGEMENT

In this page it is possible to:
1. Enable/disable of power management function. When the machine is cold, to start it means to switch ON all the heating elements together: coffee boilers, groups and steam boiler. The power management function avoids the initial spike of power consumption, switching ON taking turns the heating elements.
2. Enable/disable of standby function. When the machine is switched OFF by the automatic weekly programming or by manually pressing the power button, if the standby function has been enabled, the machine is not completely OFF but it keeps the steam boiler pressure to a set value.
3. Set the boiler pressure value in standby condition.

24



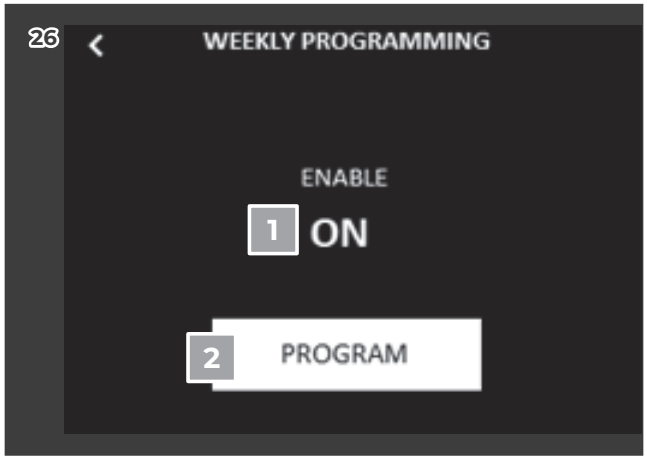
25



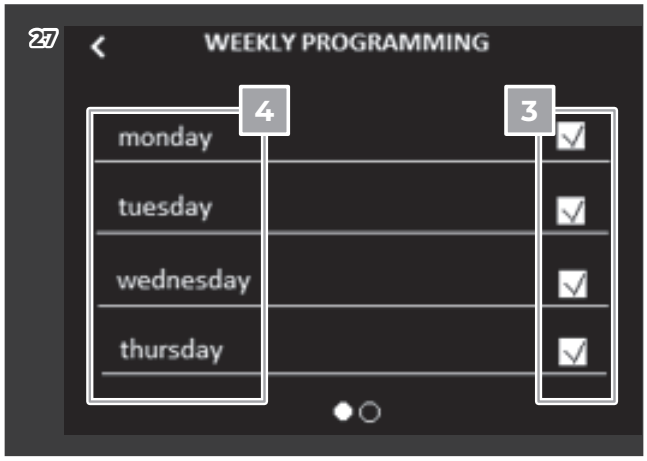
9.3.2 WEEKLY PROGRAMMING

This function let to set the automatic switching ON/OFF for each day of the week.

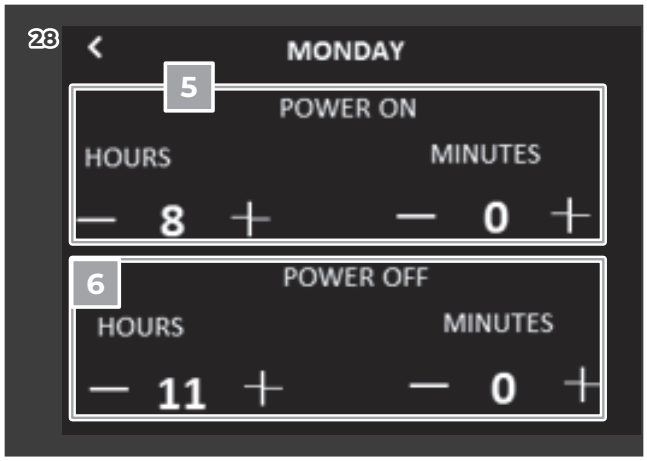
1 Enable/disable of weekly programming.
2 Press to enter the weekly programming.



3 Enable/disable the programming for that specific day.
4 Press the day to enter its programming by select the day.



5 Set of switching ON hours and minutes.
6 Set of switching OFF hours and minutes.

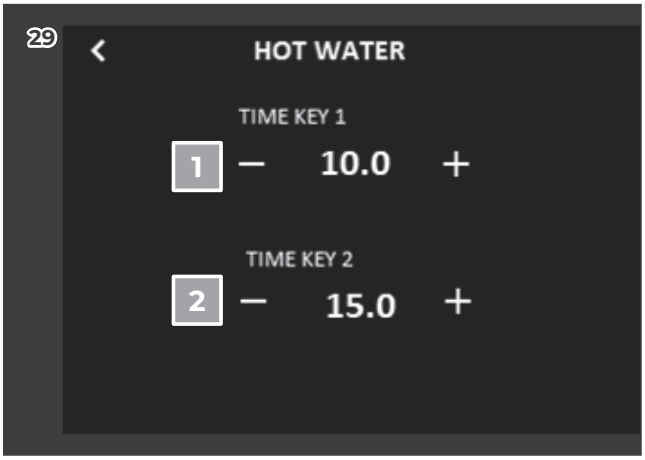


9.4 HOT WATER DOSE

The hot water delivery button serves to deliver two types of doses:
1 Button upwards
2 Button downwards

Press − + to set hot water doses to deliver:
1 Time key 1
2 Time key 2

29



9.5 MACHINE CLEANING

This menu allows to set:
- Washing of the groups;
- The automatic purge;
- The cleaning alarms.

The following paragraphs describe the above-mentioned functions in detail.

30

9.5.I WASHING GROUPS

In this page it is possible to:
- Start the washing program for each group.
- Set number of cleaning cycles.
- Set number of rinsing cycles.

When the washing cycle has been started:
- On the touch screen will appear a drop above the group considered and a count-down to the end of the cycle.
- On the group display will appear only the countdown.

31

NOTE

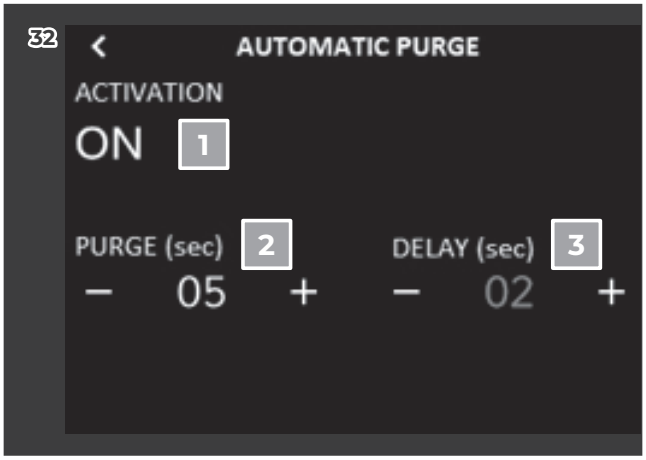
During the washing cycle of a group, all the other machine functions can be used.

9.5.2 AUTOMATIC PURGE

The purge function let the groups brew a small quantity of water to clean themselves before every brewing.

In this page it is possible to:
1 Enable/disable the automatic discharge.
2 Set the discharge duration after delivery.
3 Set the discharge delay after delivery.

32

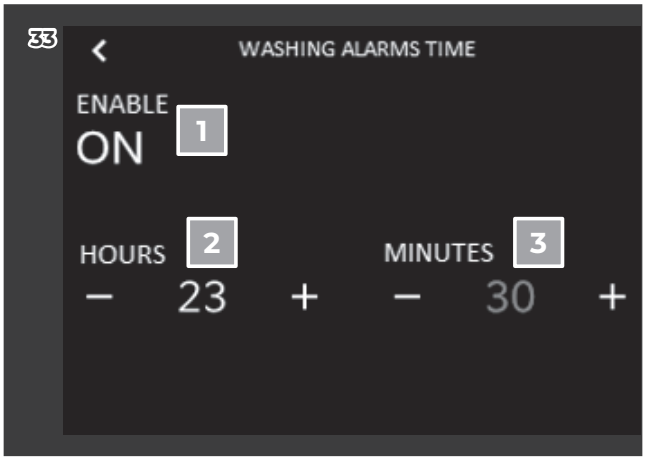


9.5.3 WASHING ALARM

This function let enable and set the daily alarm for the machine washing cycle.

From this page it is possible to:
1 Enable/disable of cleaning alarm.
2 Set the alarm hour.
3 Set the alarm minute.

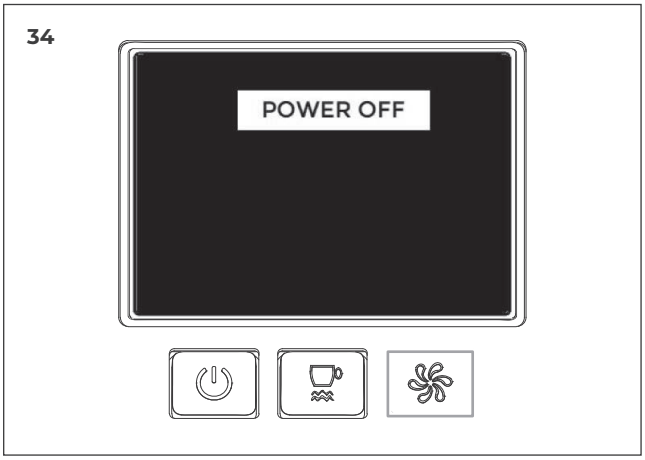
33



9.5.4 AUTOMATIC GROUP CLEANING CYCLE

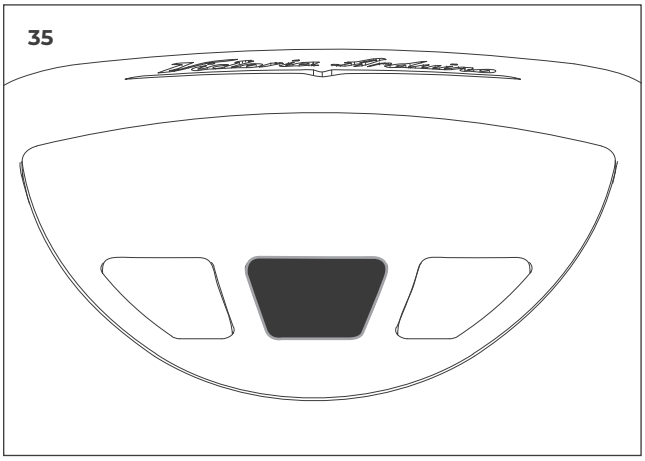
Besides to activate the washing cycle from the touch screen as explained above, it is possible to start it by pushing the key for 3 seconds (the central dose key of each group starts flashing).

34



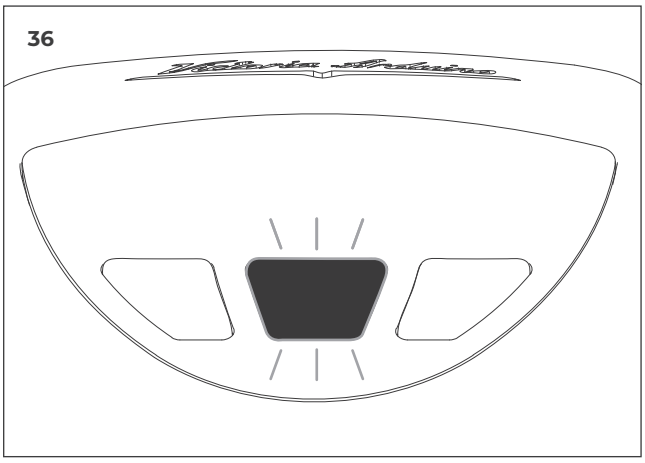
Press the central dose key of a group to carry out the washing cycle of that group.

35



At the end of the washing cycle, the central dose key of the group considered, starts flashing again to allow the rinsing cycle.

36



It is possible to exit the washing cycle, only before starting it. During flashing of the central dose key of each group:

- Press and hold the key for 3 seconds.
- Or, do not press any key for 20 seconds.

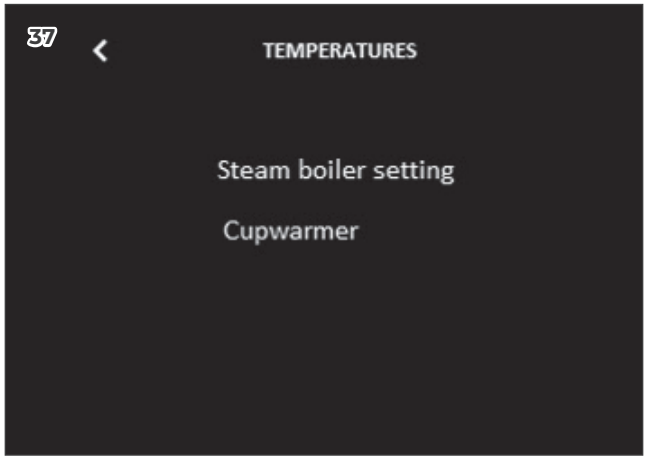
When the automatic washing cycle is started, it cannot be stopped before its end. If the machine is stopped before the cycle has finished, when it is switched back ON, it restarts the rinsing cycle automatically.

9.6 TEMPERATURES

In this page it is possible to:
- Set the settings of steam boiler;
- Set the cupwarmer.

The following paragraphs describe the above-mentioned functions in detail.

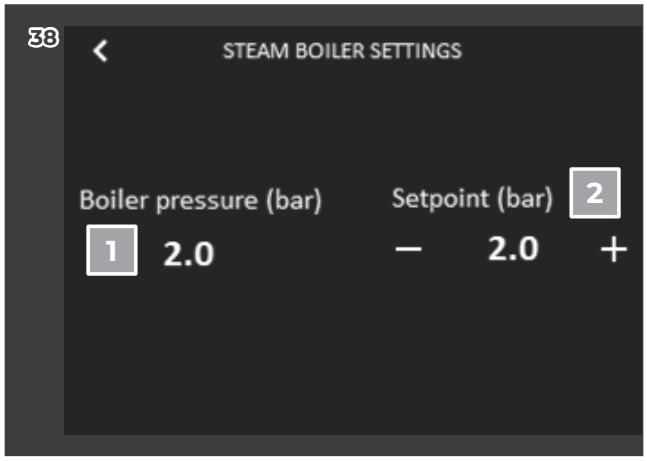
37



9.6.1 STEAM BOILER SETTINGS

It shows:
- The current pressure of the steam boiler (**1**);
- The setpoint pressure, which can be modified (**2**).

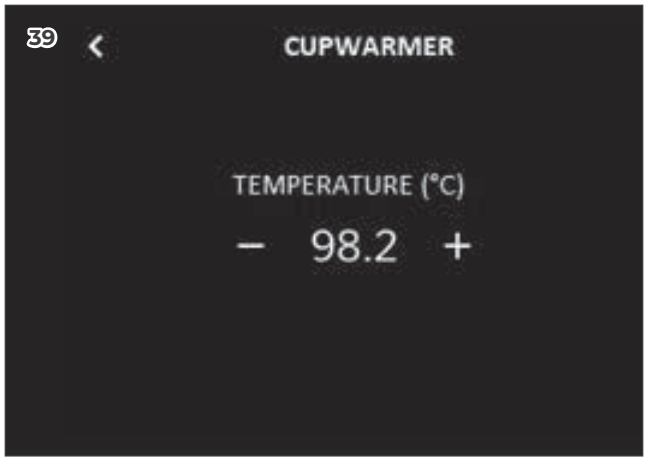
38



9.6.2 CUPWARMER

This page allow to set the temperature for the cupwarmer.

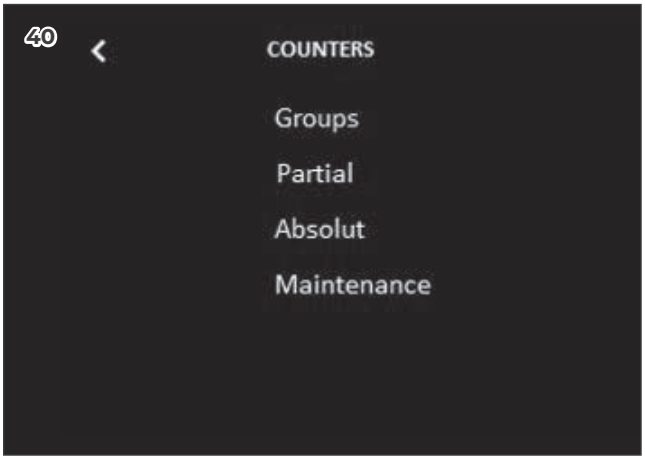
39



9.7 COUNTERS

This menu allows to show dose counters delivered for each group:

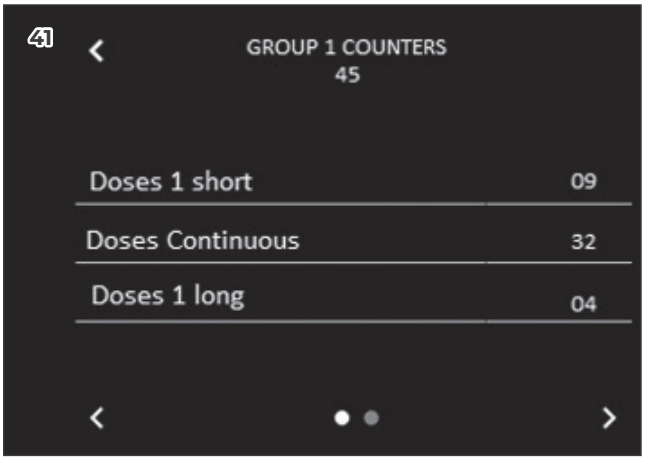
- Groups;
- Partial;
- Absolute;
- Maintenance.



9.7.1 GROUP COUNTERS

This menu allows to show counting of delivered doses for each group.

This counters can't be reset.

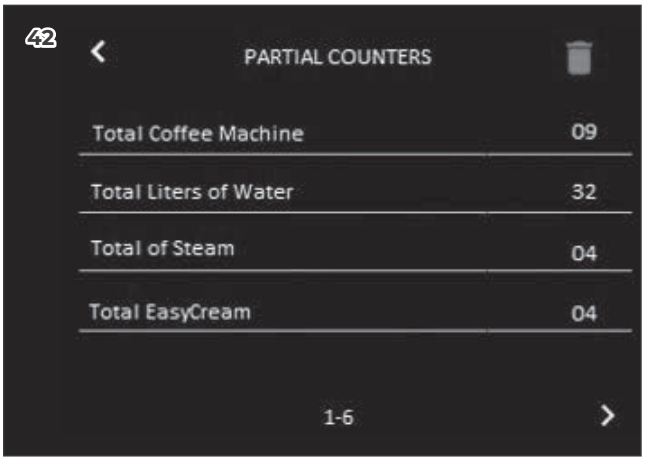


9.7.2 PARTIAL COUNTERS

This menu allows to show the partial counting of:

- Total coffee;
- Total water litres;
- Total steam;
- Total Easycream;
- Total groups;
- Hot water and steam.

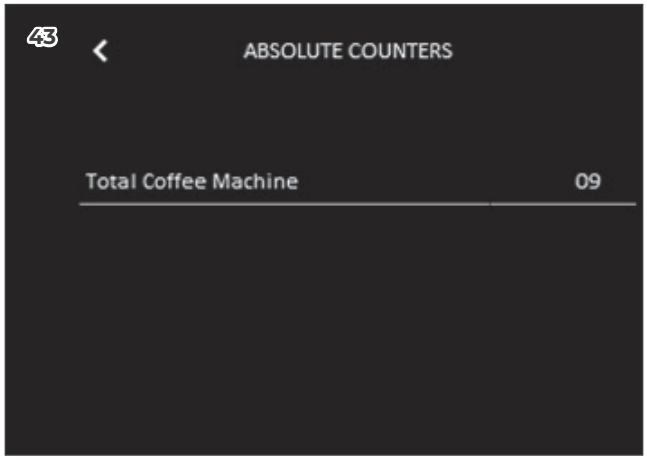
These counters can be reset, by pushing on the bin on the top right of the screen.



9.7.3 ABSOLUTE COUNTERS

This menu allows to show the total counters of the whole machine.
To reset this counter, keep pressed on the name of the function until the counter is deleted.

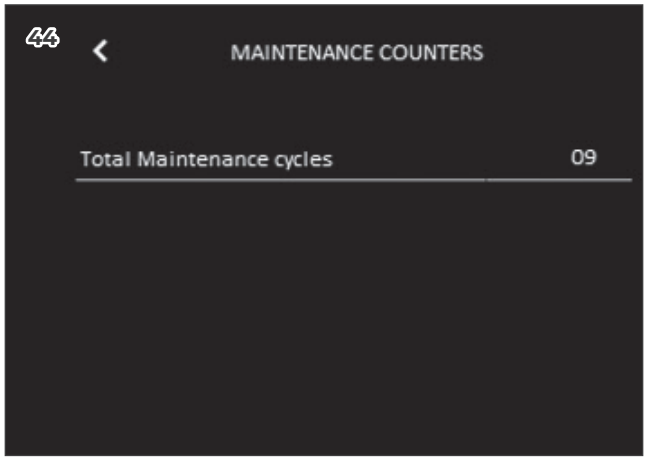
43



9.7.4 MAINTENANCE COUNTERS

This menu allows to show the total counter of the maintenance cycle.
To reset this counter, it is necessary to go in the maintenance page.

44

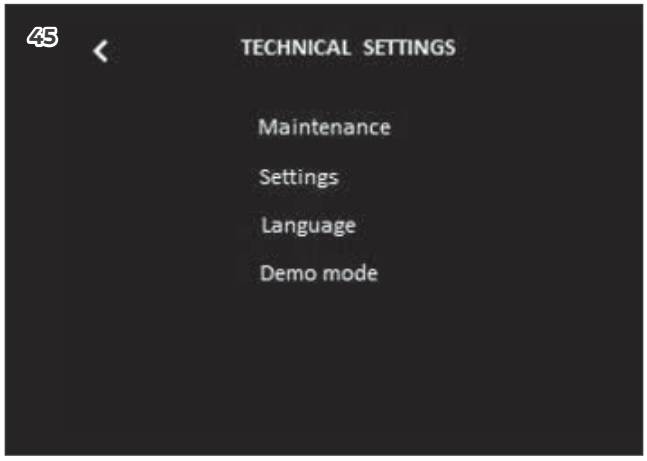


9.8 TECHNICAL SETTINGS

To enter in this section it is necessary to insert the PIN **1936** and click the symbol  .

In this page the selectable functions are:
- Maintenance;
- Settings;
- Language;
- Demo Mode.

45



9.8.I MAINTENANCE

In the maintenance page it is possible to access the following functions:
- Offset;
- Alarms;
- Smartwater;
- Diagnostic.

Press the function to enter inside it.

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9.8.2 OFFSET

The term offset is used to indicate the difference from a reference value. The temperature probes, in fact, can be slightly different compared to an outside thermometer.

NOTE

We recommend using a scace device and a fluke for these measurements.

In this section it is possible to set the offset of:

1 Steam boiler pressure.

2 Coffee group boilers 1, 2, 3 temperatures.

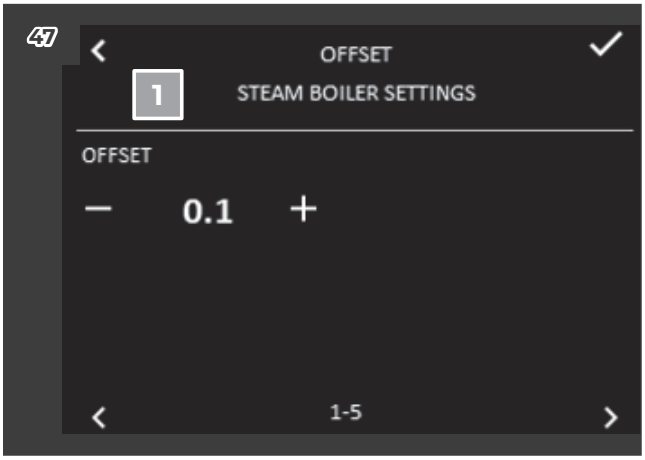
3 Easycream (optional) probe temperature.

NOTE

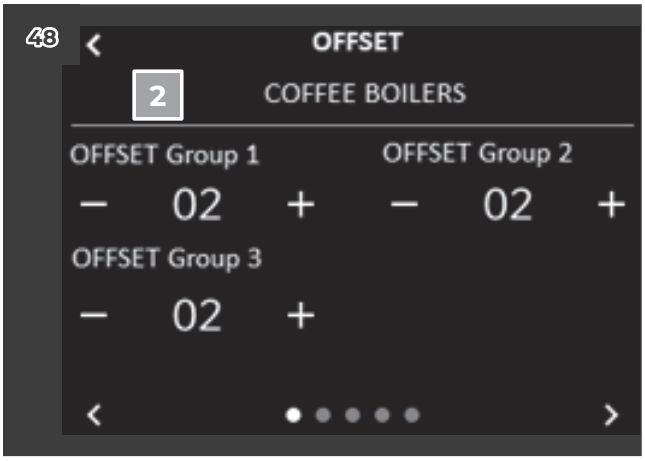
EXAMPLE: if I set a temperature, but an external device measures an higher temperature, I can set a negative offset to compensate the difference.

