

Service Service Service



Service Manual

Rev. 02 February 2020

TYPE	SIN	12NC	DESCRIPTION
RI9480/11	SIN035UR	886948011010	GAG.NEW CLASSIC SB SS 230V EU
RI9480/18	SIN035UR	886948018150	GAG.NEW CLASSIC SB SS 240V UK
RI9380/03	SIN035R	886938003530	GAG.NEW CLASSIC SS 240 AU
RI9380/06	SIN035R	886938006470	GAG.NEW CLASSIC SS 220V KR
RI9380/40	SIN035R	886938040460	GAG.NEW CLASSIC SS 100V JP
RI9380/46	SIN035R	886938046540	GAG.NEW CLASSIC SS 120V US

HISTORY OF CHANGES TO THE SERVICE MANUAL

From Rev.	To Rev.	Chapter	Inserted	Modified
Rev.01	Rev.02	1.4. Water circuit diagram		Hydraulic circuit

All parts of this document are the property of Philips.

All rights reserved. This document and all the information herein is provided without liability deriving from any errors or omissions. Furthermore, no part may be reproduced, used or collected, except where express authorisation has been provided in writing or through a contractual agreement.

GAGGIA CLASSIC 2018

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

Table of contents		Page	Table of contents		Page
1.	Introduction		4.	Disassembly	
1.1.	Specific tools and equipment	1	4.1.	Outer Shell	1
1.2.	Maintenance Products	1	4.2.	Pump and electrical connection	1
1.3.	Safety warnings	1	4.3.	Steam tube	2
1.4.	Water circuit diagram	2	4.4.	Boiler	2
1.5.	Electrical diagram	5	4.5.	Fitting and removing Oetiker clamps	3
1.6.	Service POLICY grid as used for coffee machine	8	4.6.	Other parts	4
1.7.	External machine parts	8	4.7.	Tightening torques	4
1.8.	Internal machine parts	8			
2.	Technical specifications				
2.1.	Specification for the measurement of the coffee products temperature.	1			
3.	Troubleshooting				
3.1.	Causes and solution.	1			

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 $\pm 0,3^{\circ}\text{C}$)
-	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 $\pm 0,5$ g
-	Power meter	Voltcraft EnergyCheck 3000 or comparable device with a base accuracy of 1 % or $\pm 5\text{W}$
-	Stopwatch	Basic model
-	Allen key	#4-5
-	Wrench	#14-18

1.2. Maintenance Products

12NC Code	Material	Description
-	Thermal paste	Heat resistance $> 200^{\circ}\text{C}$
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.



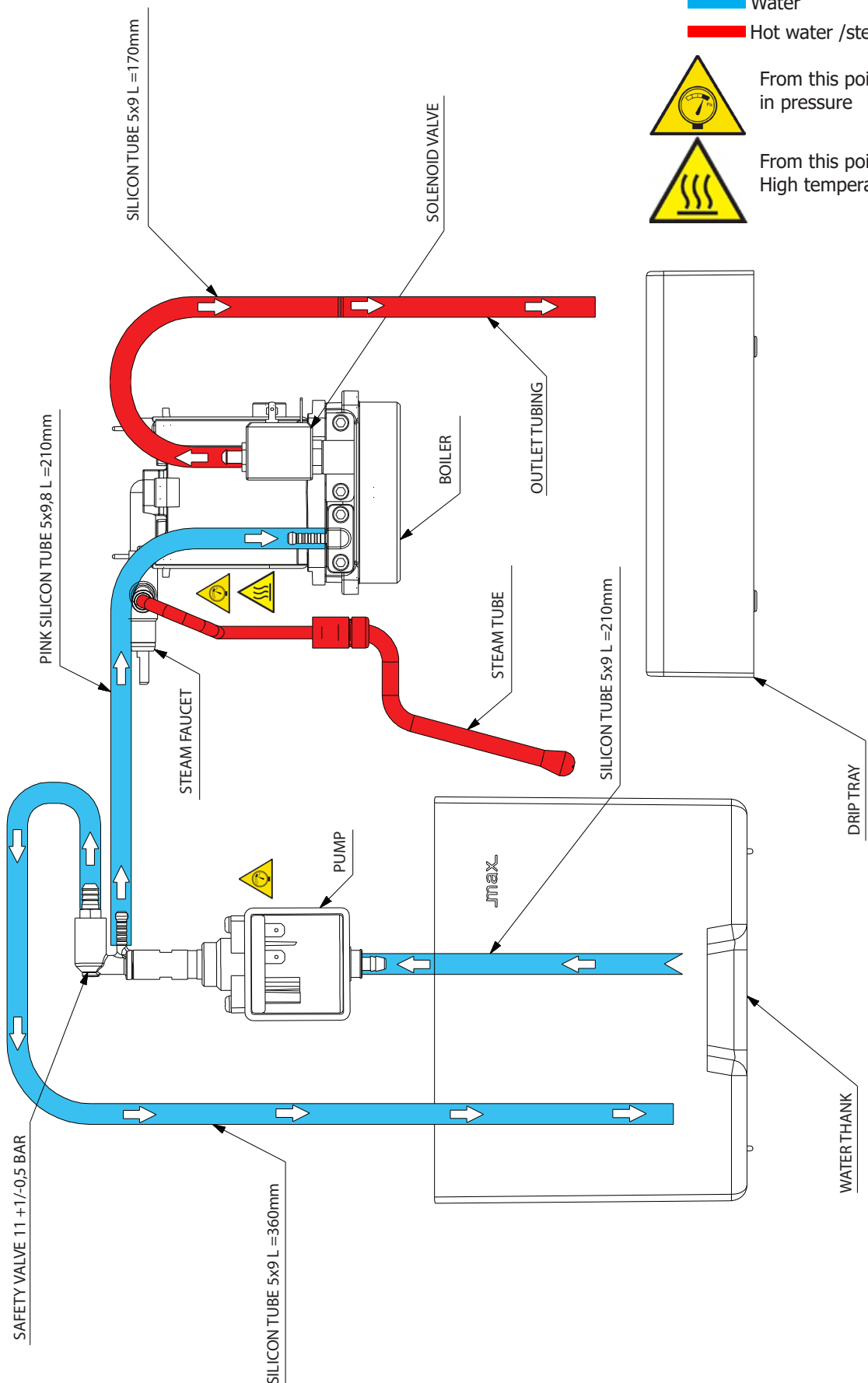
The machine hydraulic circuit can reach maximum pressure of 11 +1/-0,5 bar.

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.

