Coffee Machine

Service
Service
**Service**

Gaggia Naviglio

# ServiceManual

Rev. 01 MAY 2016

**General Information**

| **Description** | **Value** |
|---|---|
| Nominal Voltage - Power Rating - Power Supply | See label on the inside of the service door |
| Housing material | Thermoplastic material |
| Size (w x h x d) | 256 x 340 x 440 mm<br>(data may vary depending on the model) |
| Weight | 9 kg (data may vary depending on the model) |
| Power cord length | 800 - 1200 mm |
| Control panel | Front panel |
| Classic Milk Frother | Especially for cappuccinos |
| Maximum height of the cup under the dispensing spout (mm) | 110 |
| Water tank | 1.5 litres - Removable type |
| Coffee bean hopper capacity | 300 g |
| Coffee grounds drawer capacity | 10 |
| Pump pressure | 15 bar |
| Boiler | Stainless Steel |
| Safety devices | Thermal fuse |



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| MODIFICATIONS TO SERVICE MANUAL | | | | |
|---|---|---|---|---|
| **From Rev.** | **To Rev.** | **Chapter** | **Inserted** | **Modified** |
| **Rev.00** | **Rev01** | 01 | | Par. 1.3 Material |
| | | | | Par. 1.4. Safety warning |
| | | 05 | Par. 5.3. Saeco Service Center - Quick Start Guide | |
| | | 06 | | Par. 6.1. Repair Flow |

# CHAPTER 1

# INTRODUCTION

### 1.1 Documentation required

The following documentation is needed for repair procedures:
- Instruction booklet for specific model
- Technical documentation for specific model (diagrams, exploded view, sympton cure and service manual)

### 1.2 Tools and equipment required

As well as the standard equipment, the following is required:

| Qty. | Description | Notes |
|---|---|---|
| 1 | Screwdriver | Torx T 8 - T 10 - T 20 |
| 1 | Pliers for Oetiker clamps | |
| 1 | CC -A - Vdc tester | |
| 1 | Digital thermometer | Scale limit > 150°C |
| 1 | SSC (Saeco Service Center) | Programmer<br>(for programming and diagnostics mode) |

### 1.3 Material

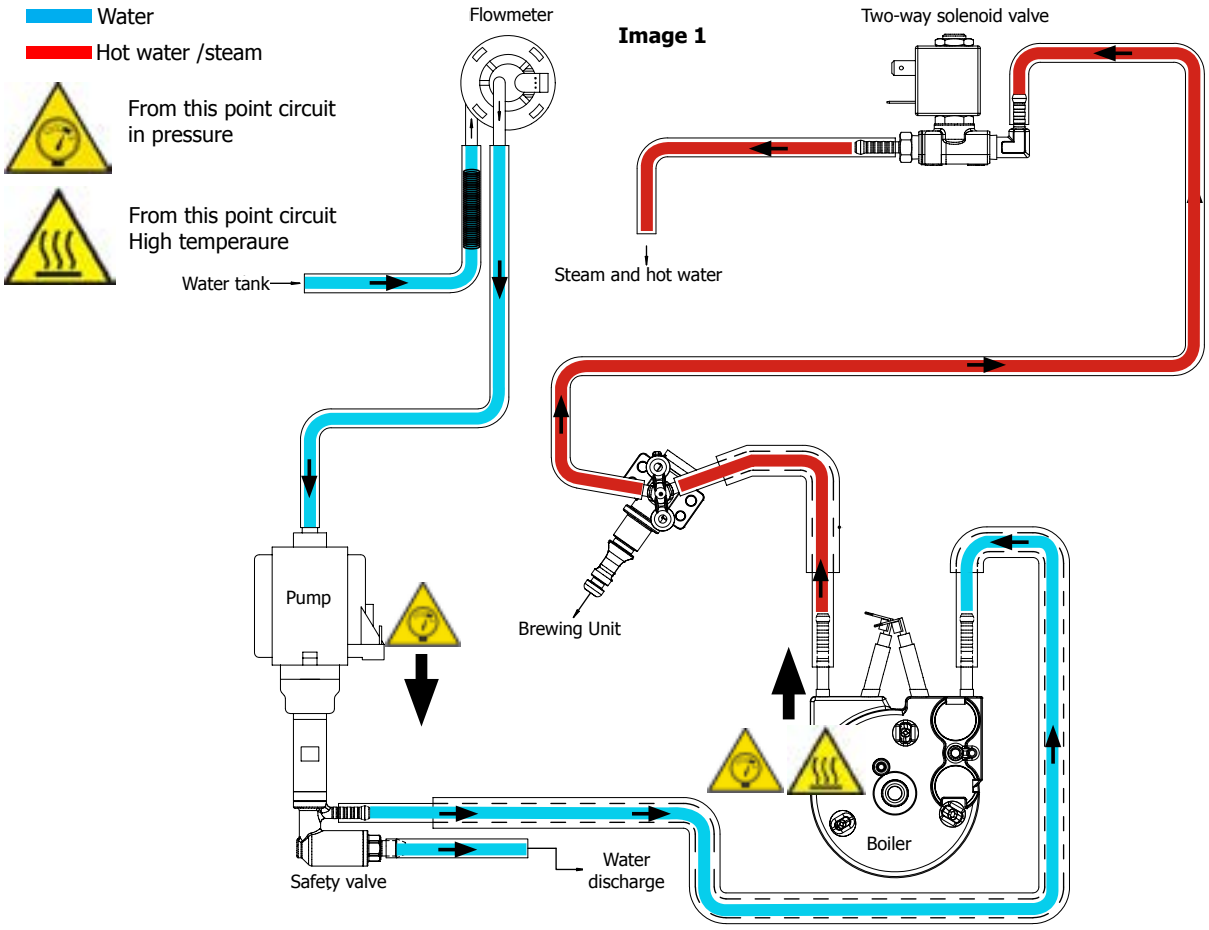
| Material | Code and Description |
|---|---|
| Thermal paste | Heat resistance > 200°C |
| Descaler | 21001901 "ACC SAE DECALCIFIER 5 L 1 UNIT" |
| Grease solvent | 132253695601 "PARALIQ GB 363" |
| Silicone grease | 14-INTGR22004 "ACC TUBE FIN FOOD GREASE 2 400 ML" |

### 1.4 Safety warnings

We recommend you consult the technical manual of the machine before performing any maintenance work.
Observe all applicable standards relating to the repair of electrical appliances.
Always disconnect the power plug from the mains before beginning repair work.

Simply turning off the main machine power switch is not an adequate safety precaution.
This domestic appliance is rated as insulation class I.
On completion of the repair work, insulation and dielectric rigidity tests must be performed.

Disassembling the machine, the operator must pay attention to hot and under Pressure parts: boiler, pin-boiler, valves, dispensing, steam tube, brew unit, connections and pipes to avoid burns. Please refer to specific hydraulic circuit (Image1) to know the parts in detail.
The machine hydraulic circuit can reach maximum pressure of 16/18 bar.
To operate in safety condition is recommended to perform the Steam Out procedure in order to remove the pressure and hot water inside the hydraulic circuit.



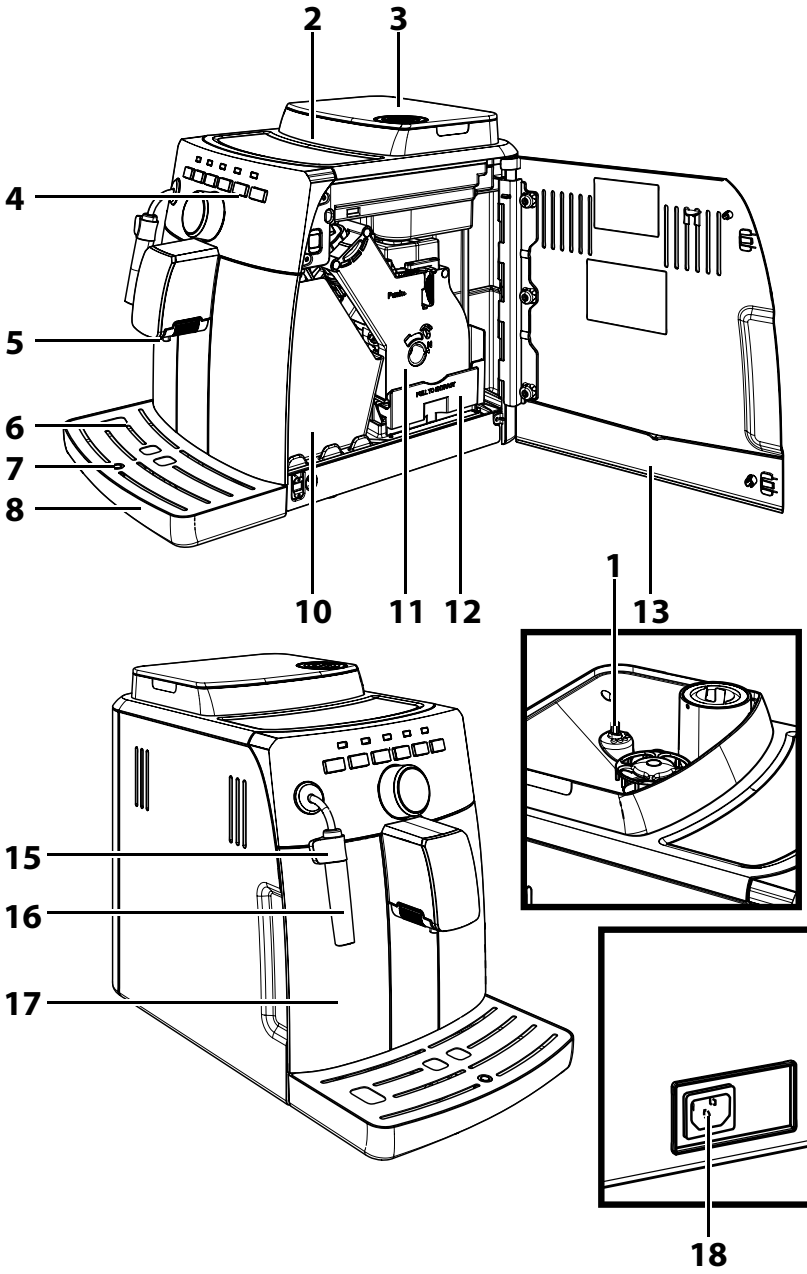

### 1.5 Service POLICY grid as used for coffee machine

**For IN WARRANTY** repairs is raccomanded to use when and where possible the single components,available in the exploded views of the coffee machines or of the specific components. If you find the information "SEE THE EXPLODED VIEW E....." in the assembly description field, it means that the single components of the assembly are available in the other pages of the exploded view. It's possible to use the assembly only if there is a specific Symptom Cure that include this possibility or when the single components are not available for the order.

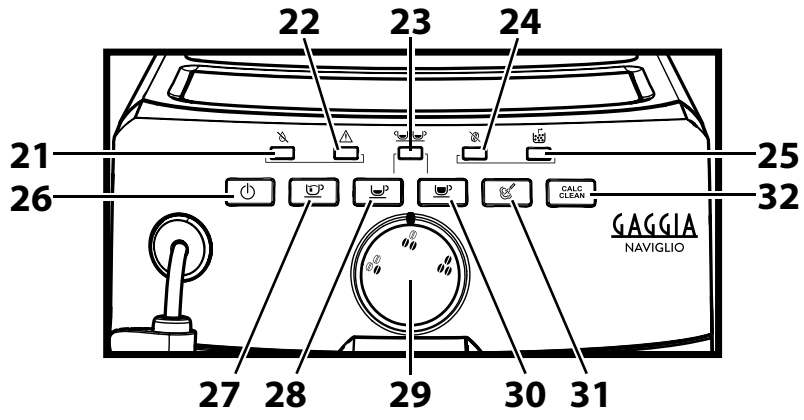
## List of principal assembly present in all our coffee machines

| Components | Assembly use | Single components available |
|---|---|---|
| **COFFEE GRINDER** | **Only for OOW repairs** | **YES**, to consult the specific exploded-view of the machine or of the Coffee Grinder on website |
| **BREWING UNIT** | **Only for OOW repairs** | **YES**, to consult the specific exploded-view of the machine or of the Brewing unit on website |
| **BOILER** | **Only for OOW repairs** | **YES**, to consult the specific exploded-view of the machine on website |
| **GEAR MOTOR** | **Only for OOW repairs** | **YES**, to consult the specific exploded-view of the machine on website |
| **FILTER HOLDER** | **Only for OOW repairs** | **YES**, to consult the specific exploded-view of the machine on website |
| **MILK CARAFE** | **Only for OOW repairs** | **YES**, to consult the specific exploded-view of the machine on website |
| **THERMAL CARAFE** | **Only for OOW repairs** | **YES**, to consult the specific exploded-view of the Thermal Carafe on website |
| **MILK ISLAND** | **Only for OOW repairs** | **YES**, to consult the specific exploded-view of the Milk Island on website |

