Service Manual : Gaggia Classic 2019 and Classic Evo Pro

Rev.04 25/09/2023

Gaggia Classic 2019				Gaggia Classic Evo Pro			
TYPE	SIN	12NC	DESCRIPTION	TYPE	SIN	12NC	DESCRIPTION
RI9480/11	SIN035UR	886948011010	GAG.NEW CLASSIC SB SS 230V EU	RI9481/11	SIN035UR	886948111010	RI9481/11 GAG.ESPR.CLASSIC EVO INOX (SCH)
RI9480/12	SIN035UR	886948012010	RI9480/12 GAG NEW CLASSIC RED 230 EU	RI9481/11	SIN035UR	886948111150	RI9481/11 GAG.ESPR.CLASSIC EVO INOX (UK)
RI9480/13	SIN035UR	886948013010	RI9480/13 GAG NEW CLASSIC WHI 230 EU	RI9481/11	SIN035UR	886948111530	RI9481/11 GAG.ESPR.CLASSIC EVO INOX (AU)
RI9480/14	SIN035UR	886948014010	RI9480/14 GAG NEW CLASSIC BLK 230 EU	RI9481/12	SIN035UR	886948112010	RI9481/12 GAG.ESPR.CLASSIC EVO RED (SCH)
RI9480/15	SIN035UR	886948015010	RI9480/15 GAG NEW CLASSIC BLU 230 EU	RI9481/13	SIN035UR	886948113010	RI9481/13 GAG CLASSIC PRO EVO WHITE 230 (SCH)
RI9480/16	SIN035UR	886948016010	RI9480/16 GAG NEW CLASSIC GREY 230 EU	RI9481/14	SIN035UR	886948114010	RI9481/14 GAG CLASSIC PRO EVO BLACK 230 (SCH)
RI9480/18	SIN035UR	886948018150	GAG.NEW CLASSIC SB SS 240V UK	RI9481/15	SIN035UR	886948115010	RI9481/15 GAG.ESPR.CLASSIC EVO BLUE (SCH)
RI9380/03	SIN035R	886938003530	GAG.NEW CLASSIC SS 240 AU	RI9481/16	SIN035UR	886948116010	RI9481/16 GAG.CLASSIC EVO GREY (SCH)
RI9380/06	SIN035R	886938006470	GAG.NEW CLASSIC SS 220V KR	RI9481/17	SIN035UR	886948117010	RI9481/17 GAG.ESPR.CLASSIC EVO GREEN (SCH)
RI9380/07	SIN035R	886938007470	RI9380/07 GAG CLASSIC 2019 WHITE 220 KR	RI9481/18	SIN035UR	886948118010	RI9481/18 GAG.ESPR.CLASSIC EVO YELLOW (SCH)
RI9380/08	SIN035R	886938008470	RI9380/08 GAG CLASSIC 2019 BLACK 220 KR	RI9481/19	SIN035UR	886948119010	RI9481/19 GAG.ESPR.CLASSIC EVO ORANGE (SCH)
RI9380/09	SIN035R	886938009470	RI9380/09 GAG CLASSIC 2019 RED 220V KR.	RI9380/41	SIN035R	688001000015	RI9380/41 JP GAG CLASSIC BLACK
RI9380/10	SIN035R	886938010470	RI9380/10 GAG CLASSIC 2019 BLUE 220V KR.	RI9380/42	SIN035R	688001000016	RI9380/42 JP GAG CLASSIC WHITE
RI9380/11	SIN035R	886938011470	RI9380/11 GAG CLASSIC 2019 GREY 220V KR.	RI9380/40	SIN035R	886938040460	RI9380/40 GAG.NEW CLASSIC SS 100V JP
RI9380/40	SIN035R	886938040460	GAG.NEW CLASSIC SS 100V JP	RI9380/46	SIN035R	886938046540	RI9380/46 GAG.NEW CLASSIC SS 120V US
RI9380/47	SIN035R	886938047540	RI9380/47 GAG NEW CLASSIC RED 120V US	RI9380/47	SIN035R	886938047540	RI9380/47 GAG NEW CLASSIC RED 120V US
RI9380/48	SIN035R	886938048540	RI9380/48 GAG NEW CLASSIC WHI 120V US	RI9380/48	SIN035R	886938048540	RI9380/48 GAG NEW CLASSIC WHI 120V US
RI9380/49	SIN035R	886938049540	RI9380/49 GAG NEW CLASSIC BLK 120V US	RI9380/49	SIN035R	886938049540	RI9380/49 GAG NEW CLASSIC BLK 120V US
RI9380/50	SIN035R	886938050540	RI9380/50 GAG NEW CLASSIC BLU 120V US	RI9380/50	SIN035R	886938050540	RI9380/50 GAG NEW CLASSIC BLU 120V US
RI9380/51	SIN035R	886938051540	RI9380/51 GAG NEW CLASSIC GREY 120V US	RI9380/51	SIN035R	886938051540	RI9380/51 GAG NEW CLASSIC GREY 120V US
				RI9380/53	SIN035R	886938053540	RI9380/53 GAG CLASSIC 2019 ORANGE 120V
				RI9380/54	SIN035R	886938054540	RI9380/54 GAG.NEW CLASSIC GREEN (US)
				RI9380/55	SIN035R	886938055540	RI9380/55 GAG NEW CLASSIC YELLOW (US)

HISTORY OF CHANGES TO THE SERVICE MANUAL				
From Rev.	To Rev.	Chapter	Inserted	Modified
Rev.03	Rev.04	First page		Update codes involved

Published by Gaggia.

Subject to modification

PROUDLY MADE IN ITALY

GAGGIA CLASSIC 2019 & CLASSIC EVO PRO

Technical specification		
	STAND-BY VERSION SIN035UR	NO STAND-BY VERSION SIN035R
Power supply	"230V 50Hz 1200W" "240V 50Hz 1300W"	“100V 50/60Hz 1150W” “120V 60Hz 1350W” “220V 60Hz 1150W” “240V 50Hz 1300W”
Pump pressure	15 bar	15 bar
By-packed filters	1 “Crema perfetta” filter 2 “Traditional” filter	1 “Crema perfetta” filter 2 “Traditional” filter
Water tank	Integrated & removable	Integrated & removable
Water tank capacity	2,1 l	2,1 l
Boiler	Aluminium	Aluminium
Control panel	Rocket buttons + indicator lights	Rocket buttons + indicator lights
Professional filter-holder	Yes	Yes
Size in cm. (L x H x D)	23 x 38 x 24	23 x 38 x 24
Weight	7,3 kg	7,3 kg
Bodywork	Brushed stainless steel	Brushed stainless steel
Color	Brushed stainless steel	Brushed stainless steel
Accessories	Ground coffee doser, tamper, filters	Ground coffee doser, tamper, filters
Automatic shut-off	Yes (20 min.)	No

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CHAPTER 1

INTRODUCTION

1.1. Specific tools and equipment

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

12NC	Description	Notes
-	Flathead screwdriver	# 0, # 2
-	Torx screwdriver	(T10-T20)
-	Head screwdriver	
-	Cutter	
-	Cable tie tightening tool	
-	Pliers for Oetiker clamps	
-	Digital Thermometer	Type K (accuracy for temperature of 0,05 % or ± 0,3°C)
-	Temperature probe	80PK-22 (80AK-A Thermocouple adapter required)
-	Scale	KERN EMB 500-1 or comparable device with a base accuracy of 0,05 % or ± 0,5 g
-	Power meter	Voltcraft EnergyCheck 3000 or comparable device with a base accuracy of 1 % or ± 5W
-	Stopwatch	Basic model
-	Allen key	#4-5
-	Wrench	#14-18

1.2. Maintenance Products

12NC Code	Material	Description
-	Thermal paste	Heat resistance > 200°C
996530010512	Descaler	“DECALCIFYING LIQUID”

1.3. Safety warnings

Please, read the Service manual of the machine before starting any maintenance.
Operation, maintenance and/or repair of this device has to be carried out only by qualified persons, trained for work at or with electric devices.