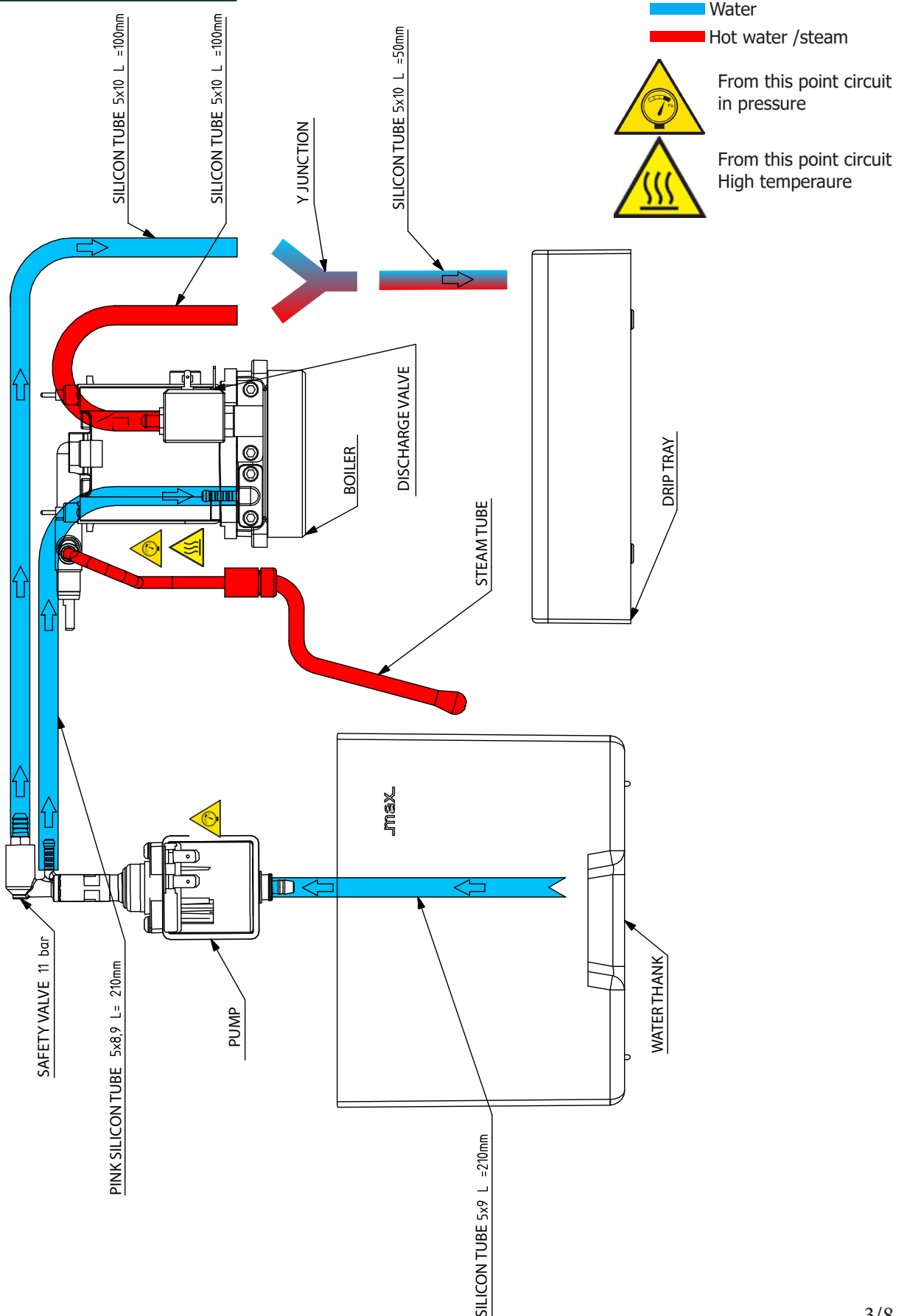
After the product has been repaired, it should function properly and has to meet the safety requirements and legal regulations as officially laid down at this moment.

1.4. Water circuit diagram

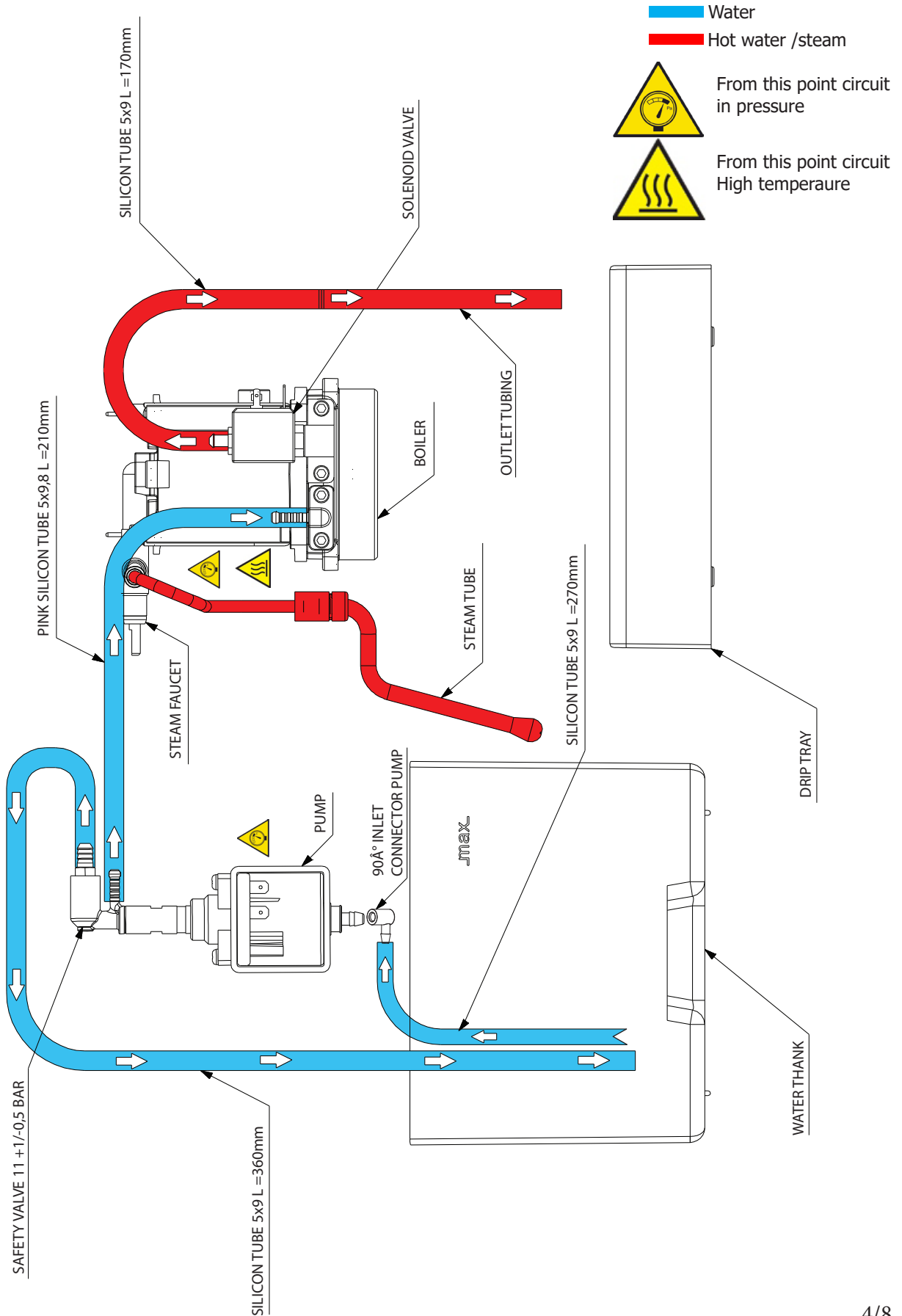
Hydraulic circuit
Up to WK10 2019
120V model up to WK07 2020