### 1.6.1 External machine parts

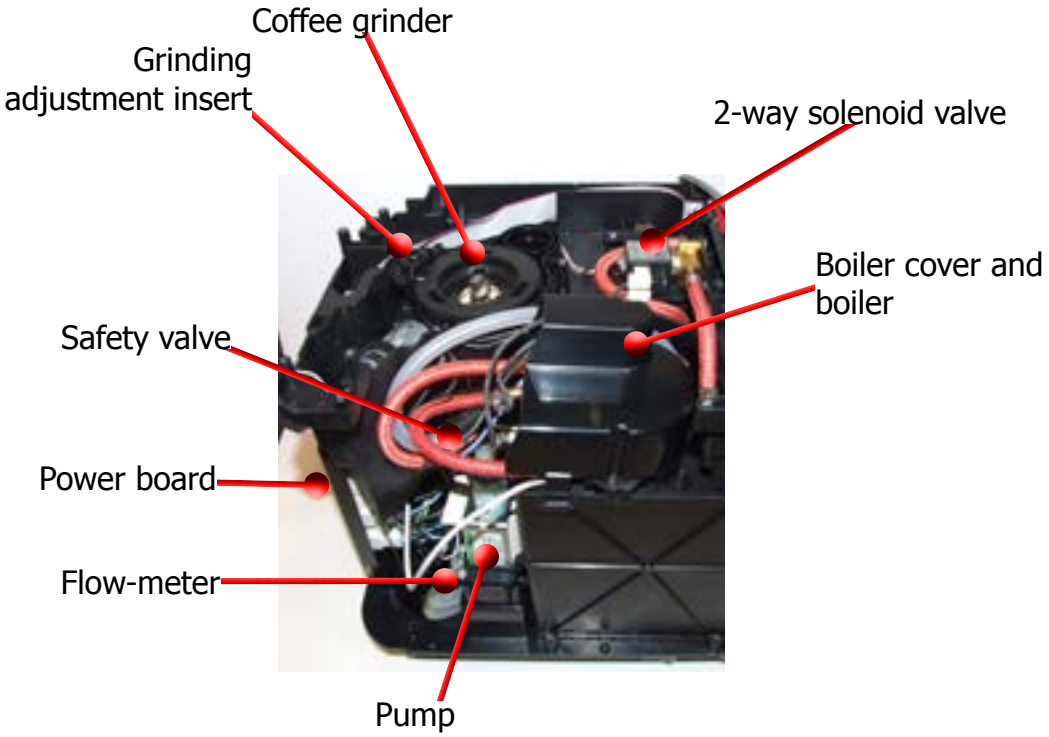


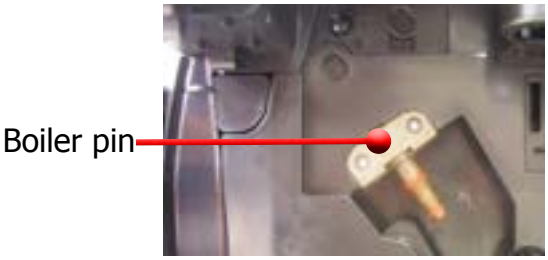

| | |
|---|---|
| 01 | Coffee grinder adjustment pin |
| 02 | Coffee bean hopper |
| 03 | Coffee bean hopper lid |
| 04 | Control panel |
| 05 | Coffee dispensing spout |
| 06 | Cup holder grill |
| 07 | Full drip tray indicator |
| 08 | Drip tray |
| 09 | Grease for the brew group to be purchased separately |
| 10 | Coffee grounds drawer |
| 11 | Brew group |
| 12 | Coffee residues drawer |
| 13 | Service door |
| 14 | Power cord |
| 15 | Wand protective gripper |
| 16 | Classic Milk Frother (for hot water/steam wand) |
| 17 | Water tank |
| 18 | Power cord socket |




| | |
|---|---|
| 21 | "No water" light |
| 22 | "Warning" light |
| 23 | "Double coffee" light |
| 24 | "No coffee" light |
| 25 | "Coffee grounds drawer" light |
| 26 | ON/OFF button |
| 27 | Hot water dispensing button |
| 28 | Espresso brew button |
| 29 | "Aroma" selector switch |
| 30 | Coffee brew button |
| 31 | Steam dispensing button |
| 32 | Descaling button |

### 1.6.2 Internal machine parts



# CHAPTER 2

# TECHNICAL SPECIFICATIONS

## 2.1. Technical specifications

| | |
|---|---|
| Power supply and output: | 240 V~ 50 Hz 1850 W - 230 V~ 50/60 Hz 1850 W<br>120 V~ 60 Hz 1500 W - 100 V~ 50/60 Hz 1300 W |
| Temperature monitoring: | (NTC) variable resistor sensor - transmits the value to the electronic card |
| Safety system: | 2 thermostats at 190°C one shot |
| Coffee heat exchanger output: Stainless steel | (230 V~) 1900 W<br>for coffee, hot water and steam dispensing |
| Steam heat exchanger output: Stainless steel | As above |
| Gear motor: | 2 rotation directions; power supply 24VC |
| Pump: | Ulka Type EP5/S GW approx. 13-15 bar with reciprocating piston and thermal switch 100°C 48 W, 230V, 50 Hz, 120V, 60Hz 100V, 50/60 Hz |
| Overpressure valve: | Opening at approx. 15-18 bar |
| Water filter: | In tank |
| Coffee grinder: | Direct current motor with flat ceramic grinder blades |
| Automatic dosage: | Dose adjustment controlled by the electronic system |
| Power consumption: | During heating phase- approx. 5.6 A |
| Dimensions: W x H x D in mm: | 256x340x440 (data may vary depending on the model) |
| Weight: | 9 kg (data may vary depending on the model) |
| Water tank capacity: | 1.5 l |
| Coffee bean hopper capacity: | 300 g. of coffee beans |
| Dreg drawer capacity: | 10 |
| Heat exchanger capacity: | 10 (11 if after 9 dregs you dispense a double espresso) |
| Water circuit filling time: | Approx. 15 sec Max. on first filling cycle |
| Heating time: | Approx. 45 sec. |
| Grinding time: | Approx. 8-10 sec. |

## 2.2. Specification for the measurement of the coffee products temperature.

The temperature is influenced by the flow from the dispenser and stratification of temperatures in the glass. In order to consider these phenomena and to introduce measures that allow comparisons in controlled conditions, below guidelines must be followed:

**Conditions:**

a) Water temperature in tank: 23°C (+/-2°C).
b) It must be used a plastic cup (see picture N°1).
c) It must be used a thermocouple thermometer (e.g. type K - see picture N°2).
d) The coffee machine is tested without any change of parameters or calibrations, which may affect the temperature of products, so the measurement of temperature must be done with machine in default factory setting.

**Procedure:**

1. The temperature must be measured in the cup, immediately after dispensing. Cup has to be placed on a non-metal surface using a thermocouple thermometer (Picture 1).

2. The temperature in the cup is measured by immersing the probe of the thermometer up to touch the bottom.The probe then must be moved in a circular motion for 5/6 rotations. At the of the rotations, stop in the center of the cup (Picture 2).

3. The highest temperature measured during the rotations is the value we are searching for, and that must be reported;

4. Test measurement: from end of dispensing to the end of rotations must be completed within 12 seconds.

5. the distance of the probe from the bottom of the glass is a function of the quantity of coffee dispensed: 10mm for 35gr - 17mm for 60gr - 35mm for 120gr and superior (Picture 3).

**Limits of acceptability**

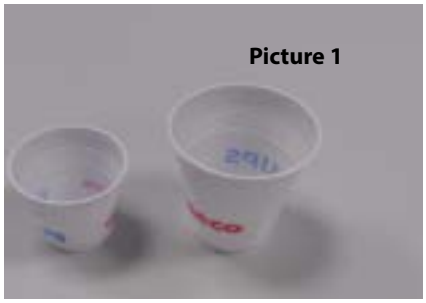
The acceptance limits are divided by features and products and are the following:

**Espresso Coffee Italy Q.ty 25/40 gr.**

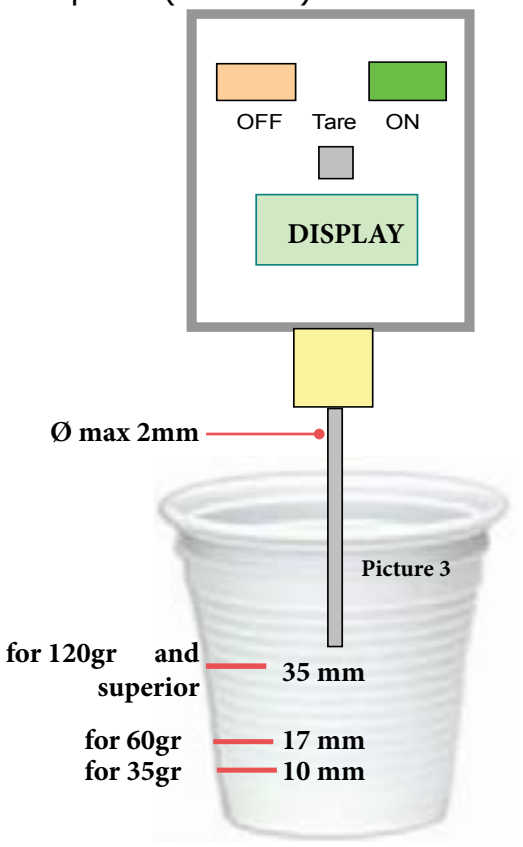
Temperature of 1st product 69°C ≤ 85°C
Temperature of 2nd product 72°C ≤ 85°C

**Coffee Q.ty 70/120 gr.**

Temperature of 1st product 69°C ≤ 85°C
Temperature of 2nd product 72°C ≤ 85°C


Picture 1


Picture 2



Picture 3

## 2.3. Specification for the measurement of the Milk products temperature.

### Milk evaluation

To carry out the test, a partially skimmed UHT milk with a percentage of grease between 1.5-1.8% at a refrigerator temperature **T**refr. (between 4 to 10°C) must be used.
The milk product must be checked on a beaker of 250 ml of capability and with an inner diameter of 70mm, brewing 100gr of product.

### Parameters to be respected:

The parameters to be respected are: milk temperature and height of the cream. Each of these parameters, however, must be evaluated depending on the type of system used for the production of hot milk.
Actually three types of devices are present on the appliances:

- Manual system (pannarello)
- Semi-Automatic system (cappuccinatore)
- Automatic system (carafe, Pinless wonder system, etc.)

### Milk temperature in the beaker:

System without Pinless Wonder: e.g. Xelsis, Exprelia, Syntia, Intelia.
With milk at Trefr. (about 4-10 °C): →Δ≥ 36

### Height of the milk cream in the beaker:

Manual system (pannarello) ≥ 15mm on 100gr. of brewed product

Semi-automatic system (cappuccinatore) ≥ 20mm on 100gr. of brewed product

Automatic system: carafe, cappuccinatore, Pinless wonder (New Royal, Energica Pure, Intelia EVO latte) ≥ 20mm on 100gr. of brewed product

### How to measure the temperature of the milk.

1. The measurement is carried out in the beaker, immediately after the end of milk brew, positioned on a non-metallic surface, using a thermocouple thermometer (eg. Type K). Stop the preparation of mixed product: at the end of milk brewing, where "One Touch product" function is present.

2. The temperature is measured by immersing the probe of the thermometer, positioning the probe inside the beaker at about 10mm from the bottom of the container, then the probe moves in a circular motion for 3-5 turns, stopping at the end, at the center of the beaker. It detects the maximum temperature reached in a time of relief between 3 to 5 seconds. It is important the mixing of milk before the measurement at 10mm from the bottom of the beaker. If the mixing is correct, temperature, for a few fractions of a second, during the measurement should not oscillate.

**How to measure the milk cream.**

The temperature (Trefr or Tamb) of the milk doesn't affect as much the test result on measuring the milk cream; by convection is assumed to always use milk at refrigerator temperature **T**refr..

**Manual systems (Pannarello)**

Pour 100cc. of milk at Trefr. in a beaker of 250 ml of capacity and with a inner diameter of 70 mm; with machine in steam mode:

1. Open the steam knob to discharger water circuit for 4 sec, then close the knob.
2. Place the beaker with the frother dipped in milk, open the steam knob to maximum and start the chronometer.
3. After about 30 to 60 seconds, close the knob and check the result on milk.

**Semi-automatic systems (cappuccino)**

Pours milk at Trefr. in a container ; with the machine in steam mode:

1. Open the steam knob to discharge water circuit for 4 sec. then close the knob.
2. Insert the silicone tube in the milk container, placing a beaker of 250 ml capacity and with an inner diameter of 70 mm under the cappuccino maker and open the steam knob.
3. After having provided 100gr. of product, close the knob and check the result obtained on milk. Note: The same applies to machines which have a steam key on the user interface and a solenoid valve in place of the steam tap.

**Automatic: Carafe, Cappuccino Pinless wonder (New Royal, Energica Pure, Intelia EVO Latte), etc..**

After setting the machine to delivery of 100gr. of product:

1. Launch the "hot milk" function.
2. Collect the product in a beaker with a 250ml of capacity and with an inner diameter of 70 mm, and verify the result obtained on milk. Carry out the test using milk at a **T**refr..

In case the machine allows modify of the emulsion through the menu, use the machine with the emulsion set to the default value.

Related to the above testing procedure derives the following table of acceptability:

| **Manual, Semi-Automatic and Automatic's Milk System** | |
|---|---|
| Grams of Product | Minimun Height of the milk cream |
| ≥ 130 | ≥ 30mm |
| 120 | ≥ 25mm |
| 110 | ≥ 22mm |
| **100** | ≥ 20mm |
| 90 | ≥ 16mm |
| 80 | ≥ 13mm |
| 70 | ≥ 11mm |

**NB:** To verify more accurately the height of the cream, a practical expedient dictated by experience is to add to the product just delivered a small amount of coffee. The addition of coffee immediately put in evidence the surface of separation between liquid and cream.