4 Water pump pressure.

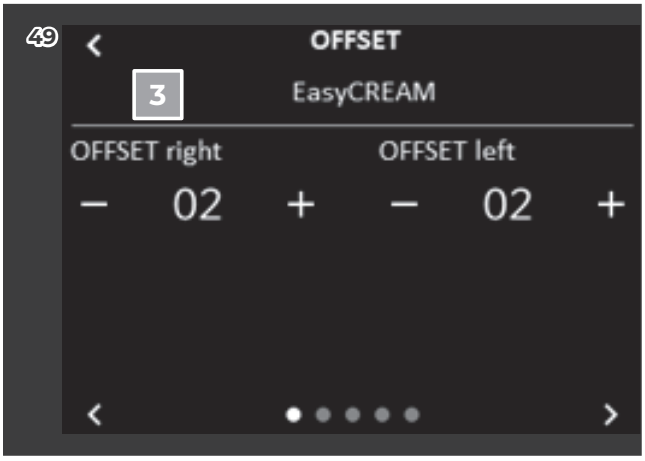
47



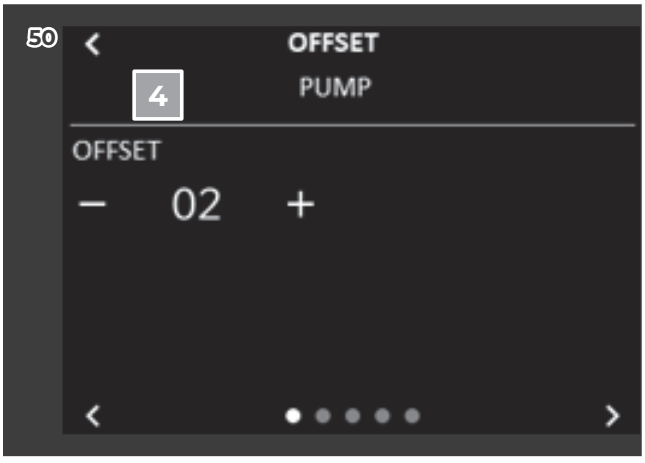
48



49

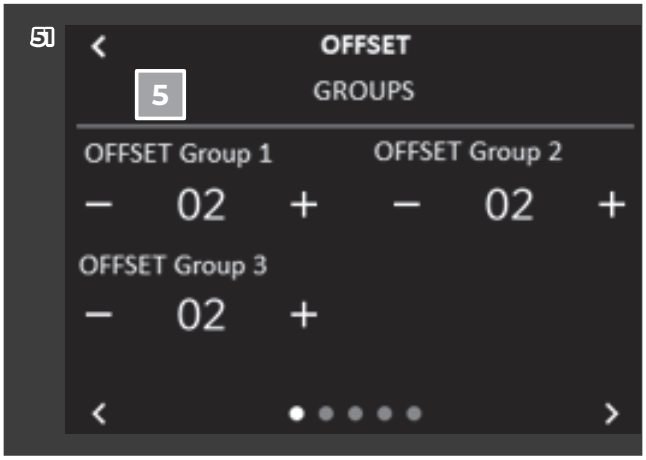


50



5 Coffee groups 1, 2, 3 temperatures.

51



9.8.3 ALARMS

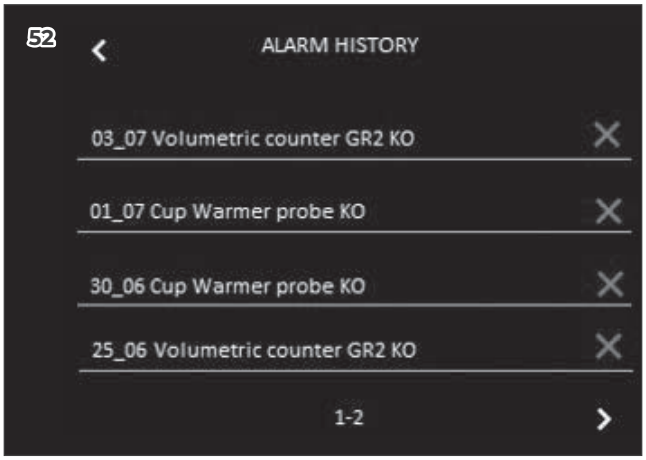
From this section it is possible to access the Alarms menu, where it is possible to find:

- Alarms history;
- Maintenance alarm.

9.8.4 ALARM HISTORY

It shows a list with all the alarms that are activated during machine operation.
To delete an alarm press the red cross near it.
For a detailed explanation of the Alarms, refers to Chapter 10.

52



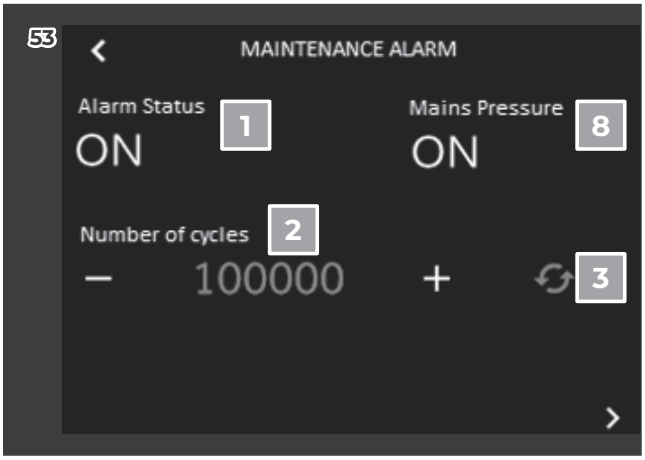
9.8.5 ALARM SETTING

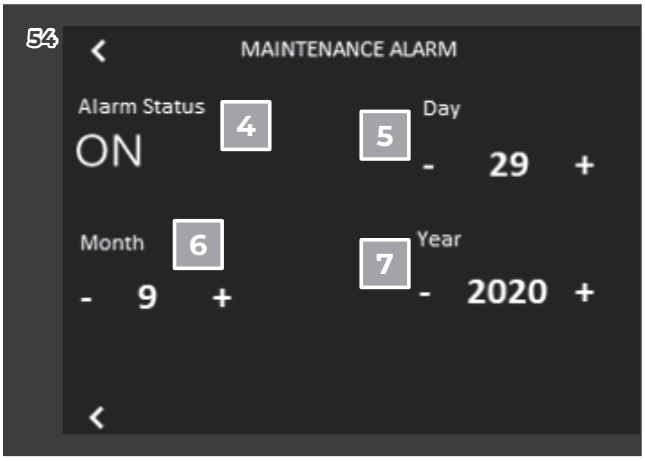
This page permits:

- To modify the delivery number or the date above which the maintenance alarm is activated.
- To enable/disable the mains pressure alarm.

Inside it it's possible to:

1 Enable/disable the maintenance alarm for number of cycles.
2 Set the number of cycles before maintenance alarm.
3 Reset the maintenance counter.
4 Enable/disable the maintenance alarm for date.
5 Set the day of maintenance alarm.
6 Set the month of maintenance alarm.
7 Set the year of maintenance alarm.
8 Set mains pressure alarm: when the alarm is enabled, it appears if the mains pressure is under 0.5 bar for more than 15 seconds.



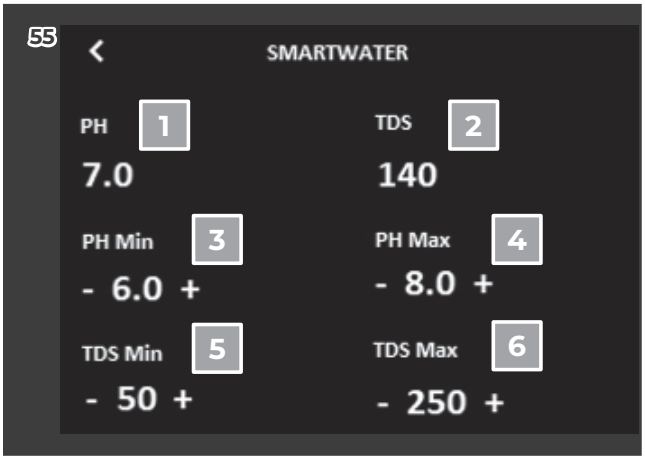


9.8.6 SMART WATER TECHNOLOGY (OPTIONAL)

This page contains the smart water technology parameters. It permits to show the current PH and TDS values and to set the PH and TDS range acceptable before giving an alarm.

1 Current PH value
2 Current TDS value
3 Minimum PH
4 Maximum PH
5 Minimum TDS
6 Maximum TDS

Refers to Chapter 7 for the detailed functions of the smart water technology.

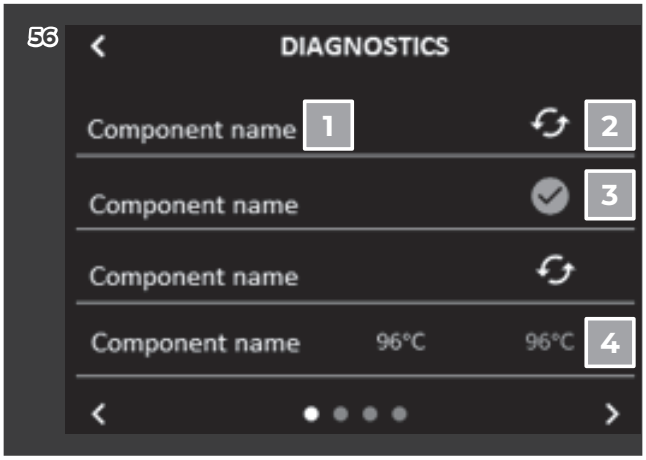


9.8.7 DIAGNOSTICS

This menu is a powerful instrument helping the technicians to check the functioning state of the single parts of the machine.
In the page it is possible to see:
1 Parts list
2 Part to be tested
3 Part tested
4 Part under test

During the test phase of the part selected, depending on the part it is possible to hear the part in operation and to read on the touch screen "test in progress" or the current value of the peculiar parameter.

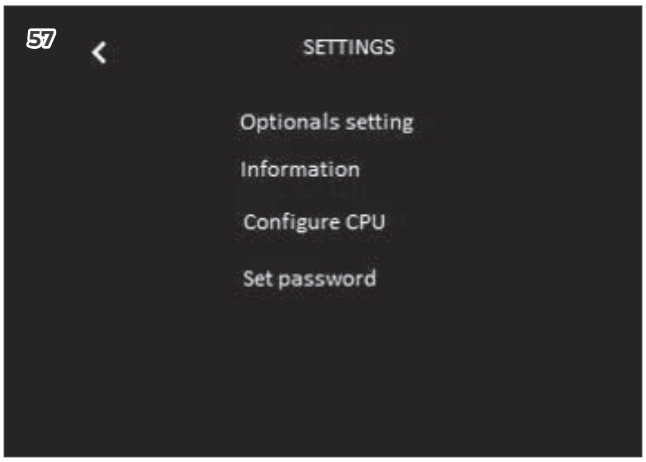
56



9.8.8 SETTINGS

In the settings menu it is possible to:
- Set the optional;
- See the information of the machine;
- Configure CPU;
- Set passwords.

57



9.8.9 OPTIONAL CONFIGURATION

In this menu it is possible to enable/disable the smartwater optional.
For detailed functions of smartwater technology, see Chapter 7.

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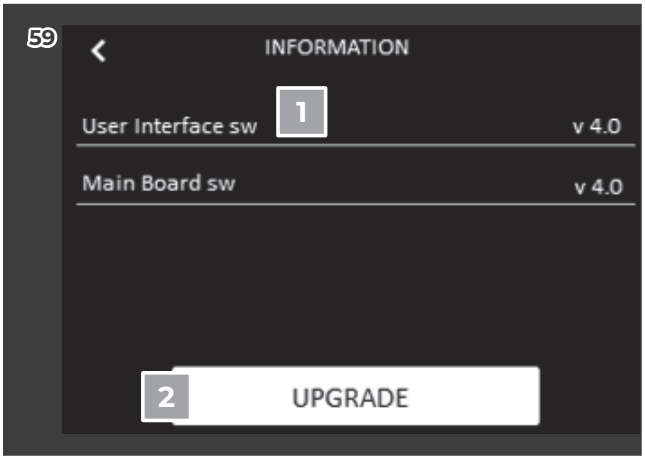
9.8.10 INFORMATION

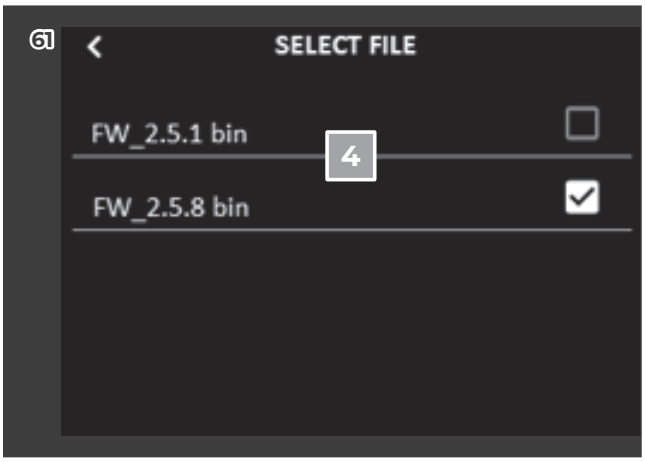
It allows to show machine information and carry out software update.

1 It shows machine information.
2 Press to UPGRADE software.

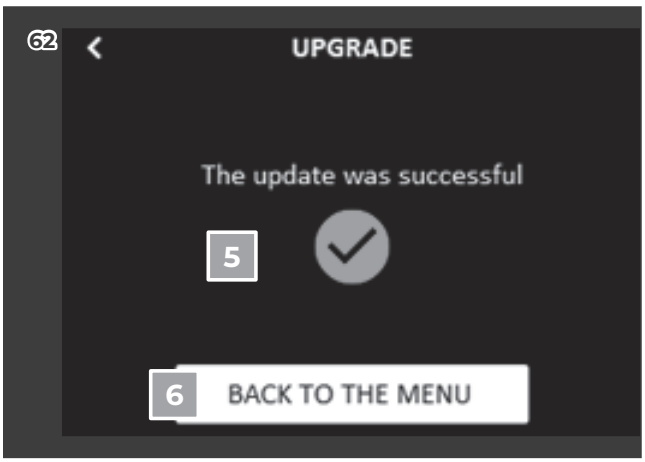


3 Insert the USB support containing the new software.

4 Select the software file for update.



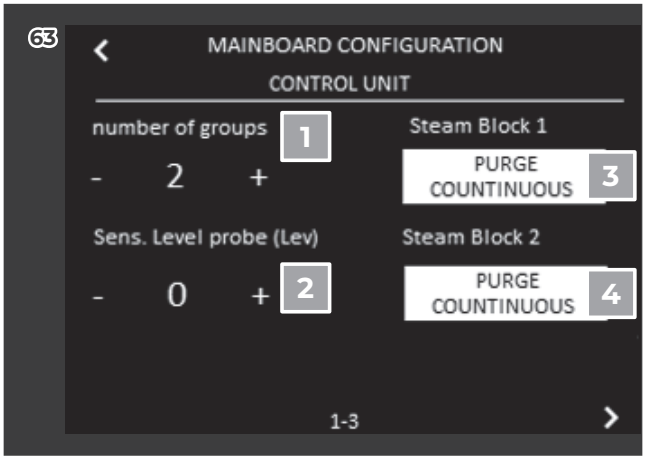
5 Confirmation message.
6 Press to go back to main menu.



9.8.II CPU CONFIGURATION

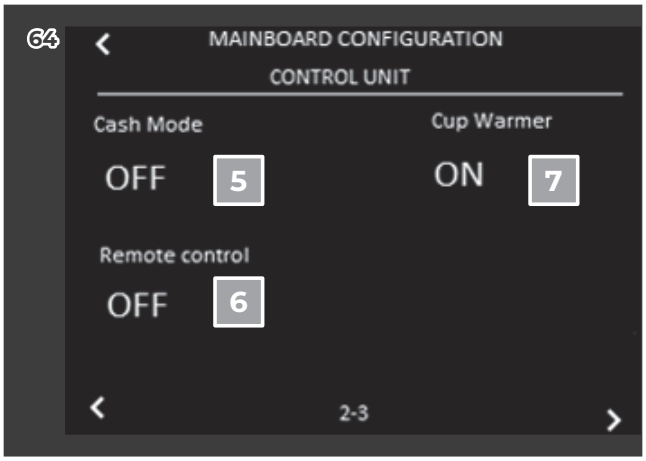
In this menu it is possible to set the machine control unit.
In the first page it is possible to:
1 Set the number of groups of the machine.
2 Set the sensitivity of the level probe.
3 Set the steam button left.
4 set the steam button right.

63



In the second page it is possible to:
5 Activate the cash mode.
6 Activate the remote control.
7 Activate the cup warmer.

64



In the third page, it is possible to choose the modality to activate the autorefill function:
8 With pump.
9 With water.
10 In delivering.
11 Hot water and pump.

65

9.8.I2 PASSWORD MANAGEMENT

In this page it is possible to:

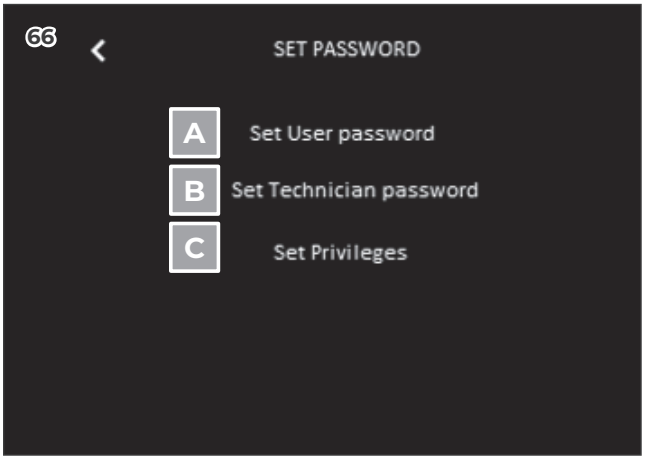
1 Select the password to be setting or privileges.

- A Set the user password, which can be inserted by the user of the machine (example: barista).
- B Set the technician password, which should be inserted by technicians to access the privileges and the hidden functions.
- C Set privileges: this function let choose at which person give privileges (the technicians can not be deleted from privileges).

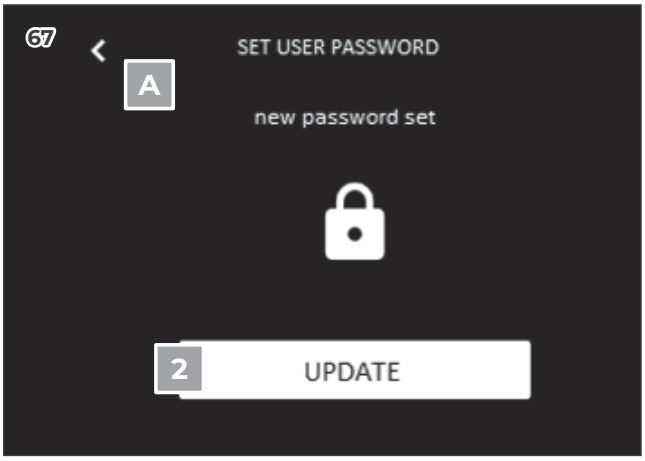
2 Select UPDATE to enter the password setting.

Press  or  to enable/disable the Technician or user privileges.

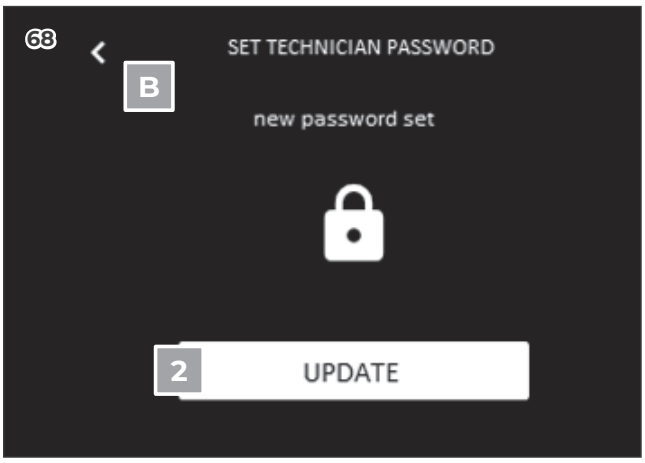
66



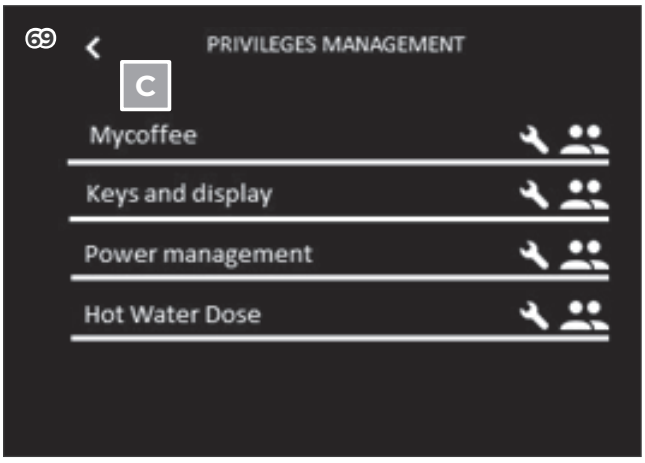
67



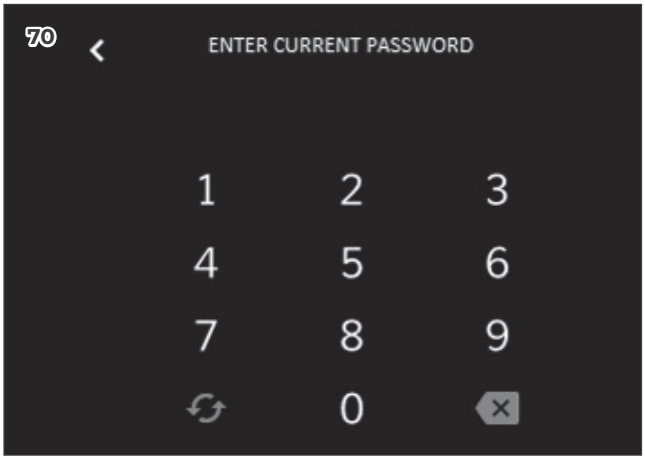
68



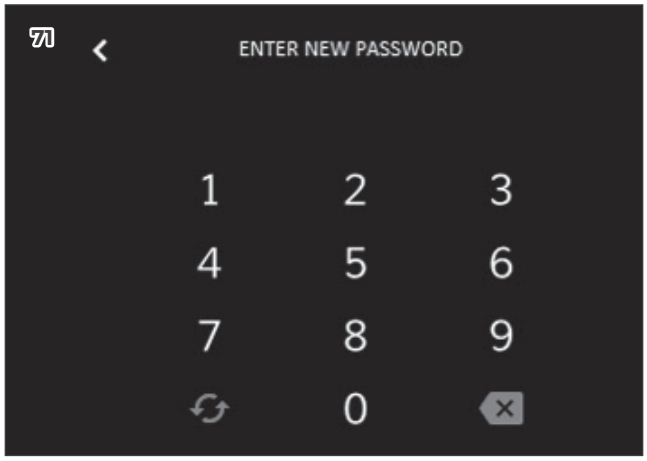
69



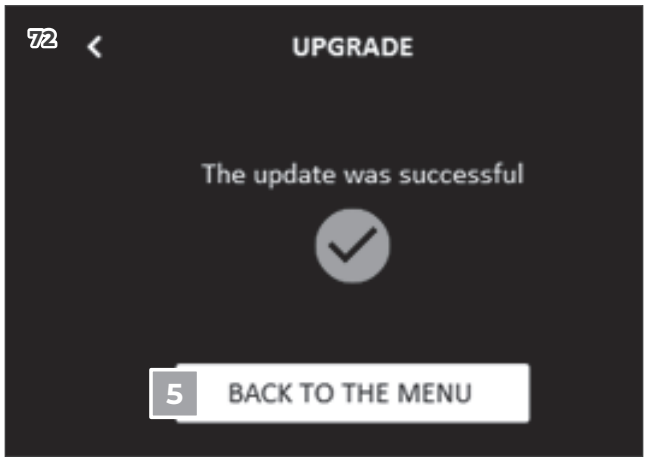
3 Insert the current password.



4 Set a new password.



5 Press BACK TO THE MENU to go back to main menu.



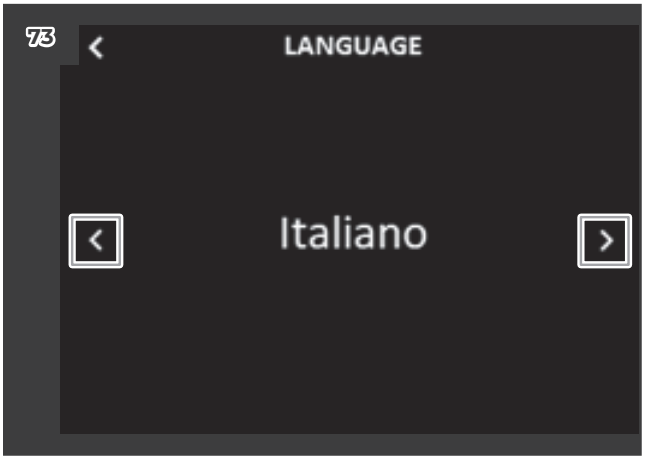
NOTE

If not set a new password, the default password 1936 is always present.

9.8.I3 LANGUAGE

Set the touch screen language with < >.

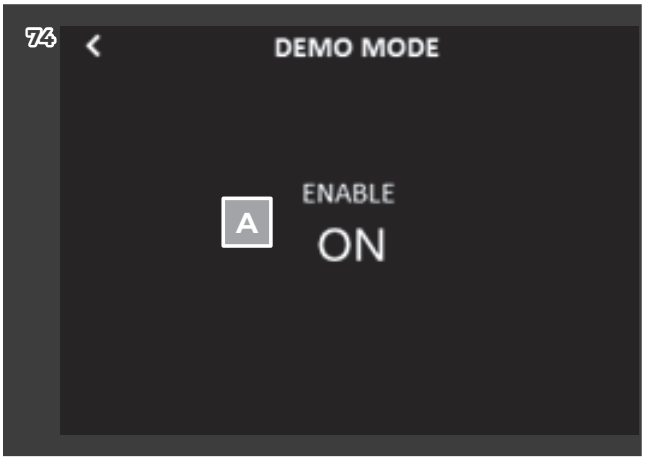
- Italian;
- English;
- French;
- German;
- Spanish.



9.8.I4 DEMO MODE

This mode allows to simulate the machine operation by keeping all of settings active.

Enabling or disabling the demo mode via the ON/OFF button (**A**).



10 ALARMS AND CONTROL OF THE EMERGENCIES

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10. ALARMS AND CONTROL OF THE EMERGENCIES 173
10.1 ALARMS AND SOLUTIONS 174
10.2 WARNINGS AND SOLUTIONS 178

The **Eagle One** can alert the user with various “alarms” and “warnings” on the touch screen and by keypad signalling.

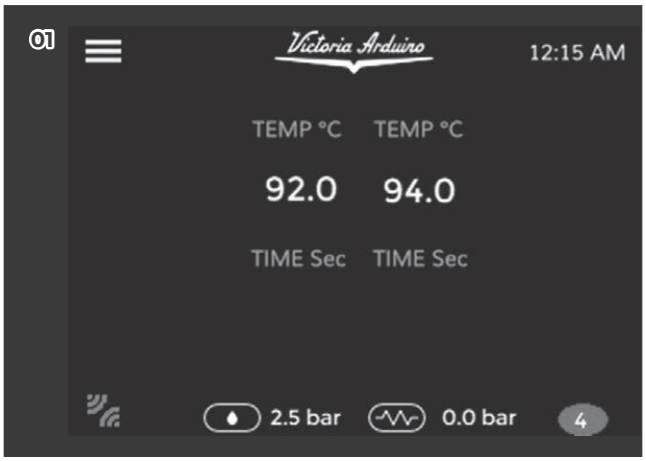
Below is a key to decoding the various alarms and signals. To follow the suggested solutions, if needed, refer to the relative chapters in this manual.

Please note that some alarms and warnings are significant only from certain firmware release on. This Service Manual is based on firmware release 4.0.

10.1 ALARMS AND SOLUTIONS

Alarm codes will be seen in **RED** in the bottom right corner of the touch screen, as shown in the picture.