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

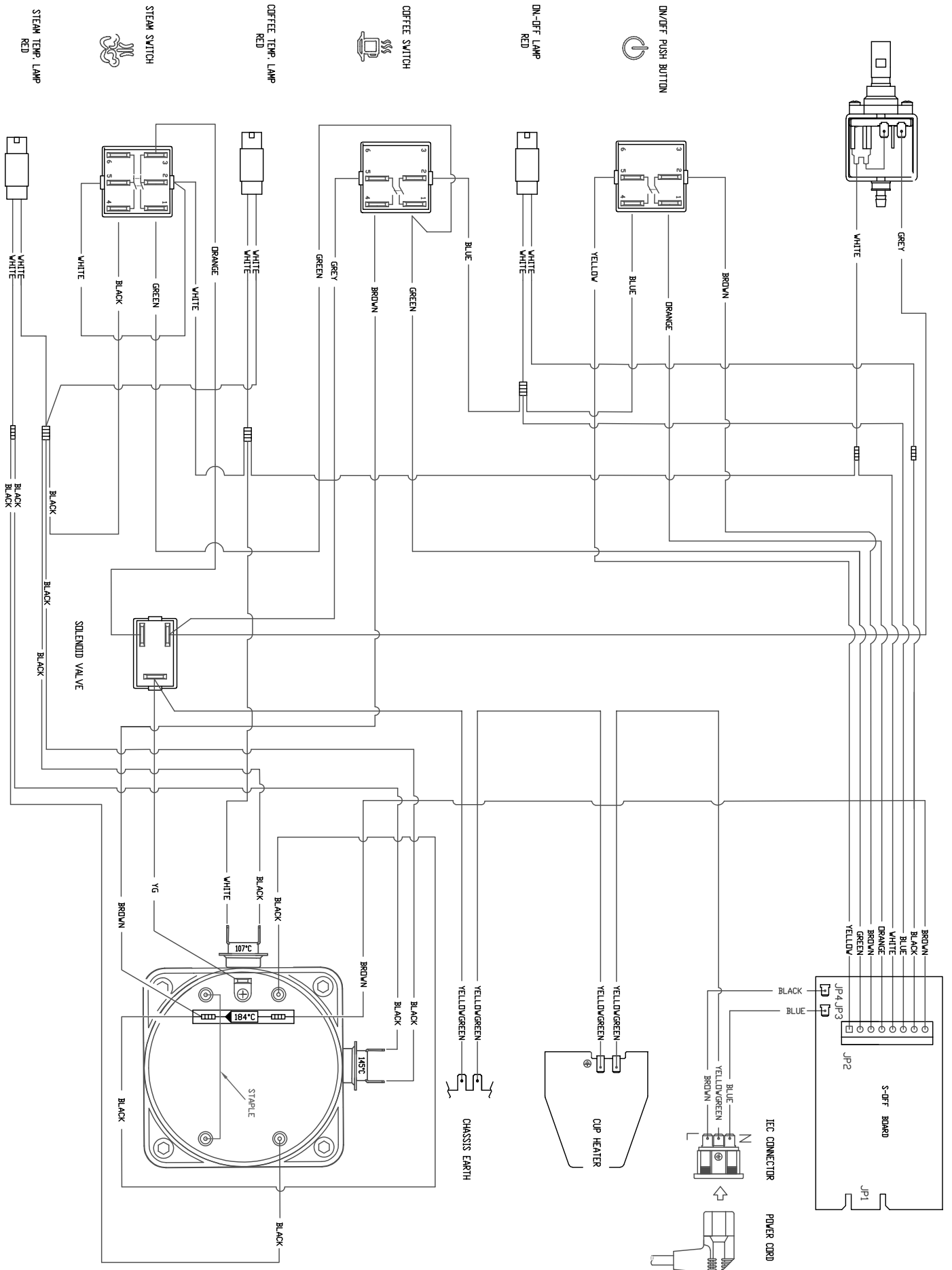


Hydraulic circuit
From WK07 20020

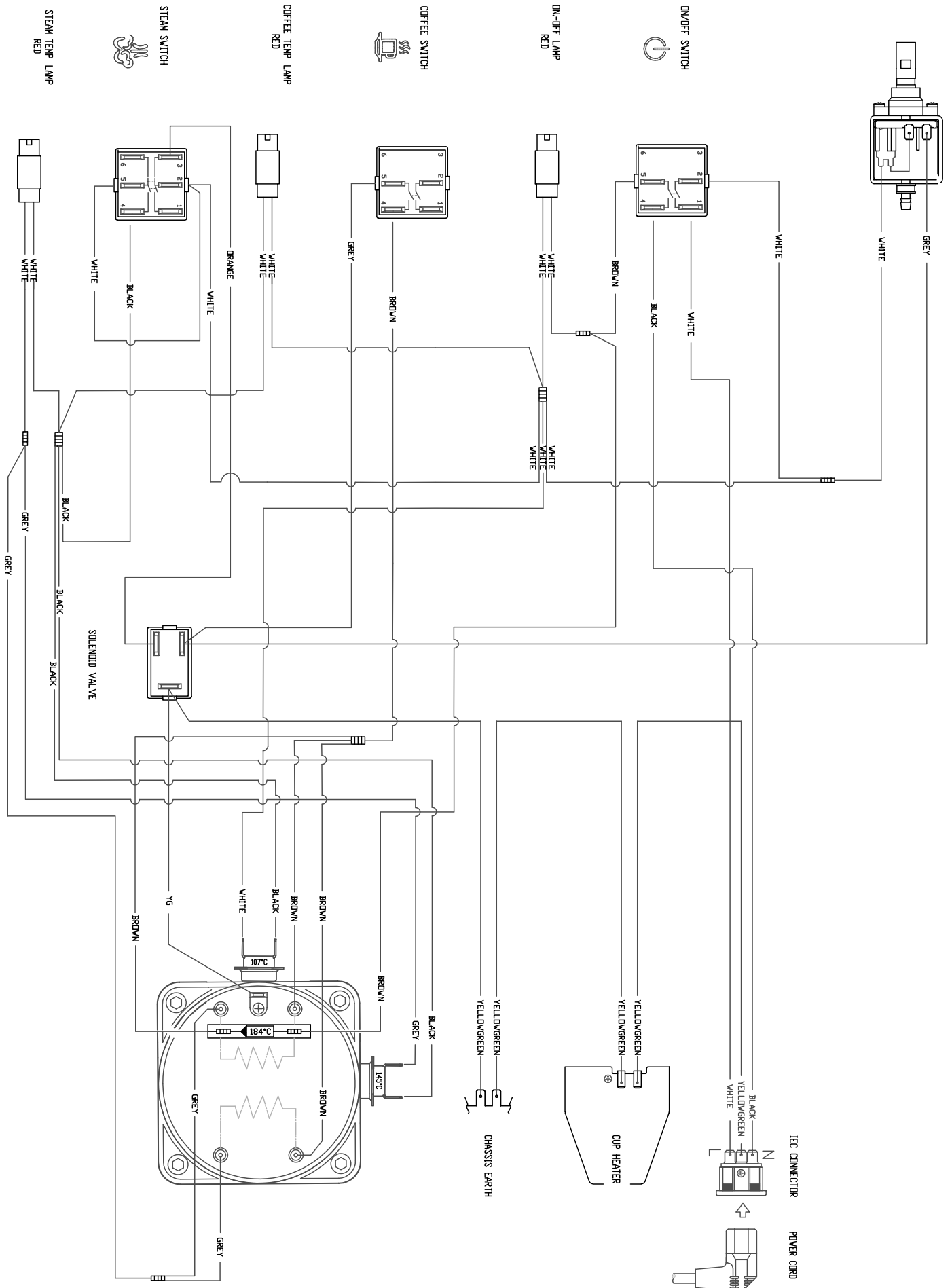


1.5. Electrical diagram

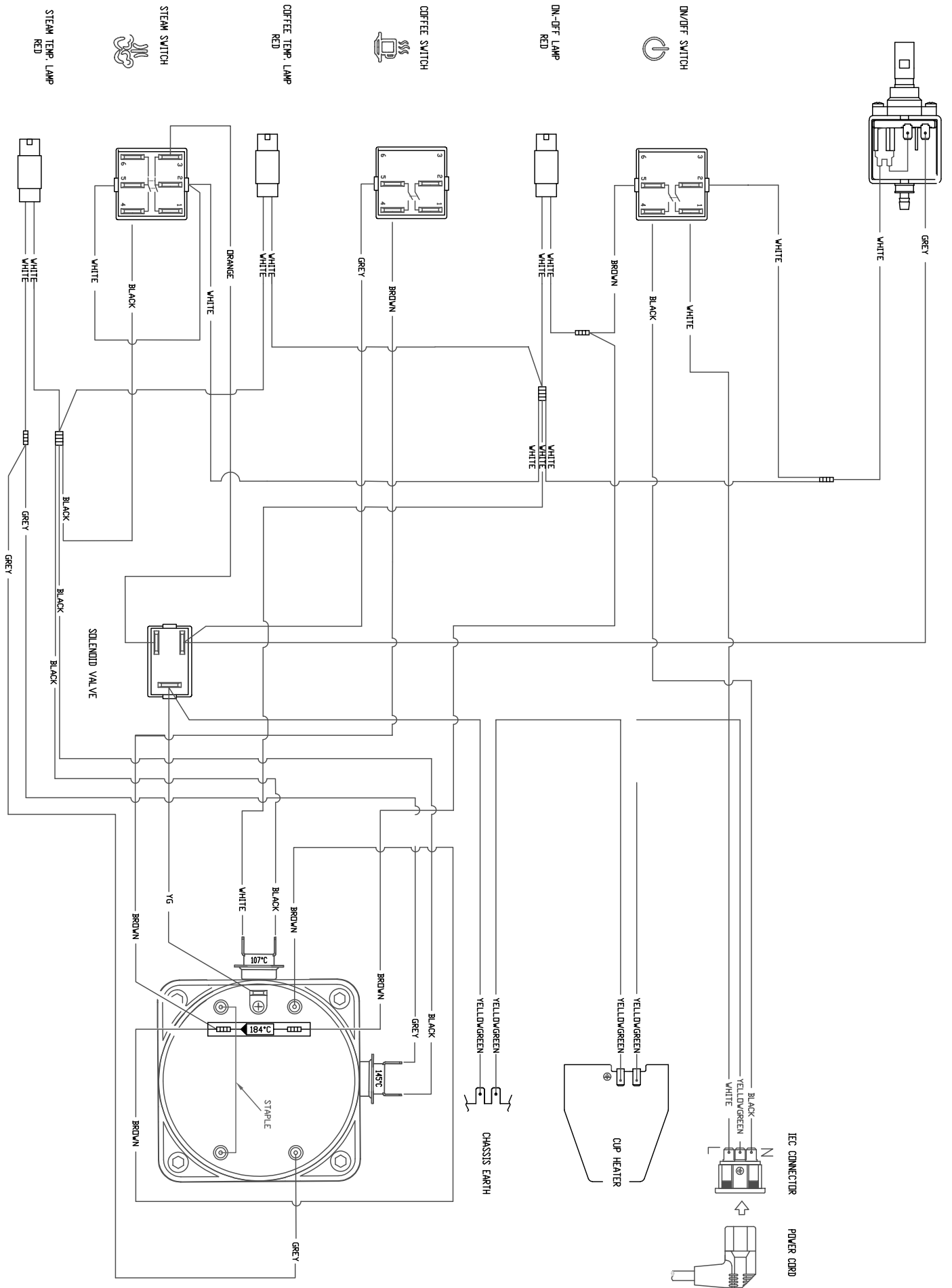