### 2.4. Machine parameters and performance

| PRODUCT QUANTITY | Minimum quantity (Puls.) | Default quantity (Puls.) | Maximum quantity (Puls.) | User programmable | Programm. by Production / Service |
|---|---|---|---|---|---|
| **Espresso** | 50 | 165 | 600 | Yes | No |
| **Long coffee** | 70 | 440 | 600 | Yes | No |
| **Pre-ground** | No | | | | |
| **Hot water** | Continues until the water supply has been exhausted (capacitive sensor) | | | | |
| **Steam pannarello (frother)** | Continues until the water supply has been exhausted (capacitive sensor) | | | | |

| RINSE | Initial rinse | Final rinse |
|---|---|---|
| When performed | When the machine is switched on and the boiler temperature is ≤ 50°C | When the machine is switched off electronically, manually or automatically after 30', if at least one coffee has been dispensed, before switching off |
| No. of pulses | 180 | 80 |
| Stopping option | Yes, by pressing any key | Yes, by pressing any key |
| User disable option | No | No |
| Production/Service department disable option | No | No |
| No. of pulses user adjustment option | No | No |
| No. of pulses Production/ Service department adjustment option | No | No |
| Pulse range (Min. – Max.) | No | No |

| Descaling cycle frequency | | | |
|---|---|---|---|
| **Hardness** | **Water hardness** | **Without water filter** | **With water filter** |
| **1** | Soft (up to 7°dH) | 240 litres (480,000 pulses) | 480 litres (960,000 pulses) |
| **2** | Medium (7° - 14°dH) | 120 litres (240,000 pulses) | 240 litres (480,000 pulses) |
| **3** | Hard (15° - 21°dH) | 60 litres (120,000 pulses) | 120 litres (240,000 pulses) |
| **4** | Very hard (over 21°dH) | 30 litres (60,000 pulses) | 60 litres (120,000 pulses) |

The default water hardness level is 4. Each litre of water corresponds to approximately 2,000 pulses.
**In the machines where is not possible change the water hardness the default hardness level is 3.**

| DREG DRAWER | Description and values |
|---|---|
| **Time-out for dreg drawer** | 5 sec. |
| **Reset dreg counter** | Dreg emptying alarm, if the dreg drawer is removed for more than 5 seconds. |

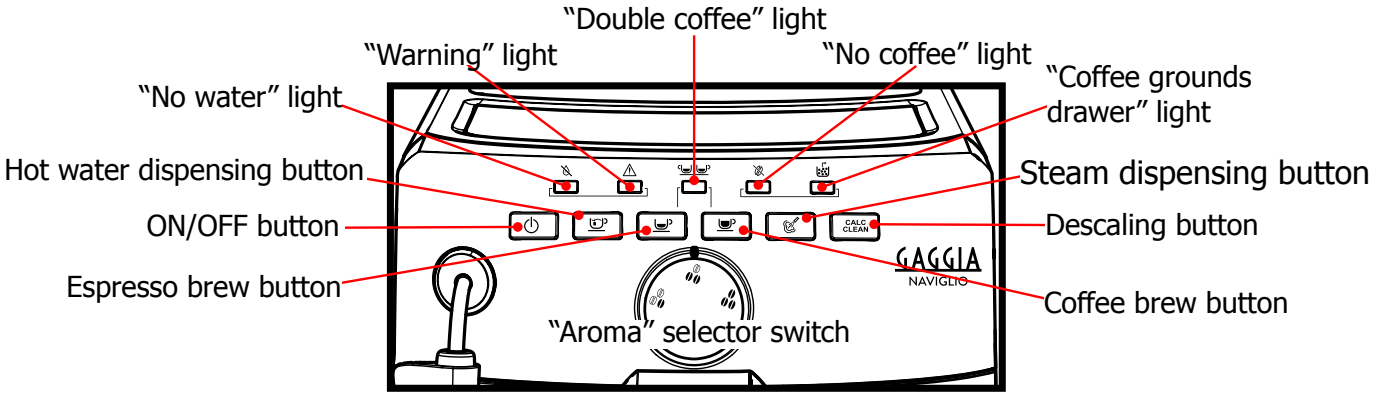
| STANDBY | Description and values |
|---|---|
| **Inlet time (default)** | 30 minutes |
| **Inlet time programmed by Production/Service** | Yes |
| **Boiler temperature during Standby** | Boiler OFF |

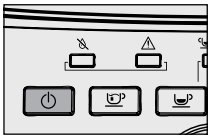
| WATER TANK | Description |
|---|---|
| **Water reserve (pulses) with water filter** | 200 |
| **Water reserve (pulses) with no water filter** | 200 |
| **Water reserve modifiable by Production/Service departments** | No |
| **"Fill tank" alarm** | Yes |
| **"No tray" alarm** | Yes (Fill tank) |
| **Water mains** | No |

# CHAPTER 3

# BRIEF INSTRUCTIONS

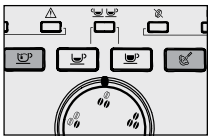
### 3.1. Customer and programming menu



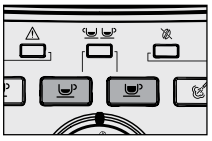
Machine in Stand-by.

FLASHING



The machine is performing the rinse cycle.

FLASHING SLOWLY

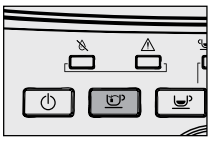


The machine is warming up to brew espresso and dispense hot water or steam.

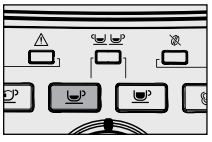
FLASHING SLOWLY

The machine is ready for use.

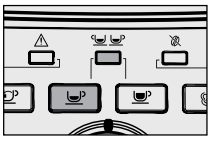
STEADY ON



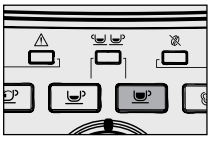
STEADY ON
Hot water is being dispensed.

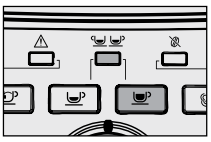


STEADY ON
The machine is brewing
1 cup of espresso coffee.

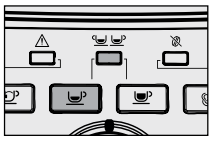


STEADY ON
The machine needs a descaling cycle.
Please bear in mind that failure to descale your machine will prevent it from working properly. Repair is not covered by warranty.

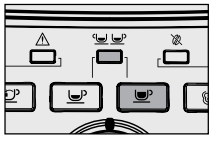




STEADY ON
The machine is brewing 2 cups of espresso coffee.



STEADY ON
The machine is brewing 1 cup of coffee.



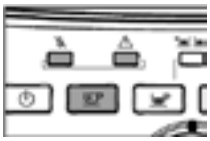
STEADY ON
The machine is brewing 2 cups of coffee.

BLINKING
The machine is reprogramming the amount of coffee necessary to brew a cup of espresso coffee.

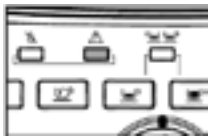
BLINKING
The machine is reprogramming the amount of coffee necessary to brew a cup of coffee.

STEADY ON
Steam is being dispensed.

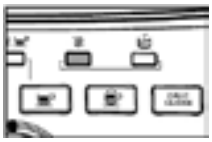
Alarm signals



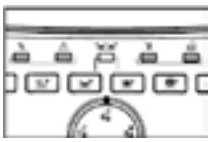
BLINKING
Prime the circuit.



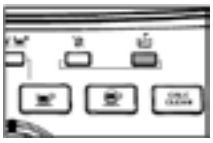
BLINKING
Close the service door. The Brew Group must be inserted into the machine.



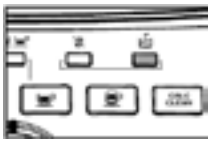
STEADY ON
No coff ee beans in the coffee bean hopper. After refi lling the hopper, the cycle can be restarted.



BLINKING
Turn off the coffee machine. After 30 seconds, turn it on again. Try this 2 or 3 times. If the machine does not start, contact the consumer care help line at the phone number listed on the last page of this document.



BLINKING
Insert the coff ee grounds drawer.



FAST BLINKING
Empty the coffee grounds drawer and the liquid recovery tray.

STEADY ON
Fill the water tank.

## 3.2. Operation, cleaning and maintenance

| Operating the machine | | |
|---|---|---|
| 1 | Fill water tank | |
| 2 | Fill the coffee bean hopper | |
| 3 | Switch on the appliance | |
| 4 | Press the button to start the appliance |  |
| 5 | Heating | When the heating phase begins, wait for it to finish |
| 6 | Rinse | Carry out a rinse cycle for the internal circuits |
| 7 | Machine ready | The machine is ready to dispense beverages |

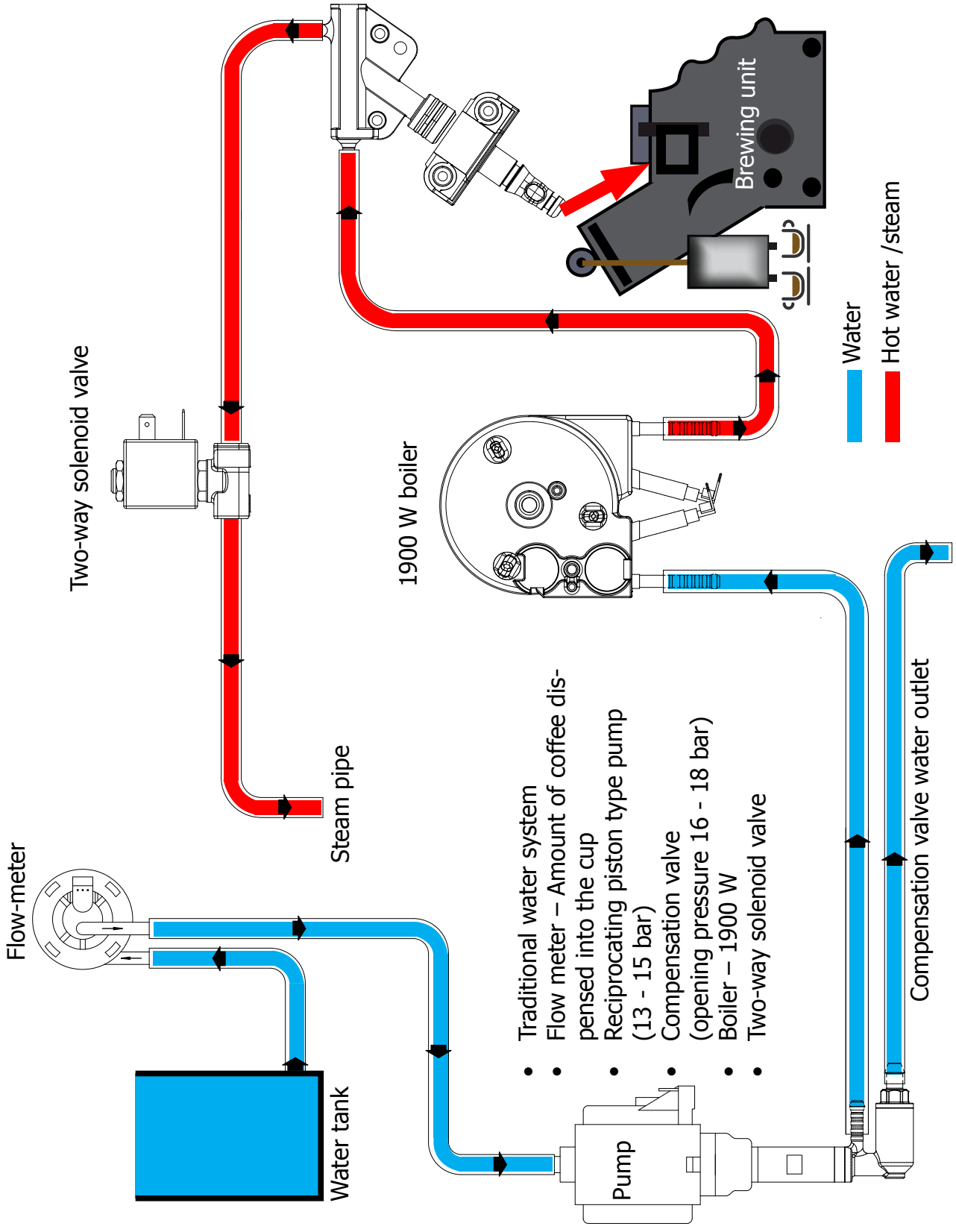
| CLEANING AND TECHNICAL SERVICING | | |
|---|---|---|
| A | Empty the dregs drawer | When indicated |
| B | Empty the drip tray | As necessary |
| C | Clean the water tank | Weekly |
| D | Clean the coffee bean hopper | As necessary |
| E | Clean the casing | As necessary |
| F | Clean the brewing unit | Every time the coffee bean hopper is filled or weekly |
| | Lubricate the brewing unit | After 500 dispensing cycles or when the grease is no longer present on the brewing unit |
| | Clean the unit housing | Weekly |
| H | Descaling | When indicated |

| Descaling cycle frequency | | | |
|---|---|---|---|
| **Hardness** | **Water hardness** | **Without water filter** | **With water filter** |
| **1** | Soft (up to 7°dH) | 240 litres (480,000 pulses) | 480 litres (960,000 pulses) |
| **2** | Medium (7° - 14°dH) | 120 litres (240,000 pulses) | 240 litres (480,000 pulses) |
| **3** | Hard (15° - 21°dH) | 60 litres (120,000 pulses) | 120 litres (240,000 pulses) |
| **4** | Very hard (over 21°dH) | 30 litres (60,000 pulses) | 60 litres (120,000 pulses) |
| The default water hardness level is 4. Each litre of water corresponds to approximately 2,000 pulses. **In the machines where is not possible change the water hardness the default hardness level is 3.** | | | |