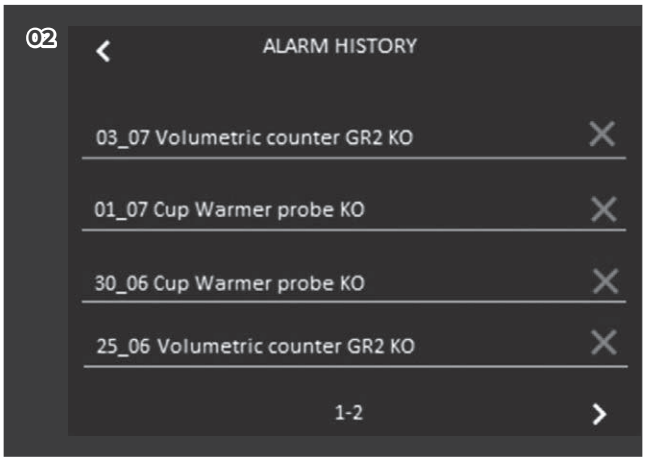
01



A detailed list of previous alarms may be found in the Alarm History menu. To access this, select:

MENU
> **TECHNICAL SETTINGS**
> PIN **1936**
> **MAINTENANCE**
> **ALARMS**
> **ALARM HISTORY**

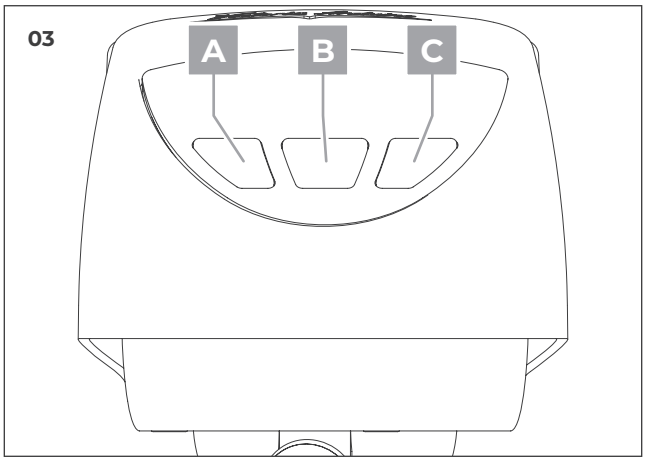
02



NOTE

To reference keypad signalling, the group buttons are identified as A, B and C, as shown in the picture.

03



ALARM	MAIN REASON	KEYPAD SIGNALLING	ALARM HISTORY	SOLUTIONS
1	The control unit does not receive a signal from the flowmeter by 5 seconds.	Key pressed flashing.	Volumetric counter GR1 KO. Volumetric counter GR2 KO. Volumetric counter GR3 KO.	Check the flowmeter of the specified group and its connection to the control unit. LEDs on the control unit can confirm if it is receiving signals from flowmeters.
2	The machine cannot fill the steam boiler within 90 seconds.	All keys synchronous flashing.	Time out Boiler filling.	Switch the machine OFF and ON to restart the auto-fill function. If not solved: · Check proper flow of inlet water from the mains or from the external tank. · Check the pump and the boiler filling valve manual operations in the Diagnostic menu. · Check machine taps and potential leaks. · Check the level probe: the presence of limescale, the integrity of the plastic insulation and its sensitivity in the Configure CPU menu, can all effect the auto-fill function.
3	The machine cannot reach the setpoint temperature within 40 minutes.	Key B of all Groups flashing.	Time out Heating Boiler SER. Time out Heating Boiler GR1. Time out Heating Boiler GR2. Time out Heating Boiler GR3. Time out Heating GROUP1. Time out Heating GROUP2. Time out Heating GROUP3.	In relation to the heating element of the steam boiler, or of the coffee boiler X, or of the group X: · Check the manual operation in the Diagnostic menu. · Check the thermo-fuse or high-limit thermostat continuity. · Check the heating element continuity and integrity. · Check the LEDs on the relative part: static relays and/or T3 card and/or control unit. · Check connections.

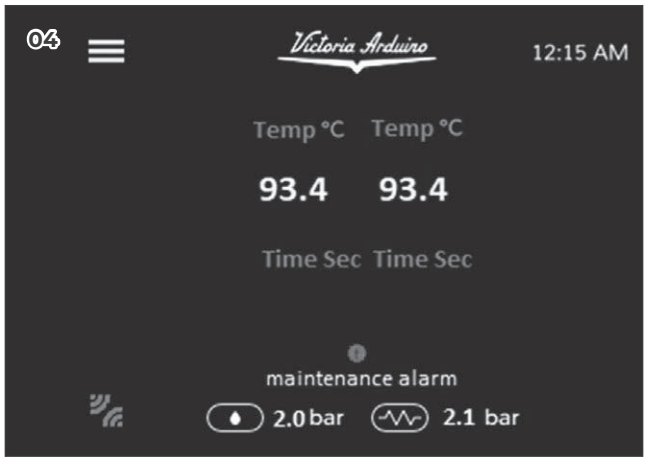
ALARM	MAIN REASON	KEYPAD SIGNALLING	ALARM HISTORY	SOLUTIONS
4	The control unit does not receive the signal from a temperature probe or the pressure transducer.	Key B of all Groups steady OFF.	Error Services Pressure.	Check the steam boiler pressure transducer and its connection to the control unit.
			NTC Boiler Group1 KO.	Check the coffee boiler X temperature probe and its connection via the extension cord to the T3 card.
			NTC Boiler Group2 KO.	
			NTC Boiler Group3 KO.	
			PT1000 Group1 KO.	Check the group X temperature probe and its connection via the extension cord to the T3 card.
			PT1000 Group2 KO.	
			PT1000 Group3 KO.	
			Cup Warmer probe KO.	• Check the cupwarmer temperature probe and its connection to the control unit. • If the machine has not the cupwarmer, turn the cupwarmer OFF and disable it in the configure CPU menu (paragraph 9.8.11).
			PT1000 EasyCream Block1 KO.	Check the Left Easycream temperature probe and its connection via the extension cord to the control unit.
			PT1000 EasyCream Block2 KO.	Check the Right Easycream temperature probe and its connection via the extension cord to the control unit.
5	A temperature probe or the pressure transducer has short circuit.	Key B of all Groups steady OFF.	Error Services Pressure.	Check the steam boiler pressure transducer and its connection to the control unit.
			NTC Boiler Group1 KO.	Check the coffee boiler X temperature probe and its connection via the extension cord to the T3 card.
			NTC Boiler Group2 KO.	
			NTC Boiler Group3 KO.	
			PT1000 Group1 KO.	Check the group X temperature probe and its connection via the extension cord to the T3 card.
			PT1000 Group2 KO.	
			PT1000 Group3 KO.	
			Cup Warmer probe KO.	• Check the cupwarmer temperature probe and its connection to the control unit. • If the machine has not the cupwarmer, turn the cupwarmer OFF and disable it in the configure CPU menu (paragraph 9.8.11).
			PT1000 EasyCream Block1 KO.	Check the Left Easycream temperature probe and its connection via the extension cord to the control unit.
			PT1000 EasyCream Block2 KO.	Check the Right Easycream temperature probe and its connection via the extension cord to the control unit.

ALARM	MAIN REASON	KEYPAD SIGNALLING	ALARM HISTORY	SOLUTIONS
6	The control unit cannot sense the water level in the steam boiler.	Key B of all Groups steady ON.	Level Probe KO.	On the level probe: · Check the presence of limescale. · Check the integrity of the plastic insulation. · Change its sensitivity in the Configure CPU menu.
7	The machine cannot fill the coffee boilers within 10 seconds.	Key A and C of all Groups flashing.	Filling Boiler KO.	The control unit does not receive the signal from a flowmeter during the “clock reset” procedure. · Check proper flow of inlet water from the mains or from the external tank. · Check machine taps and potential leaks. · Check the flowmeter LEDs on the control unit to understand which is the faulty flowmeter. · Check the flowmeter connection to the control unit. · Check the presence of a blockage: in the flowmeter, its metallic input filter, the restrictor and the not-return valve.
8	General error on memory parameters.	-	Error Memory parameters.	· Check if the error disappears by switching the machine OFF and ON. · Reset all machine parameters: open the control unit and, with machine ON, change the status of the dip switch SW2-3. Wait 5 seconds and return the dip switch to its original position. · Update the firmware or re-install the same firmware version. · Change the control unit.
9	General error on memory counters.	-	Error Memory counters.	· Check if the error disappears by switching the machine OFF and ON. · Reset all machine parameters: open the control unit and, with machine ON, change the status of the dip switch SW2-3. Wait 5 seconds and return the dip switch to its original position. · Update the firmware or re-install the same firmware version. · Change the control unit.

ALARM	MAIN REASON	KEYPAD SIGNALLING	ALARM HISTORY	SOLUTIONS
10	General communication error between CPU and touch screen.	-	Error Communication.	This error may appear after another error has occurred, or if the control unit does not communicate correctly with the touch screen. · Check the presence of another error in the Alarm History menu. · Check if the error disappears by switching the machine OFF and ON. · Check the connections of the cable between the control unit and the touch screen.
11	The CR1220 3 Volt battery has been discharged.	-	Battery Discharged.	Change the CR1220 3 Volt battery on the control unit.

10.2 WARNINGS AND SOLUTIONS

Warning messages appear on the touch screen as shown in the picture.



WARNING	MAIN REASON	SOLUTIONS
Maintenance Alarm	The machine is due for its periodic maintenance.	To delete the warning, enter the Maintenance alarm menu, press and hold the  for about 5 seconds to reset the cycle counter.
Mains Pressure	Inlet water pressure less than 0,5 bar for at least 15 seconds.	Check the mains pressure. It is suggested to have this control enabled in case of mains water supply, or disabled in case of water supply by tank. To disable the warning, enter the Maintenance alarm menu and set Mains Pressure to OFF.
Washing Alarm	The set time for daily washing has been reached.	Perform the automatic group cleaning cycle to clean the message. To disable this warning, enter the Washing Alarm page and set ENABLE to OFF.

11 MAINTENANCE CHECK LIST

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II.3 ONE (1) YEAR MAINTENANCE KIT 182

II.I FOUR (4) - SIX (6) MONTHS MAINTENANCE

Approximate time for service is 1 hour uninterrupted. Consider that the technicians performing the service are aware of safety measures before commencing in regards to isolating power, pressure of steam and pressure of water.
Information should be sought from the site manger for any problems or concerns before commencing work, and to allow sufficient time to complete the task uninterrupted. Remove all covers before commencing and check for damage/signs of leaks.

- ❒ Check for any signs of valves leaking
- ❒ Check and inspect touch screen, ensuring it is not faulty
- ❒ Check for boiler leaks
- ❒ Check the cleaning cycle counts Total _____ (if present)
- ❒ Replace cup gaskets (40200004)
- ❒ Replace shower screens (03000066.R)
- ❒ Check for any signs of leaking in machine
- ❒ Check for any damaged wires or caballing
- ❒ Check for noisy pump motor
- ❒ Check for blockage in waste hose
- ❒ Check for leaking from hot water pipe
- ❒ Check anti vacuum valve for leaks
- ❒ Check Safety Valve
- ❒ Check auto-fill function
- ❒ Check steam pressure (_____Bar)
- ❒ Check the static water pressure (_____Bar)
- ❒ Check pump pressure (_____Bar)
- ❒ Check for over all coffee product outcomes
- ❒ Check boiler level
- ❒ Replace the Teflon pipe (11740003)

NOTE

The water hardness must be less than 6° fr (French degree). The chlorine content must not exceed 100 mg per litre (0.00000361 lb/cu in), otherwise the conditions of guarantee of the machine will expire.

2 GR	3GR
2 X 40200004	3 X 40200004
2 X 03000066.R	3 X 03000066.R
0,5 m X 11740003	0,5 m X 11740003

DATA

SITE NAME ----------

TECHNICIAN ----------

TECHNICIAN SIGNATURE ----------

DATE ----------

II.2 TWELVE (12) MONTHS MAINTENANCE

Approximate time for service is 2 hours uninterrupted. Consider that the technicians performing the service are aware of safety measures before commencing in regards to isolating power, pressure of steam and pressure of water.
Information should be sought from the site manger for any problems or concerns before commencing work, and to allow sufficient time to complete the task uninterrupted. Remove all covers before commencing and check for damage/signs of leaks.

Check, adjust replace (if necessary):

- ❒ Check for any signs of leaking in machine
- ❒ Check for any damaged wires or caballing
- ❒ Check for noisy pump motor
- ❒ Check for blockage in waste hose
- ❒ Check for leaking from hot water pipe
- ❒ Check Safety Valve
- ❒ Check auto-fill function
- ❒ Check steam pressure (_____Bar)
- ❒ Check the static water pressure (_____Bar)
- ❒ Check pump pressure (_____Bar)
- ❒ Check for over all coffee product outcomes
- ❒ Check boiler level
- ❒ Check for any signs of valves leaking
- ❒ Check and inspect touch screen, ensuring it is not faulty
- ❒ Check for boiler leaks
- ❒ Check the cleaning cycle counts Total _____ (if present)
- ❒ Replace cup gaskets (40200004)
- ❒ Replace shower screens (03000066.R)
- ❒ Replace anti vacuum Valve (01000023)
- ❒ Replace pre-infusion chamber gasket (02280012)
- ❒ Replace steam arm o-rings (02280036)
- ❒ Replace steam arm protectors (05000660)
- ❒ Replace the Neplax Valve (98120001)
- ❒ Replace the Teflon pipe (11740003)
- ❒ Replace the check valves (98110001)
- ❒ Replace filter baskets (03000072, 030000073)

NOTE

The water hardness must be less than 6° fr (French degree). The chlorine content must not exceed 100 mg per litre (0.00000361 lb/cu in), otherwise the conditions of guarantee of the machine will expire.

2 GR	3 GR
2 X 40200004	3 X 40200004
2 X 03000066.R	3 X 03000066.R
1 X 01000023	1 X 01000023
2 X 02280012	3 X 02280012
2 X 05000660	2 X 05000660
2 X 02280036	2 X 02280036
3 X 98120001	3 X 98120001
2 X 11740003	2 X 11740003
2 X 98110001	3 X 98110001
1 X 03000072	1 X 03000072
2 X 03000073	3 X 03000073

DATA

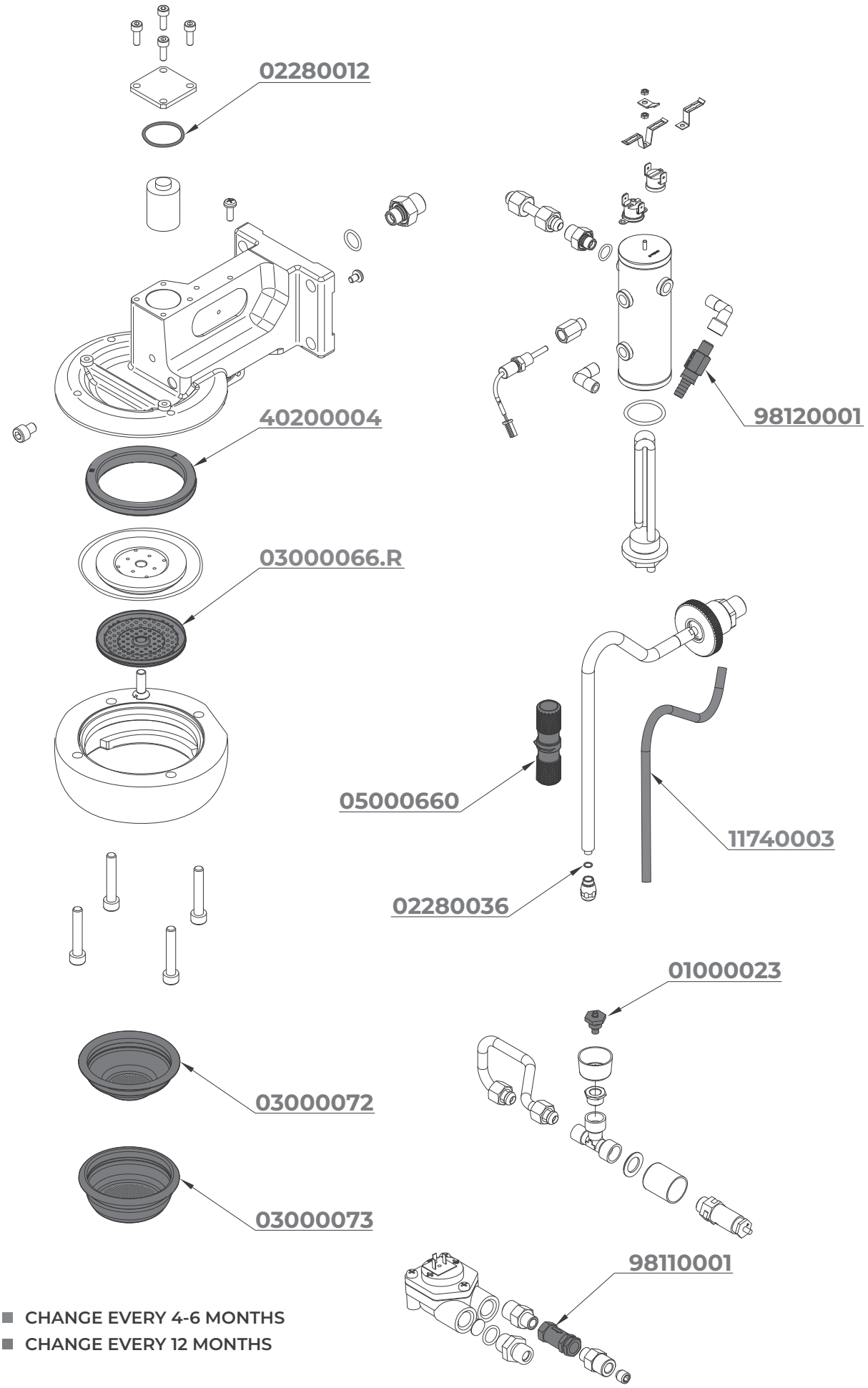
SITE NAME ----------

TECHNICIAN ----------

TECHNICIAN SIGNATURE ----------

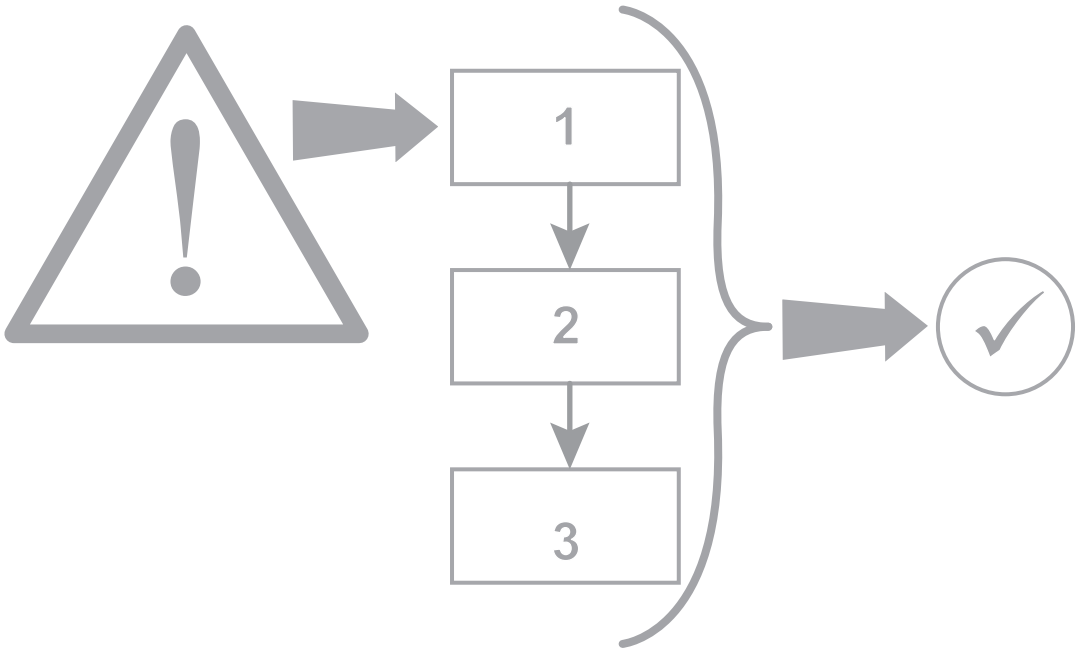
DATE ----------

II.3 ONE (I) YEAR MAINTENANCE KIT



- CHANGE EVERY 4-6 MONTHS
- CHANGE EVERY 12 MONTHS

12 TROUBLESHOOTING



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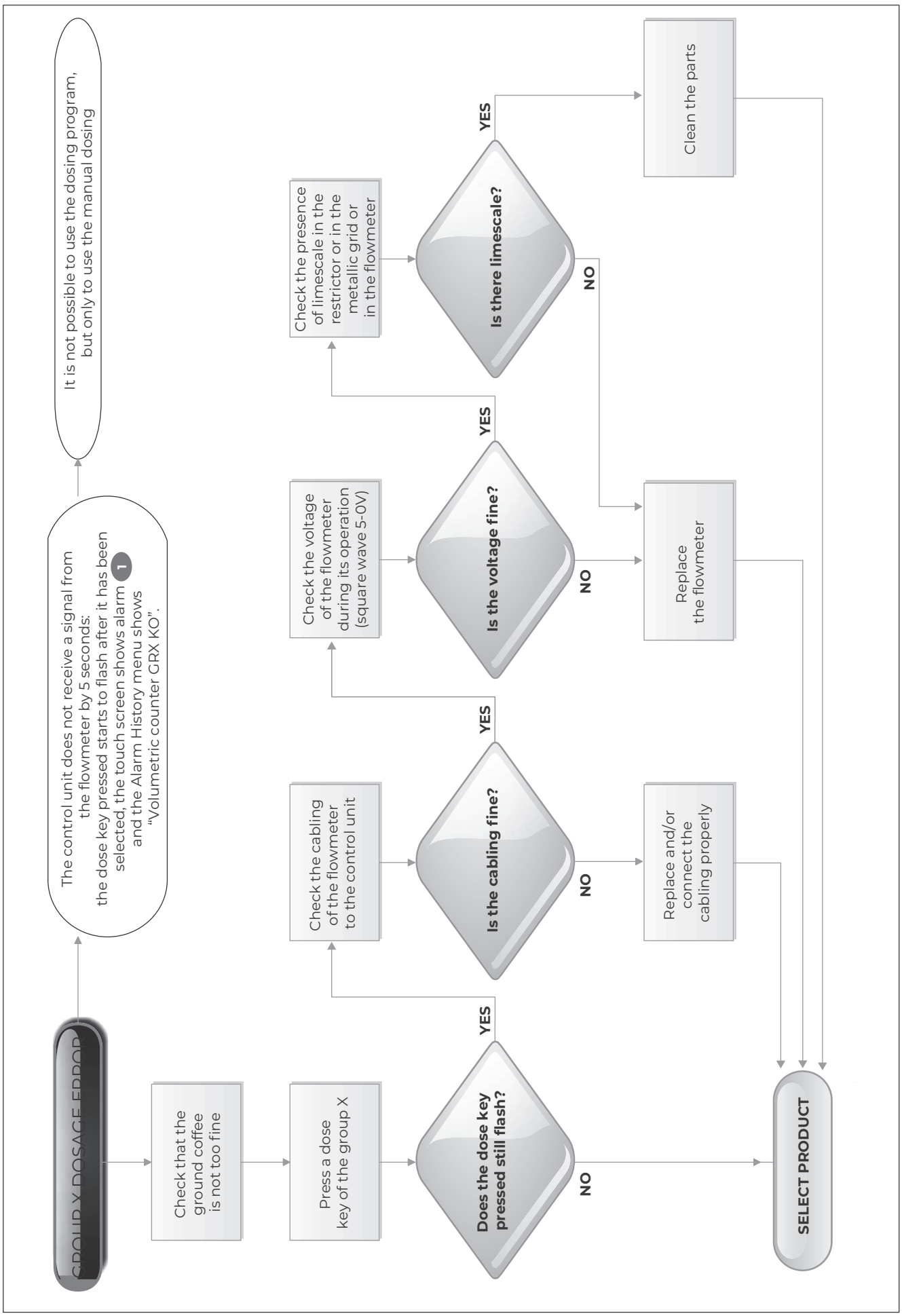
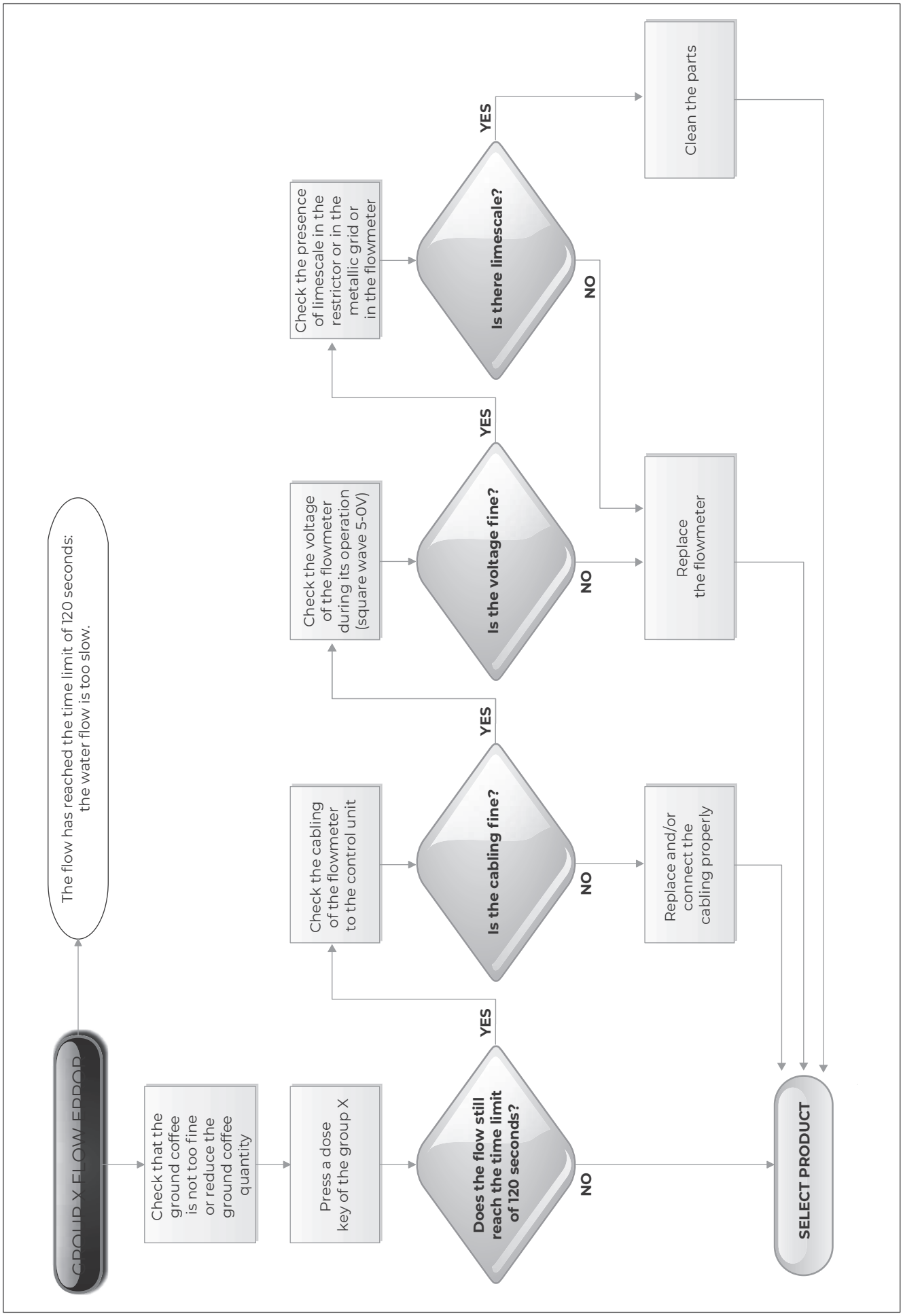
12.7 COFFEE GROUP COLD BUT COFFEE IS WARM 190