From SIN035UR 230/240V



From SIN035R 100/120V



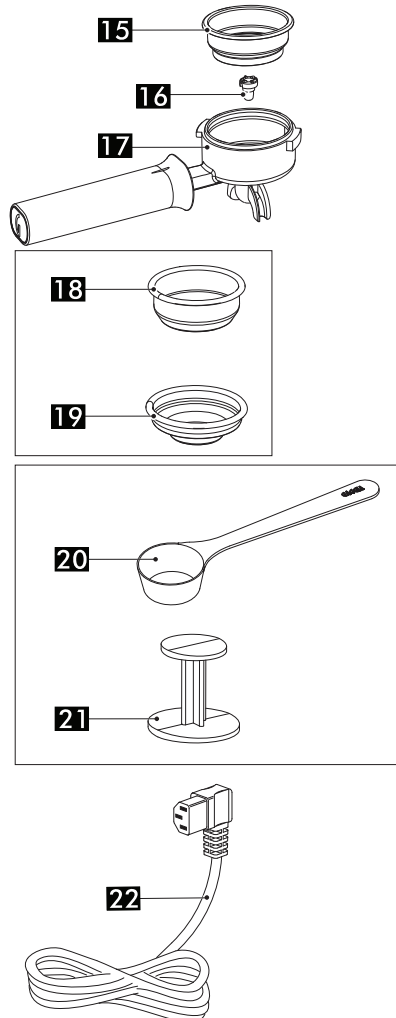
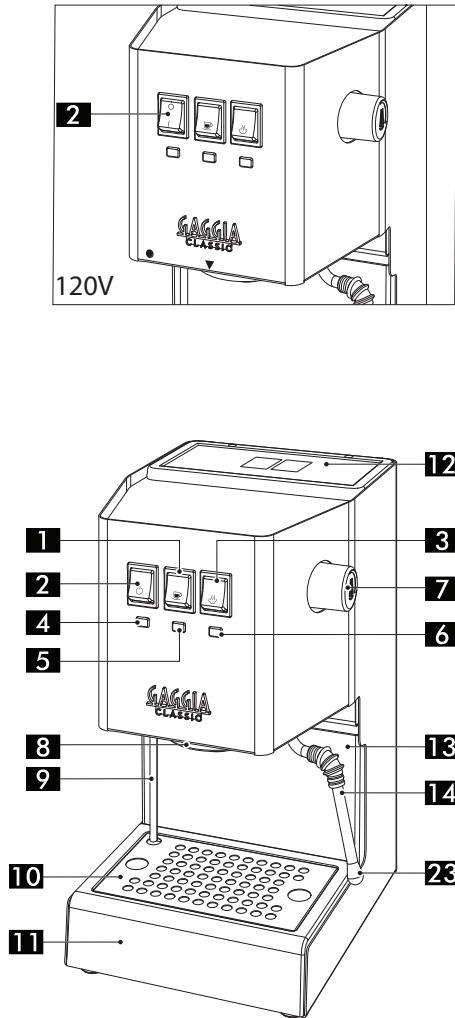
From SIN035R 220/240V



1.6. Service POLICY grid as used for coffee machine