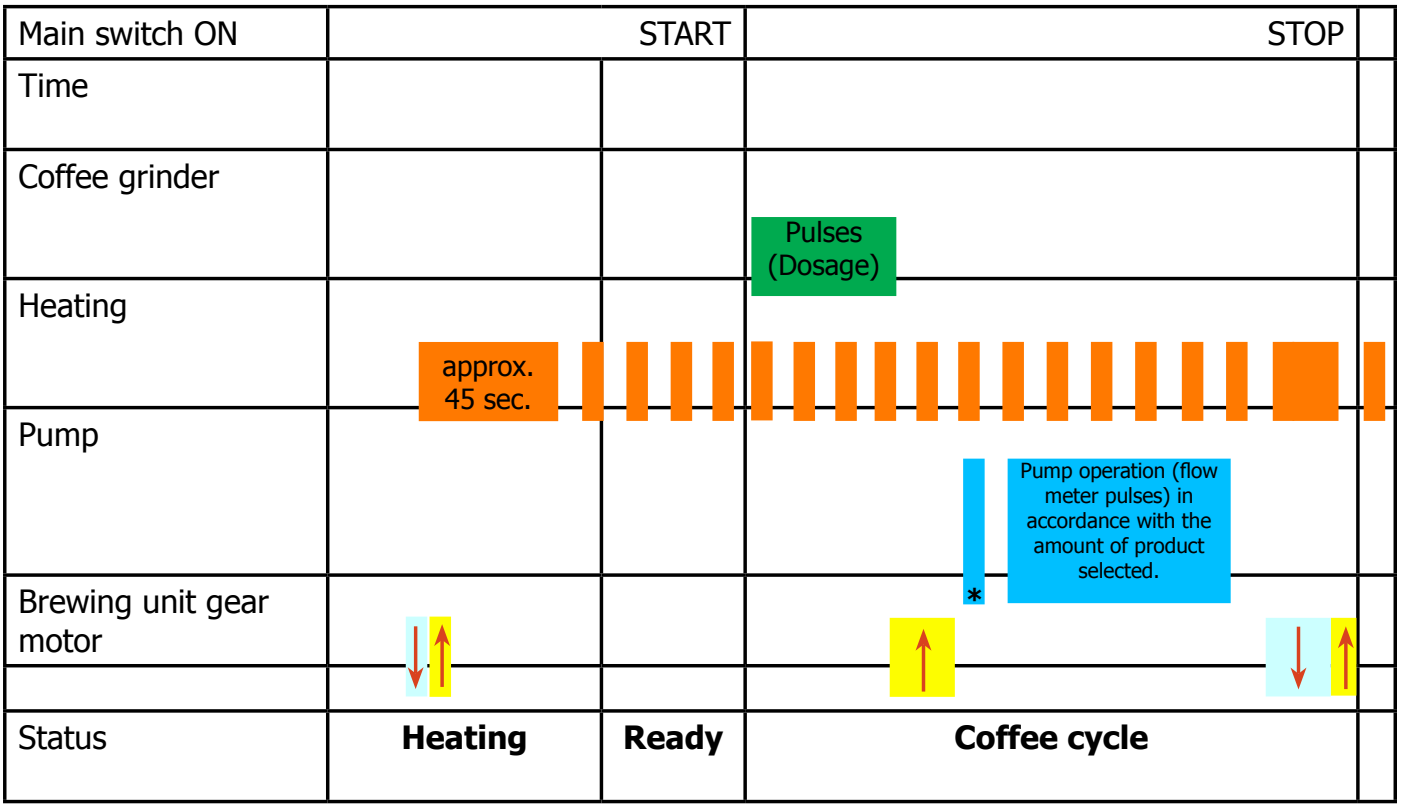
# CHAPTER 4

# OPERATING LOGIC

## 4.1. Water circuit



### 4.2. Coffee cycle




**Notes: * Only with Pre-brewing**


**Single microswitch gear motor**

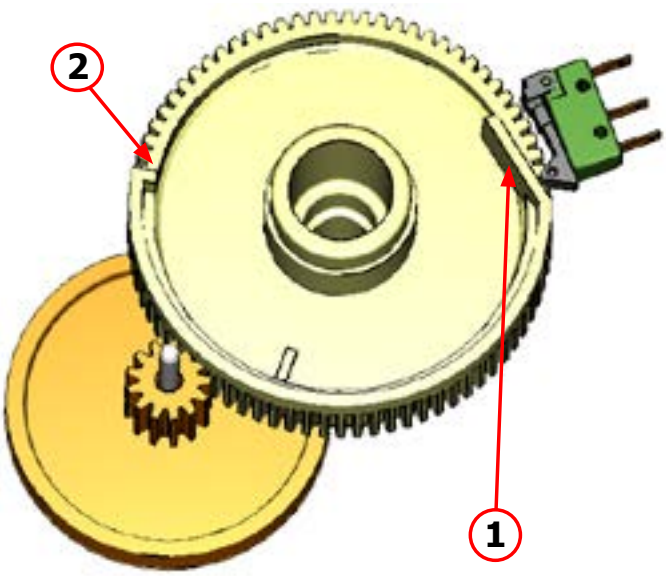
**Switching on**

When the machine is switched on, the gear motor repositions itself as follows:
- It acts on microswitch 1 (see following chapter).
- The gear motor changes its rotation direction and moves upwards again by approx. 1-2 mm.
- The boiler begins to heat the water for approx. 45 sec., at full power, in order to reach the optimal temperature. The temperature will then remain at a constant level.

**Coffee cycle**

1. The coffee grinder starts the grinding process (controlled by pulses generated by a sensor).
2. The gear motor (brewing unit) moves to the brewing position.
3. Preliminary dispensing phase (short pump activity, short pause).
4. Product dispensing (the pump operation period is defined by the amount of product dispensed).
5. The gear motor moves to its home position (the dregs are expelled automatically).

### 4.3. Single microswitch




The gear motor is powered by a direct current motor that engages with the smaller double toothed wheel using a worm screw. The unit is mounted on the axle of the large gear wheel and when a coffee is requested, it moves from the standby position to the dispensing position, and then back to the standby position again.

**- Standby position: 1**

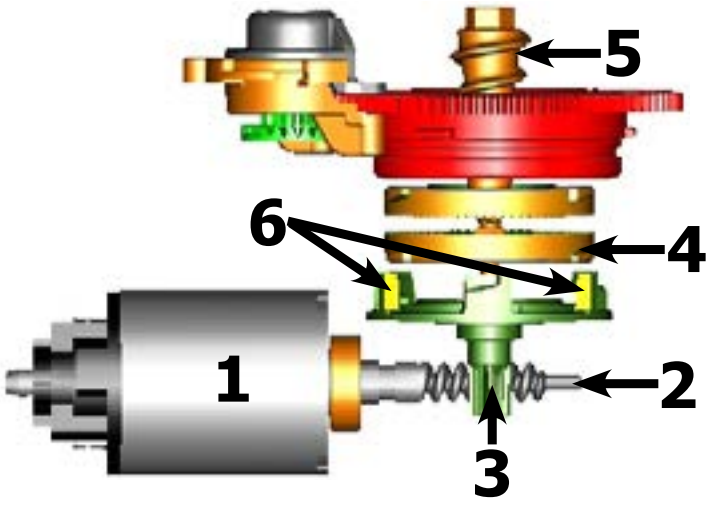
**- Dispensing position: 2**

### 4.4. Temperature sensor (adjustment)

An NTC is used as a temperature sensor; in the event of overheating this reduces boiler element power consumption.
The electronic system detects the current boiler temperature from the drop in voltage of the sensor and adjusts it accordingly.
Heating element values and corresponding temperatures: see table.

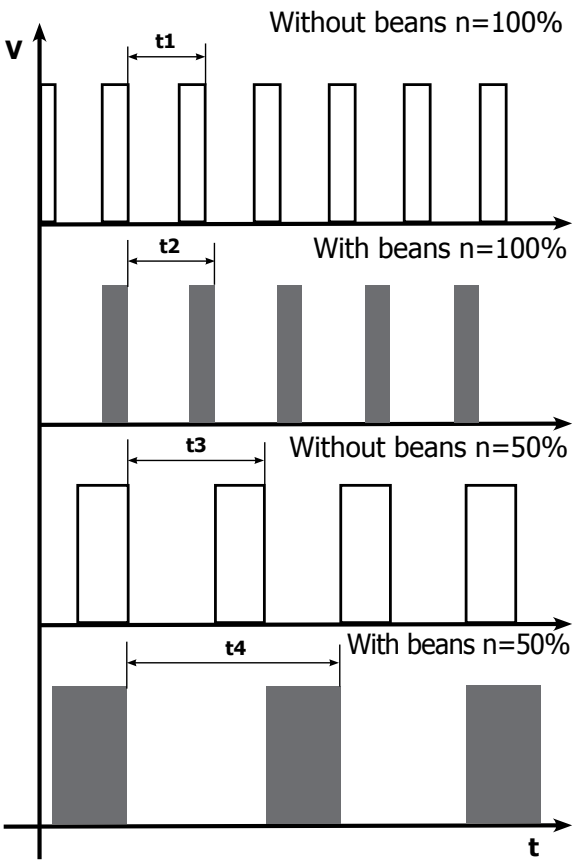
| Temp. (°C) | R nom (kΩ) | ΔR (+/- %) |
|---|---|---|
| 20 | 61.465 | 8.6 |
| 50 | 17.599 | 5.9 |
| 75 | 7.214 | 4.1 |
| 80 | 6.121 | 3.7 |
| 85 | 5.213 | 3.4 |
| 90 | 4.459 | 3.1 |
| 100 | 3.3 | 2.5 |
| 125 | 1.653 | 3.9 |
| 150 | 0.893 | 5.1 |

### 4.5. Coffee grinder




The coffee grinder is driven by a direct current motor (1) using a worm screw helicoidal wheel transmission (2).
The worm screw (2) drives a plastic gear wheel (3), which turns the lower grinder (4) and the increment pin (5)
There are two magnets (6) in the gear wheel; at every rotation these induce two pulses to a Hall sensor, which in turn transmits them to the electronic system.

### 4.6. Low bean level detection, dose quantity adjustment, coffee grinder blocked




**No coffee**
A low coffee bean level is detected by the Hall sensor, after variations in the pulse frequency (with or without coffee).
If there are no coffee beans (operation while empty), the number of rotations – and therefore the number of pulses – will be greater.
**t1 = no coffee indication**

If, however, there are coffee beans, the number of rotations will be lower due to the force created by the grinding.
**t2 = no indication**

**t3 and t4 =** this measurement is performed at the end of each grinding process

**Dose quantity adjustment**
The dose quantity is adjusted in accordance with the pulses detected (number of rotations proportional to the selected flavor – mild, medium or strong).

**Coffee grinder blockage**
If the coffee grinder becomes blocked for any reason, pulses will no longer be transmitted to the electronic system and the grinder will come to a stop.

### 4.7. Dose self-learning (SAS)

The aim of this function is to automatically regulate the average dose of ground coffee (SELF-LEARNING); this takes place with an algorithm based on the following values and setting by the user:

1. Number of coffee grinder pulses during the grinding cycle.
2. Max. average value of the power consumed by the gear motor during the coffee brewing cycle.
3. Aroma selected by the user.

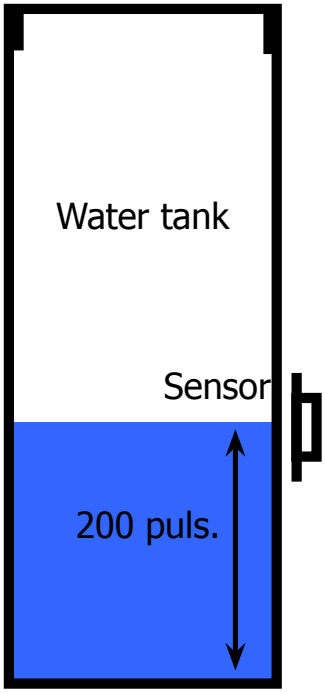
The algorithm compares the maximum average value of the power consumed by the gear motor with the value listed in the table for the selected aroma, in order to calculate the new grinding pulse value for the next coffee produced.
If the power consumption value is less than the minimum current value, the grinding pulses will be increased by 2.
If the power consumption value is greater than the maximum current value, the grinding pulses will be decreased by 4.
If the power consumption value falls within the "over-torque" interval, the product will be dispensed and the grinding pulses will be decreased by 10.
If the power consumption value falls within the "abort cycle" interval, the dreg will be expelled and the grinding pulses will be decreased by 10.
If the "pre-ground" flavour is selected by the user, no modification will be made.