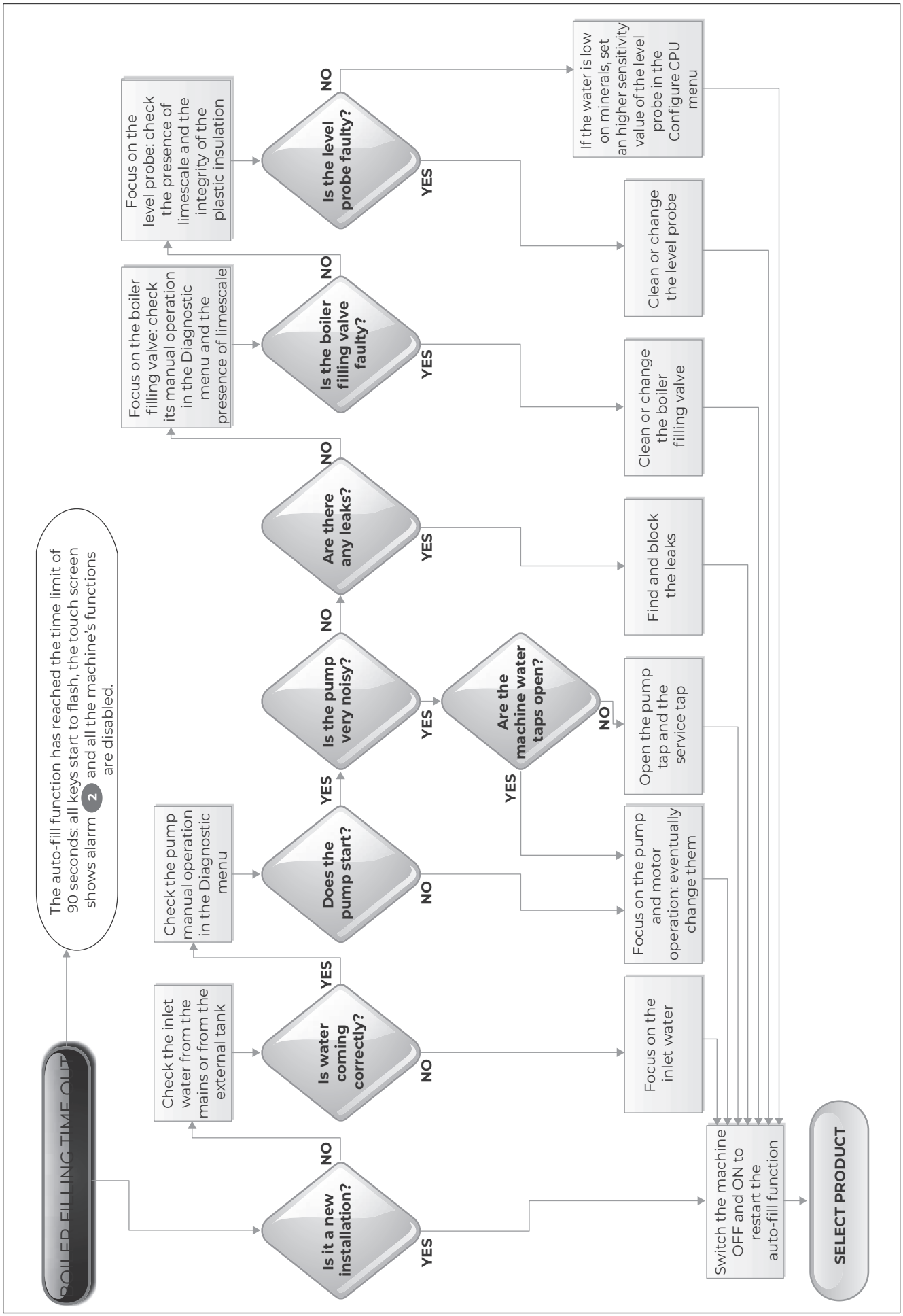
12.1 COFFEE DOSAGE ERROR



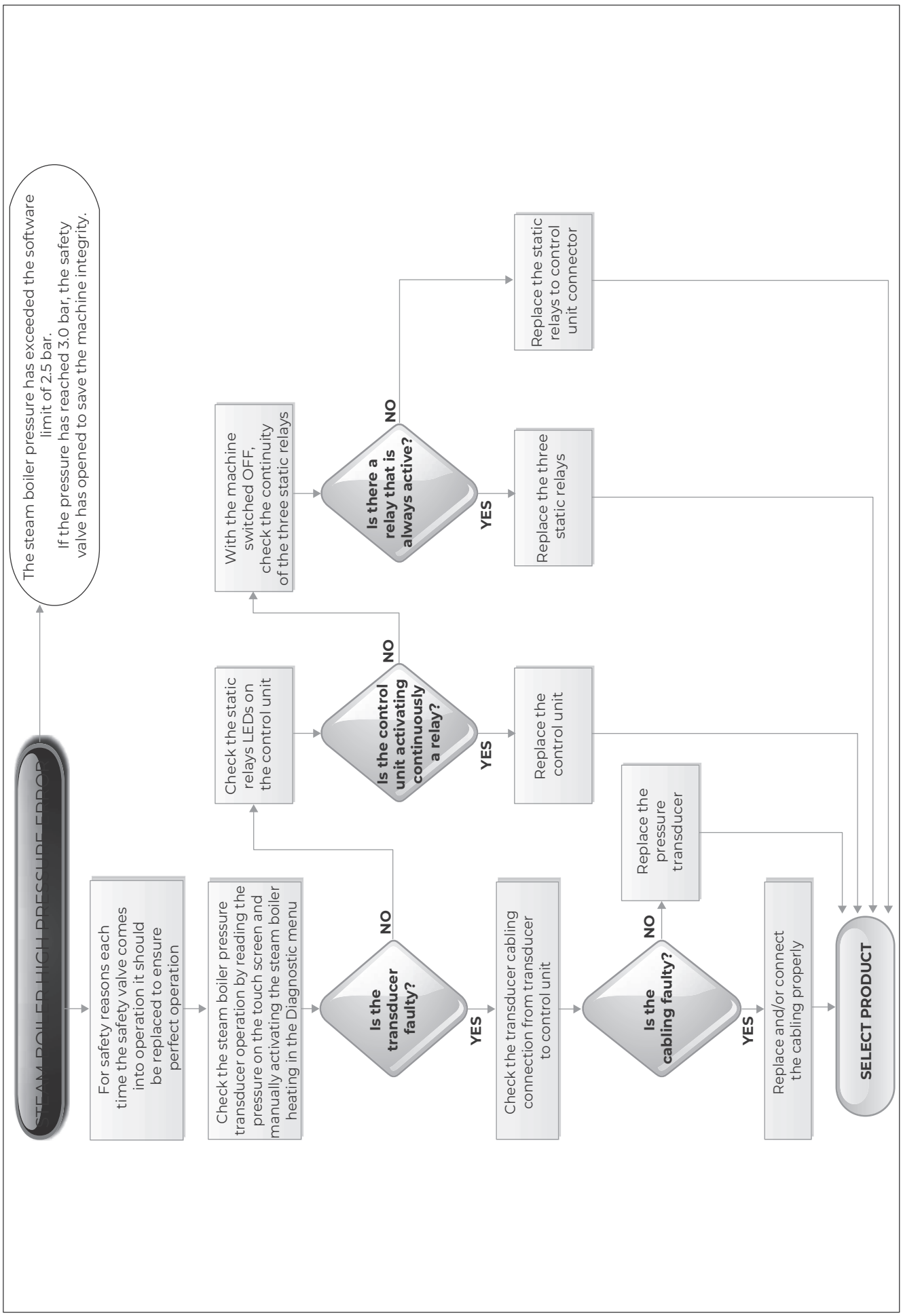
I2.2 COFFEE FLOW ERROR



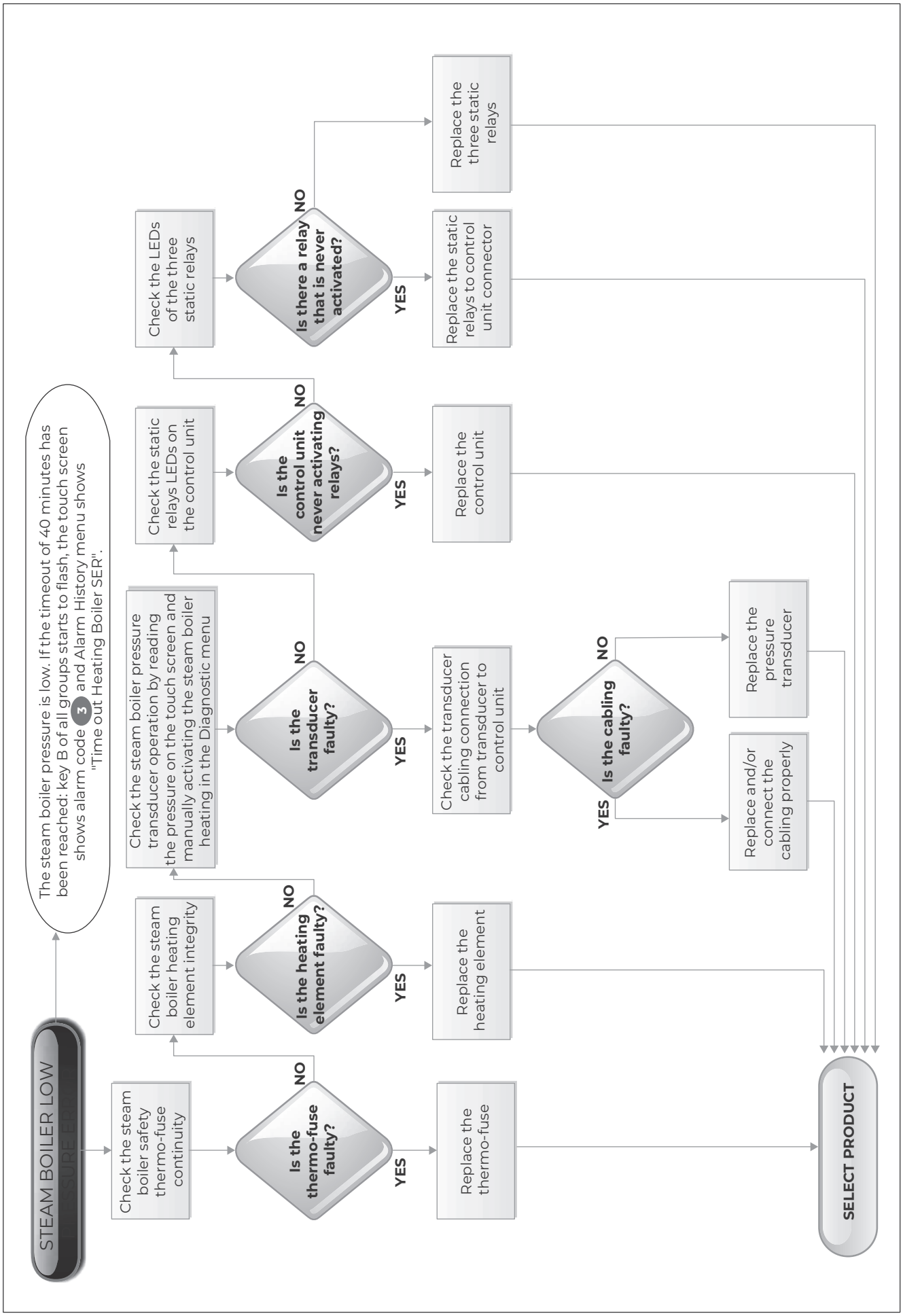
I2.3 BOILER FILLING TIME OUT



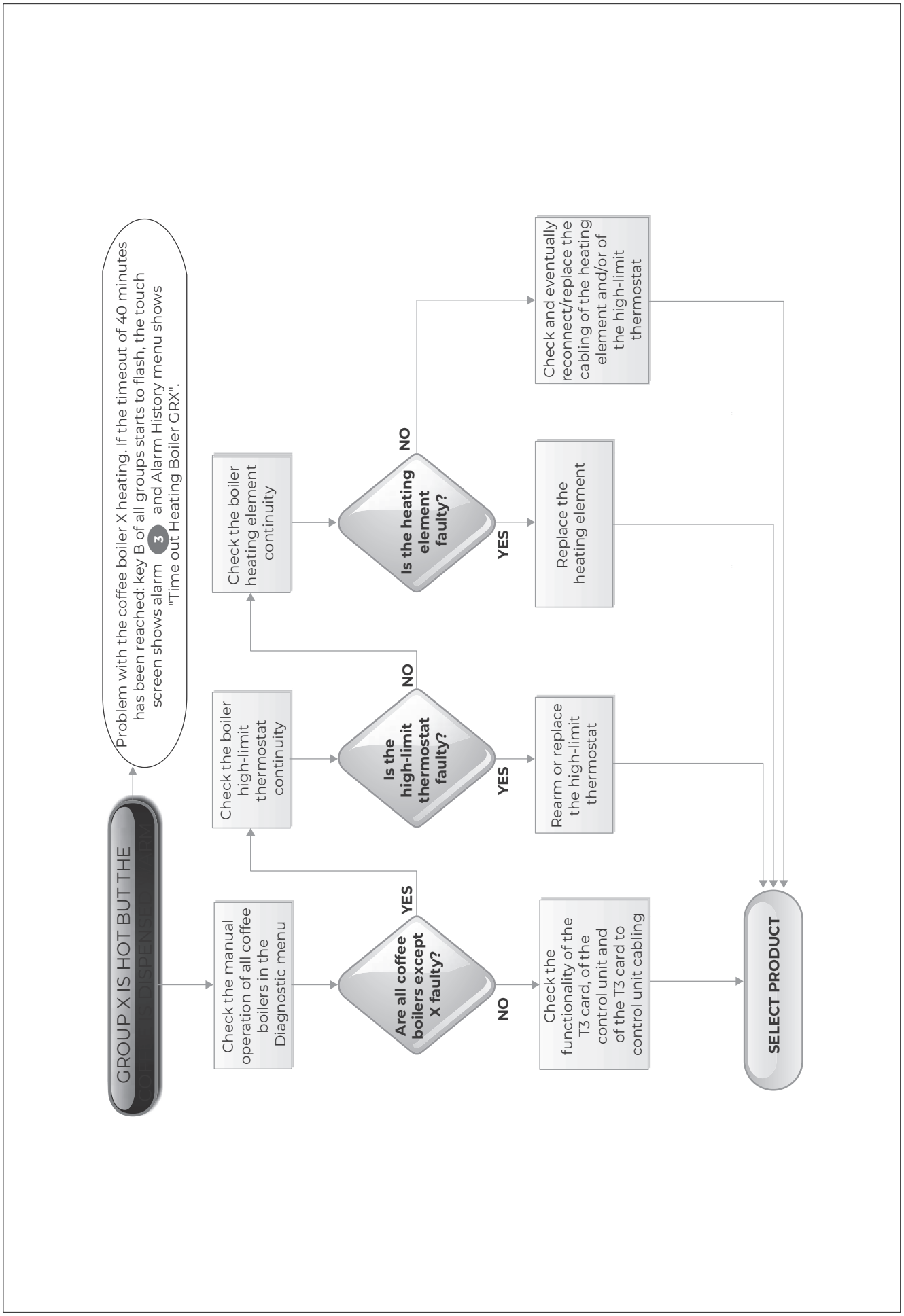
12.4 STEAM BOILER HIGH PRESSURE ERROR



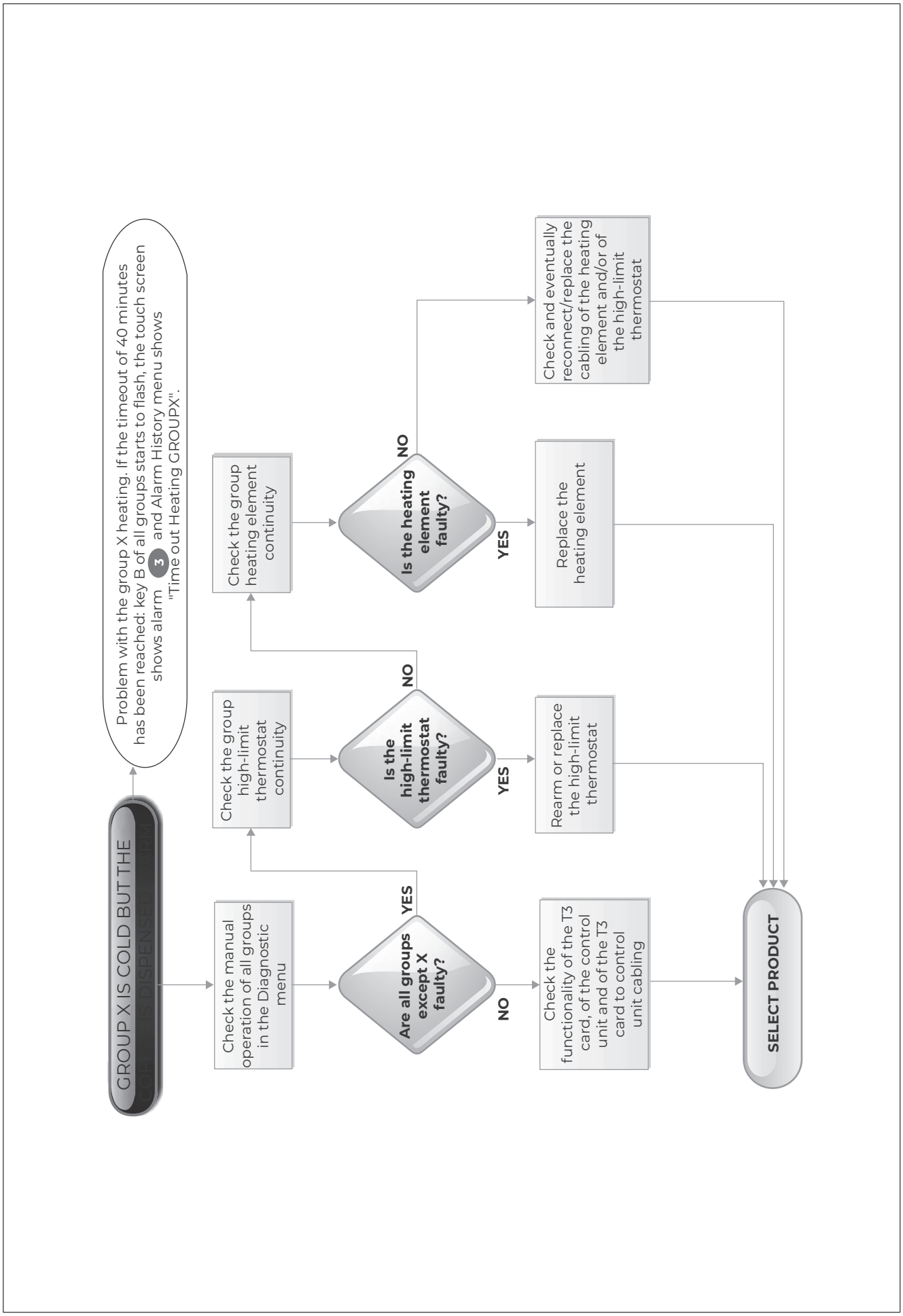
I2.5 STEAM BOILER LOW PRESSURE ERROR



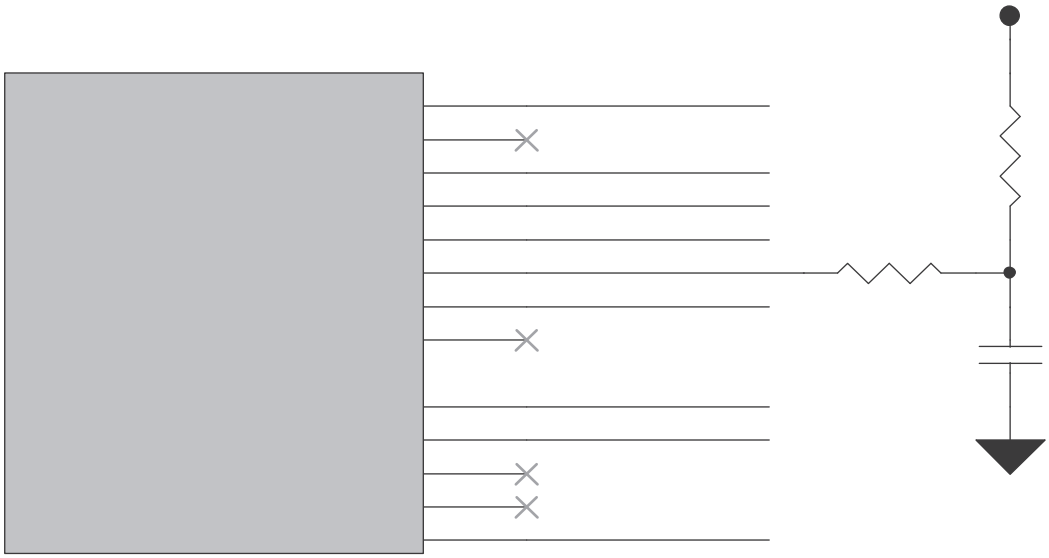
I2.6 COFFEE GROUP HOT BUT COFFEE IS WARM



I2.7 COFFEE GROUP COLD BUT COFFEE IS WARM



13 DIAGRAMS



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- 13.3 EAGLE ONE 2 GROUPS NORTH AMERICA MARKET ELECTRICAL DIAGRAM 196
- 13.4 EAGLE ONE 3 GROUPS ELECTRICAL DIAGRAM 198
- 13.5 EAGLE ONE 3 GROUPS NORTH AMERICA MARKET ELECTRICAL DIAGRAM 200
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- 13.8 EAGLE ONE 2 GROUPS BOILER DIAGRAM 204
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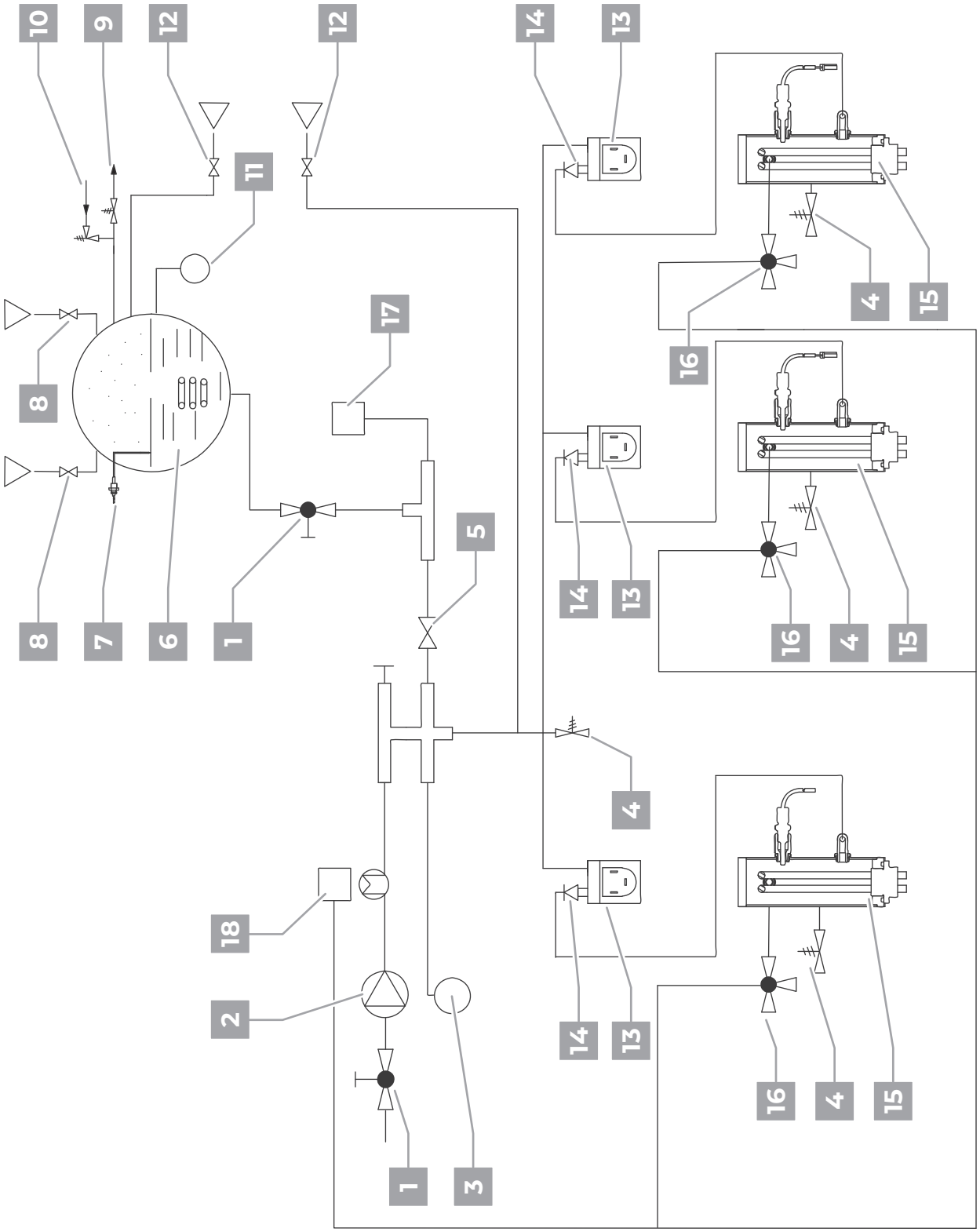
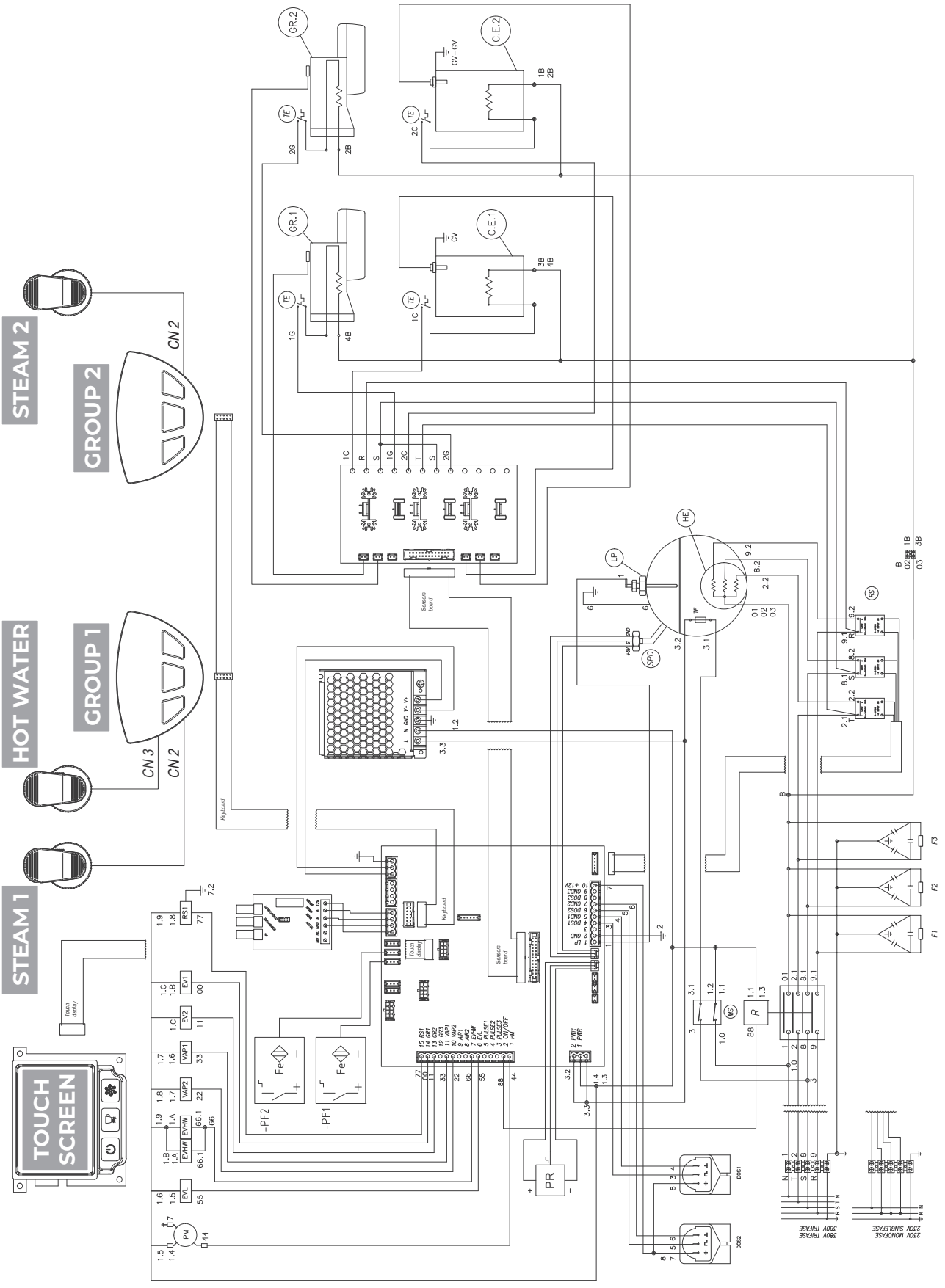
13.1 HYDRAULIC SCHEME