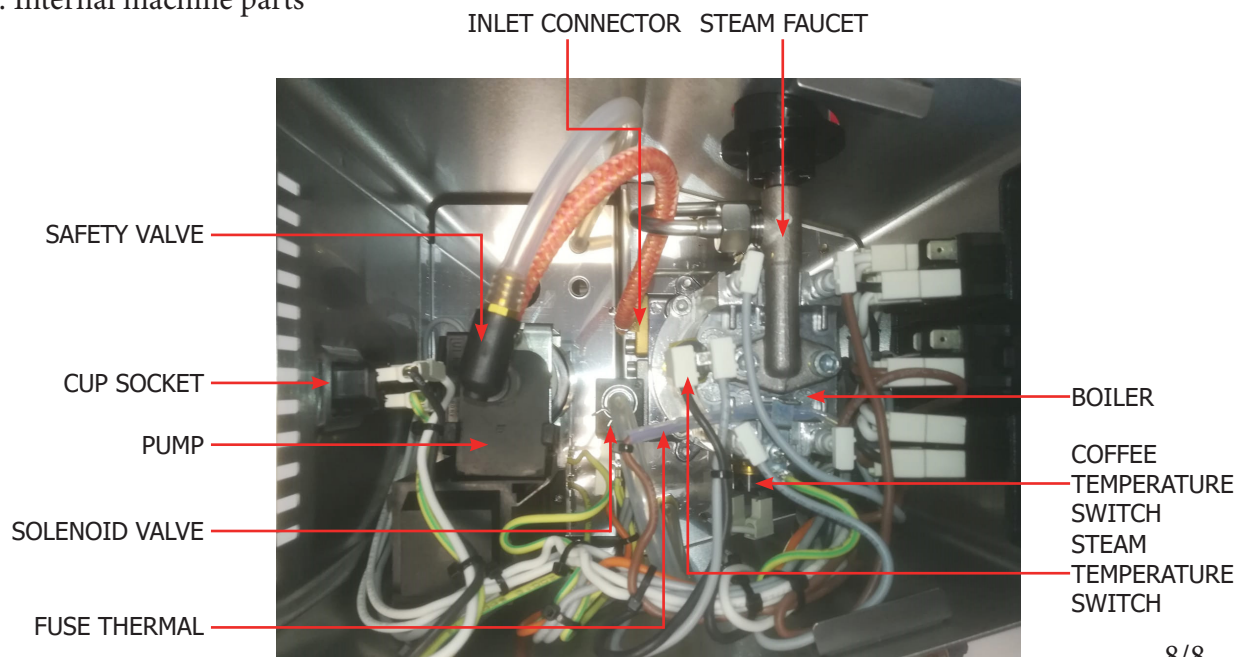
During the repair is always recommended to use, if possible, single parts rather than the correspondent assembly.

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.