**This guarantees that, regardless of the coffee type used, the grinding level setting and the wear on the grinders, the ground coffee dose always remains constant.**

| | | | | **DOSE ADJUSTMENT (NUMBER OF GRINDER IMPULSES) TO APPLY TO MED AROMA** | | | | |
|---|---|---|---|---|---|---|---|---|
| | | **3 levels** | **5 levels** | **+2** | **0** | **-4** | **-10** | **-10 and CYCLE ABORTED** |
| **Aroma of the grinded product** | **A** | Light | Very Light | MAX_CURRENT_mA <150mA | <=150mA MAX_CURRENT_mA <=250mA | MAX_CURRENT_mA >250mA | MAX_CURRENT_mA >800mA | MAX_CURRENT_mA >1000mA |
| | **B** | Med | Light | MAX_CURRENT_mA <250mA | <=250mA MAX_CURRENT_mA <=350mA | MAX_CURRENT_mA >350mA | MAX_CURRENT_mA >800mA | MAX_CURRENT_mA >1000mA |
| | | | Med | | | | | |
| | **C** | Strong | Strong | MAX_CURRENT_mA <350mA | <=350mA MAX_CURRENT_mA <=500mA | MAX_CURRENT_mA >500mA | MAX_CURRENT_mA >800mA | MAX_CURRENT_mA >1000mA |
| | | | Very Strong | | | | | |

**Important:**
For perfect operation, machine adjustment should take place in the area of the fields highlighted in green (A, B, C). When the type or brand of coffee is changed, there may be variations in the size of the beans and their stickiness or roasting level. This leads to variations in power consumption (mA), with resulting excessive or insufficient doses (until the necessary adjustments have been made to compensate for this change).
**Caution: In the case of excessive dosage, powder may be expelled into the dreg drawer. This is not a fault, but can occur during preliminary operation or after a service.**

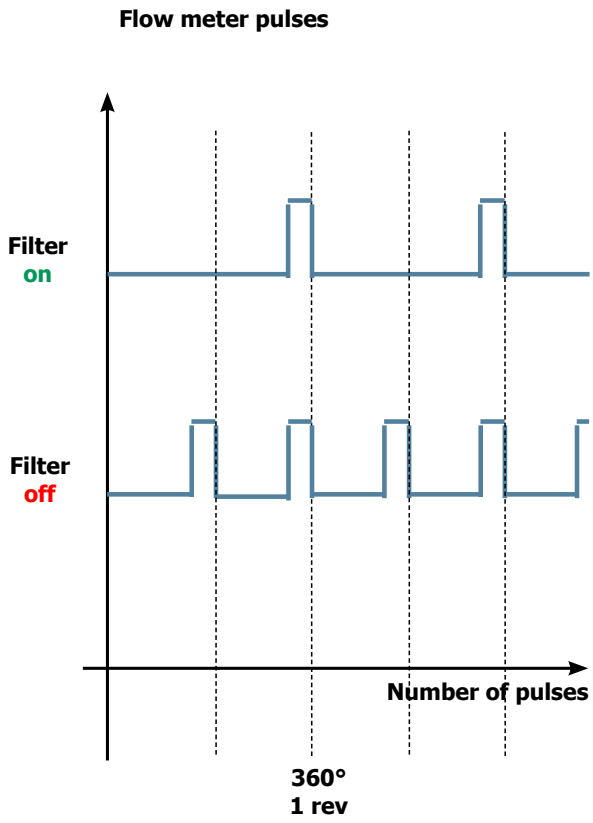
## 4.8. Water level detection (water tank)




**"Water low" message (water reserve)**

**Function:**
The water level is monitored by a capacitative sensor, located one third of the way up the water tank wall.
If the electronics assembly detects, by means of the sensor, that the amount of water in the tank has dropped below the above mentioned level, a water reserve remains available for the dispensing process underway (this will cover 200 flow meter pulses).
The product dispensing process will then come to an end.
If a dispensing cycle ends after the sensor has been triggered (in the reserve) then the display "Water low" continues to be displayed during the following dispensing cycle.

## 4.9. Descaling request




**"Descaling" – message with water filter inserted**
(appliances with display only)

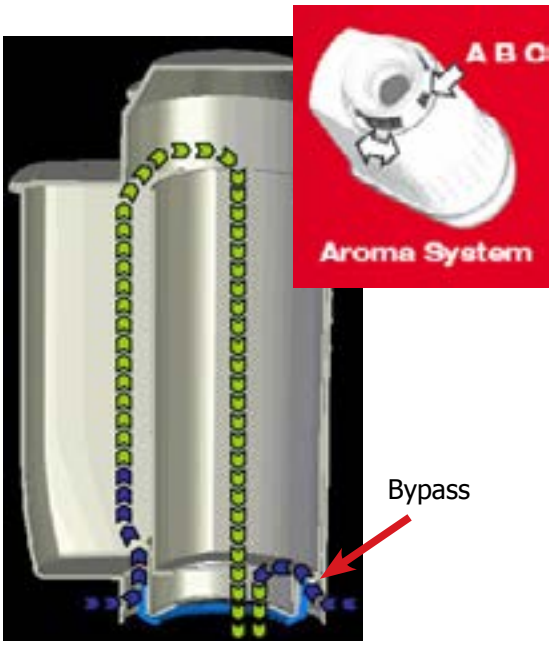
The water hardness is set on the basis of the regional water hardness analysis
(1, 2, 3, 4).

**Filter off:**
If the function is turned off the electronics assembly monitors the flow meter pulses, recording one pulse each turn.

**Filter on:**
If the function is turned on the electronics assembly monitors the flow meter pulses, recording one pulse every two turns.

**"Change water filter" message**
The electronics assembly uses the flow meter impulses to keep track of the amount of water which has flowed through; after the specified amount (set in accordance with the water hardness level), the "Replace filter" message appears.

## 4.10. Water filter




**Water filter**

**Function:**

- Reduced limescale deposits which take longer to form.
- Improved water quality.
- Improved taste due to the ideal water hardness.

**Life span / descaling performance:**

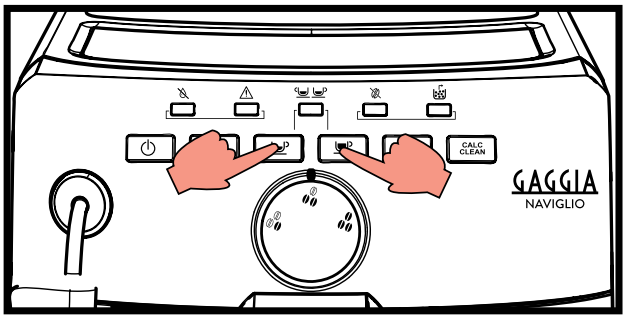
- - 10 ° dH
- 60 litres
- 2 months

To achieve the best possible operating mode consistency over the total life span, the water is channelled using a 3-stage bypass (A, B, C) depending on the degree of hardness. See small image.

# CHAPTER 5

# SERVICE MODE

## 5.1. Test Mode




**To enter Test Mode**
The machine enters in test mode by pushing the ESPRESSO and COFFEE buttons and then turning ON the AC power.
As long as the buttons are pressed the machine shows LED Double Service flashing.
When the buttons are released the machine passes to the first level of the test.
There are 6 different level, in each level the coffee-machine can execute different commands

**Level 0:** The machine tests the LED:
a)Turn ON every LED
b)Turn OFF every LED
c)Sequence turn ON every LED

**Level 1:** The machine tests the buttons:
a)Button Hot Water
b)Button Espresso
c)Button Coffee
d)Button Steam
e)Button Descaling

**Level 2:** The machine tests the other input signals:
a)Capacitive sensor in water tank
b)Switch door close / open
c)Switch brewing unit presence
d)Switch dump box presence

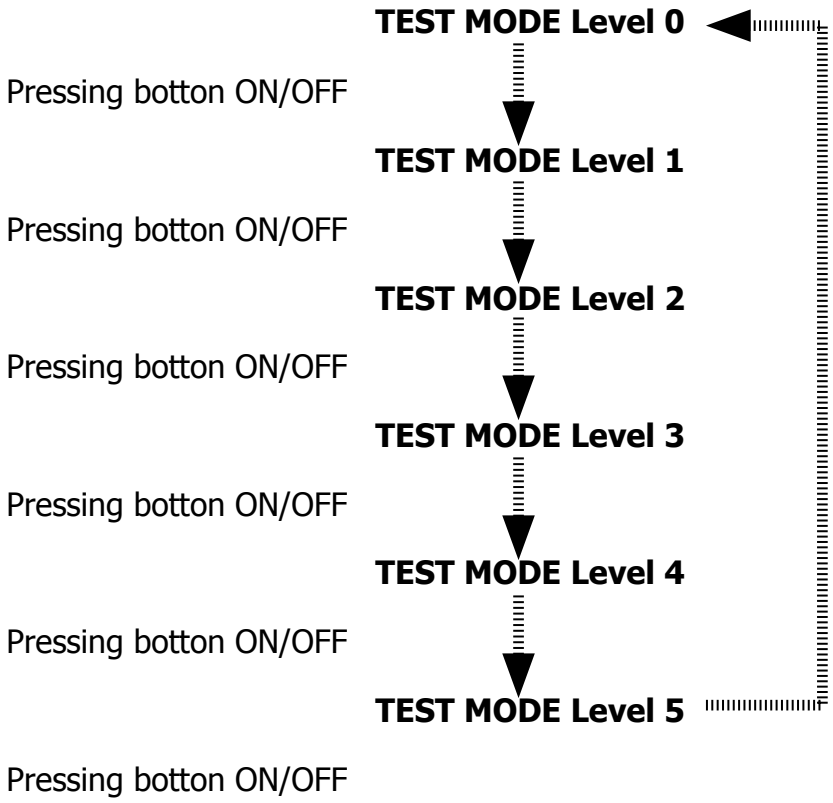
**Level 3:** The machine tests the aroma trimmer:
a)Aroma position 1 bean
b)Aroma position 2 beans
c)Aroma position 3 beans

**Level 4:** The machine tests the water circuit:
a)EV
b)Pump (plus flux meter)
c)Brewing unit moves to work
d)Brewing unit moves to home

**Level 5:** The machine tests the coffee powder circuit:
a)Heater (plus NTC sensor)
b)Grinder (plus rotation pick up)

The user can switch the level by pressing the ON/OFF button, the machine shows the level of the test:

a) Level 1: LED No Water
b) Level 2: LED No Water, LED Error
c) Level 3: LED No Water, LED Error, LED Double
d) Level 4: LED No Water, LED Error, LED Double, LED No Coffee
e) Level 5: LED No Water, LED Error, LED Double, LED No Coffee, Coffee grounds drawer



**Level 0 (LED)**

**Description :**
Verify keyboard LED
**Action :**
LED ON/OFF always blink during the test.
The others LED blink once, then only one LED is ON starting from No Water, Error, Double, No Beans, Dump Box, Calc Clean, Steam, Coffee, Espresso, Hot Water.
The sequence is always repeated.
**Note**

| LED | COLOR |
|---|---|
| No Water | RED |
| Warning | RED |
| Double Coffee | GREEN |
| No Coffee | RED |
| Coffee grounds drawer | RED |
| Descaling | YELLOW |
| Steam | GREEN |
| Coffee | GREEN |
| Espresso | GREEN |
| Hot Water | GREEN |
| ON/OFF | RED |

Pressing ON/OFF button moves to next level

**On ERROR verify:**
Cable connection
Power supply
Driver 74HC595 presence and welding
Driver 74HC595 orientation
LED presence and welding
LED orientation
Polarization resistor presence and welding

**Level 1 (Buttons) [LED No Water ON]**

**Description:**
Verify the keyboard buttons (each button has a rear LED)
**Action:**
Pressing the button where the rear LED is ON changes the LED OFF, follow the moving LED
If you are not able to turn the LED OFF detects an error condition over the button switch
**Start condition**
All LED are OFF

Pressing ON/OFF button moves to next level

**On ERROR verify:**
Cable connection
Power supply
Push button presence and welding

**Level 2 (switch) [LED No Water + Error ON]**
**Description:**
Verify the security switch connection

**Action:**
Mechanical move the switch and verify the relative electrical feedback
**Start condition** (no water tank, no BU, no dump box, door open)
All LED are blinking (because every switch is OFF)
Closing every switch turns ON the LED

| Switch | LED |
|---|---|
| Water presence | hot water |
| BU presence | espresso |
| Door open | coffee |
| Dump box | steam |

Press ON/OFF button moves to next level

**On ERROR verify:**
Cable connection
Power supply

**Level 3 (Alarm imput) [LED No Water + Error + Double ON]**
**Description:**
Verify the alarm imput connections:
Rotate aroma trimmer, 3 position 3 LED
**Start condition none**

| Aroma | LED |
|---|---|
| 1 bean | hot water |
| 2 beans | hot water + espresso |
| 3 beans | hot water + espresso + coffee |

Press ON/OFF button moves to next level

**On ERROR verify:**
Cable connection Power supply

**Level 4 (Water Circuit) [LED No Water + Error + Double + No Beans ON]**
**Description:**
Verify the water circuit component: flux meter, pump, electro valve, brewing unit
**Action:**
Turn on and off actuators along water and coffee beverage circuit.