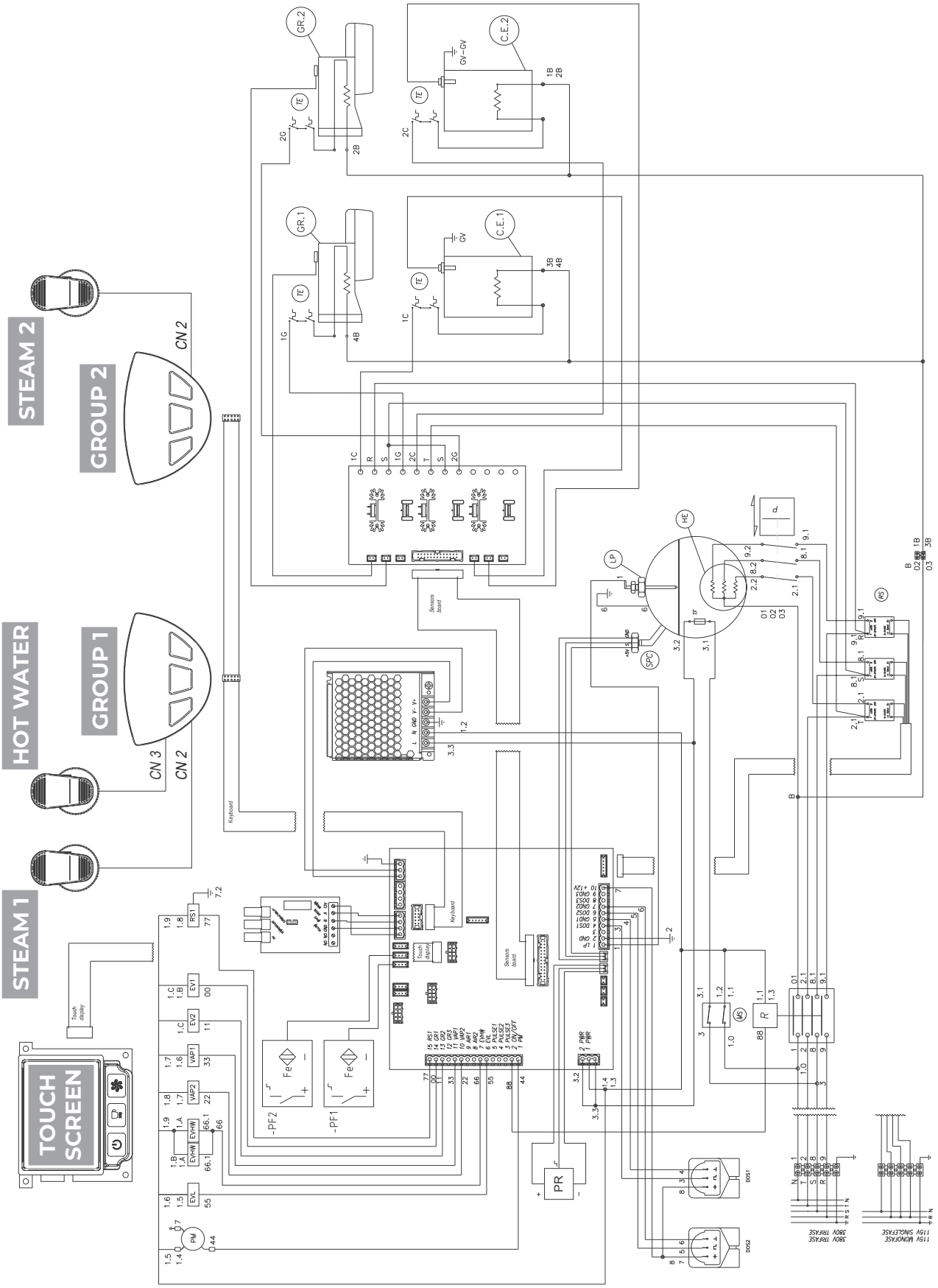
POSITION	DESCRIPTION
1	Manual Tap
2	Pump
3	Digital Pressostat
4	Exhaust Valve
5	Refill Electrovalve
6	Heating Elements Boiler
7	Level Probe
8	Steam Electrovalve
9	Safety Valve Main Boiler
10	Antivacum Valve
11	Digital Pressostat
12	Hot Water Electrovalve
13	Flowmeter
14	Retain Valve
15	Heating Element
16	Delivery Electrovalve
17	Drain
18	Ters

13.2 EAGLE ONE 2 GROUPS ELECTRICAL DIAGRAM



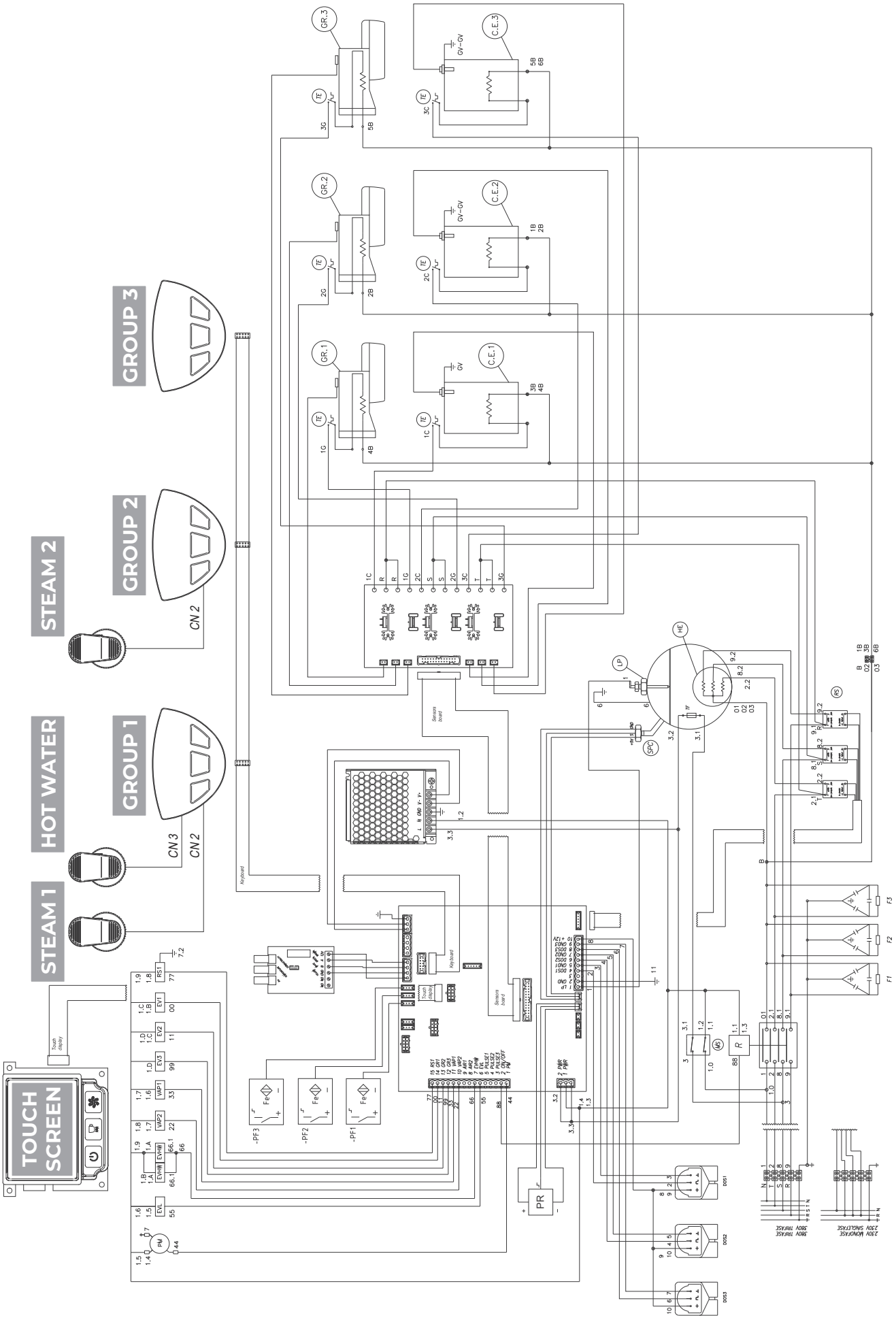
ELEMENT	DESCRIPTION
MS	MAIN SWITCH
R	RELAY
RS	STATIC RELAY
PM	PUMP MOTOR
HE	HEATING ELEMENT (BOILER)
LP	LEVEL PROBE
EV 1-2	GROUP 1-2 ELECTRO-VALVE
TE	THERMOSTAT
EVHW	MIXER ELECTRO-VALVE
TF	THERMOFUSE
PR	PRESSURE SWITCH
SPC	BOILER PRESSURE SENSOR
RS1	CUPWARMER HEATING ELEMENT
EVL	WATER LEVEL ELECTRO-VALVE
PF 1-2	FILTER-HOLDER SENSOR 1-2
F 1-2-3	FUSE 1-2-3
CN 2-3	CONNECTORS 2-3
GR 1-2	GROUP 1-2
CE 1-2	GROUP 1-2 BOILER
VAP 1-2	STEAM ELECTRO-VALVE 1-2
DOS 1-2	FLOWMETER 1-2

13.3 EAGLE ONE 2 GROUPS NORTH AMERICA MARKET ELECTRICAL DIAGRAM



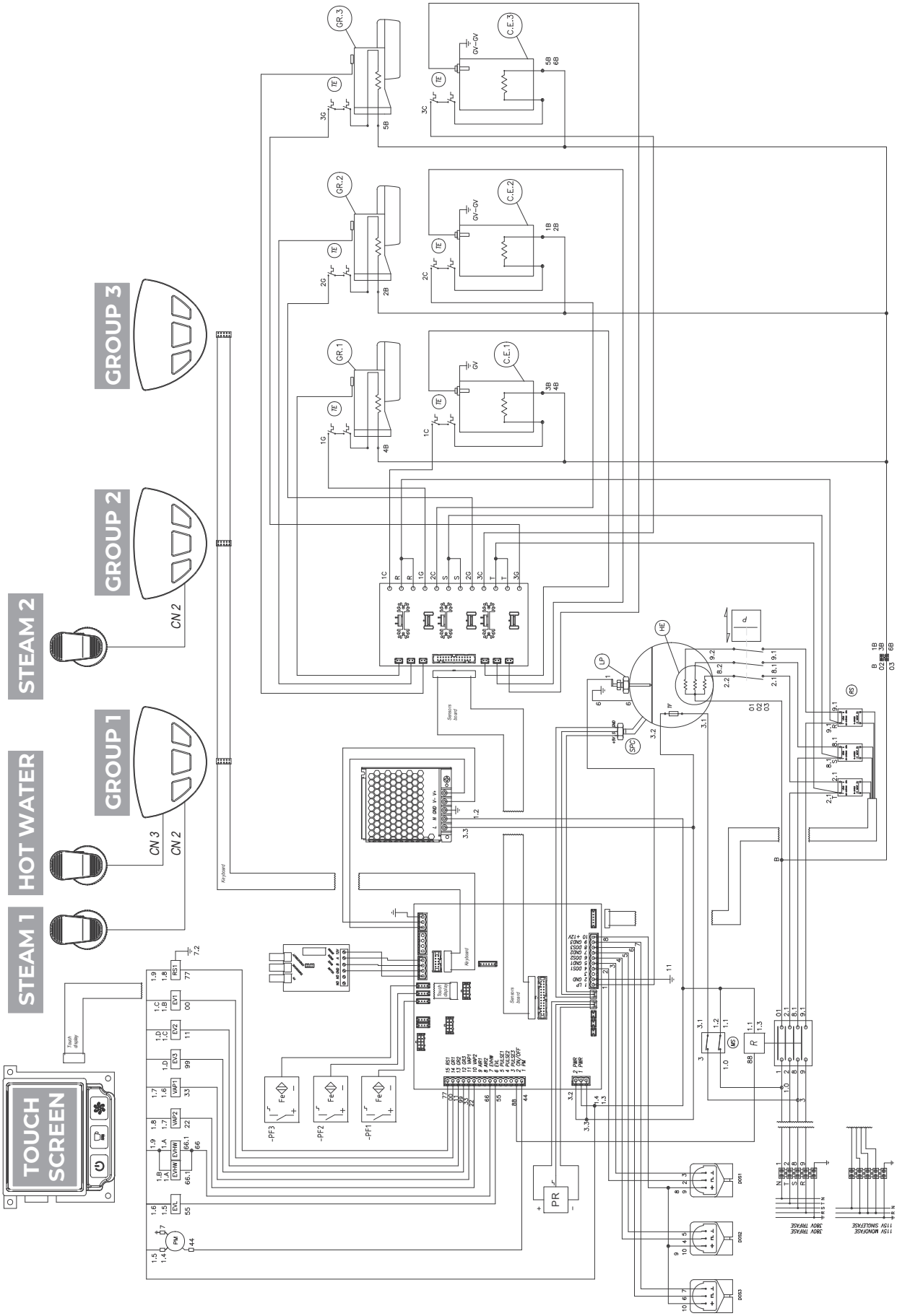
ELEMENT	DESCRIPTION
MS	MAIN SWITCH
R	RELAY
RS	STATIC RELAY
PM	PUMP MOTOR
HE	HEATING ELEMENT (BOILER)
LP	LEVEL PROBE
EV 1-2	GROUP 1-2 ELECTRO-VALVE
TE	THERMOSTAT
EVHW	MIXER ELECTRO-VALVE
TF	THERMOFUSE
PR	PRESSURE SWITCH
SPC	BOILER PRESSURE SENSOR
RS1	CUPWARMER HEATING ELEMENT
EVL	WATER LEVEL ELECTRO-VALVE
PF 1-2	FILTER-HOLDER SENSOR 1-2
CN 2-3	CONNECTORS 2-3
GR 1-2	GROUP 1-2
CE 1-2	GROUP 1-2 BOILER
VAP 1-2	STEAM ELECTRO-VALVE 1-2
DOS 1-2	FLOWMETER 1-2
P	SAFETY PRESSURE SWITCH

13.4 EAGLE ONE 3 GROUPS ELECTRICAL DIAGRAM



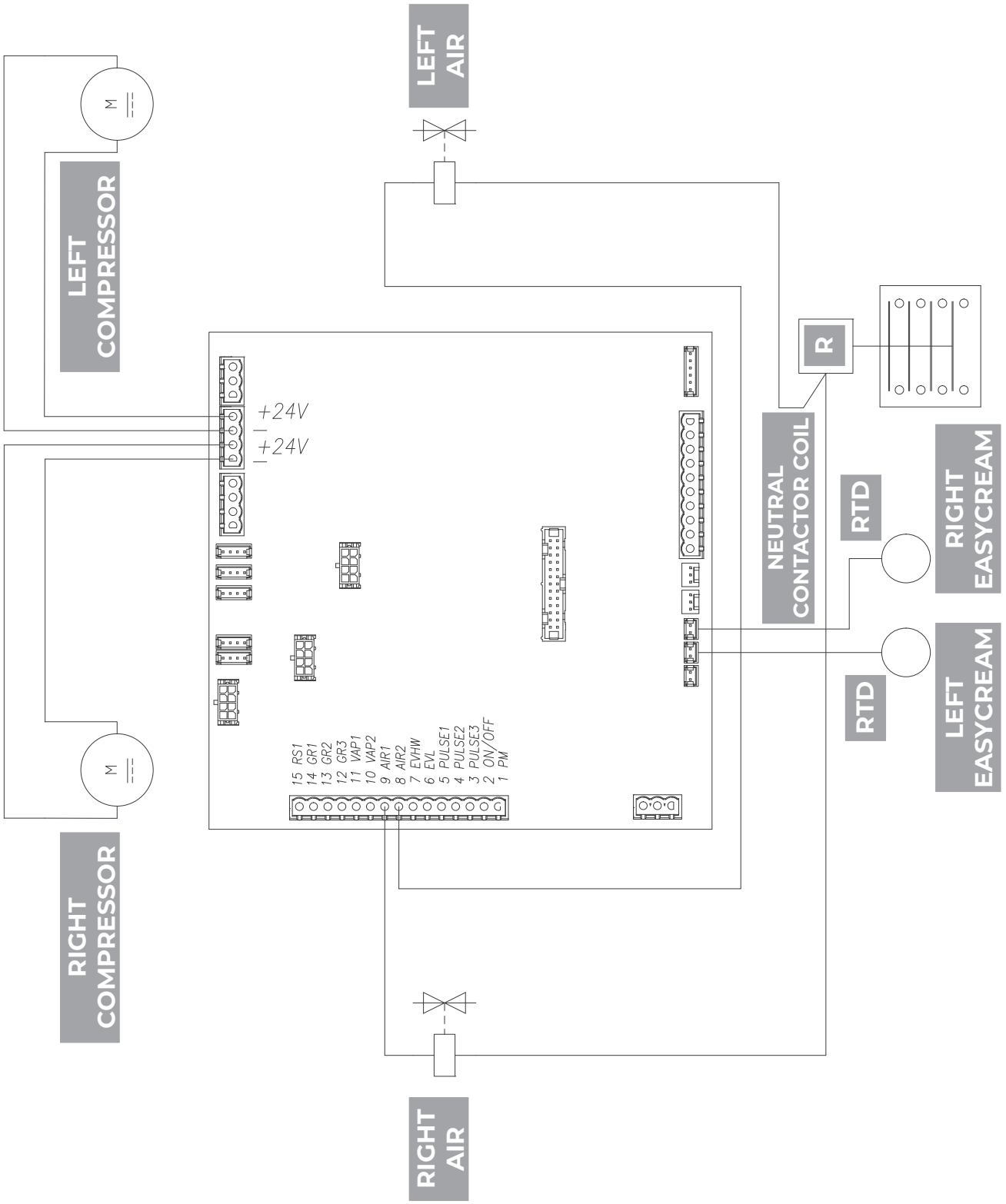
ELEMENT	DESCRIPTION
MS	MAIN SWITCH
R	RELAY
RS	STATIC RELAY
PM	PUMP MOTOR
HE	HEATING ELEMENT (BOILER)
LP	LEVEL PROBE
EV 1-2-3	GROUP 1-2-3 ELECTRO-VALVE
TE	THERMOSTAT
EVHW	MIXER ELECTRO-VALVE
TF	THERMOFUSE
PR	PRESSURE SWITCH
SPC	BOILER PRESSURE SENSOR
RS1	CUPWARMER HEATING ELEMENT
EVL	WATER LEVEL ELECTRO-VALVE
PF 1-2-3	FILTER-HOLDER SENSOR 1-2-3
F 1-2-3	FUSE 1-2-3
CN 2-3	CONNECTORS 2-3
GR 1-2-3	GROUP 1-2-3
CE 1-2-3	GROUP 1-2-3 BOILER
VAP 1-2	STEAM ELECTRO-VALVE 1-2
DOS 1-2-3	FLOWMETER 1-2-3

13.5 EAGLE ONE 3 GROUPS NORTH AMERICA MARKET ELECTRICAL DIAGRAM



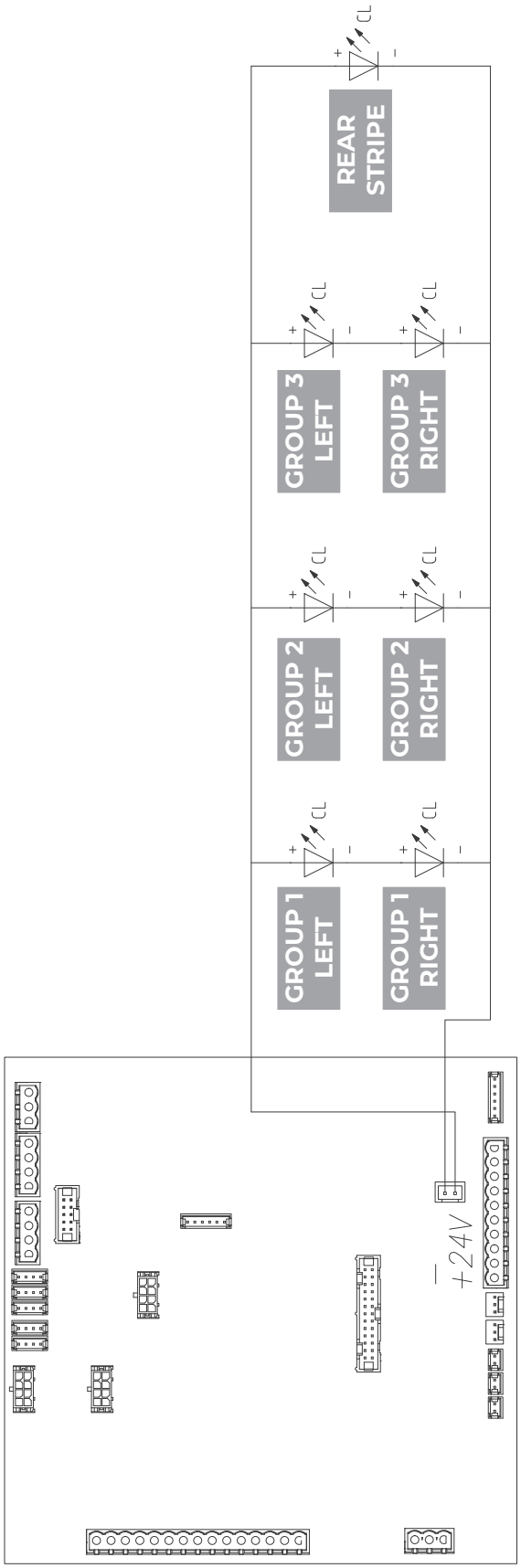
ELEMENT	DESCRIPTION
MS	MAIN SWITCH
R	RELAY
RS	STATIC RELAY
PM	PUMP MOTOR
HE	HEATING ELEMENT (BOILER)
LP	LEVEL PROBE
EV 1-2-3	GROUP 1-2-3 ELECTRO-VALVE
TE	THERMOSTAT
EVHW	MIXER ELECTRO-VALVE
TF	THERMOFUSE
PR	PRESSURE SWITCH
SPC	BOILER PRESSURE SENSOR
RS1	CUPWARMER HEATING ELEMENT
EVL	WATER LEVEL ELECTRO-VALVE
PF 1-2-3	FILTER-HOLDER SENSOR 1-2-3
CN 2-3	CONNECTORS 2-3
GR 1-2-3	GROUP 1-2-3
CE 1-2-3	GROUP 1-2-3 BOILER
VAP 1-2	STEAM ELECTRO-VALVE 1-2
DOS 1-2-3	FLOWMETER 1-2-3
P	SAFETY PRESSURE SWITCH