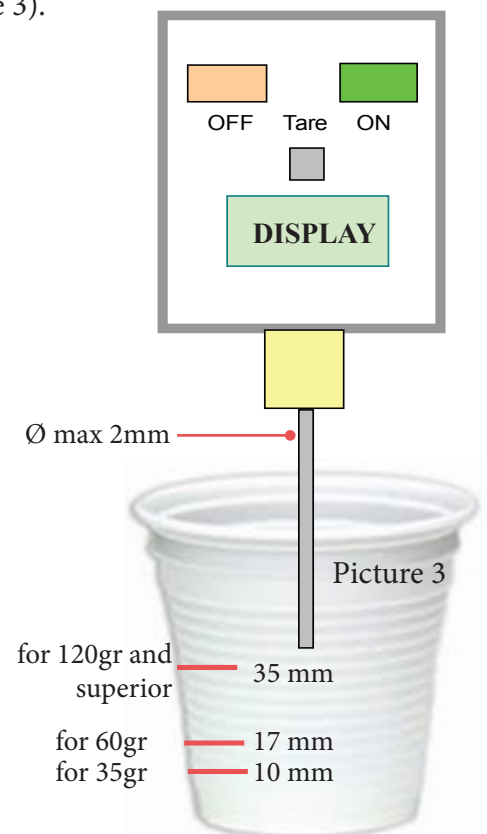
Procedure:

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 bottom. The probe then must be moved in a circular motion for 5/6 rotations. At the end 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 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

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 The power supply does not reach the boiler	Replace the thermostats (if of the One shot type) If they are manual, reset them If they are automatic, they are reset automatically 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

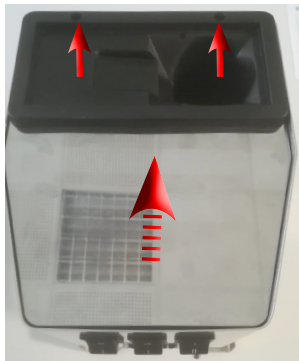
4.1. Outer Shell lid



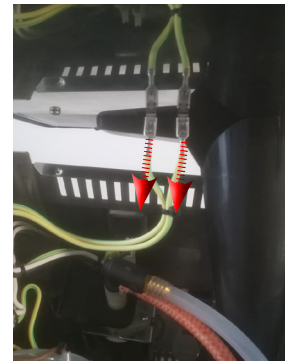
Remove the water tank, the water drip tray, the grille, the top lid, the steam knob and the portafilter.



Upper cover

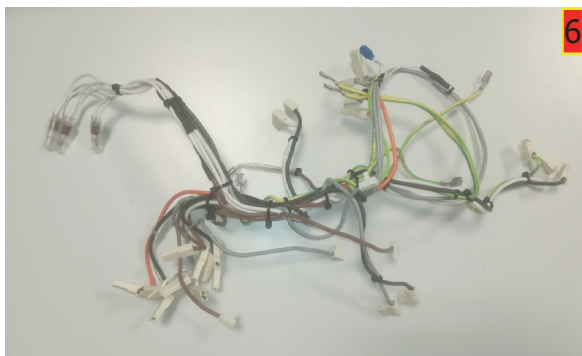
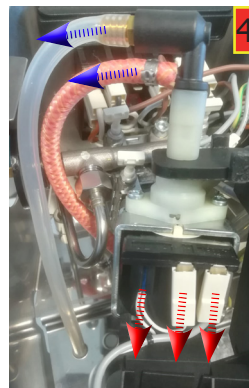
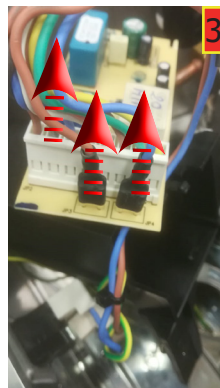
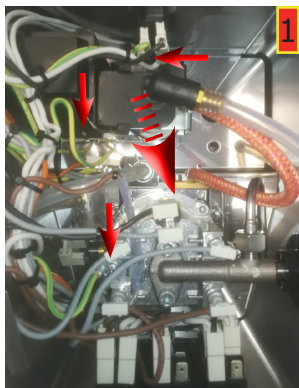


Unscrew the screws highlighted and remove the top cover



Disconnect the electrical connection

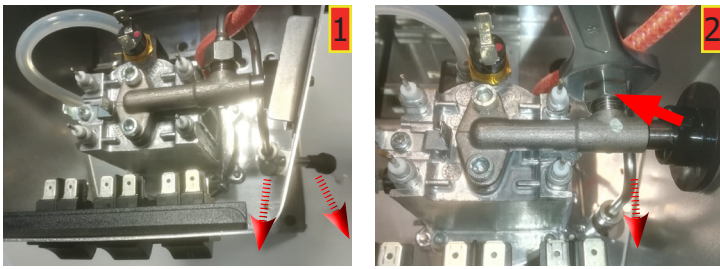
4.2. Pump and electrical connection



N.B.: Marks the lamps for reassembly.

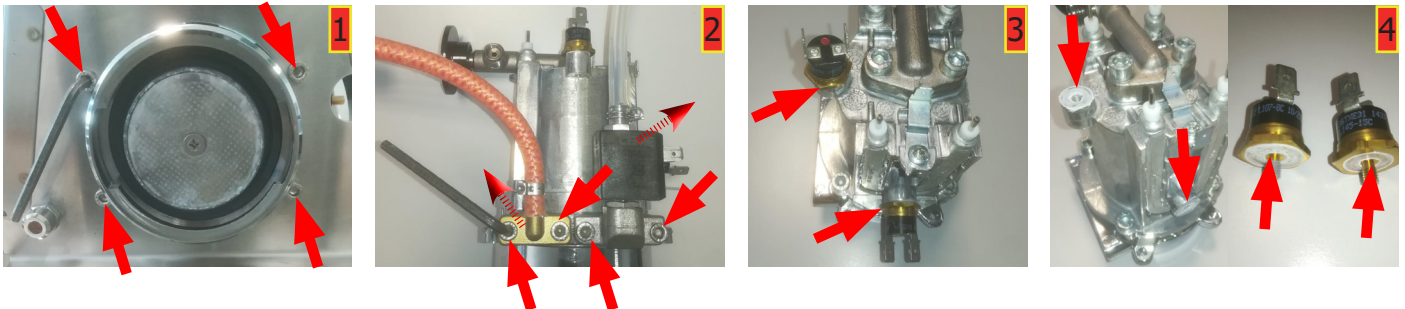
- 1) Unscrew the screws highlighted and remove the pump;
- 2) and 3) Only for SIN035UR, remove the CPU support and disconnect the electrical connection;
- 4) Disconnect the electrical and idraulic connection;
- 5) Disconnect the pump support;
- 6) Disconnect all electrical connection and remove the wiring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