The technicians to operate under safety conditions, needs to:
1. Use personal safety devices;
2. Disconnect the appliance from the power mains before repairing;
3. Before and after repair, it is recommended to perform dielectric strength tests (This domestic appliance is rated as insulation class 1).

During the machine disassembly the operator has to pay attention to hot and under pressure parts.
All parts involved can be find in the hydraulic circuit below schema.

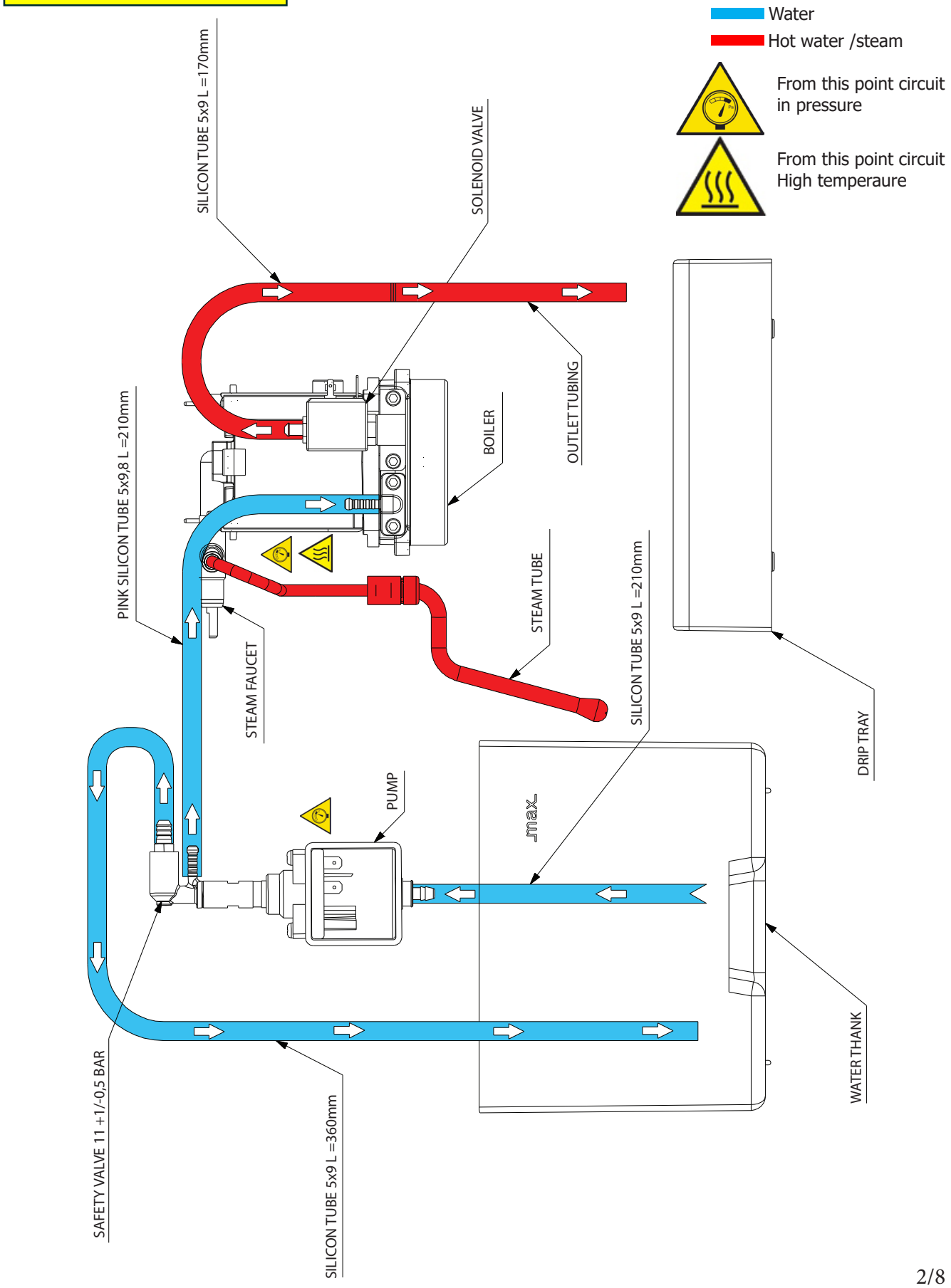
The machine hydraulic circuit can reach maximum pressure of 11 +1/-0,5 bar.

When the machine arrives at the Service Center in descaling mode interrupted, or making Descaling , take EXTREME CARE to avoid any unintentional contacts with the descaler.

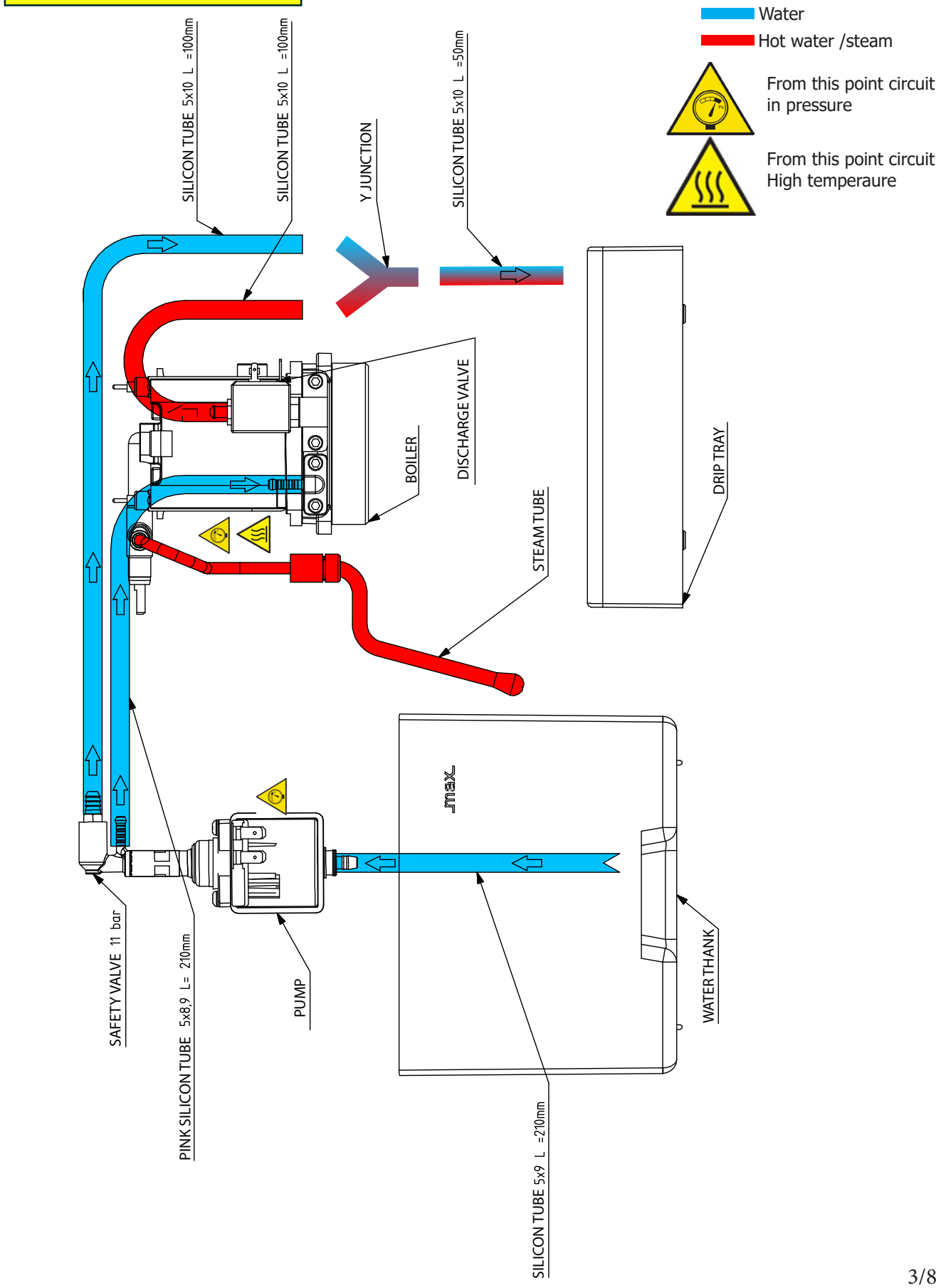
After the product has been repaired, it should function properly and has to meet the safety requirements and legal regulations as officially laid down at this moment.