I3.6 EAGLE ONE 2-3 GROUPS EASYCREAM ELECTRICAL DIAGRAM

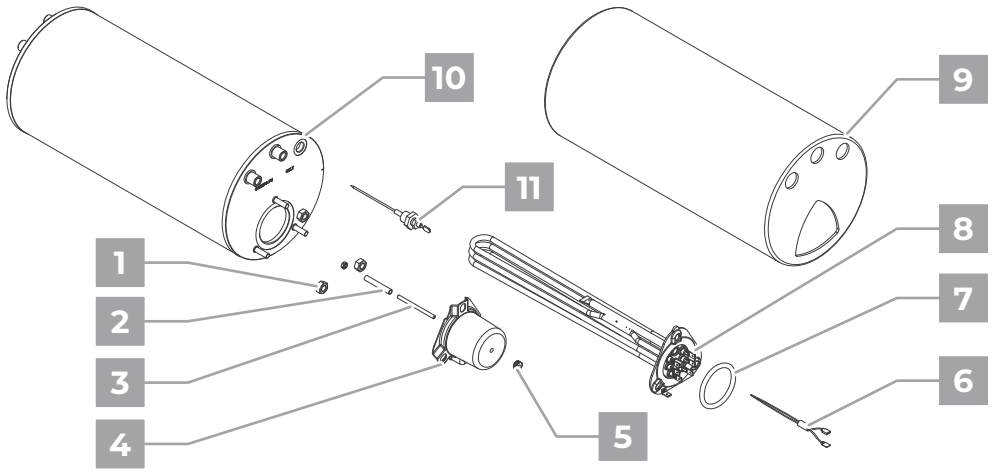


ELEMENT	DESCRIPTION
M	MOTOR
R	RELAY
RTD	EASYCREAM TEMPERATURE PROBE

13.7 EAGLE ONE 2-3 GROUPS LIGHTS ELECTRICAL DIAGRAM



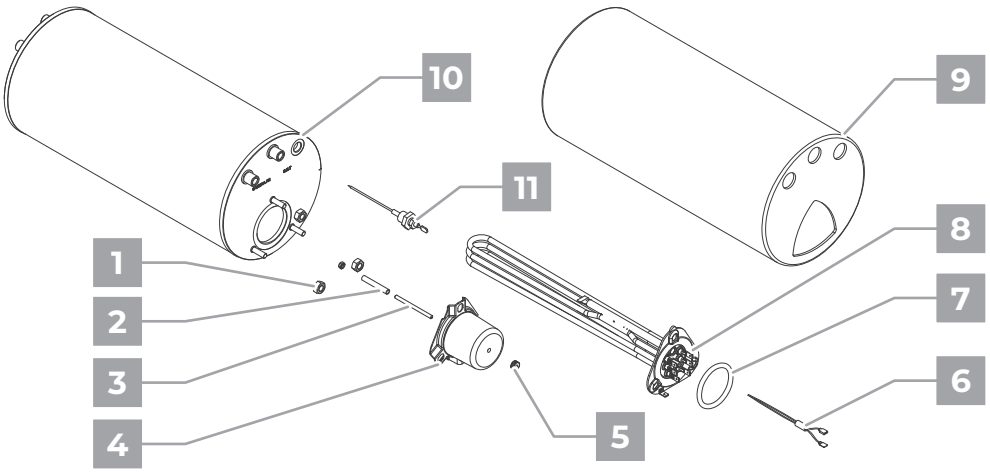
I3.8 EAGLE ONE 2 GROUPS BOILER DIAGRAM



PROJECT DATA FOR DIRECTIVE PED 97/23/CE	
VOLUMES	6,8 l
TS	139°C
P.V.S.	3,0 Bar
PT	4,0 Bar
FLUID	H_2O

NO.	Q.TY	PART NUMBER	DESCRIPTION	MATERIAL
1	3	**00000056**	*Nut*	INOX 304
2	1	**11740001**	*Pipe*	Teflon
3	1	**07300707**	*Prisoner*	OT57
4	1	**05000656**	*Cylindrical heating element cover*	NYLON
5	1	**05000037**	*Threaded ring nut*	NYLON
6	1	**09500015**	*Thermoprotector 184°C*	*Electrical*
7	1	**02290034**	*OR Gasket*	VITON
8	1	**14100100**	*Heating element 3000W*	INOX 304
9	1	**01000638**	*Boiler insulation*	*High performance insulation*
10	1	**98031202**	*Boiler*	INOX 304
11	1	**09000005**	*Level probe*	*Brass, inox, nylon*

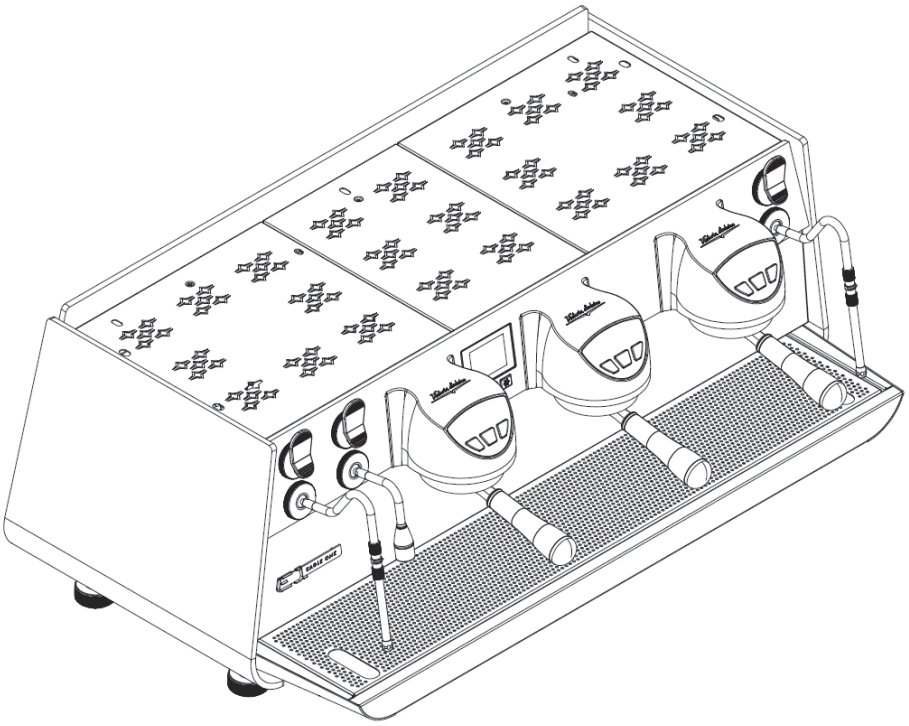
13.9 EAGLE ONE 3 GROUPS BOILER DIAGRAM



PROJECT DATA FOR DIRECTIVE PED 97/23/CE	
VOLUMES	6,8 l
TS	139°C
P.V.S.	3,0 Bar
PT	4,0 Bar
FLUID	H_2O

NO.	Q.TY	PART NUMBER	DESCRIPTION	MATERIAL
1	3	**00000056**	*Nut*	INOX 304
2	1	**11740001**	*Pipe*	Teflon
3	1	**07300707**	*Prisoner*	OT57
4	1	**05000656**	*Cylindrical heating element cover*	NYLON
5	1	**05000037**	*Threaded ring nut*	NYLON
6	1	**09500015**	*Thermoprotector 184°C*	*Electrical*
7	1	**02290034**	*OR Gasket*	VITON
8	1	**14100102**	*Heating element 3600W*	INOX 304
9	1	**01000638**	*Boiler insulation*	*High performance insulation*
10	1	**98031202**	*Boiler*	INOX 304
11	1	**09000005**	*Level probe*	*Brass, inox, nylon*

14 SPARE PARTS BOOK



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- 14.2 CONTROL PANEL DISPLAY 210
- 14.3 POURING GROUP PARTS 212
- 14.4 HYDRAULIC COMPONENTS 214
- 14.5 STEAM & HOT WATER PARTS 216
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NOTE

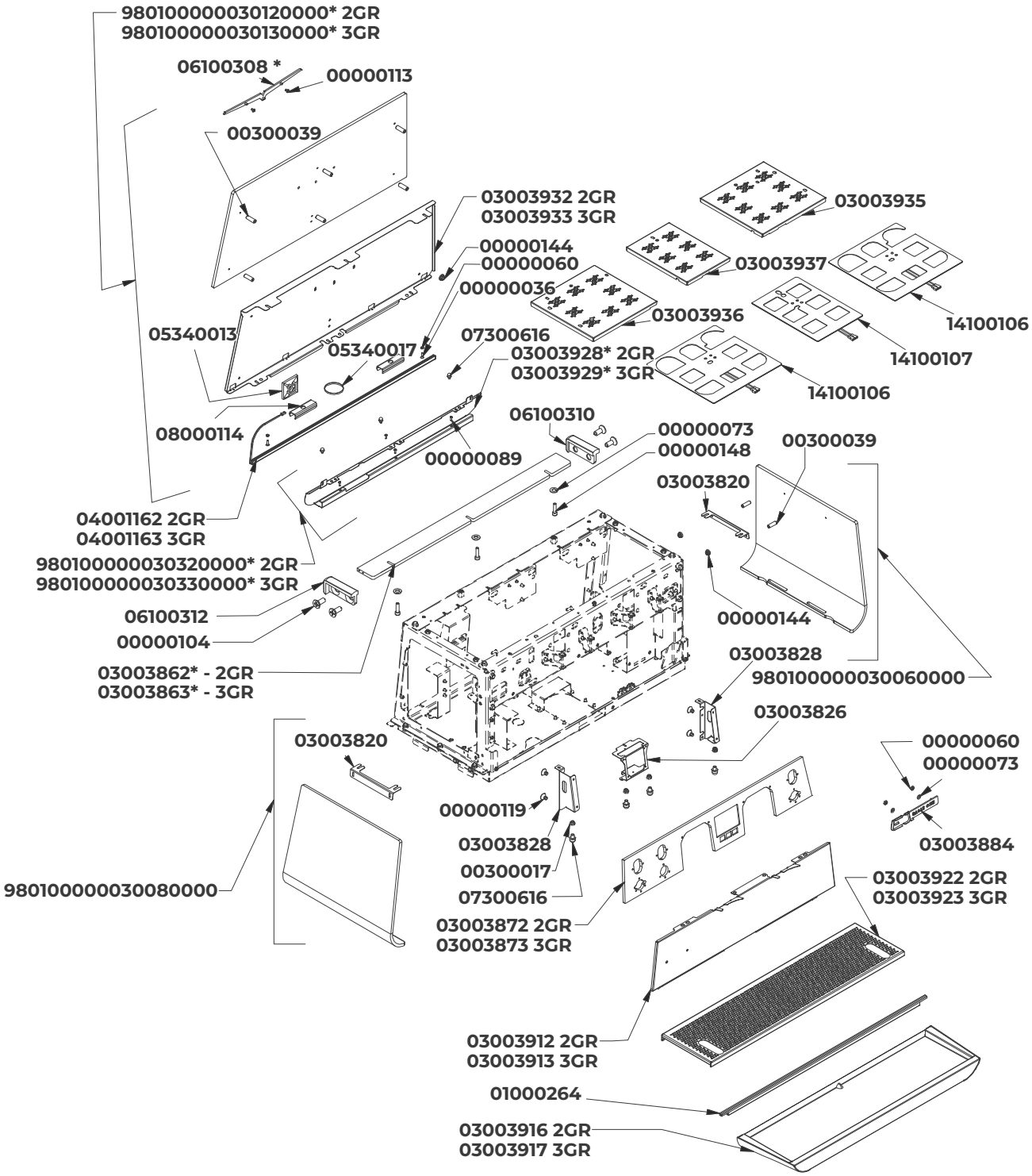
Update to 10-2020.

NOTE

The codes written in bold refer to the components employed currently.

The *codes* **used before are** *written in cursive* **with indicated, on the side, the end of validity date.**

14.1 CABINET PARTS

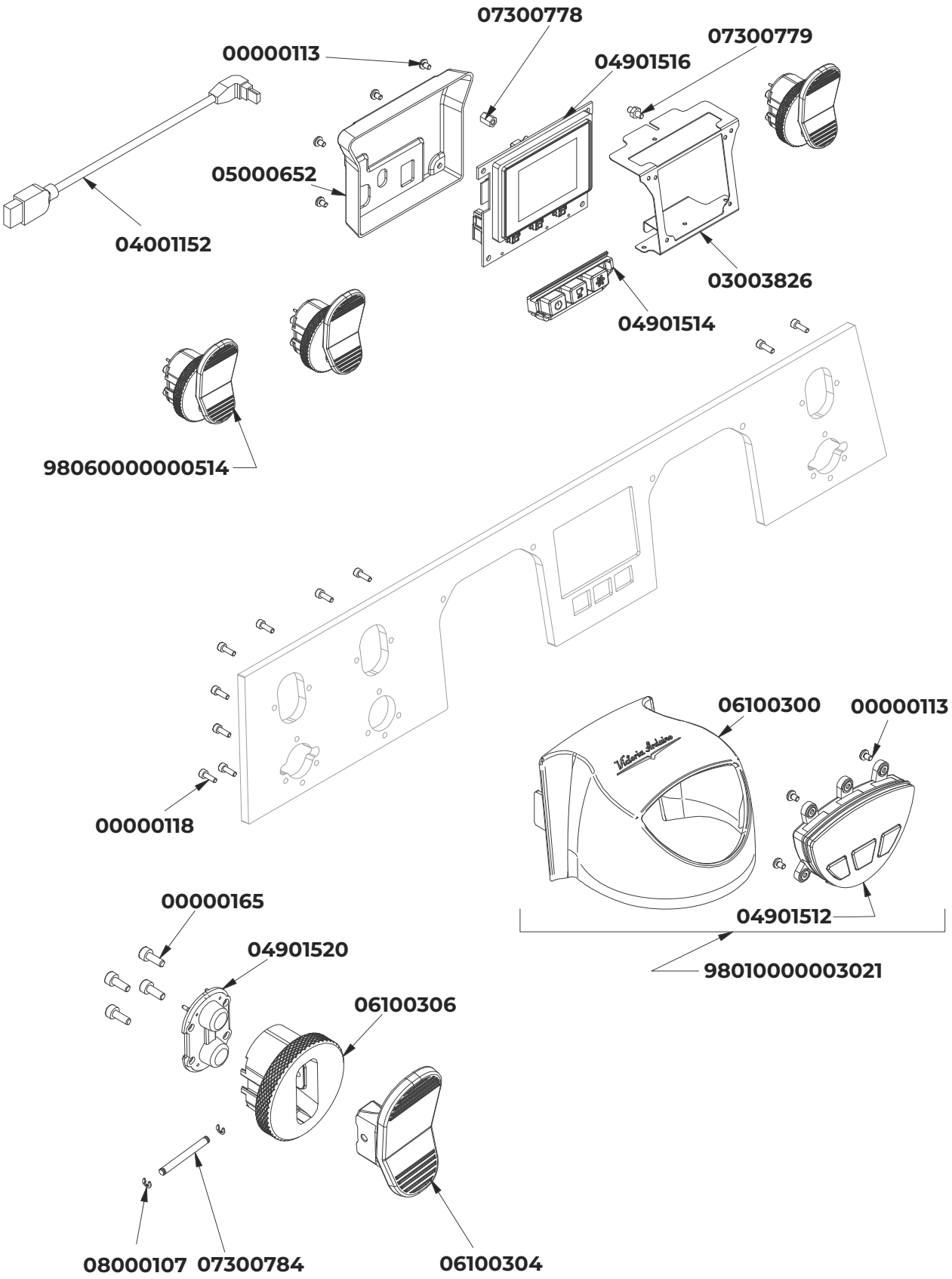


NOTE

*** Specify colour.**

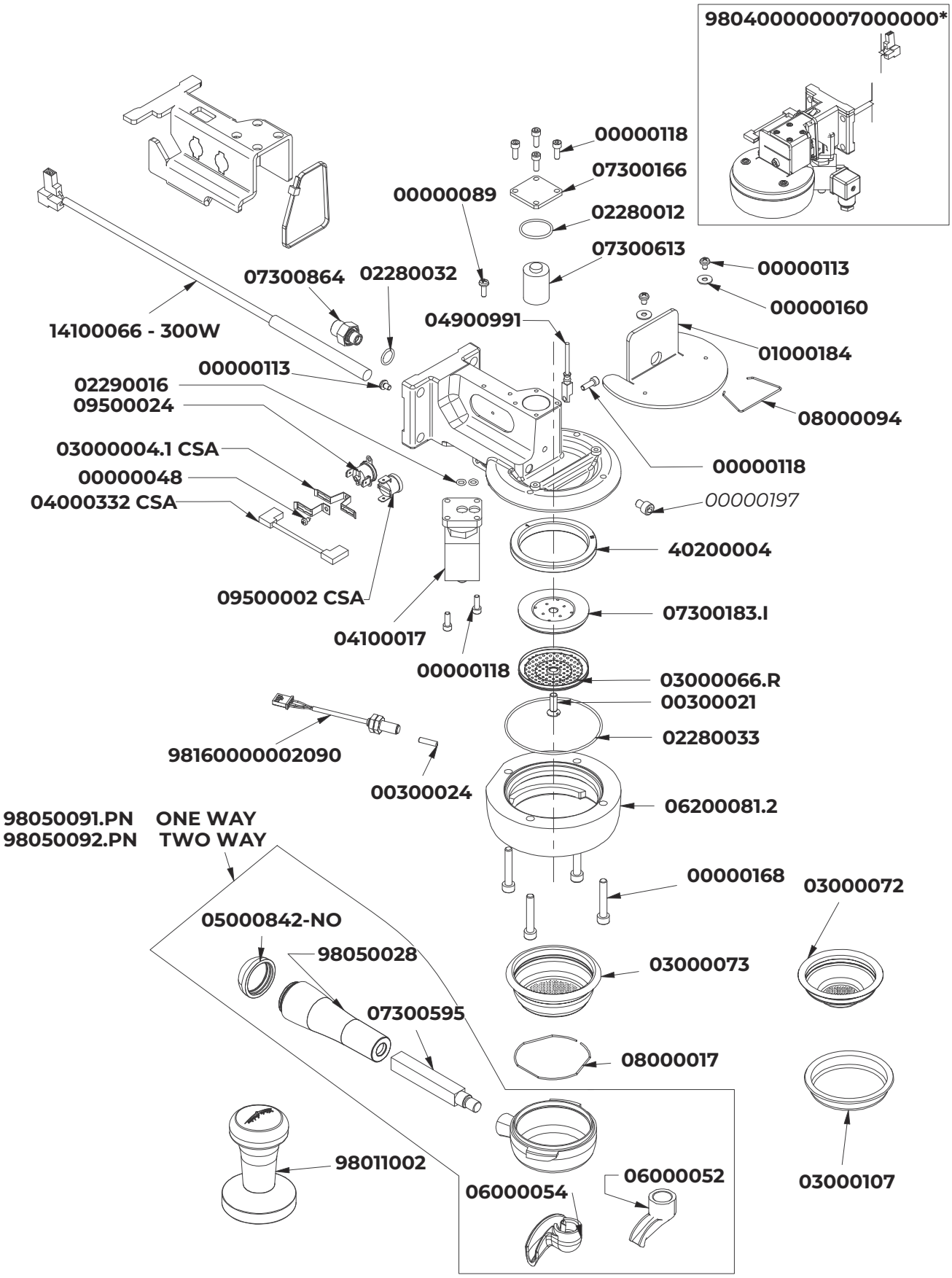
CODE	DESCRIPTION	END VALIDITY
00000036	GALVANIC CROSS HEAD COUNTERSUNK SCREW M3x10	
00000060	GALVANIC MEDIUM NUT AQ M3	
00000073	S/S WASHER D.8x4x1 UNI6592	
00000089	S/S CROSS HEAD CAP SCREW M4x12 DIN7985	
00000104	S/S CROSS HEAD COUNTERSUNK SCREW M4x10 DIN965	
00000113	S/S CROS SHEAD CAP SCREW M4x6 7985	
00000119	SS CROSS HEAD COUNTERSUNK SCREW M4x6 ISO 7046	
00000144	GALVANIC FLANGED NUT M5 UNI 6923	
00000148	S/S HEXAGON SOCKET HEAD SCREW M4x16 UNI 5931	
00300017	S/S SELF-LOCKING NUT M4 LOW DIN 982	
00300039	S/S FH GRUB SCREW M5x15	
01000264	WIRED GASKET FOR PLATE	
03003820	SUPERIOR SHEET SIDE SUPPORT	
03003826	SUPPORT PANEL COMMAND DISPLAY	
03003828	SUPPORT PANEL DISPLAY	
03003862	BACK INFERIOR PROFILE 2GR SHINY ALUMINIUM	
03003863	BACK INFERIOR PROFILE 3GR SHINY ALUMINIUM	
03003872	FRONT PLATE 2GR CHROMED ALUMINIUM	
03003873	FRONT PLATE 3GR CHROMED ALUMINIUM	
03003884	FRONT-SIDE LOGO EAGLE ONE	
03003912	INFERIOR FRONT PLATE 2GR EAGLE ONE	
03003913	INFERIOR FRONT PLATE 3GR EAGLE ONE	
03003916	DRIP TRAY 2GR EAGLE ONE	
03003917	DRIP TRAY 3GR EAGLE ONE	
03003922	MESH WORKTOP 2GR EAGLE ONE	
03003923	MESH WORKTOP 3GR EAGLE ONE	
03003928	INFERIOR BACK PANEL 2GR EAGLE ONE	
03003929	INFERIOR BACK PANEL 3GR EAGLE ONE	
03003932	SUP BACK PANEL SUPPORT 2GR	
03003933	SUP BACK PANEL SUPPORT 3GR	
03003935	SUP RIGHT CUP-HOLDER EAGLE ONE	
03003936	SUP LEFT CUP-HOLDER EAGLE ONE	
03003937	SUP CENTRAL CUP-HOLDER EAGLE ONE	
04001162	LED STRIP 2GR EAGLE ONE	
04001163	LED STRIP 3GR EAGLE ONE	
05340013	SMALL BASE 19X19 FOR BAND WITH SCREW HOLE M4	
05340017	BLACK WIRE CLAMP 135x2.6	
06100308	BACKSIDE EAGLE LOGO EAGLE ONE SHINY ALUMINIUM	
06100310	RIGHT TERMINAL INFERIOR BACKSIDE PROFILE	
06100312	LEFT TERMINAL INFERIOR BACKSIDE PROFILE	
07300616	FRAME PIN M4	
08000114	SPRING REAR LED FIXING	
14100106	LATERAL SIL. HEATING ELEMENT 200W	
14100107	CENTRAL SIL. HEATING ELEMENT 100W	
980100000030060001	RIGHT SIDE PANEL SET STEELUX	
980100000030060002	RIGHT SIDE PANEL SET MATT BLACK	
980100000030060003	RIGHT SIDE PANEL SET WHITE	
980100000030080001	LEFT SIDE PANEL SET STEELUX	
980100000030080002	LEFT SIDE PANEL SET MATT BLACK	
980100000030080003	LEFT SIDE PANEL SET WHITE	
980100000030120001	REAR FRAME SET 2GR STEELUX	
980100000030120002	REAR FRAME SET 2GR STEELUX LIGHTS	
980100000030120003	REAR FRAME SET 2GR BLACK	
980100000030120004	REAR FRAME SET 2GR BLACK LIGHTS	
980100000030120005	REAR FRAME SET 2GR WHITE	
980100000030120006	REAR FRAME SET 2GR WHITE LIGHTS	
980100000030130001	REAR FRAME SET 3GR STEELUX	
980100000030130002	REAR FRAME SET 3GR STEELUX LIGHTS	
980100000030130003	REAR FRAME SET 3GR BLACK	
980100000030130004	REAR FRAME SET 3GR BLACK LIGHTS	
980100000030130005	REAR FRAME SET 3GR WHITE	
980100000030130006	REAR FRAME SET 3GR WHITE LIGHTS	
980100000030320001	REAR INFERIOR FRAME SET 2GR STEELUX	
980100000030320002	REAR INFERIOR FRAME SET 2GR MATT BLACK	
980100000030330001	REAR INFERIOR FRAME SET 3GR STEELUX	
980100000030330002	REAR INFERIOR FRAME SET 3GR MATT BLACK	

I4.2 CONTROL PANEL DISPLAY



CODE	DESCRIPTION	END VALIDITY
00000113	S/S CROSS HEAD CAP SCREW M4x6 7985	
00000118	S/S HEX SOCKET CAP SCREW M4x12 5931	
00000165	S/S SCREW M3x8 TCEI ISO 4762	
03003826	SUPPORT PANEL COMMAND DISPLAY	
04001152	FEMALE USB BOARD CABLE DISPLAY TFT EAGLE ONE	
04901512	3KEY DISPENSING KEYBOARD EAGLE ON	
04901514	SILICONE SERVICE KEYPAD EAGLE ONE	
04901516	3KEY SERVICE KEYPAD WITH DISPLAY EAGLE ONE	
04901520	ELECTRICAL CONTROL BOARD W/ STEAM LEVER MAT	
05000652	CLOSING DISPLAY SHEET	
06100300	GROUP COVER EAGLE ONE CHROME	
06100304	STEAM LEVER EAGLE ONE	
06100306	LEVER SUPPORT EAGLE ONE	
07300778	CENTRAL LOCK PIN F-F M4 L10 SS	
07300779	CENTRAL SUPPORT PIN. M4 M-M SS	
07300784	STEAM LEVER LOCK PIVOT EAGLE ONE	
08000107	LOCKING SPRING FOR STEAM TAP EAGLE ONE	
98010000003021	ASSEMBLY COVER + DISPENSING CARD 3 KEYS	
98060000000514	STEAM KNOB ASSEMBLY	