**Start condition (water tank full, BU, dump box, door closed)**

| LED | ON/OFF | Hot water | Espresso | Coffee | Steam | Descaling |
|---|---|---|---|---|---|---|
| OK | OFF | OFF | OFF | OFF | OFF | OFF |

**Press one time Hot Water button to open electro valve**

| LED | ON/OFF | Hot water | Espresso | Coffee | Steam | Descaling |
|---|---|---|---|---|---|---|
| OK | | ON | | | | |

**Press Epresso button to turn on pump**

| LED | ON/OFF | Hot water | Espresso | Coffee | Steam | Descaling |
|---|---|---|---|---|---|---|
| During the test | | | BLINK | | | OFF |
| OK | | | ON | | | OFF |
| ERROR (no flux meter feedback) | | | ON | | | ON |

**Press one time Hot Water button to close electro valve**

| LED | ON/OFF | Hot water | Espresso | Coffee | Steam | Descaling |
|---|---|---|---|---|---|---|
| OK | | OFF | | | | |

**Move BU to work position. Press Coffee button to move BU to work position**

| LED | ON/OFF | Hot water | Espresso | Coffee | Steam | Descaling |
|---|---|---|---|---|---|---|
| During the test | | | | BLINK | | OFF |
| OK | | | | ON | | OFF |
| Work position not reached | | | | ON | | ON |
| Overcurrent (with or without BU) | | | | ON | | BLINK |

**Move BU to home position. Press Steam button to move BU to home position**

| LED | ON/OFF | Hot water | Espresso | Coffee | Steam | Descaling |
|---|---|---|---|---|---|---|
| During test | | | | | BLINK | OFF |
| OK | | | | | ON | OFF |
| Home position not reached | | | | | ON | ON |
| Overcurrent (with or without BU) | | | | | ON | BLINK |

**Move BU to rest position. Press Calc Clean button to move BU to rest position**

| LED | ON/OFF | Hot water | Espresso | Coffee | Steam | Descaling |
|---|---|---|---|---|---|---|
| OK | | | | BLINK | BLINK | |

Press ON/OFF button moves to next level
**On ERROR verify:**
Cable connection
Power supply

**Level 5 (Grinder & Heater)**
**[LED No Water + Error + Double + No Beans + Dump Box ON]**
**Description:**
Verify temperature increase in the heater and grinder rotation
**Action:**
Turn on and off actuators

**Start condition (water tank full, BU, dump box, door close)**

| LED | ON/OFF | Hot water | Espresso | Coffee | Steam | Descaling |
|---|---|---|---|---|---|---|
| OK | OFF | OFF | OFF | OFF | OFF | OFF |

**Press once Hot Water button to check heater NTC sensor**

| LED | ON/OFF | Hot water | Espresso | Coffee | Steam | Descaling |
|---|---|---|---|---|---|---|
| During the test | | BLINK | | | | OFF |
| OK | | ON | | | | OFF |
| ERROR NTC open or short circuit | | ON | | | | ON |

**Press Espresso button to check heater power on (you need current sense / measure)**

| LED | ON/OFF | Hot water | Espresso | Coffee | Steam | Descaling |
|---|---|---|---|---|---|---|
| OK CURRENT SENSE > 1 A | | | ON | | | OFF |
| Heater already hot | | | | | | BLINK |
| ERROR CURRENT SENSE > 1 A | | | ON | | | OFF |

**Press Coffee button to check grinder rotation**

| LED | ON/OFF | Hot water | Espresso | Coffee | Steam | Descaling |
|---|---|---|---|---|---|---|
| During the test | | | | BLINK | | OFF |
| OK | | | | ON | | OFF |
| No grinder rotation | | | | ON | | ON |

Press ON/OFF button moves to next level (level 0)
**On ERROR verify:**
Cable connection Power supply

### 5.2. SteamOut

**Introduction**
This document describes the Steam Out procedure. This application is used in order to empty the heater.

**1 Steam Out**
The machine enters SteamOut mode by holding pressed together the buttons showed in the document
"Special Mode Combinazione tasti.doc" while switching on the machine.
During steam out the STEAM LED is fast blinking, at the end the STEAM LED is slow blinking
When the Steam-Out is complete the following parameters are reset to their default values:
· Coffee Grounds Counter
· Length Espresso product
· Length Coffee product
· Filter Presence
· Filter Pulses
· Aroma Impulses
· History of grindings for Beans Presence detection
· The request for Priming the Circuit at the first switch on is set.

### 5.3. Error codes

| ERROR CODES | DESCRIPTION |
|---|---|
| **01** | The coffee grinder is blocked (grinder blades jammed or sensor not reading properly) |
| **03** | The brewing unit is blocked in work position (microswitch not released in up position after 3", torque error trying to move down, descent time out exceeded) |
| **04** | The brewing unit is blocked in home position (microswitch not released in down position after 3", torque error trying to move up, ascent time out exceeded) |
| **05** | Water circuit / flow meter problems (water circuit blocked or no flow meter signal) |
| **10** | Boiler temperature sensor short circuited |
| **11** | Boiler temperature sensor open circuit |
| **14** | The boiler temperature has exceeded the maximum allowed value (165°c) |
| **15** | The boiler temperature has not increased by x°C in y sec (boiler power supply disconnected, incorrect boiler fitted must be a 1300W boiler, partial power supply to boiler, cut out thermostat tripped) |
| **19** | Mains voltage trouble |

### 5.4. Saeco Service Center - Quick Start Guide

Saeco Service Center (SSC) is a tool with which you can re-program the machine and check the diagnostic of the same.
You can download the software from the following link: http://logsave.logtronics.com/SSC2/publish.htm
In support of this tool it is essential to order the Saeco Programming Device:
Cod. 20000490 "KIT PROGRAMMER SERKIT SSC2".
This kit includes the programmer and cables helpful.
All details related to the registration and operation are explained in the enclosed Quick start guide (QSG).

**Saeco Service Center – Quick Start Guide**

Press the icon to view the document
To open the attached document is necessary to save the service manual on your PC.

# CHAPTER 6

# SERVICE AND MAINTENANCE

## 6.1. Repair Flow

| Proces stap | Saeco no. | Action |
|---|---|---|
| Intake | 1 | Visual inspection (transport damage) take care for pictures |
| | 2 | Check Type/serialnumber |
| | | Log all available accessory |
| Diagnosis | 3 | Check product for consumer complaint (NFF contact consumer) |
| | 4 | Opening machine |
| | | Run Diagnostic to get error codes and relevant set statistics (Saeco Service Center SSC) |
| | 5 | Visual inspection check for loosen parts, leaking etc.. |
| | 6 | Operational tests |
| Repair | 7 | Repairing the faults encountered |
| | | Checking any modifications (view Symptom Cure, new software, etc.) |
| | 8 | Refer Annex tabs per family |
| | 9 | *Service activities in accordance with the operating schedule* |
| | | *Check/Replace Waterfilter (the small filter, not the Britta filter)* |
| | | *Check/Replace Water tank lip seal* |
| | | *Check/Replace Boiler pin O-ring* |
| | | *Clean/align Coffee grinder (Vacuum cleaner / brush)* |
| | | *Descale the water Circuit* |
| | | *Check/Replace Hot water/steam valve* |
| | 10 | *Internal check / cleaning* |
| | | *Check/Clean/Grease Brewing unit* |
| | 11 | Operational test while the appliance is open |
| | | Check Hoses, attachments and Oetiker clamps |
| | | Check Pump for operation & noise |
| | | Check Gear motor for operation & noise |
| | | Check for leakage |
| | 12 | Assembly |
| | 13 | Final inspection test |
| | 14 | Steam out before shipping out, if temperature is below 0° to prevent any demaged due to frozen water.<br>No need for those families Minuto family (all platform); Incanto family new; Pico Baristo; Gran Baristo; Intelia V2; Philips 2000-2100; Incanto Executive; Moltio family (all platform). Please also check for GDA_113455 |
| | 15 | Provide precise IRIS code, according dedicated code table for Coffee products. The location code from the part you have worked on MUST be completed always with the part reference from exploded view ! |
| Inspection | | |
| visual | | Do cabinet parts fit well together |
| | | Check for damages |
| Power check | | Will the set switch on |
| Accesoires | | Do the accessories match with the intake |
| Consumer complaint | | Check the product for the consumer complaint |
| Coffee | | Basic Functional test |
| Dispense | | Make 2 * coffee. Are both amounts equal |
| | | Make e 2 cups at the same time. Are the volumes equal |
| Noise | | Is the sound normal |
| Crema | | Blow on the coffee. Does the crema come back together |
| | | Is the crema colour correct (Hazelnut) |
| Temperature | | Is the coffee temperature within spec |
| Grinder | | Is the grinder noise normal |
| Steam | | |
| Steam | | Does the steam work |
| Hot Water | | Does the hot water work |
| Milk | | (if applicable) |
| Cappuchino | | Does the cappuccinatore produce good froth |

| | | |
|---|---|---|
| Leakage | | |
| Leakage | 14 | Did the product leak during the testing |
| | 15 | Draining the circuit (in winter) |
| Cleaning | 16 | Clean water reservoir, bean reservoir, brew chamber and conveyor |
| | | Clean and dry brew unit, coffee bin and drip tray. |
| | | Lubricating the brewing unit with suitable grease |
| | | External cleaning |
| Safety check | | |
| | | Earth leakage, Isolation test, resistor of earth wire grounding, as requested in certain country's (VDE, ISO) |
| visueel | | Check the mains cord for damages |
| Packing | | |
| | 18 | Packing |
| | | Check completeness (accessories) according income log |
| | 19 | Neatly pack the product |
| Documentation | | NFF letter |
| | | Descaling instruction with changed procedure (S/C) |
| | | Other instructions according S/C |
| Repair report | | Is there an answer to ALL consumer questions/complaints (see complaint)<br>add set statistic and give, if needed clear instruction towards consumer<br>Is it indicated which documents are added<br>Are there tips how to prevent issues |

# CHAPTER 7

# DISASSEMBLY

## 7.1. Outer Shell

Remove the water tank, coffee container cover, drip tray, dreg drawer, brewing unit, pannarello

Unscrew the screws shown and remove the finger protection.

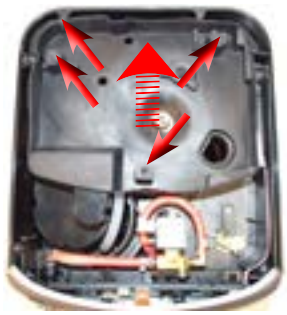
Lift the top cover.

Unscrew the screws shown and slide out the left side body.

Slide out the hatch.

Loosen the screws as illustrated, slide out the rear body and the sound insulating cover of the coffee grinder.

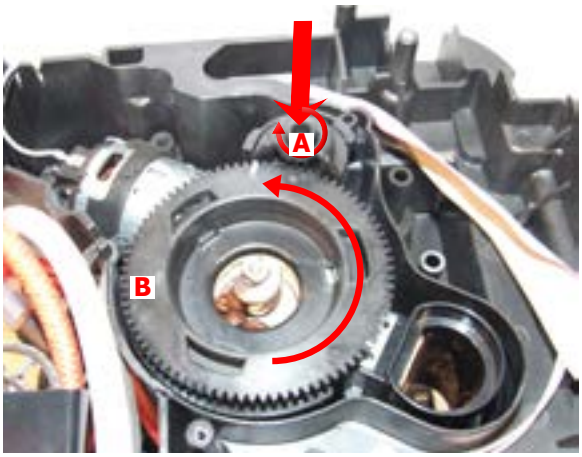
## 7.2. Coffee grinder



Loosen the screws as illustrated and remove the sound insulating cover. Raise the coffee grinder and remove the connections.

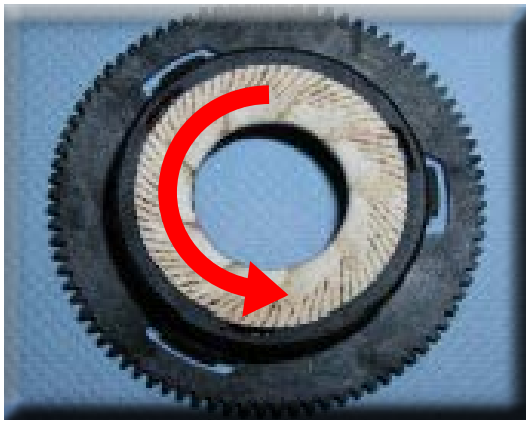
When reassembling the coffee grinder, make sure the spring is repositioned correctly (see photo).

### 7.3. Grinder blades

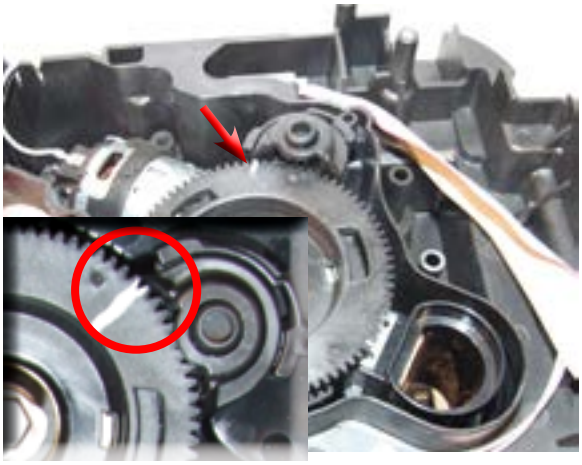



To extract the top support of the appliance, press on the grinding adjustment spindle (A) and turn the support anticlockwise until it unhooks.