1.4. Water circuit diagram

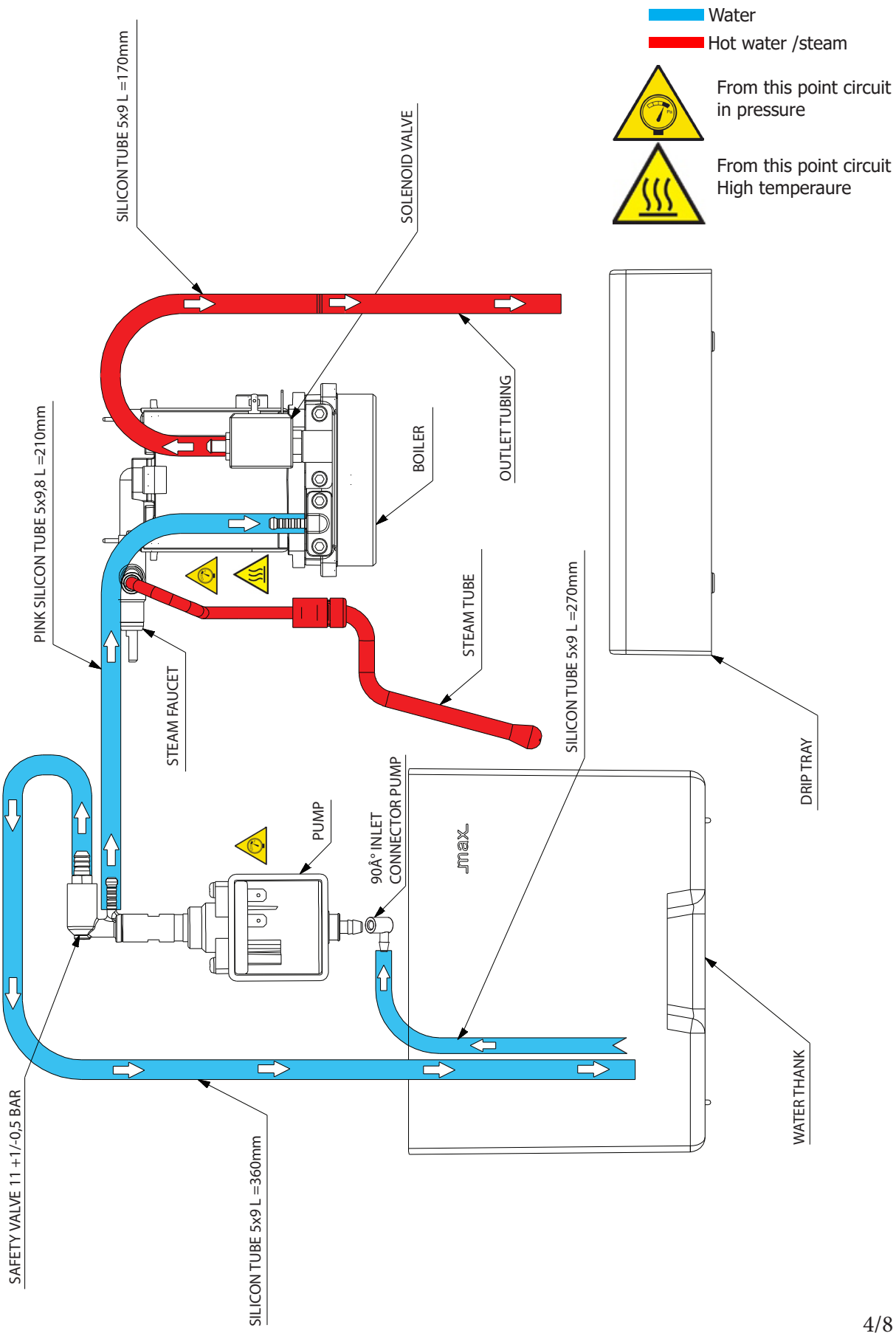
Hydraulic circuit
Up to WK10 2019
120V model up to WK07 2020