14.3 POURING GROUP PARTS

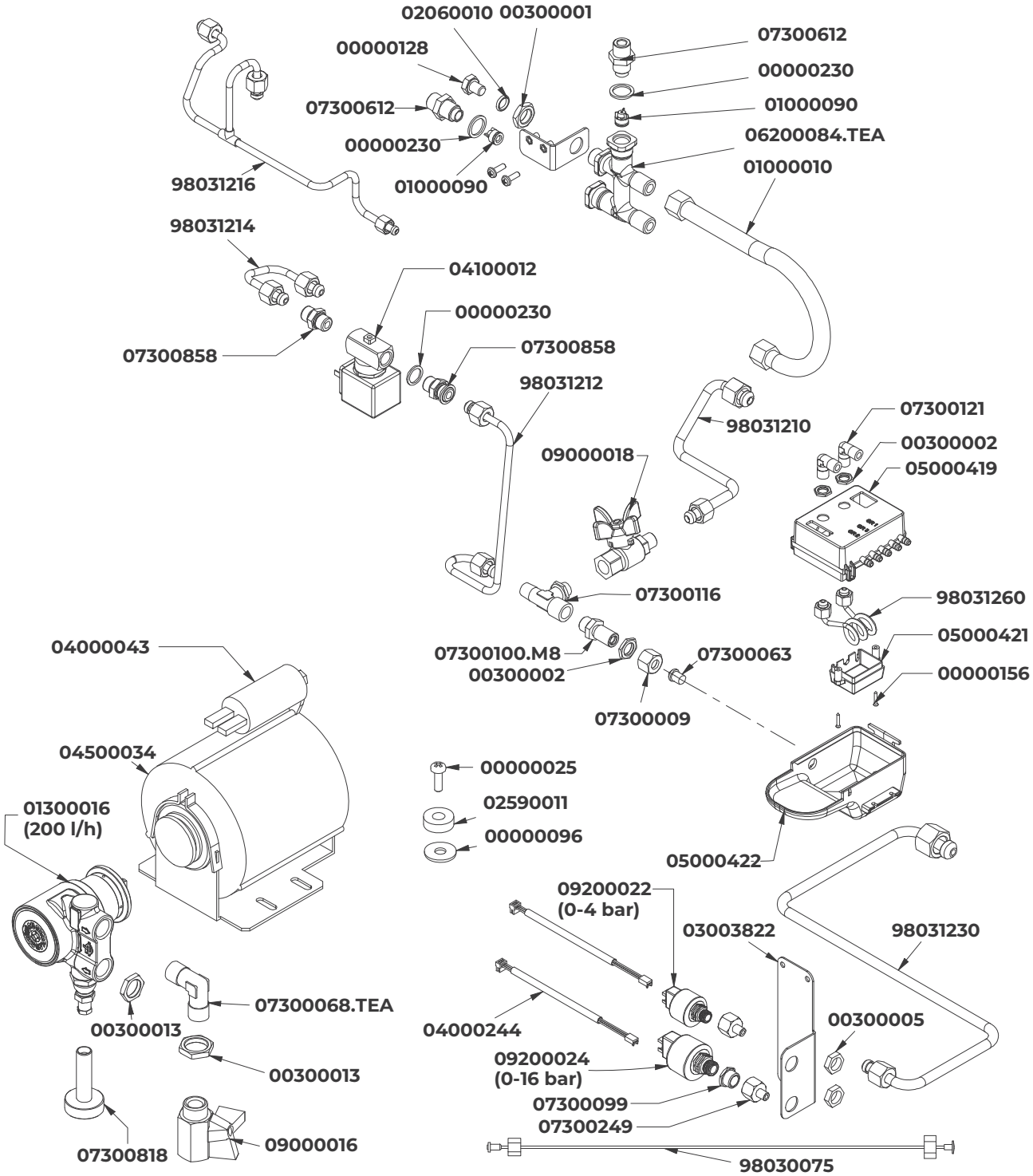


NOTE

*** Specify version.**

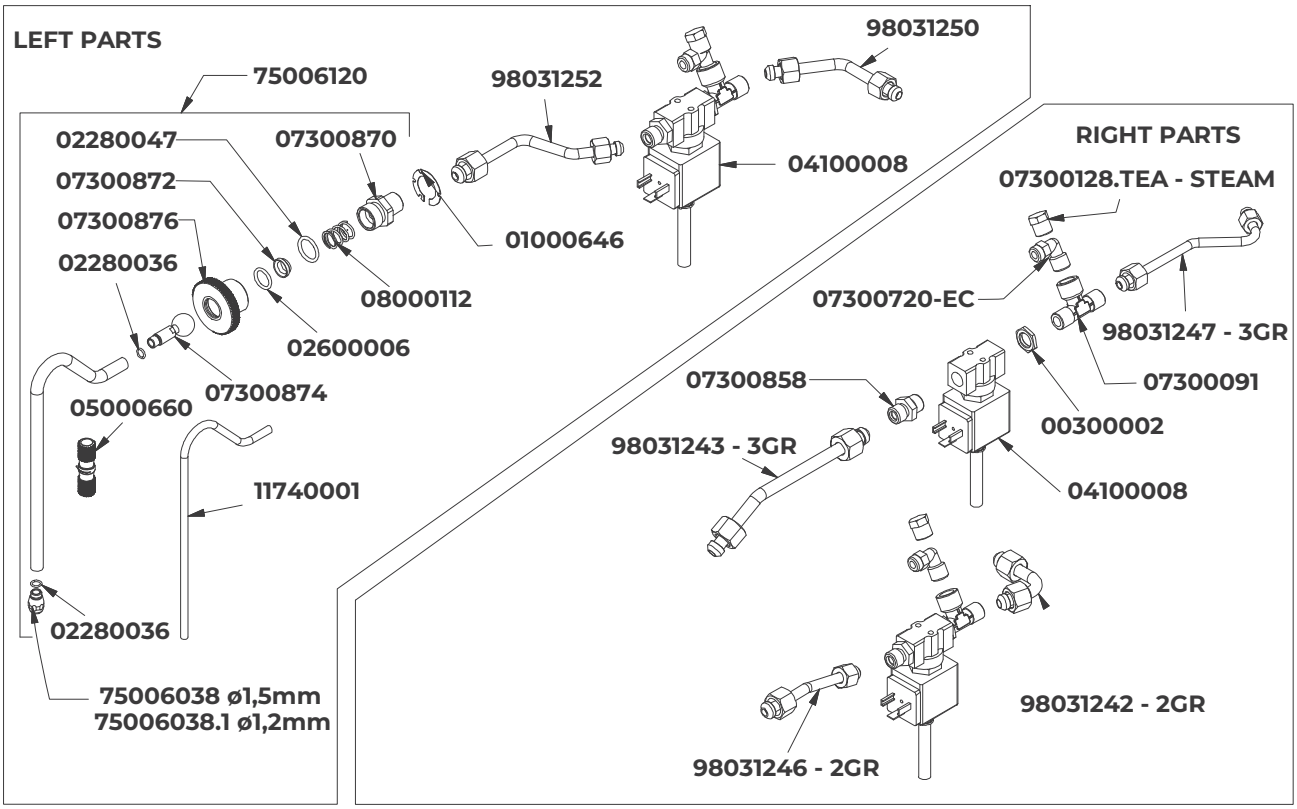
CODE	DESCRIPTION	END VALIDITY
00000048	SELF-TAPPING SCREW 2.9x4.5 TC/T.CR.	
00000089	S/S CROSS HEAD CAP SCREW M4x12 DIN7985	
00000113	S/S CROSS HEAD CAP SCREW M4x6 7985	
00000118	S/S HEX SOCKET CAP SCREW M4x12 5931	
00000160	S/S WASHER D4X12 UNI 6593	
00000168	S/S HEXAGON SOCKET HEAD SCREW M6x35 UNI 5931	
00000197	S/S HEX SOCKET CAP SCREW M6x8 ISO 4762	23/06/2020
00300021	S/S SLT COUNTERSUNK SCREW M6X18 DIN963	
00300024	S/S GRUB SCREW M4X16 5923	
01000184	ADONIS GROUP INSULATOR	
02280012	GASKET O RING 2093 D.27 EP851	
02280032	GASKET O RING 114 D15 EP 851	
02280033	GASKET O RING 75,92x1,78 NBR XP70	
02290016	GASKET O RING D9,5 R5 SIL RED	
03000004.1	DOUBLE BRACKET FOR THERMOSTAT	
03000066.R	S/S SHOWER REINFORCED	
03000072	FILTER ONE COFFEE HIGH 7gr	
03000073	FILTER TWO COFFEE HIGH 14gr	
03000107	BLIND FILTER	
04000332	EXT L=85 + FASTON F-F A FLAG AWG18	
04100017	2WAY SOLENOID DIS BASE 1/8220-230V50/60Hzz F1.5 CE	
04900991	GROUP TEMPERATURE PROBE PT1000	
04901296	EXT CABLE INDUCTIVE FILTER-HOLDER SENSOR	
05000842	FILTER HOLDER KNOB LOCK 2003	
06000052	S/S NOZZLE 1WAY CURVED OPEN	
06000054	S/S NOZZLE 2WAY CURVED OPEN	
06200081.2	GR RING OR CHROME OT-58 - FILTER-HOLDER SENSOR	
07300166	FLANGE BLOCK LOCK SOLENOID HOLDER	
07300183.I	GROUP DIFFUSER h=3 S/S Aisi316	
07300595	FILTER-HOLDER KNOB INSERT 2003 AVP ZINC.	
07300613	PRE INFUSION CHAMBER INSERT GROUP	
07300864	FITTING 1/4M 1/8M + THREADED M6 Aisi316 +	
08000017	S/S FILTER LOCKING SPRING	
08000094	FAST. SPRING FOR INSULATION - DISPENSING GROUP	
09500002	AUTOMATIC THERMOSTAT 125°C WHITE DRIPPING	
09500024	MANUAL THERMOSTAT 135°C TRIP FREE GREEN DRIP.	
14100066	CARTRIDGE HEAT. ELEMENT D10x115 300W 230V	
40200004	GASKET CONICAL UNDERCOVER 82/84 ShA	
98011002	ANODISED COFFEE TAMPER BRILLIANT WHITE	
980400000007000001	DISPENSING GROUP SET CE	
980400000007000002	DISPENSING GROUP SET KC	
98050028	BLACK LEATHER FILTER-HOLDER HANDLE	
98050091.PN	1 WAY FILTER-HOLDER IN BLACK LEATHER W/OUT FILTER	
98050092.PN	2 WAY FILTER-HOLDER IN BLACK LEATHER W/OUT FILTER	
98160000002090	FILTER-HOLDER PRESENCE SENSOR W/CONNECTORS	

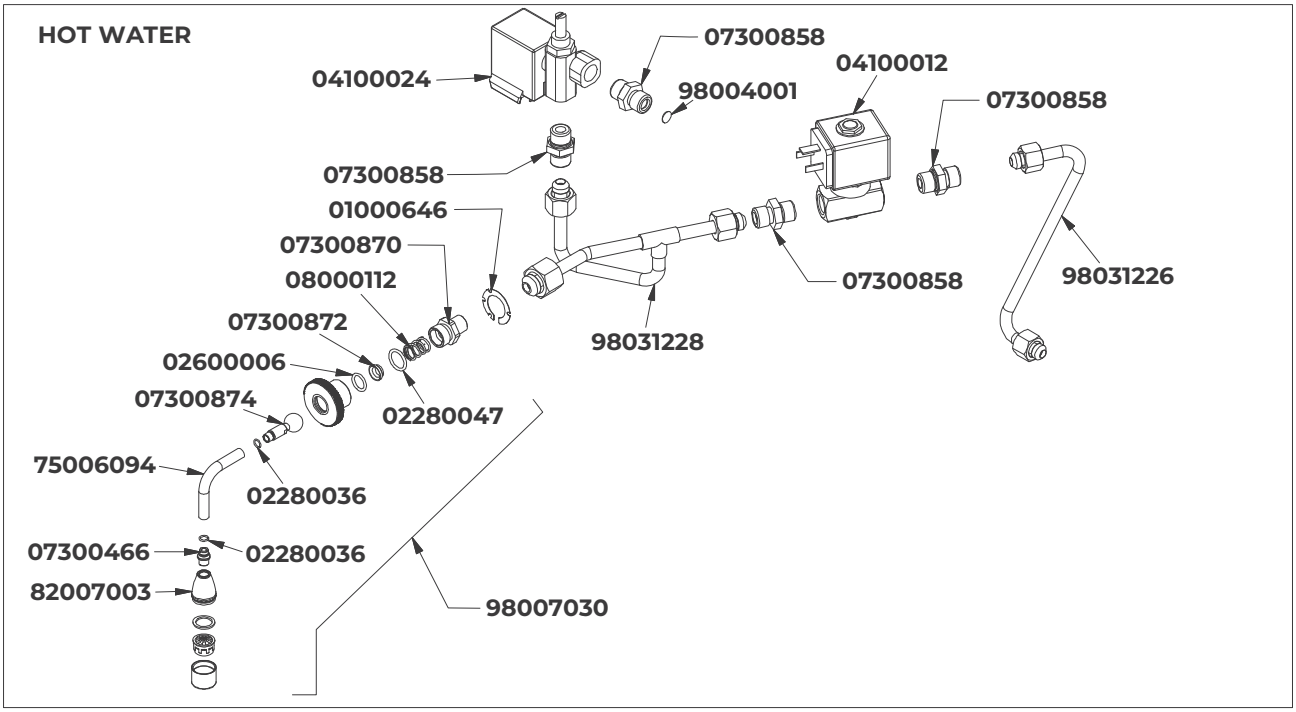
I4.4 HYDRAULIC COMPONENTS



CODE	DESCRIPTION	END VALIDITY
00000025	GALVANIC CROSS HEAD CAP SCREW AQ M6x20	
00000096	GALVANIC AQ WASHER M6 6,6x18x1,5	
00000128	S/S HEX CAP SCREW M8x10 THREADED	
00000133	S/S CLIP WD12 16-25 C7 W2	
00000156	S/S SELF-THREADING SCREW 2.9x19 TCTCR	
00000230	COPPER WASHER SEAL 14X18X1.5	
00300001	BRASS NUT 1/4 GAS D5 CH18	
00300002	BRASS NUT 1/4 D3 CH18	
00300005	BRASS NUT 1/8 GAS D4 ADD 22.07.96 CH13	
00300013	BRASS NUT 3/8 GAS D4 CH20 ADD 22.07.96	
01000010	S/S FLEXIBLE TUBE 1/4 FF L=320	
01000030	S/S FLEXIBLE TUBE 3/8 FF L=500	
01000090	RETAINING VALVE D10	
01000113	S/S FLEXIBLE TUBE 3/8 90° 3/8 FF L1500	
01000127	DIRECT SLEEVE DISCHARGE TUBE D19 L=2m	
01300016	S/S VOLUMETRIC PUMP 200 Lt/h	
02060010	COPPER O RING 8.3x13x1.9 ND8	
02590011	PISTON GASKET 14,4X6X4,5 SIL RED SR80	
03003822	SUPPORT SHAFT PRESSURE TRANSDUCER	
04000043	CAPACITOR 10mF x 04500034	
04000244	3POLE CONN CABLE RAST 2.5/MOLEX L = 800mm	
04100012	2WAY SOLENOID 1/8-1/8 1/8 240V50/60hz F3 UL TH2xM5	
04500034	ELECTRICAL ENGINE 230V 50/60Hz 165W	
05000419	TRAY PLUG UNDER PLATE VA388 T.E.R.S.	
05000421	INTERNAL CLOSURE TRAY TAP T.E.R.S.	
05000422	DRIP TRAY UNDER PLATED VA388	
05000763	CONNECTION 3/4 90°F FOR DRAINING TUBE	
06200084.TEA	5 WAY MANIFOLD OT-57 USA TEA	
07300009	NUT FITTING 1/4 GAS	
07300063	CLOSED TERMINAL D11	
07300068.TEA	CYLINDRICAL ELBOW FITTING G3/8" M/M	
07300099	FITTING ADAPTER 3/8-1/4 ES. 20 ADD. 29.05.96	
07300100.M8	DISCHARGE ATTACHMENT 1/4 1/4 + INT M8 OT-57 USA	
07300116	FITTING T 1/4 M-M-F OT-57	
07300121	FITTING L 1/4 M-M CYLINDER ADD. 18.02.97	
07300249	FITTING 1/8M L = 12 3/8F	
07300612	FITTING 1/4 1/4 GAS WITH O-RING + RET. VALVE LOCK	
07300818	PUMP REGISTER KNOB NICKEL	
07300858	FITTING 1/4M-1/4M OT-57 USA	
09000016	SPHERE TAP - NETWORK CONNECTION 3/8 M-F MINI	
09000018	DISPENSING SPHERE TAP 1/4 M-F "BUTTERFLY"	
09200022	PRESSURE TRANSDUCER 0-4 BAR 3/8	
09200024	PRESSURE TRANSDUCER 0-16 BAR 1/4	
98030075	CAPILLARY TUBE 1/8-1/4 0,9X2X400 GAUGE-PUMP	
98031210	BOILER LOADING TUBE EAGLE ONE	
98031212	VALVE LEVEL - TAP TUBE EAGLE ONE	
98031214	VALVE LEVEL - MANIFOLD TUBE EAGLE ONE	
98031216	MANIFOLD TUBE CONN FLOWMETER+VALVE MIXER	
98031230	BOILER TUBE - PRESSURE SENSOR EAGLE ONE	
98031260	SPIRAL TUBE FOR T.E.R.S	

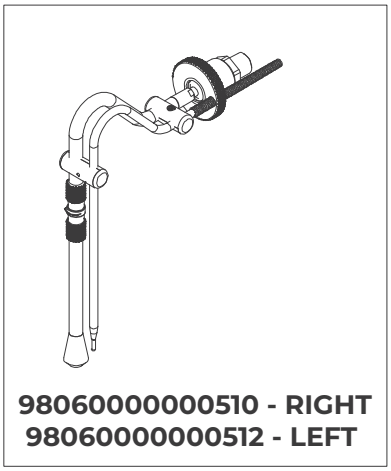
I4.5 STEAM & HOT WATER PARTS



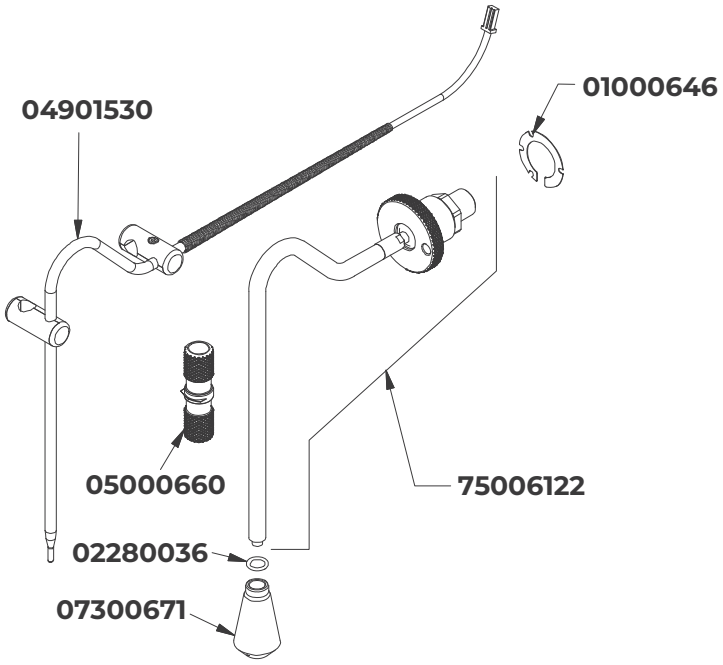


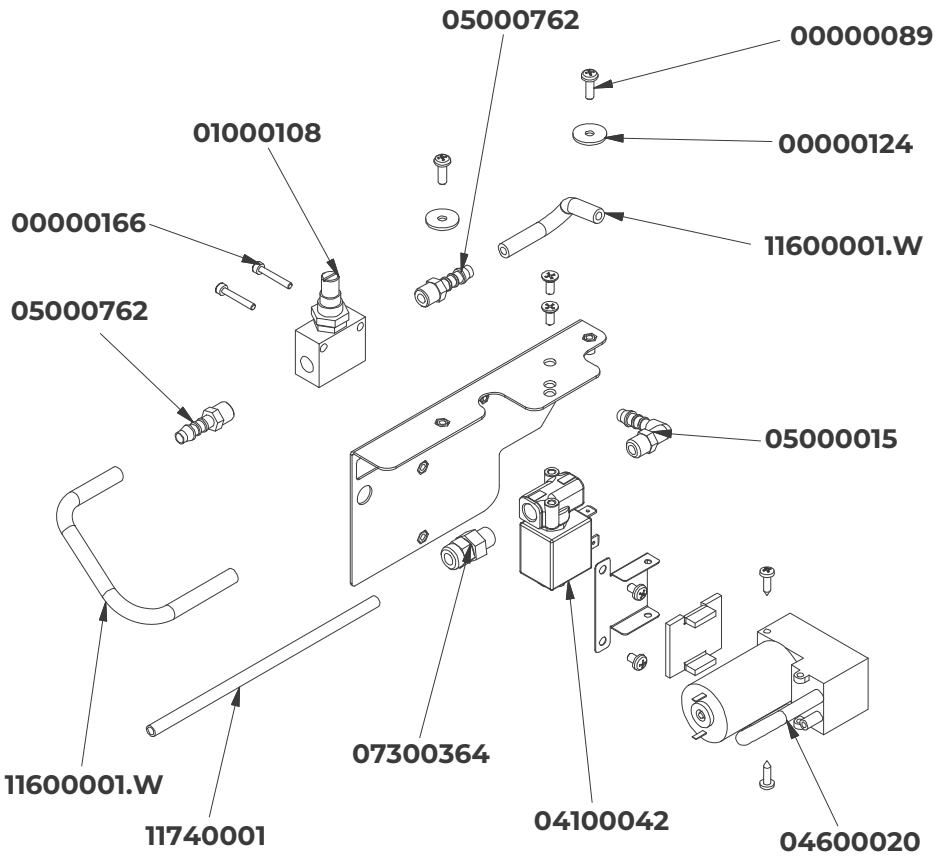
CODE	DESCRIPTION	END VALIDITY
00300002	BRASS NUT 1/4 D3 CH18	
01000646	ISOLATION STEAM WANDS	
02280036	O RING STEAM WAND NOZZLE D6x1.2 EPDM70	
02280047	GASKET OR 17,86x2,62 NBR	
02600006	TEFLON GASKET FOR STEAM LANCE BALL	
04100008	3WAY SOLENOID 1/4-1/4 1/8 240V50/60hz F3 UL TH2xM5	
04100012	2WAY SOLENOID 1/8-1/8 1/8 240V50/60hz F3 UL TH2xM5	
04100024	3WAY SOLENOID 1/4 REGULAR 90° 230V50/60Hz F3 CE	
05000660	RUBBER PROTECTION STEAM WAND D10 EAGLE ONE	
07300091	T FITTING MFM 1/4 CYLINDER	
07300128.TEA	PLUG 1/4 GAS+THEATURE	
07300466	S/S THREADED CONNECTION FOR STEAM WAND	
07300720	L FITTING 1/4 M - FITTINGS	
07300858	FITTING 1/4M-1/4M OT-57 USA	
07300870	FITTING 3/8 STEAM-WATER ARTICULATED WAND	
07300872	COMPASS JOINT STEAM-WATER WAND	
07300874	STEAM-WATER WAND STAINLESS STEEL NIPPLE	
07300876	STEAM-WATER WAND FIXING RING	
08000112	SPRING FOR ARTICULATED WAND	
11740001	TEFLON PIPE 6/4	
75006038	STEAM NOZZLE M8,65x0,75 F. 1,5 ROUNDED	
75006038.1	STEAM NOZZLE M8,65X0,75 F1,2 ESAG.1,2	
75006094	STAINLESS STEEL PIPE HOT WATER WAND	
75006120	COOLTOUCH STEAM WAND KIT EAGLE ONE	
82007003	HOT WATER DIFFUSER D23,5 F1/8	
98004001	S/S FILTER D8	
98007030	S/S HOT WATER WAND KIT EAGLE ONE W/ DIFFUSER	
98031226	BOILER TUBE - HOT WATER SOLENOID EAGLE ONE	
98031228	MANIFOLD HOT WATER MIXER EAGLE ONE	
98031242	RIGHT EASYCREAM SOLENOID-BOILER TUBE 2GR	
98031243	RIGHT EASYCREAM SOLENOID-BOILER TUBE 3GR	
98031246	EASYCREAM SOLENOID TUBE - RIGHT WAND 2GR	
98031247	EASYCREAM SOLENOID TUBE - RIGHT WAND 3GR	
98031250	LEFT EASYCREAM SOLENOID -BOILER TUBE	
98031252	EASYCREAM SOLENOID TUBE - LEFT WAND	

14.6 EASYCREAM PARTS



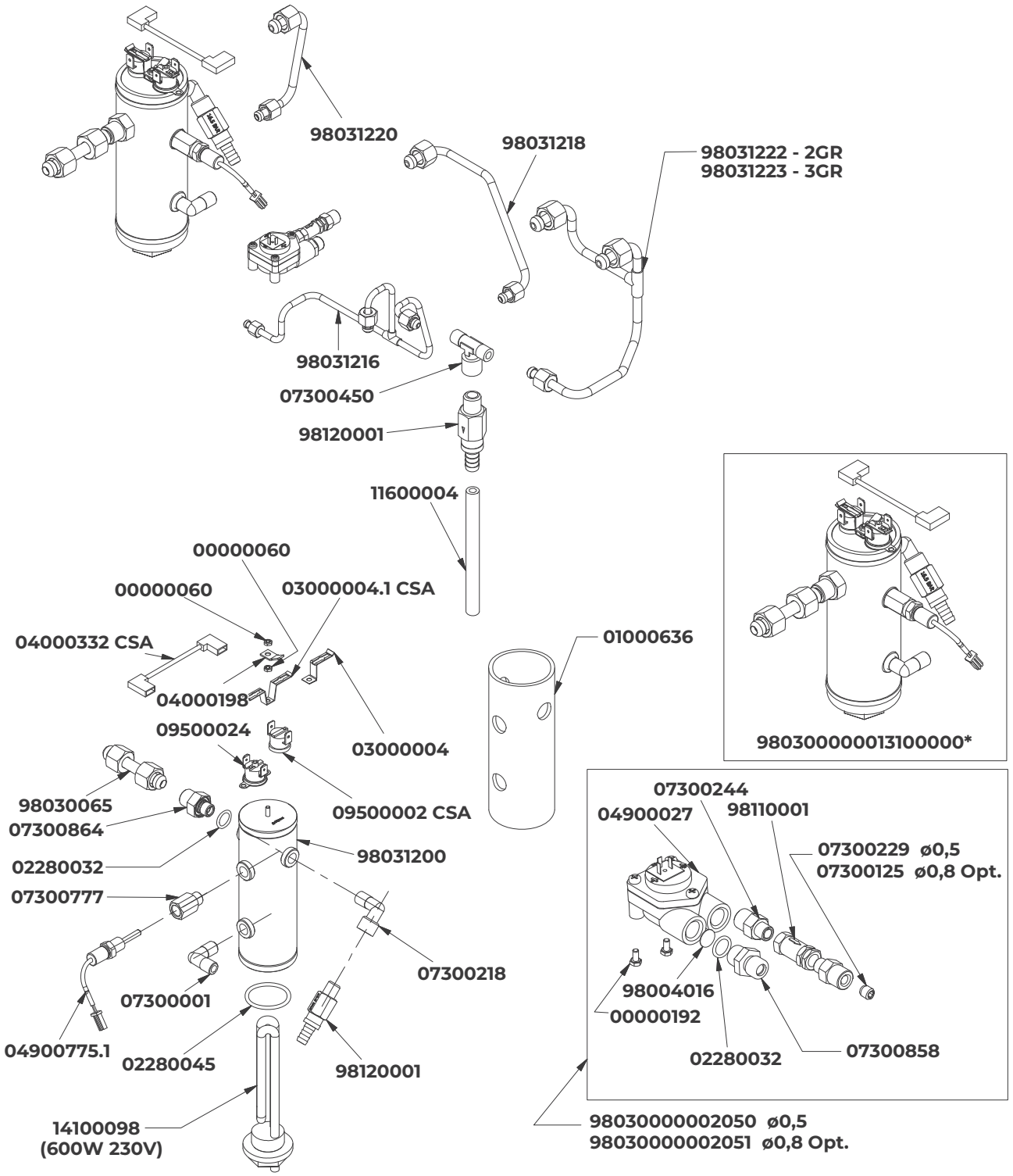
98060000000510 - RIGHT
98060000000512 - LEFT