Turn the grinder blades anticlockwise out of the support.



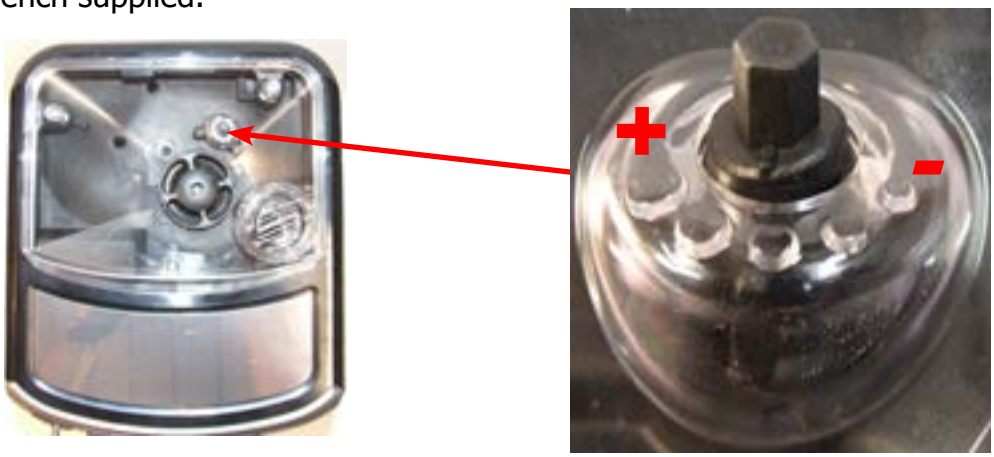
Turn the grinder blades clockwise out of the support. The bayonet connections can be accessed from the rear.



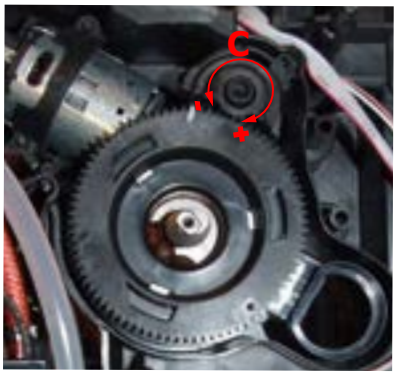
For a standard adjustment, both markings must be aligned.

### 7.4. Coffee grinder adjustment

The grinding adjustment can be set by the user (only with the coffee grinder in operation) by pressing and turning (only by one click at a time) the insert inside the coffee bean hopper with the aid of the wrench supplied.




## Adjustment by a service center

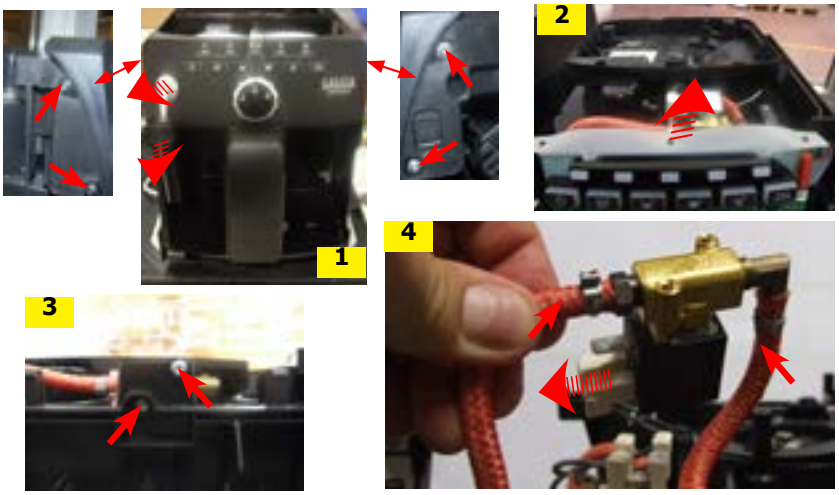



To adjust grinding further, the engineer can work directly on the coffee grinder by pressing and turning the ring nut (C) shown. (clockwise + to increase the particle size of the coffee and anticlockwise - to decrease it).

If there are any remains of coffee powder between the two grinding blades it is recommended to tighten by max. two marks at a time.

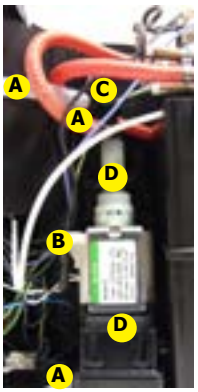
Lastly, move the arrow (A) on the adjustment knob to the center of the adjustment dots on the cover (B).

### 7.5. Two-way solenoid valve




1) Remove the Pannarello and the hole cover, loosen the screws highlighted.
2) Remove the card support assembly.
3) Loosen the screws holding the solenoid valve to the upper plate.
4) Disconnect all electrical and water circuit connections.

### 7.6. Pump




Disconnect the water circuit connections (A) and electrical connections (B), loosen the safety valve (C) and slide the pump off the brackets (D).

### 7.7. Flow-meter

Lift the flow meter out of the casing assembly and remove the electrical and water circuit connections.

### 7.8. Power board

Loosen the screws as illustrated, slide out the electrical connection and remove the card guard.

Slide the card off the support and disconnect the electrical connections.

### 7.9. Water sensor control board

Slide the card off the support.

Slide out the pipe connecting the flow meter to the pump.

Loosen the screw as illustrated and remove the capacitive sensor glued to the seat.

## 7.10. Gear motor

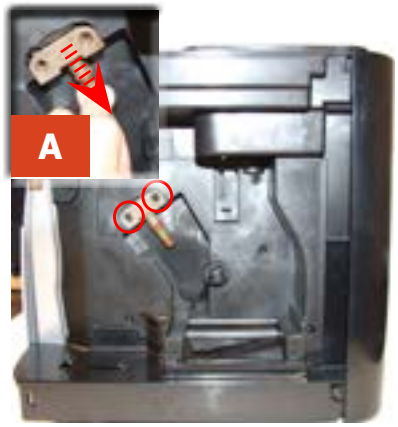
Unscrew the screws shown and remove the finger protection.

Lift the top cover.

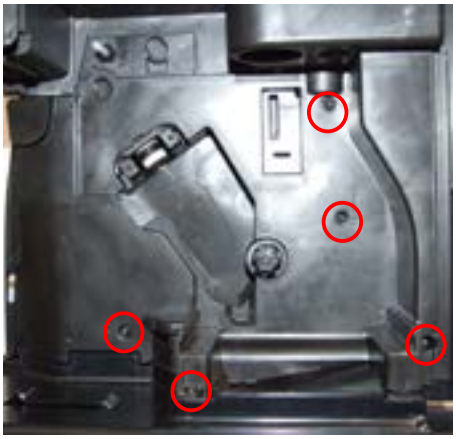
Unscrew the screws shown and slide out the left side body.

Unscrew the screws as illustrated and remove the front panel to access the screws which fix the dispenser cover into place.

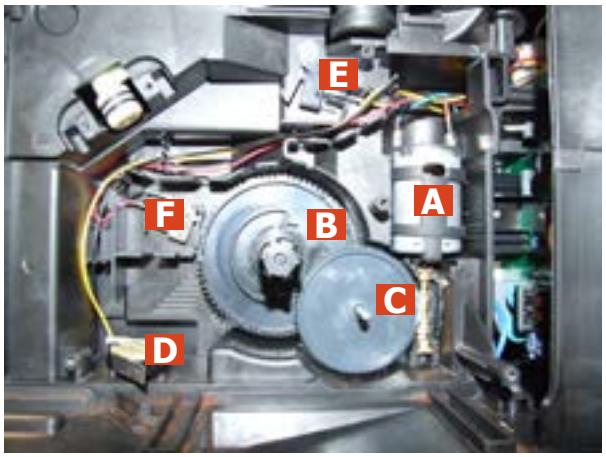
Slide out the fork as illustrated.



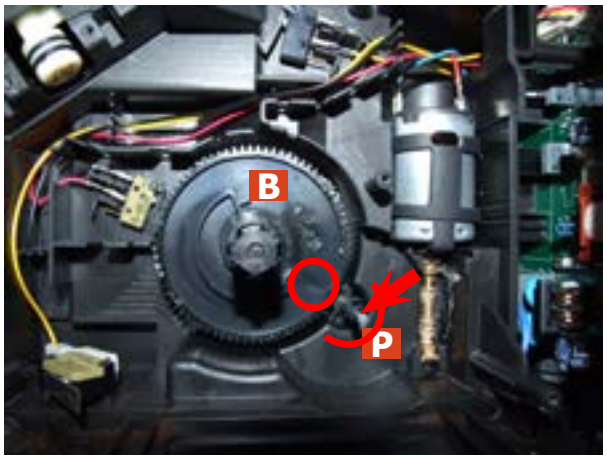

Loosen the screws as illustrated and remove the boiler pin (A).



Loosen the screws as illustrated and remove the gear motor cover.



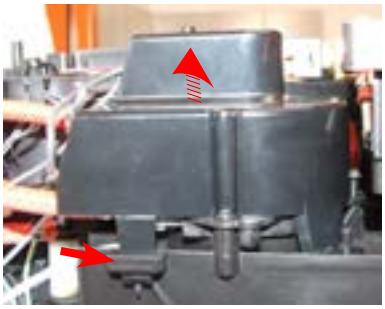

The following are located inside the compartment protected by the casing:
- Electric motor (A) with gears (B) and (C) for transmission and timing of the dispenser.
- Dreg drawer presence sensor (D).
- Brewing unit present microswitch (E).
- Microswitch (F) detecting brewing unit home and work positions.
- Remove the gear (C) that meshes with the motor transmission shaft.
- Remove the large gear (B).
- Remove the motor (A), complete with transmission shaft.




Replace the gear (B), making sure that the imprint of the arrow is aligned with the opening containing the pin (P).


When replacing the motor and the transmission shaft, make sure the guide runners (L) are in the right position.
Grease the shaft thoroughly and evenly.

### 7.11. Boiler



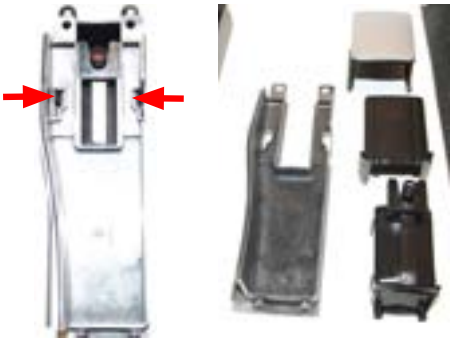
Release the boiler cover and take it off.

Unscrew the marked screw and disconnect the electrical and water circuit connections.

### 7.12. Dispenser assembly

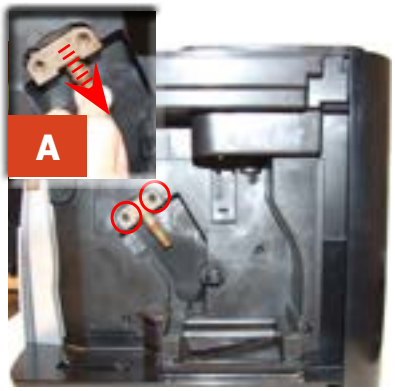
Unscrew the screws as illustrated and remove the front panel to access the screws which fix the dispenser cover into place.

Slide out the fork as illustrated.



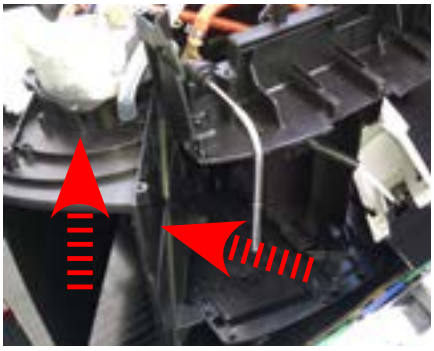
Press the hooks as illustrated and slide out the dispenser assembly.

### 7.13. Valve disassembly

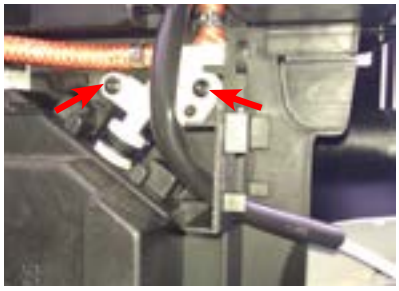



Loosen the screws as illustrated and remove the boiler pin (A)

Unscrew the screws as illustrated and remove the front panel to access the screws which fix the dispenser cover into place.



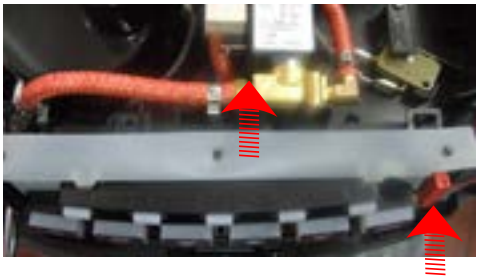
Loosen the screws as illustrated and release the insert in the bottom of the body to obtain easy access for valve disassembly



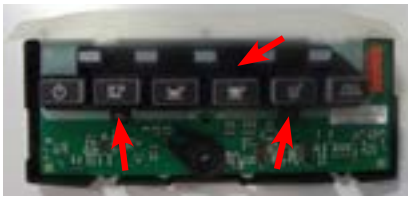
Loosen the screws as illustrated, remove the hydraulic connections and take out the valve

### 7.14. Control board and display

Loosen the screws as illustrated and remove the front panel.