Hydraulic circuit
From WK10 2019 up to WK07 20020
120V model excluded

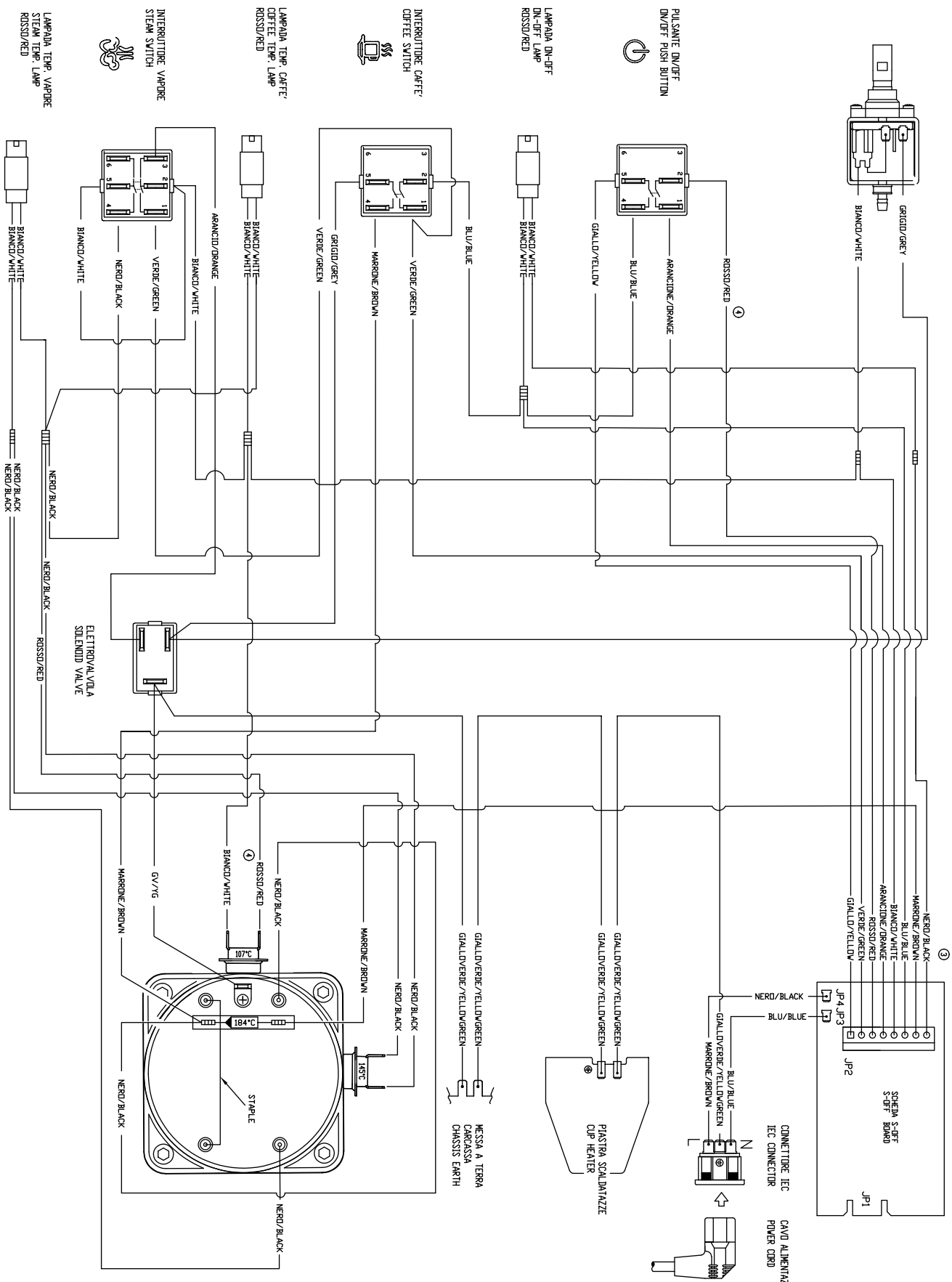


Hydraulic circuit
From WK07 20020

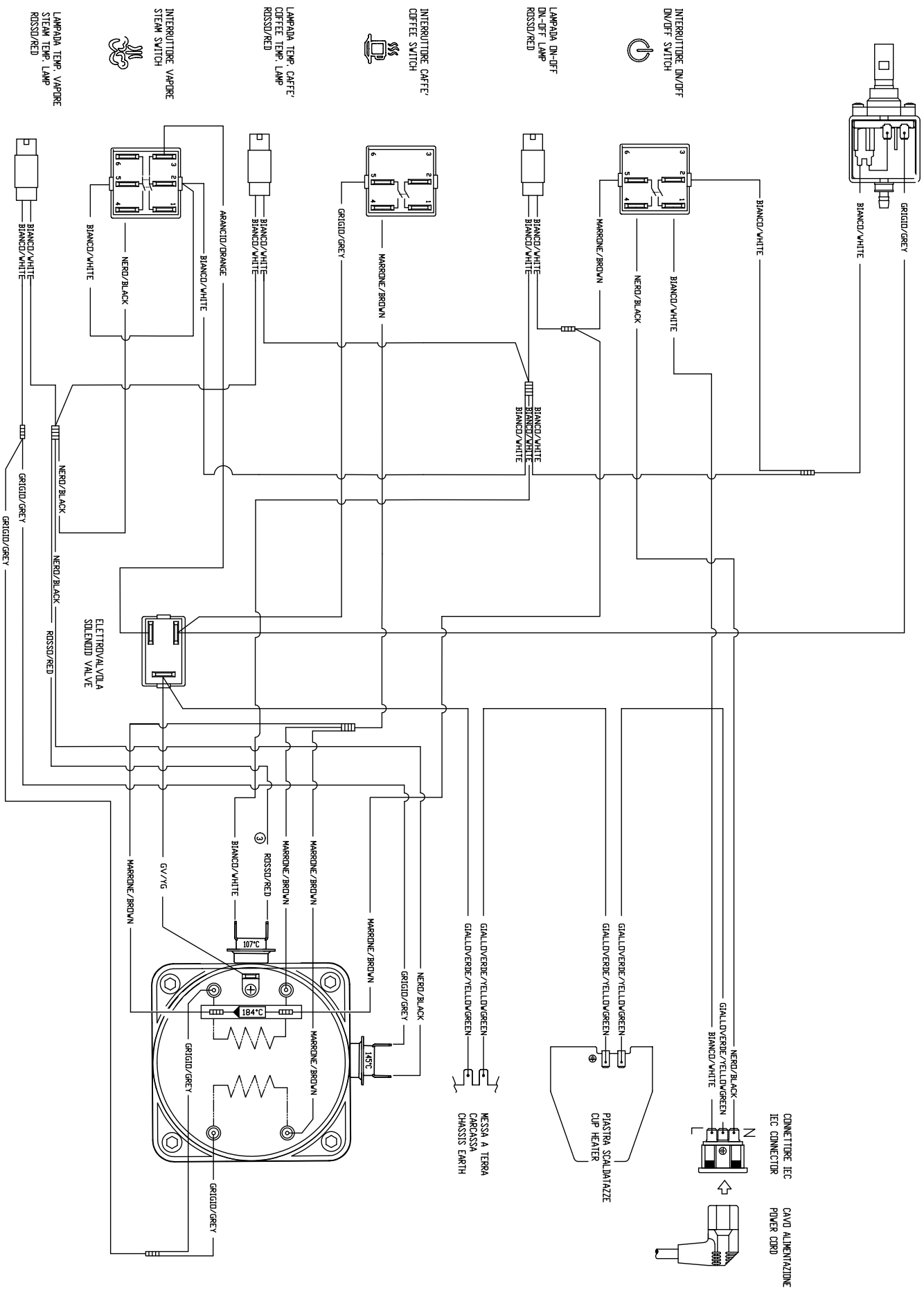


1.5. Electrical diagram

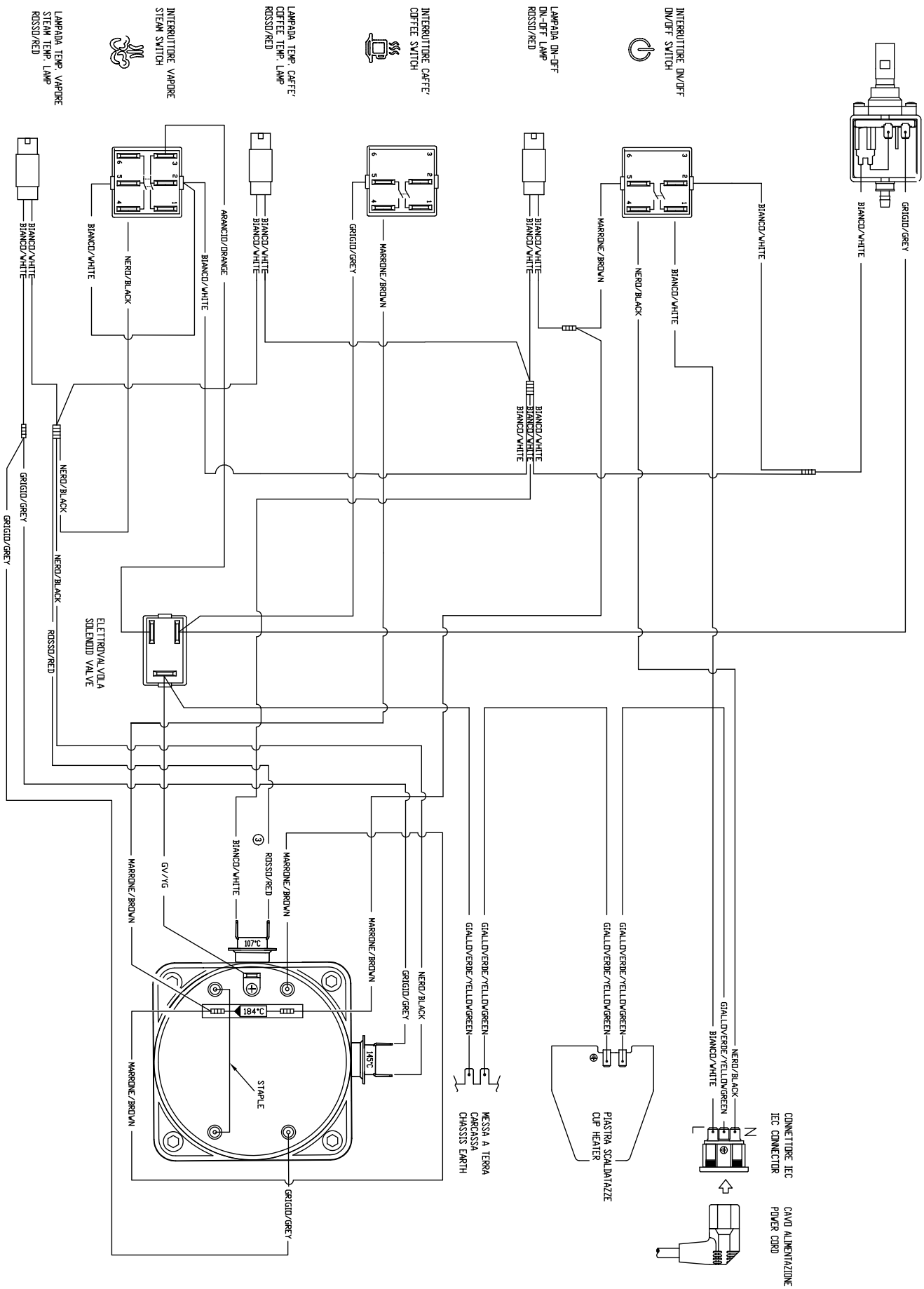
From SIN035UR 230/240V