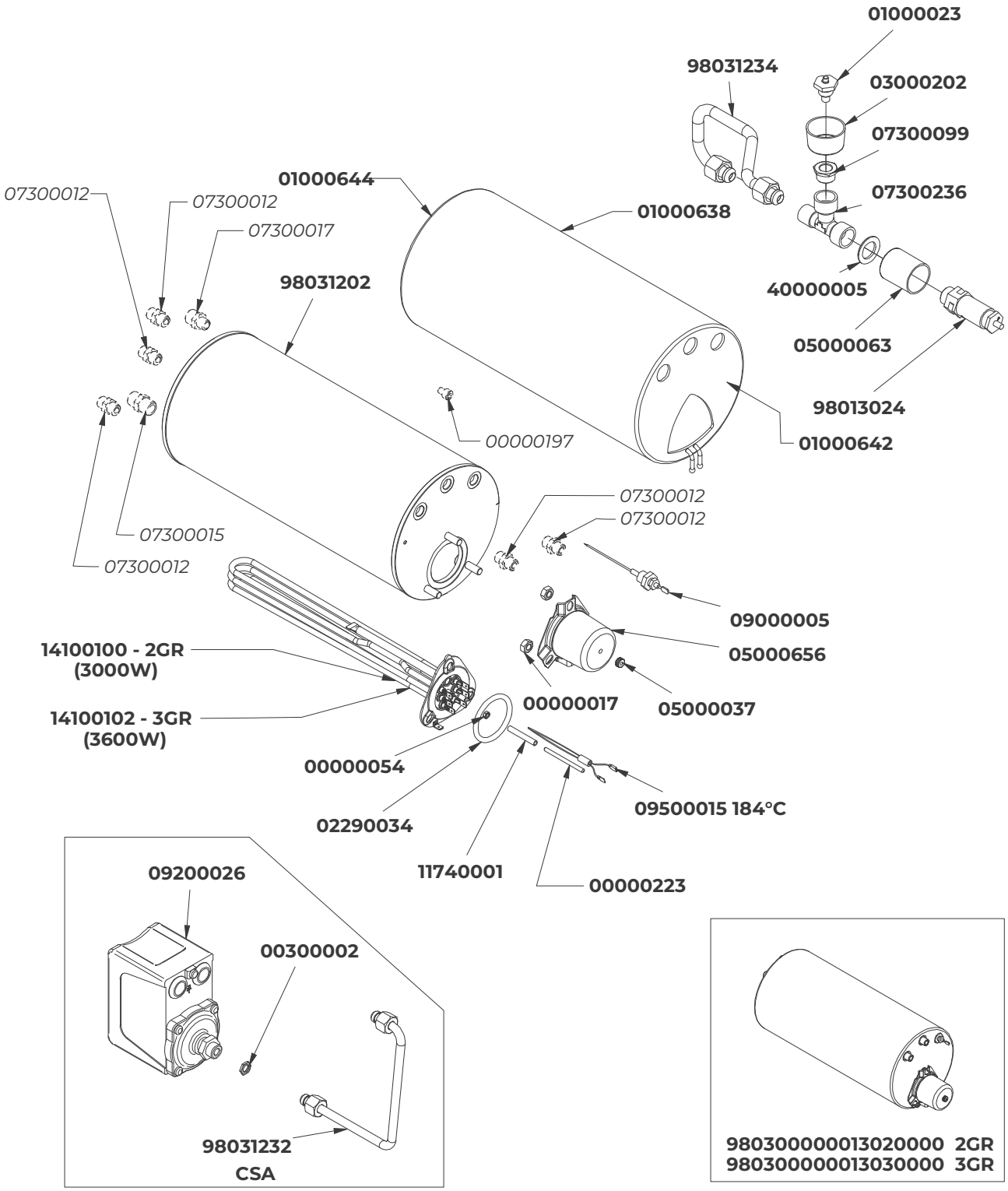
CODE	DESCRIPTION	END VALIDITY
00000089	S/S CROSS HEAD CAP SCREW M4x12 DIN7985	
00000124	GALVANIC WASHER D4 3x16x1.5	
00000166	S/S SCREW M3x20 TCEI ISO 4762	
01000108	TAP MRF 1/8 FF 604	
01000646	ISOLATION STEAM WANDS	
02280036	O RING STEAM WAND NOZZLE D6x1.2 EPDM70	
04100042	2WAY SOLENOID 1/8-1/8 220-230V50/60Hz F2 CE	
04600020	MICRO-COMPRESSOR EASYCREAM	
04901530	PT1000 PROBE STEAM WAND EAGLE ONE + 2 SUPP.	
05000015	TUBE FASTENING WES 6R 1/8	
05000660	RUBBER PROTECTION STEAM WAND D10 EAGLE ONE	
05000762	MALE STRAIGHT TUBE HOLDER JUNCTION GES 6 1/8	
07300364	STRAIGHT FITTING 1/8 M CON. - FITTING.6 340	
07300671	EASYCREAM NOZZLE 4HOLES	
11600001.W	WHITE SILICONE PIPE 4x7,5 60Sh(1mt=41gr)	
11740001	TEFLON PIPE 6/4	
75006122	EASY CREAM STEAM WAND KIT	
98060000000510	ASSEMBLY JOINT + EC WAND WITH RIGHT PROBE	
98060000000512	ASSEMBLY JOINT + EC WAND WITH LEFT PROBE	

I4.7 HYDRAULIC GROUP PARTS



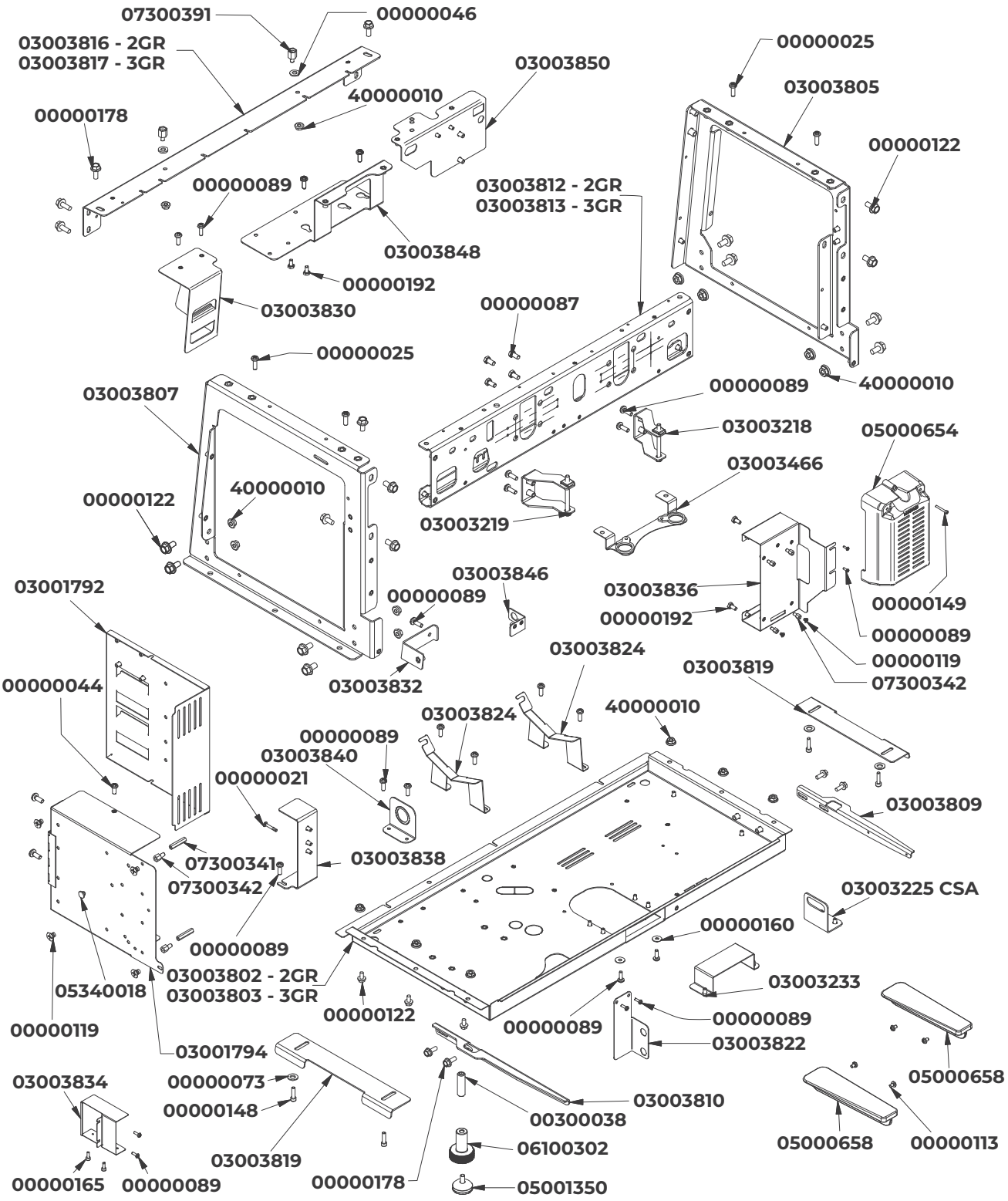
CODE	DESCRIPTION	END VALIDITY
00000060	GALVANIC MEDIUM NUT AQ M3	
00000192	S/S SCREW M4x8 TE UNI 5739	
01000636	COFFEE BOILER INSULATION	
02280032	GASKET O RING 114 D15 EP 851	
02280045	GASKET O RING 29,82x2,62 EPDM	
03000004	SINGLE BRACKET FOR THERMOSTAT	
03000004.1	DOUBLE BRACKET FOR THERMOSTAT	
04000198	FOIL HOLDER M 6.3 D 4.2 45°	
04000332	EXT L=85 + FASTON F-F A FLAG AWG18	
04900027	BRASS FLOWMETER 1/4-1/4GAS -ATT. HEAD 2,8x0,5	
04900775.1	TEMPERATURE PROBE 150°NTC ATT.1/8 SS 4X20	
07300001	L FITTING 1/8 M-M 459	
07300125	GIGLEUR M8x8 F.0,8 OT-57 +TEA	
07300218	FITTING L 1/8 M-F 458	
07300229	GIGLEUR M8X8 F.0,5 OT-57 + TEA	
07300244	FITTING 1/4M 1/8M + THREADED M8 Aisi303	
07300450	FITTING T 1/8 M-F-M OT-57	
07300777	S/S EXTENSION 1/8M 1/8F	
07300858	FITTING 1/4M-1/4M OT-57 USA	
07300864	FITTING 1/4M 1/8M + THREADED M6 Aisi316 +	
09500002	AUTOMATIC THERMOSTAT 125°C WHITE DRIPPING	
09500024	MANUAL THERMOSTAT 135°C TRIP FREE GREEN DRIP.	
11600004	SILICONE PIPE 5x9 60Sh PEROX	
14100098	HEATING ELEMENT 3/4 600W 230V INCOLOY800	
98004016	S/S FILTER D12	
980300000013100001	COFFEE BOILER SET CE	
980300000013100002	COFFEE BOILER SET CSA	
98030000002050	FLOWMETER T3 EXTERNAL GIGLER 0,5 SET	
98030000002051	FLOWMETER T3 EXTERNAL GIGLER 0,8 SET	
98030065	TUBE D8 1/4 1/4 L=59,5	
98031200	S/S WELDED COFFEE BOILER D42,5	
98031216	MANIFOLD TUBE CONN FLOWMETER+VALVE MIXER	
98031218	RIGHT FLOWMETER - BOILER TUBE EAGLE ONE	
98031220	LEFT FLOWMETER - BOILER TUBE EAGLE ONE	
98031222	CONNECTION MANIFOLD FLOWMETER EAGLE ONE 2GR	
98031223	CONNECTION MANIFOLD FLOWMETER EAGLE ONE 3GR	
98090000000044	COFFEE BOILER DISCHARGE TUBE SET 2GR	
98090000000045	COFFEE BOILER DISCHARGE TUBE SET 3GR	
98110001	RETURN VALVE 1/8 F-FOT-58	
98120001	NEPLAX VITON 16,5 BAR VALVE 1/8 HOSE CLAMP	

I4.8 BOILER PARTS



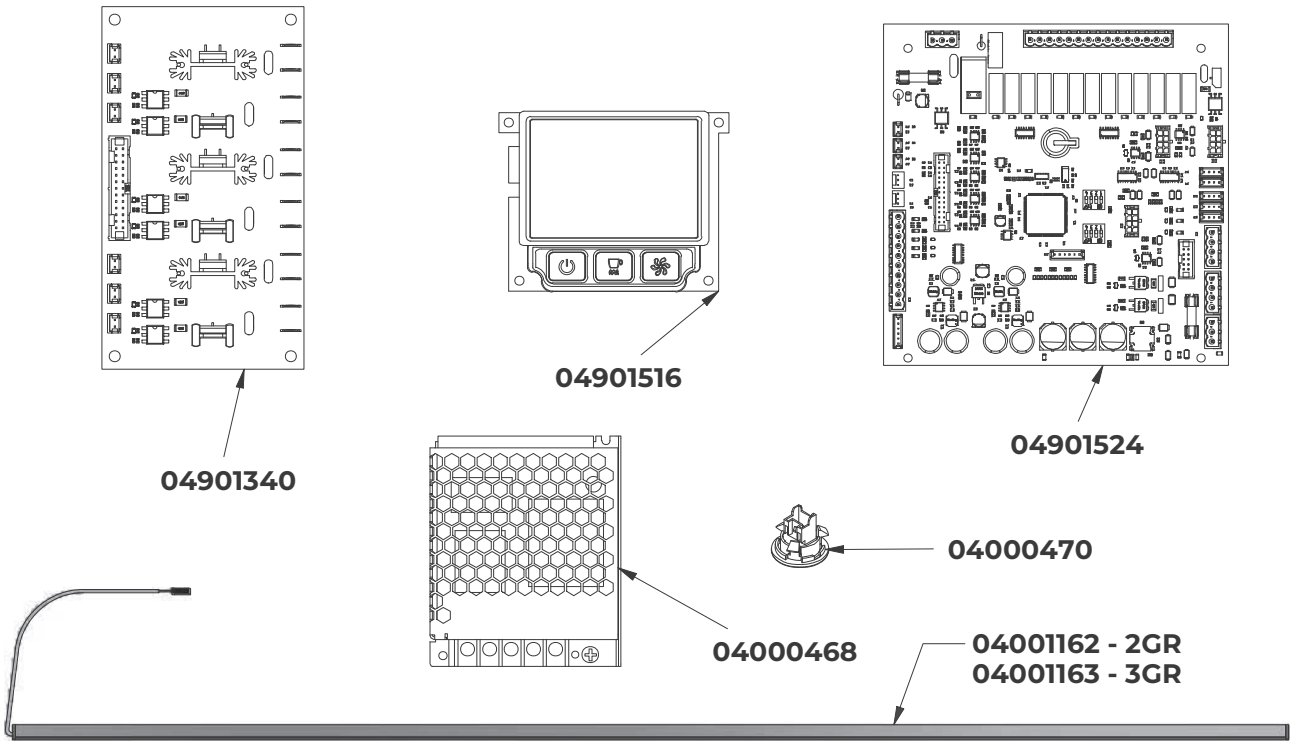
CODE	DESCRIPTION	END VALIDITY
00000017	GALVANIC BOLT AQ M6 HIGH h6 5587	
00000054	GALVANIC HIGH NUT M4	
00000197	S/S HEX SOCKET CAP SCREW M6x8 ISO 4762	23/06/2020
00000223	BRASS PRISONER M4x75	
00300002	BRASS NUT 1/4 D3 CH18	
01000023	ANTI VACUUM VALVE	
01000638	STEAM BOILER INSULATION	
01000642	INSULATOR D160 RIGHT STEAM BOILER ZOTECH	
01000644	INSULATOR D160 LEFT STEAM BOILER ZOTECH	
02290034	GASKET O RING 6187 D47x5,34 VITON FDA	
03000202	CONDENSATION TRAY MASTER	
05000037	THREADED RING NUT FOR PANELS M4 X0,7	
05000063	SAFETY VALVE COVER PA6	
05000656	CYLINDRICAL RESISTANCE COVER EAGLE ONE	
07300012	FITTING 1/4 1/4M-1/4M Aisi316	23/06/2020
07300015	FITTING 3/8 3/8 GAS OT-58 ADD. 26.06.96	23/06/2020
07300017	FITTING 1/4M 3/8M GAS OT-57 USA	23/06/2020
07300099	FITTING ADAPTER 3/8-1/4 ES. 20 ADD. 29.05.96	
07300236	T FITTING 3/8 M-F-F 466	
09000005	COMPLETE AUTOLEVEL PROBE L=130	
09200026	PRESSURE GAUGE 0,9-2,5 BAR P302/6	
09500015	HEATING ELEMENT THERMAL PROT. G5 184°C 16A	
11740001	TEFLON PIPE 6/4	
14100100	S/S FLANGE HEATING ELEMENT 3000W 230V	
14100102	S/S FLANGE HEATING ELEMENT 3600W 230V	
40000005	BRASS WASHER 27x17x2 ROUGH	
98013024	SAFETY VALVE C10 3BAR 3/8 VITON 97/23/CE	
980300000013020000	BOILER SET EAGLE ONE 2GR	
980300000013030000	BOILER SET EAGLE ONE 3GR	
98031202	S/S WELDED STEAM BOILER D160 8LT	
98031232	BOILER TUBE - PRESSURE GAUGE CSA	
98031234	SAFETY VALVE TUBE EAGLE ONE	

14.9 FRAME PARTS



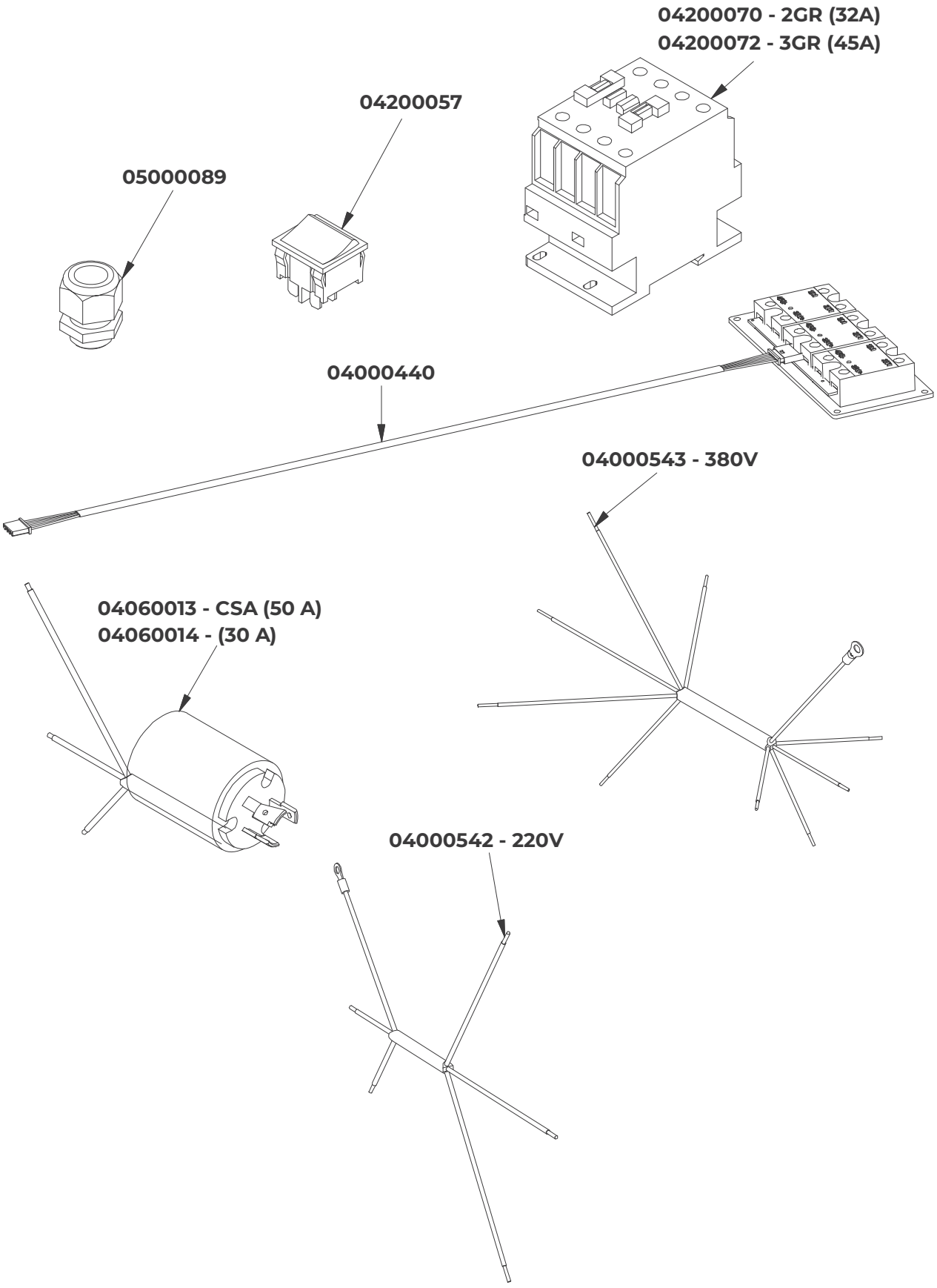
CODE	DESCRIPTION	END VALIDITY
00000021	GALVANIC CROSS HEAD CAP SCREW M4x25	
00000025	GALVANIC CROSS HEAD CAP SCREW AQ M6x20	
00000044	GALVANIC CROSS HEAD/CAP SCREW M4x10	
00000046	GALVANIC WASHER M6 6,4X12,5X1,6	
00000073	S/S WASHER D.8x4x1 UNI6592	
00000087	S/S HEX HEAD SCREW M10X20 UNI5739	
00000089	S/S CROSS HEAD CAP SCREW M4x12 DIN7985	
00000113	S/S CROSS HEAD CAP SCREW M4x6 7985	
00000119	SS CROSS HEAD COUNTERSUNK SCREW M4x6 ISO 7046	
00000122	WHITE GALVANIC FLANGED KNURLED HEX CAP SCREW 8.8 M	
00000148	S/S HEXAGON SOCKET HEAD SCREW M4x16 UNI 5931	
00000149	S/S HEXAGON SOCKET HEAD SCREW M4x30 UNI 5931	
00000160	S/S WASHER D4X12 UNI 6593	
00000165	S/S SCREW M3x8 TCEI ISO 4762	
00000178	GALVANIC FLANGED KNURLED HEX CAP SCREW 8.8 M6x16	
00000192	S/S SCREW M4x8 TE UNI 5739	
00300038	S/S FH GRUB SCREW M10x35	
03001792	CONTROL BOARD COVER	
03001794	CONTROL BOARD CASE	
03003218	RIGHT SUPPORT COVER GROUP VA388	
03003219	LEFT SUPPORT COVER GROUP VA388	
03003225	SAFETY PRESSOSTAT SUPPORT VA388	
03003233	PROTECTION SHEET CHARGE PIPE	
03003466	SUPPORT SHEET LED ON POURING GROUP	
03003802	SUPPORTING BASE 2GR	
03003803	SUPPORTING BASE 3GR	
03003805	RIGHT SIDE FRAME	
03003807	LEFT SIDE FRAME	
03003809	RIGHT PLATE GUIDE SHEET	
03003810	LEFT PLATE GUIDE SHEET	
03003812	GROUP WALL 2GR	
03003813	GROUP WALL 3GR	
03003816	SUPER. SHEET REAR 2G	
03003817	SUPER. SHEET REAR 3G	
03003819	BOTTOM SHEET SIDE SUPPORT	
03003822	SUPPORT SHAFT PRESSURE TRANSDUCER	
03003824	SUPPORT BOILER	
03003830	REMOTE SWITCH SUPPORT	
03003832	BRACKET SUPP. CENTRAL BOX	
03003834	SUPPORT TRANSFORMER	
03003836	SINGLE BOILER CONTROL UNIT SUP. + STEAM RELAY	
03003838	TERMINAL BOARD SUPPORT BRACKET	
03003840	CABLE GLAND SUPPORT BRACKET	
03003846	HYDRAULIC CROSSPIECE SUPPORT BRACKET	
03003848	SUPPORT DOSER	
03003850	SUPPORT COMPRESSOR	
05000654	BOILER CONTROL UNIT CLOSING	
05000658	FLAT WATER DRIP TRAY EAGLE ONE	
05001350	MACHINE FOOT D40 H18 M8 MALE	
05340018	WHITE NYLON CAP 10.3x6.1 HOLE D5.5	
06100302	MACHINE FOOT EAGLE ONE POLISHED	
07300341	CENTRAL LOCK VIP S/S NICKEL PLATE L=35	
07300342	NICKEL PLATED CONTROL UNIT SUPPORT PIN	
07300391	EXTENSION CUP WARMER FASTENING	
00000178	GALVANIC FLANGED KNURLED HEX CAP SCREW 8.8 M6x16	
00000021	GALVANIC CROSS HEAD CAP SCREW M4x25	
40000010	NUT M6 W/ WELDED GALVANIC WASHER	
00000087	S/S HEX HEAD SCREW M10X20 UNI5739	
00000089	S/S CROSS HEAD CAP SCREW M4x12 DIN7985	

14.10 ELECTRONIC PARTS



CODE	DESCRIPTION	END VALIDITY
04000244	3POLE CONN CABLE RAST 2.5/MOLEX L = 800mm	
04000432	FLAT CABLE 26WAY CONTROL BOARD - PID BOARD TFT	
04000440	WIRING FOR BOILER SOLID STATE RELAY L=1900	
04000468	TRANSFORMER 24VDC 50W OPTIONAL	
04000470	12VDC LED SPOT	
04000893	EXTENSIBLE CABLE L=600 2WAY CONN AMP	
04001136	EXTRA WIRING FOR DISPENSING UNIT 2GR EAGLE ONE	
04001137	EXTRA WIRING FOR DISPENSING UNIT 3GR EAGLE ONE	
04001139	POWER SUPPLY WIRING CENTRAL BOARD EAGLE ONE	
04001140	CONN CABLE DISPLAY-CENTRAL BOARD EAGLE ONE	
04001143	10WAY CABLE KEYBOARD 2-3GR EAGLE ONE	
04001145	SUPPLYING WIRING EASYCREAM 2GR.	
04001146	SUPPLYING WIRING EASYCREAM 3GR.	
04001148	CONN CABLE DISPENSING BOARD-TAP BOARD	
04001162	LED STRIP 2GR EAGLE ONE	
04001163	LED STRIP 3GR EAGLE ONE	
04001165	LIGHTS WIRING 2GR.	
04001166	LIGHTS WIRING 3GR.	
04901296	EXT CABLE INDUCTIVE SENSOR FILTER-HOLDER	
04901340	CENTRAL BOARD T3 MACHINE CONTROL	
04901516	3 KEY SERVICE KEYPAD WITH DISPLAY	
04901524	CENTRAL BOARD EAGLE ONE	
04001140	CONNECTING CABLE DISPLAY-CENTRAL BOARD	
04001143	10 WAY CABLE KEYBOARD 2-3GR EAGLE ONE	

14.11 ELECTRICAL PARTS



CODE	DESCRIPTION	END VALIDITY
04000386	CUPWARMER CABLING 1 TEMP 2GR	
04000387	CUPWARMER WIRING 1 TEMP 3GR	
04000440	WIRING FOR BOILER SOLID STATE RELAY L=1900	
04000542	ELECTRICAL CABLE 3x4 H07RN-F 2mt450/750V CB ICEL	
04000543	ELECTRICAL CABLE 5x2,5 H07RN-F CB450/750V 2,5mt ICEL	
04001132	WIRING 2 GR.	
04001133	WIRING 3 GR.	
04060013	CABLE+PLUG AWG3x10 SJOOW UL/CSA 50A 250V	
04060014	CABLE+PLUG AWG3x12 SJO UL/CSA 30A 250V	
04200057	DBL POWER BIPOLAR BIG SWITCH 10A UL 22X19	
04200070	4POLE CONTACTOR 32 A CE/UL COIL 230V	
04200072	4POLE CONTACTOR 45A CE/UL COIL 230V	
05000089	CABLE DUCT TEC-S M25 WITH NUT	
04200057	ON/OFF SWITCH 10A UL 22x19	
04200070	CONTRACTOR 32 A CE/UL 2GR.	
04200072	CONTACTOR 45 A CE/UL 230V 3GR.	
04200095	STATIC RELAY 25°-250V	
05000089	STRAIN BELIEF TEC-S M25	

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