4.3. Steam tube

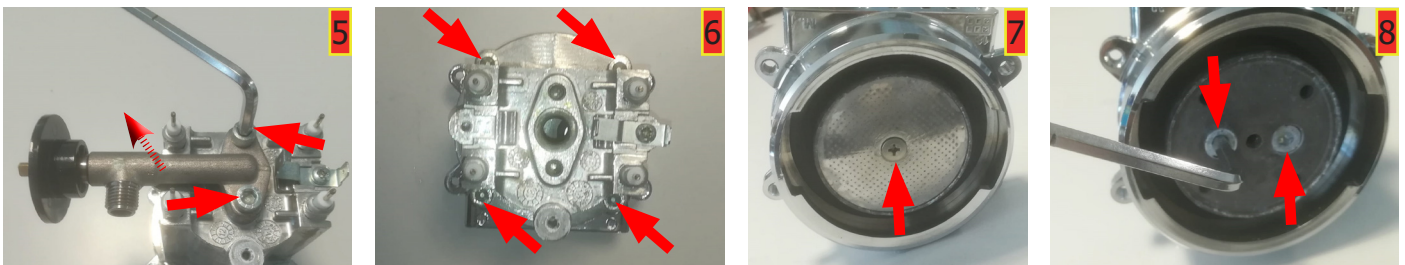


- 1) Disconnect the fork spring and remove the steam lower tube;
- 2) Helping you with a wrench unscrew the hex nut highlighted and remove the steam upper tube.

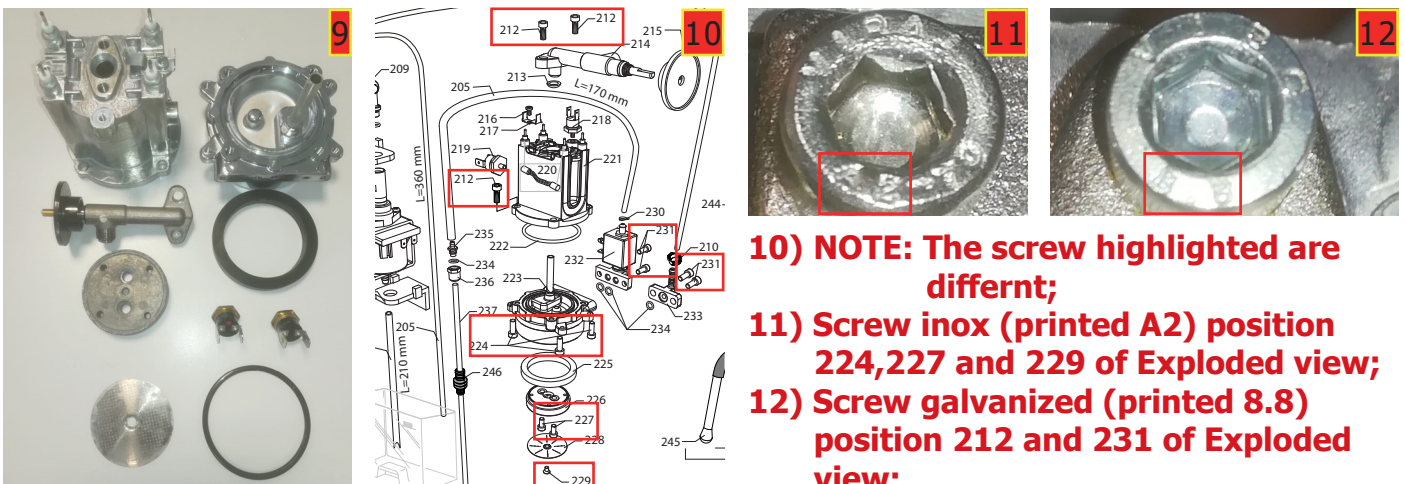
4.4. Boiler



- 1) Helping you with allen key #4 unscrew the screw highlighted and remove the boiler assembly;
- 2) Helping you with allen key #4 unscrew the screw highlighted and remove 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.**

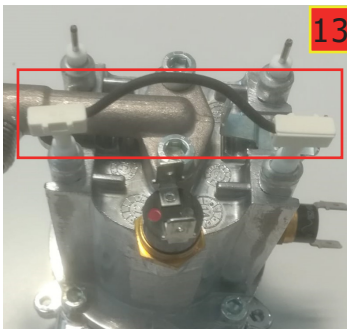


- 5) Helping you with allen key #5 unscrew the screw highlighted and remove the steam faucet;
NOTE: Before reassembling the screw make sure the knob rotates correctly in the casing;
- 6) Helping you with allen key #5 unscrew the screw highlighted and remove the upper boiler;
- 7) unscrew the screw highlighted;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



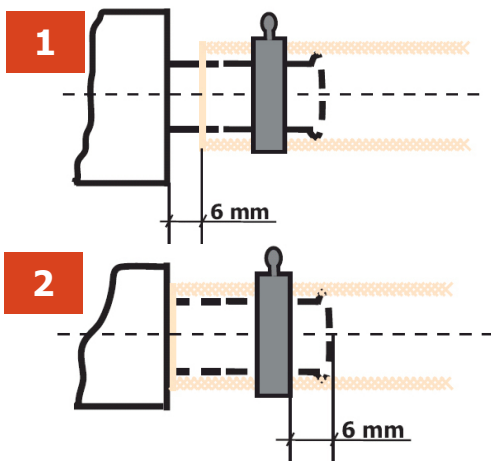
- 10) NOTE: The screw highlighted are differnt;**
- 11) Screw inox (printed A2) position 224,227 and 229 of Exploded view;**
- 12) Screw galvanized (printed 8.8) position 212 and 231 of Exploded view;**

9) Boiler assembly



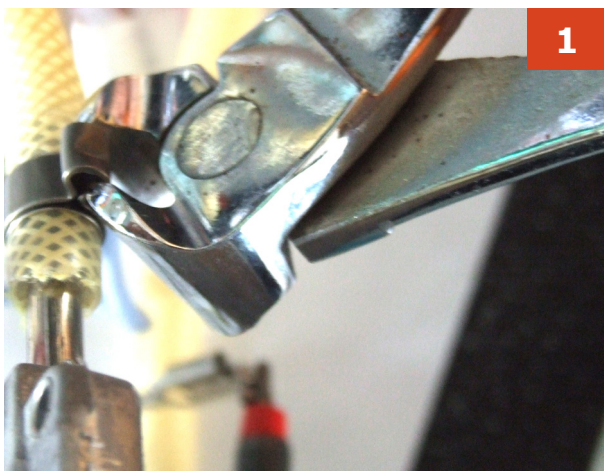
13) NOTE: The cable highlighted is assembled only in the models RI9380/03 and 06 RI9480/11 and 18, see chapter 1.5. Electrical diagram.