From SIN035R 100/120V



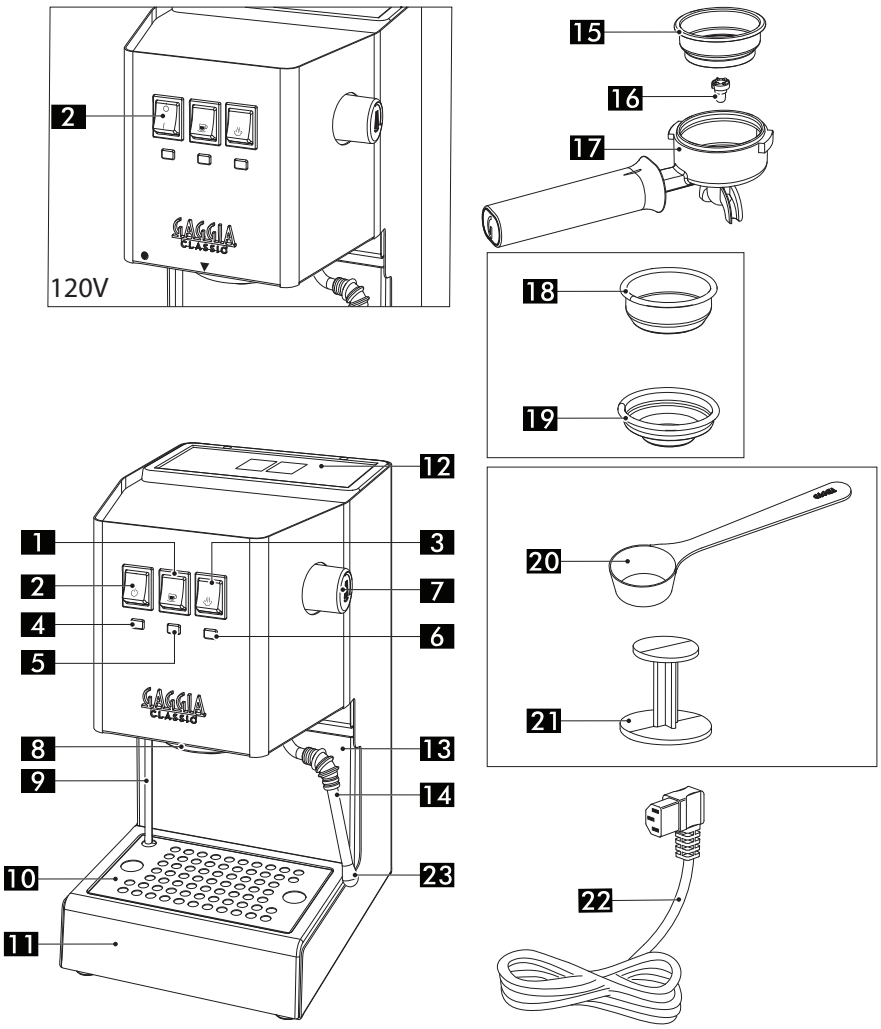
From SIN035R 220/240V



1.6. Service POLICY grid as used for coffee machine

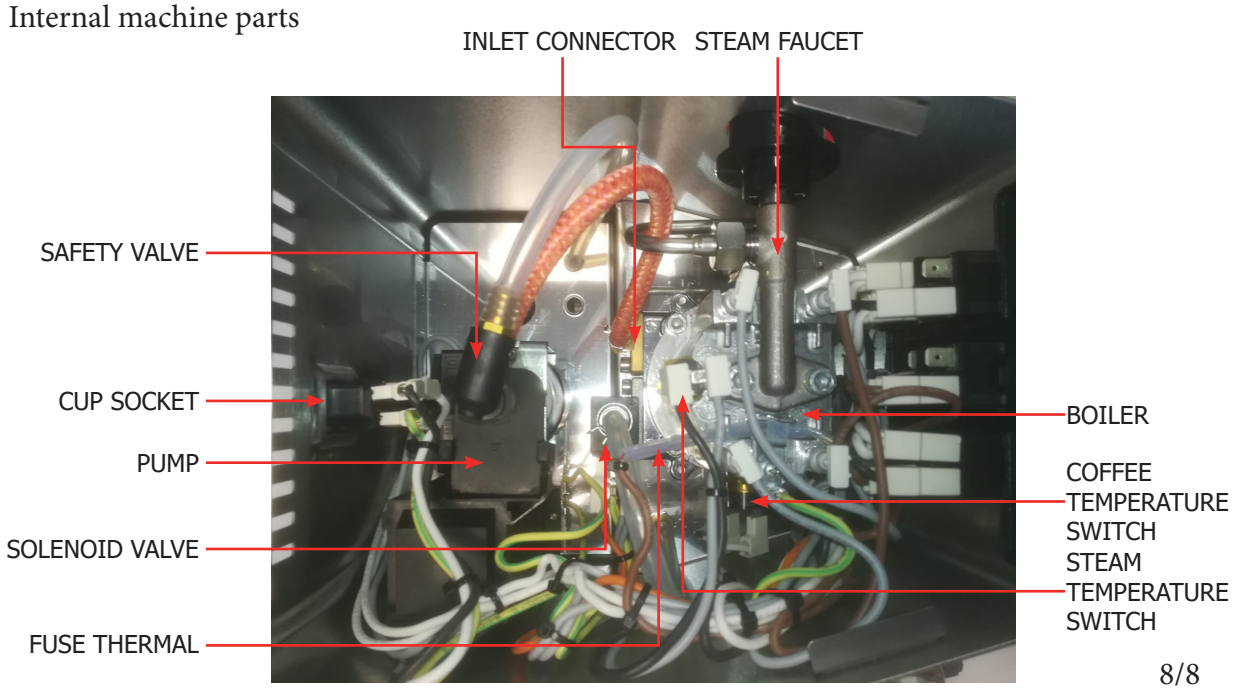
During the repair is always recommended to use, if possible, single parts rather than the correspondent assembly.