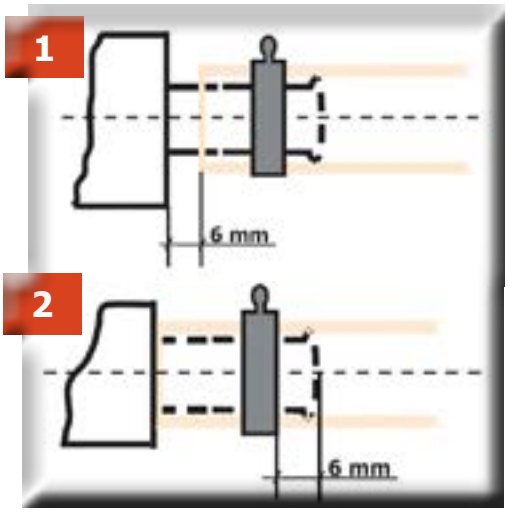


Disconnect the electrical connections and unhook the card support.



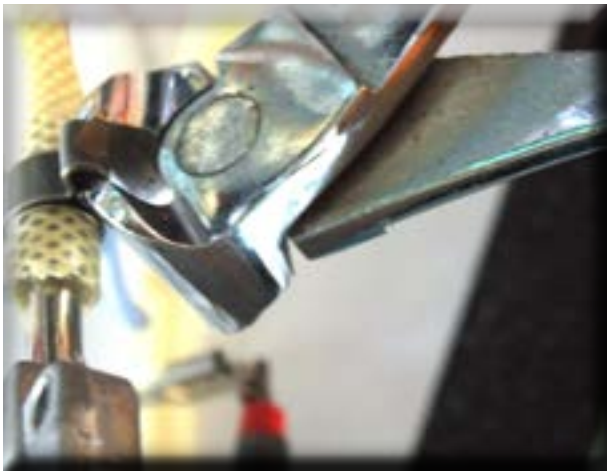
Loosen the screws as illustrated.

## 7.15. Fitting and removing Oetiker clamps




1) Boiler connection.

2) Other connections.



Use a suitable pair of pliers to remove the clamp (as illustrated).

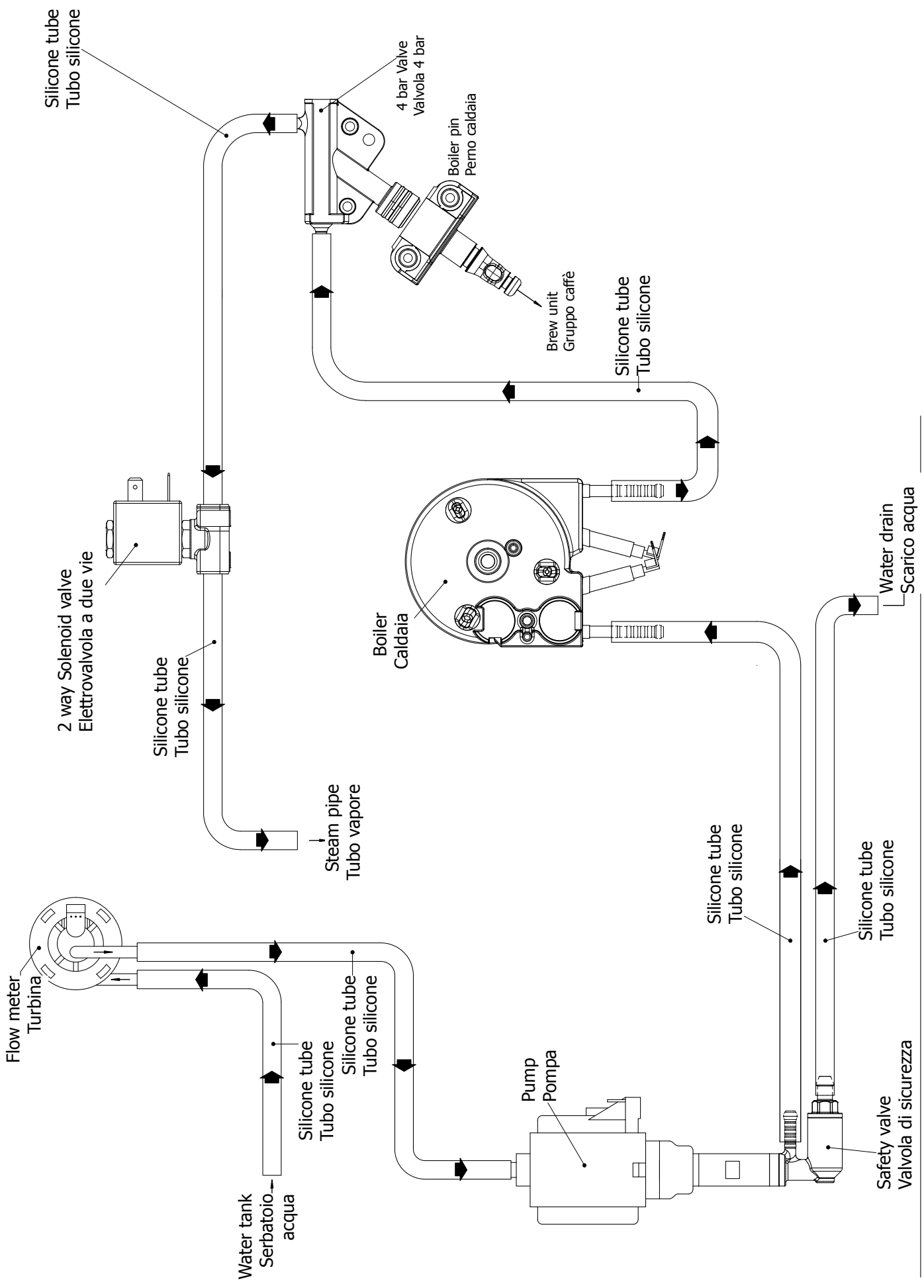
Tighten the clamp as illustrated.

# CHAPTER 8

# NOTES

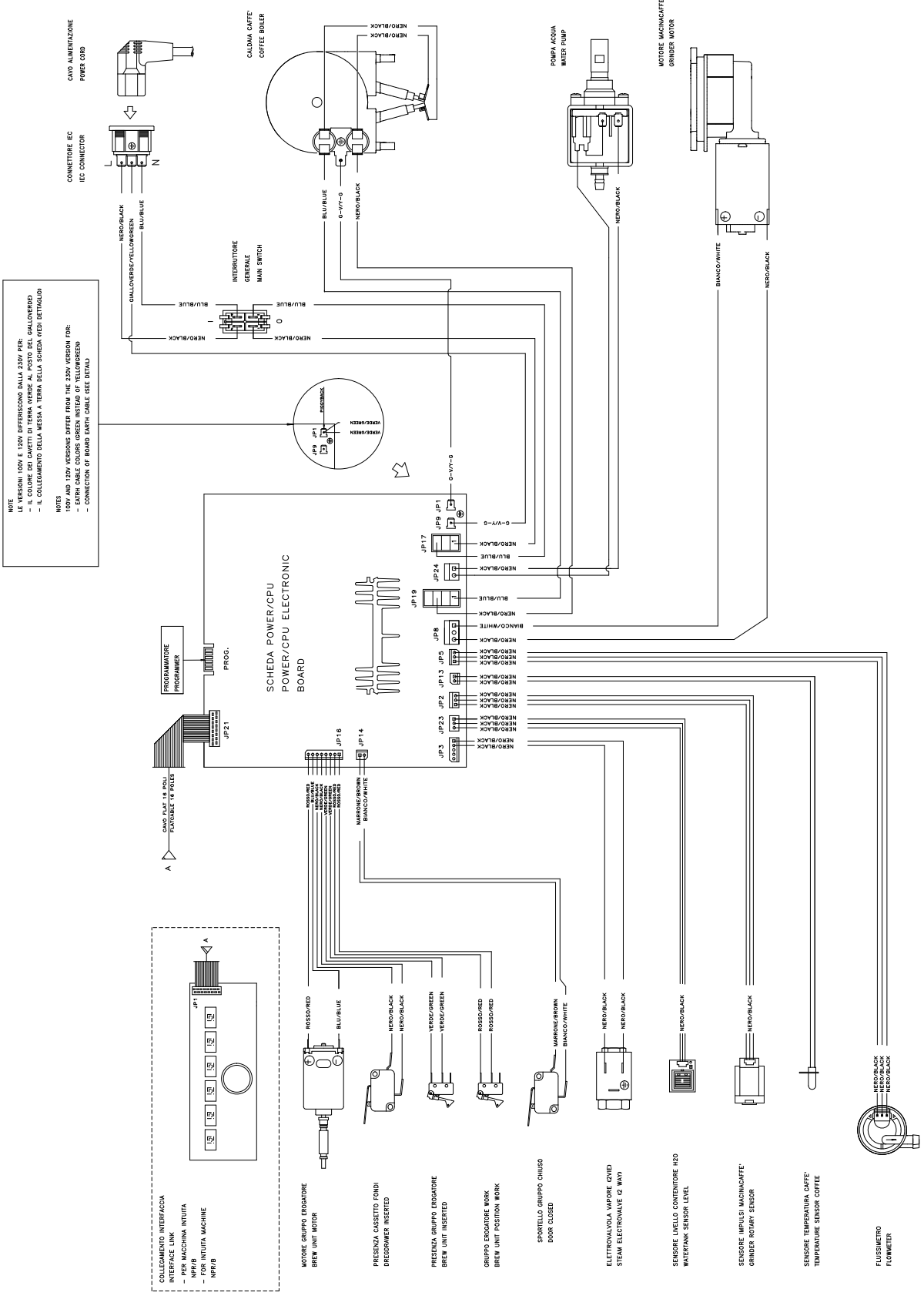
# CHAPTER 9

# WATER CIRCUIT DIAGRAM


Silicone tube
Tubo silicone
4 bar Valve
Valvola 4 bar
Boiler pin
Perno caldaia
Brew unit
Gruppo caffè
Silicone tube
Tubo silicone
2 way Solenoid valve
Elettrovalvola a due vie
Silicone tube
Tubo silicone
Boiler
Caldaia
Water drain
Scarico acqua
Steam pipe
Tubo vapore
Silicone tube
Tubo silicone
Silicone tube
Tubo silicone
Flow meter
Turbina
Silicone tube
Tubo silicone
Silicone tube
Tubo silicone
Pump
Pompa
Water tank
Serbatoio
acqua
Safety valve
Valvola di sicurezza

# CHAPTER 10

# ELECTRICAL DIAGRAM


NOTE
LE VERSIONI 100V E 120V DIFFERISCONO DALLA 230V PER:
– IL COLORE DEI CAVETTI DI TERRA (VERDE AL POSTO DEL GIALLOVERDE)
– IL COLLEGAMENTO DELLA MESSA A TERRA DELLA SCHEDA (VEDI DETTAGLIO)
NOTES
100V AND 120V VERSIONS DIFFER FROM THE 230V VERSION FOR:
– EXTRA CABLE COLORS (GREEN INSTEAD OF YELLOWGREEN)
– CONNECTION OF BOARD EARTH CABLE (SEE DETAIL)
CONNETTORE IEC
IEC CONNECTOR
CAVO ALIMENTAZIONE
POWER CORD
L
N
NERO/BLACK
GIALLOVERDE/YELLOWGREEN
BLU/BLUE
INTERRUTTORE GENERALE
MAIN SWITCH
CALDAIA CAFFE'
COFFEE BOILER
POMPA ACQUA
WATER PUMP
MOTORE MACINACAFFE'
GRINDER MOTOR
BIANCO/WHITE
SCHEDA POWER/CPU
POWER/CPU ELECTRONIC BOARD
PROGRAMMATORE
PROGRAMMER
PROG.
JP21
JP16
JP14
CAVO FLAT 16 POLI
FLATCABLE 16 POLES
MARRONE/BROWN
BIANCO/WHITE
ROSSO/RED
VERDE/GREEN
COLLEGAMENTO INTERFACCIA
INTERFACE LINK
– PER MACCHINA INTUITA
NPR/B
– FOR INTUITA MACHINE
NPR/B
MOTORE GRUPPO EROGATORE
BREW UNIT MOTOR
PRESENZA CASSETTO FONDI
DREGSDRAWER INSERTED
PRESENZA GRUPPO EROGATORE
BREW UNIT INSERTED
GRUPPO EROGATORE WORK
BREW UNIT POSITION WORK
SPORTELLO GRUPPO CHIUSO
DOOR CLOSED
ELETTROVALVOLA VAPORE (2VIE)
STEAM ELECTROVALVE (2 WAY)
SENSORE LIVELLO CONTENITORE H2O
WATERTANK SENSOR LEVEL
SENSORE IMPULSI MACINACAFFE'
GRINDER ROTARY SENSOR
SENSORE TEMPERATURA CAFFE'
TEMPERATURE SENSOR COFFEE
FLUSSIMETRO
FLOWMETER