4.5. Fitting and removing Oetiker clamps



1) Boiler connection

2) Other connections



Replacing the pipes

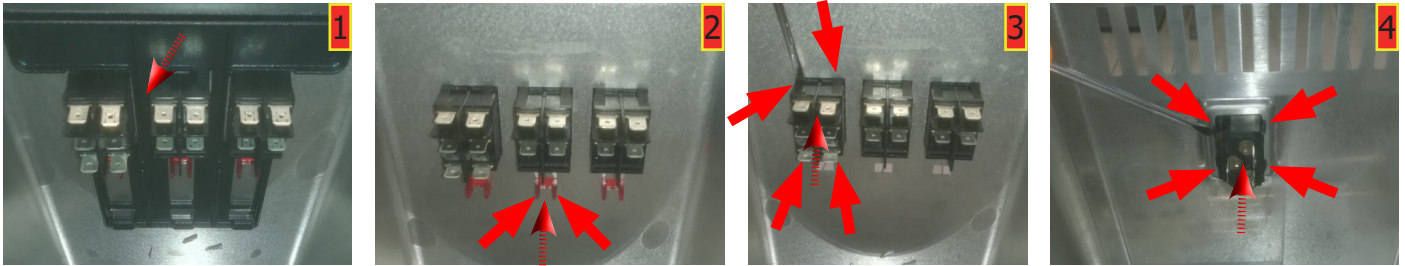
1) Use a suitable pair of pliers to remove the clamp (as shown in the picture)



2) Tighten the clamp as shown in the pictures

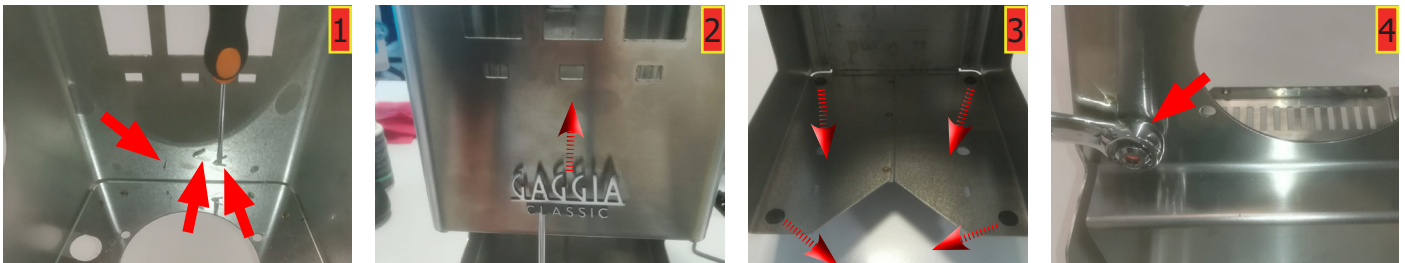
4.6. Other parts

Buttons 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



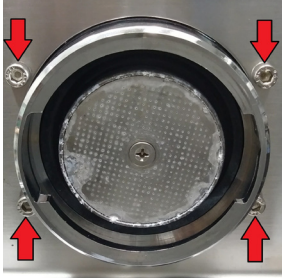
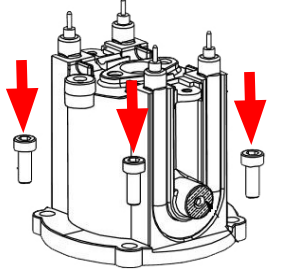
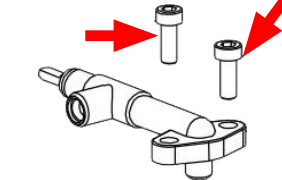
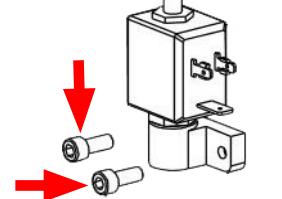
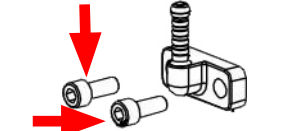

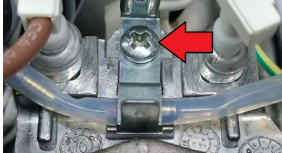
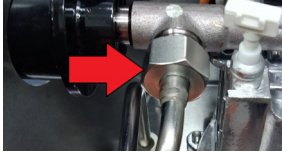
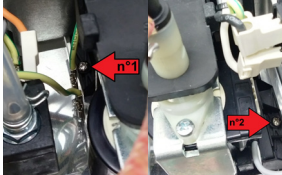
- 1) Helping you with a flat screwdriver lift the side wings of the blende;
- 2) Helping you with a flat screwdriver slide the blende as shown in the image;
- 3) Slip off the feet;
- 4) Helping you with a wrench #14 unscrew the exhaust pipe fitting

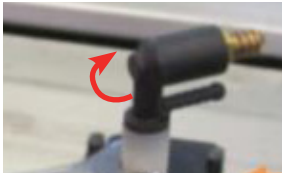
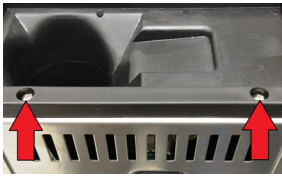
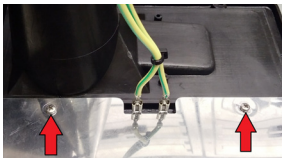
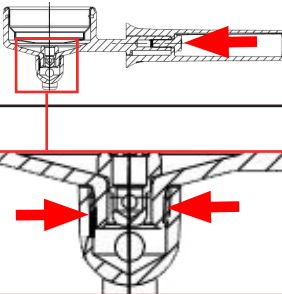
4.7. Tightening torques

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 \pm 0,5
Srew for boiler.	4		6,5 Nm \pm 0,5
Srew for steam faucet.	2		6,5 Nm \pm 0,5
Srew for solenoid valve.	2		5,5 Nm \pm 0,5
Srew for inlet connector.	2		5,5 Nm \pm 0,5
Thermostats.	2		1,0 Nm \pm 0,2
Srew for thermal fuse.	1		2,2 Nm \pm 0,3
Hex nut steam upper tube.	1		6,0 Nm \pm 0,5
Srew for pump support.	2		1,2 Nm \pm 0,1

Screw	Quantity	Image	tightening torque
Safety valve.	1		1,0 Nm \pm 0,1
Srew for funnel.	2		1,5 Nm \pm 0,1
Srew for top cover.	2		0,3 Nm \pm 0,1
Srew for portafilter.	1		3,5 Nm \pm 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 "Loxéal 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.**