1.7. External machine parts



1	Brew button
2	On/off button
3	Steam button
4	Power indicator light
5	Coffee temperature light
6	Steam temperature light
7	Steam / hot water knob
8	Coffee brew unit
9	Drain pipe
10	Grill
11	Drip tray
12	Water tank lid
13	Water tank (removable)
14	Hot water/steam wand with rubber tip
15	“Crema perfetta” filter for 1 and 2 cups.
16	Frothing jet device (Use with "Crema perfetta" filter.
17	Filter holder
18	Traditional filter for 2 cups
19	Traditional filter for 1 cup / pods
20	Measuring scoop
21	Tamper
22	Power cord and plug
23	Steam nozzle

1.8. Internal machine parts



CHAPTER 2

TECHNICAL SPECIFICATIONS

2.1. Specification for the measurement of the coffee products temperature.

The below procedure is also contained in the Symptom Cure 97832.

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 bot tom.The probe then must be moved in a circular motion for 5/6 rotations. At the of the rota- tions, 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

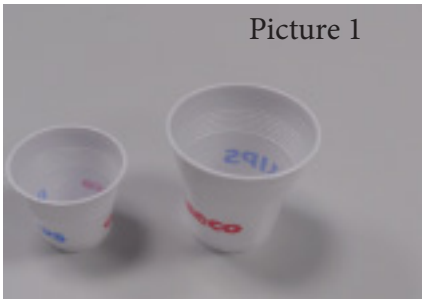
The acceptance limits are divided by features and products and are the following:

Espresso Coffee Q.ty 25/60 gr. (One product)

Temperature of 1st product 69°C ≤ 85°C

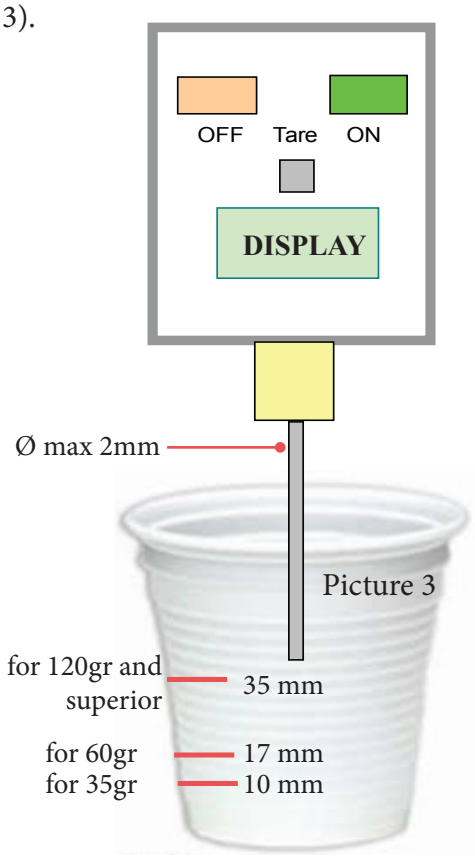
Temperature of 2nd product 72°C ≤ 85°C

Picture 1



Picture 2

Picture 3



CHAPTER 3

TROUBLESHOOTING

3.1. Causes and solution.

FAULT	POSSIBLE CAUSES	SOLUTION
The machine does not switch on	No power supply	Check the electrical circuit
The machine does not warm up	The thermostats have intervened	Replace the thermostats (if of the One shot type) If they are manual, reset them If they are automatic, they are reset automatically
	The power supply does not reach the boiler	Check the electrical connections
The pump is very noisy	There is no water in the tank The pump has disengaged from the supports The silicone pipe that carries the water from the tank to the pump is pinched or blocked	Fill the tank Insert the pump into the supports once again Check the water circuit
The coffee is too cold	The filter holder is not inserted for the pre-heating process The cups are cold	Run hot water through the filter holder Pre-heat the cups with hot water
The milk does not froth	The milk is not suitable (powdered or skimmed milk) Dirty nozzle	Use whole milk Carefully clean the nozzle with water
The coffee flows too quickly and does not form the cream	Little coffee in the filter holder Grinding level too coarse There is a missing component in the filter holder (Frothing jet device used only with "Crema perfetta" filter).	Increase the quantity Use a different mixture Verify that all the components are in place and installed correctly
The coffee does not flow or it flows in drops	Grinding level too fine The coffee is pressed too much in the filter holder Too much coffee in the filter holder Blocked water channels Blocked filter in the filter holder	Use a different mixture Agitate the coffee Reduce the amount of coffee Descale the machine Carefully clean the filter
The coffee does not flow from the edges	The filter holder has been inserted incorrectly into the coffee dispensing unit The upper border of the filter holder is dirty The seal of the boiler is dirty or worn Too much coffee in the filter holder	Insert the filter holder correctly Clean the edges of the filter holder Clean or replace the seal Reduce the amount of coffee

P.S.: Refill the water circuit when the machine is first used as well as when the water in the tank finishes.

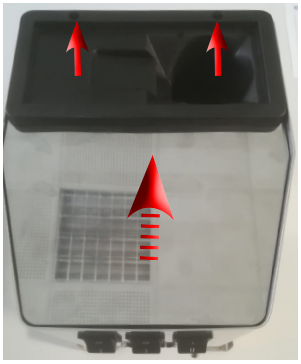
CHAPTER 4

DISASSEMBLY

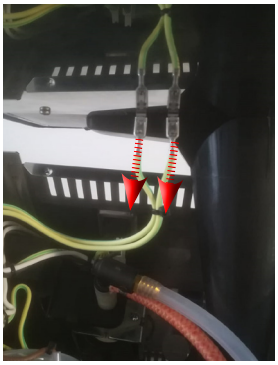
4.1. Outer Shell

Remove the water tank, the water drip tray, the grille, the top lid, the steam knob and the portafilter.

Upper cover

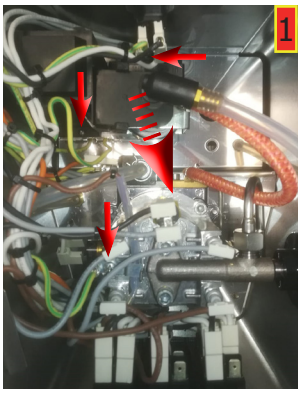


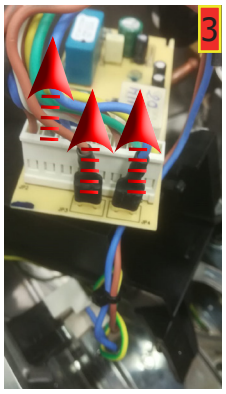
Unscrew the screws highlighted and remove the top cover

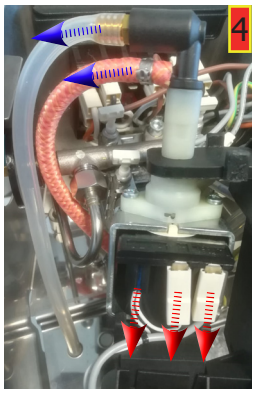


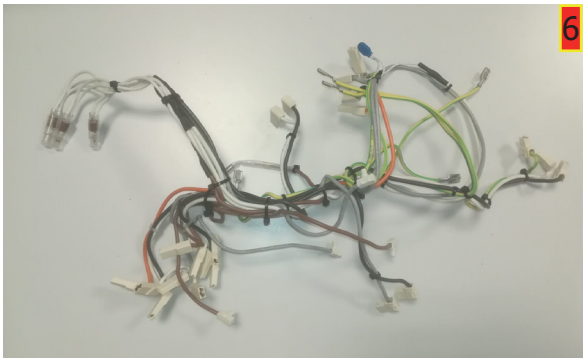
Disconnect the electrical connection

4.2. Pump and electrical connection





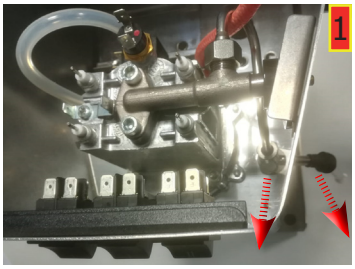


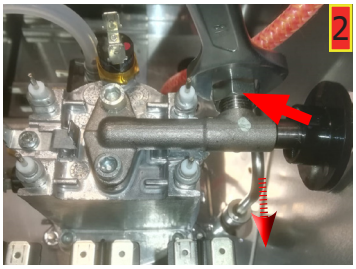


N.B.: Marks the lamps for reassembly.

1) Unscrew the screws highlighted and remove the pump;
2) and 3) Only for SIN035UR, remouve the CPU support and disconnect the electrical connection;
4) Disconnect the electrical and idraulic connection;
5) Disconnect the pump support;
6) Disconnect all electrical connection and remouve the wiring assembly.

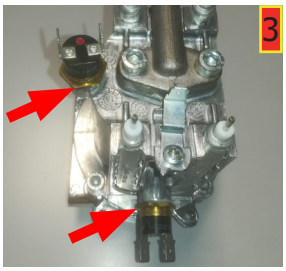
4.3. Steam tube

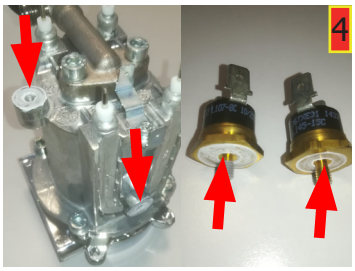




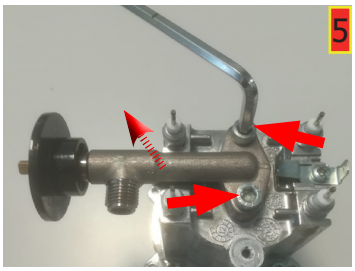
1) Disconnect the fork spring and remouve the steam lower tube;
2) Helping you with a wrench unscrew the hex nut highlighted and remouve the steam upper tube.

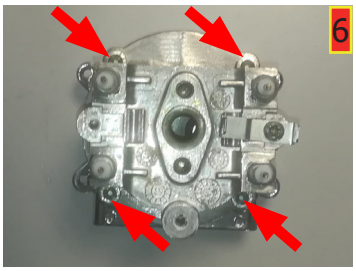
4.4. Boiler

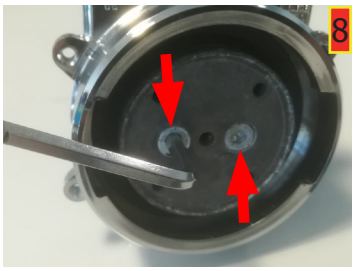




1) Helping you with allen key #4 unscrew the screw highlighted and remouve the boiler assembly;
2) Helping you with allen key #4 unscrew the screw highlighted and remouve the solenoid valve and the inlet connector;
3) unscrew the thermostats highlighted;
4) NOTE: Before reassembling the thermostats clean the highlighted surfaces and then apply the thermal paste.

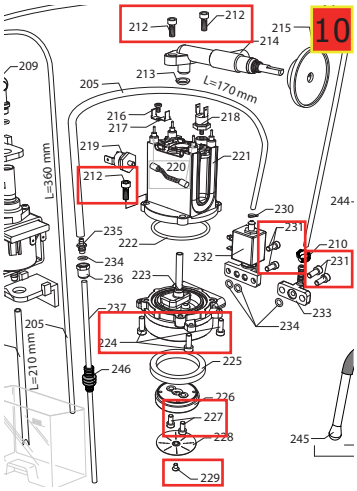




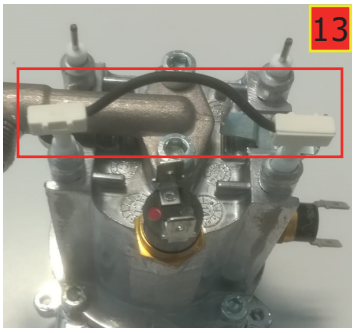


5) Helping you with allen key #5 unscrew the screw highlighted and remouve the steam faucet;
NOTE: Before reassembling the screw make sure the knob rotates correctly in the casing;
6) Helping you with allen key #5 unscrew the screw highlighted and remouve the upper boiler;
7) unscrew the screw highlighted;
8) Helping you with allen key #5 unscrew the screw highlighted and remouve the shower holder.

9) Boiler assembly

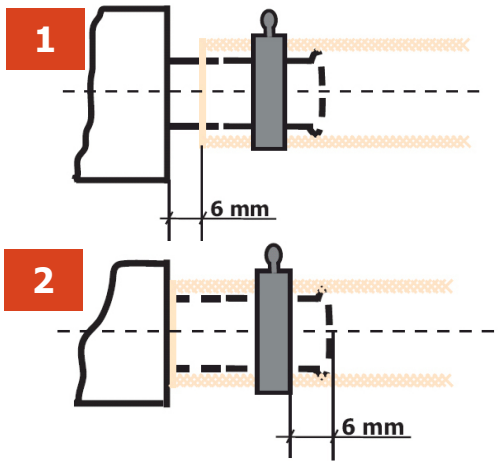


10) NOTE: The screw highlighted are differnt;
11) Screw inox (printed A2) position 224,227 and 229 of Exploded view;
12) Screw galvanized (printed 8.8) position 212 and 231 of Exploded view;



13) NOTE: The cable highlighted is assembled only in the models RI9380/03 and 06 RI9480/11 and 18, see chapter 1.5. Electrical diagram.

4.5. Fitting and removing Oetiker clamps

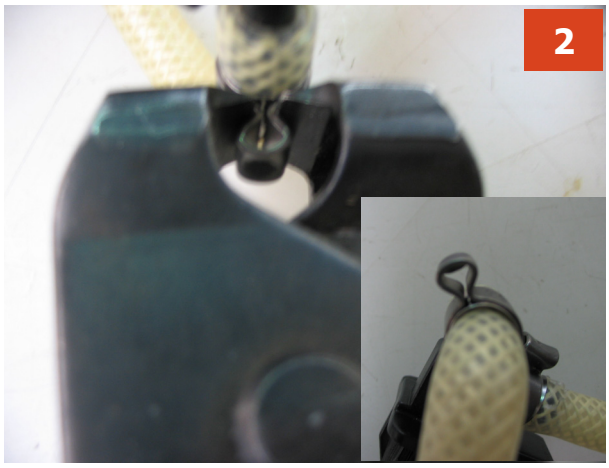


1) Boiler connection

2) Other connections

Replacing the pipes

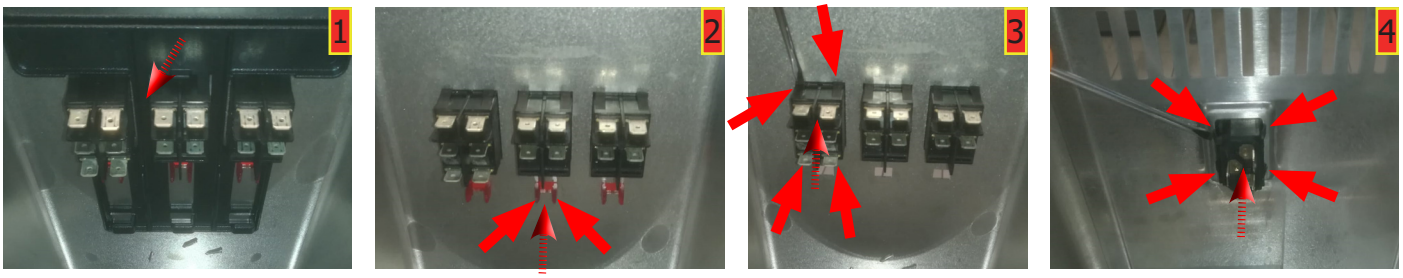
1) Use a suitable pair of pliers to remove the clamp (as shown in the picture)



2) Tighten the clamp as shown in the pictures

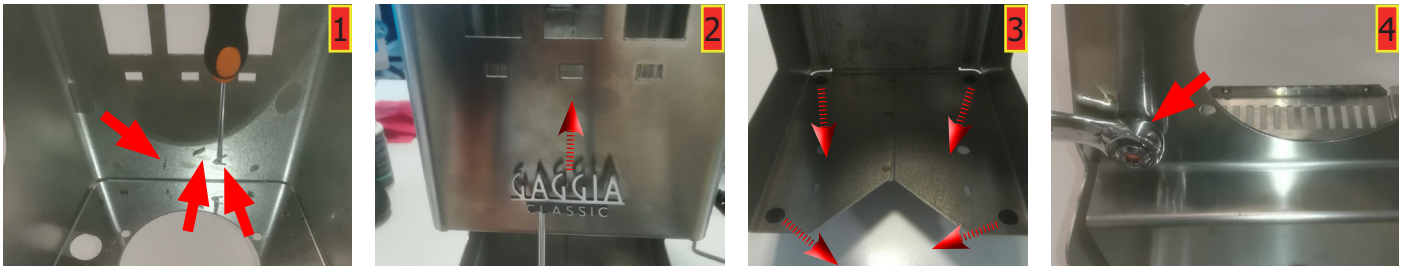
4.6. Other parts

Bottons and cup socket



1) Slip off the cover fixing bracket;
2) Push the side wings of the lenses and slide them as shown in the image;
3) Helping you with a flat screwdriver push on the side wings of the buttons and slide them as shown in the image;
4) Helping you with a flat screwdriver push on the side wings of the cup socket and slide them as shown in the image.

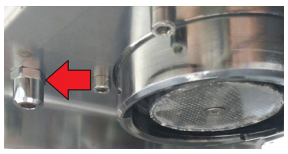
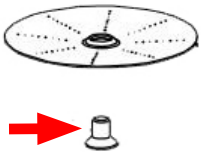
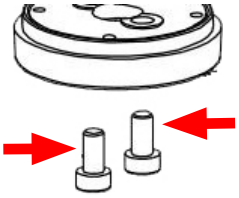
Blende, foot and exhaust pipe fitting

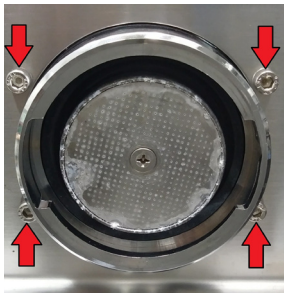
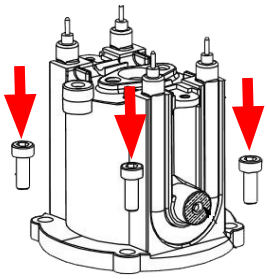
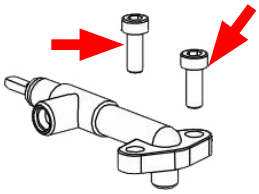
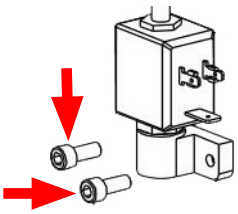
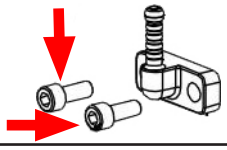
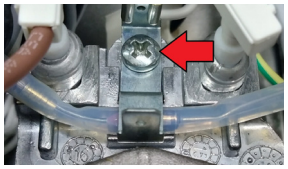
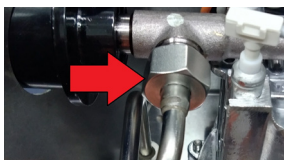
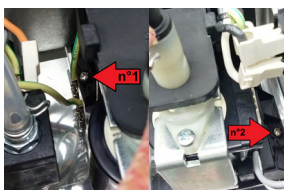


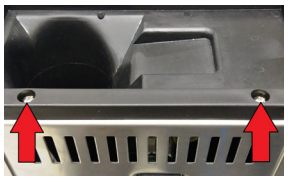
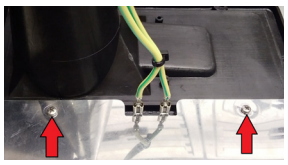
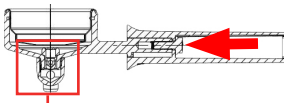
1) Helping you with a flat screwdriver lift the side wings of the blende;
2) Helping you with a flat screwdriver slide the blende as shown in the image;
3) Slip off the foots;
4) Helping you with a wrench #14 unscrew the exhaust pipe fitting

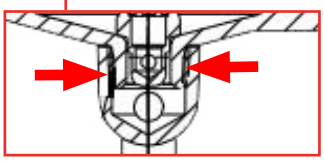
4.7. Tightening torques

The purpose of this paragraph is to define the correct tightening torque of each screw present on the Gaggia NEW CLASSIC machine models.
A manual dynamometer must be used to check the tightening torque.

Screw	Quantity	Image	tightening torque
Nut for outlet fitting.	1		2,3 Nm ± 0,3
Srew for shower.	1		4,0 Nm ± 0,3
Srew for shower holder.	2		6,5 Nm ± 0,5

Screw	Quantity	Image	tightening torque
Srew boiler locking.	4		5,5 Nm ± 0,5
Srew for boiler.	4		6,5 Nm ± 0,5
Srew for steam faucet.	2		6,5 Nm ± 0,5
Srew for solenoid valve.	2		5,5 Nm ± 0,5
Srew for inlet connector.	2		5,5 Nm ± 0,5
Thermostats.	2		1,0 Nm ± 0,2
Srew for thermal fuse.	1		2,2 Nm ± 0,3
Hex nut steam upper tube.	1		6,0 Nm ± 0,5
Srew for pump support.	2		1,2 Nm ± 0,1

Screw	Quantity	Image	tightening torque
Safety valve.	1		1,0 Nm ± 0,1
Srew for funnel.	2		1,5 Nm ± 0,1
Srew for top cover.	2		0,3 Nm ± 0,1
Srew for portafilter.	1		3,5 Nm ± 0,3



NOTE: Apply the sealant when either the "2-way spout" or the "filter holder cup" are replaced.
The sealant must be applied in the points highlighted above, and follow the following procedure:

1. **Apply the "Loxeal 85-86" sealant over the entire circumference in the first 3/4 threads of the thread;**
2. **The quantity to be applied must be equal to 0,1g +/- 0,01;**
3. **Let it dry for a period of 36 hours;**
4. **The temperature during drying must be >20 ° C.**