Data Sheet and Service Manual
EC900 – DEDICA MAESTRO
EC950 – DEDICA MAESTRO PLUS
Date: 04.06.2023





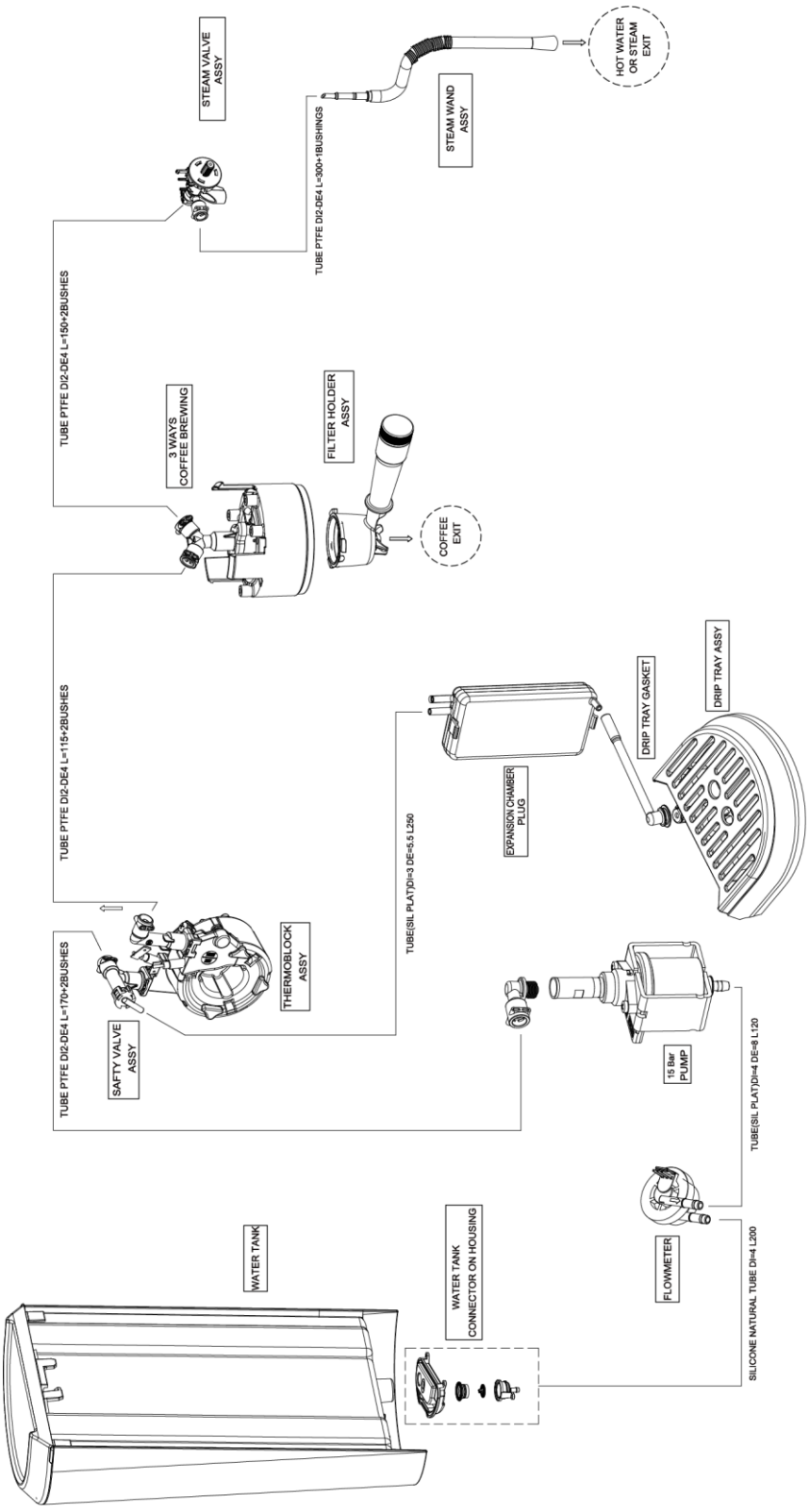
Summary

1 TECHNICAL DATA....3
2 EC900: HYDRAULIC DIAGRAM....4
3 EC950: HYDRAULIC DIAGRAM....5
4 EC900: WIRING DIAGRAM - INT VERSION....6
5 EC900: WIRING DIAGRAM - US/CA VERSION....8
6 EC950: WIRING DIAGRAM - INT VERSION....10
7 EC950: WIRING DIAGRAM - US / CA VERSION....12
7.1 EC900: COFFEE DELIVERY....14
7.2 EC900: HOT WATER DELIVERY....15
7.3 EC900: STEAM DELIVERY....16
7.4 EC950: COFFEE DELIVERY....17
7.5 EC950: STEAM DELIVERY....18
8 TEST MODE....19
8.1 LOAD TEST MODE....19
8.2 STATISTIC MODE....20

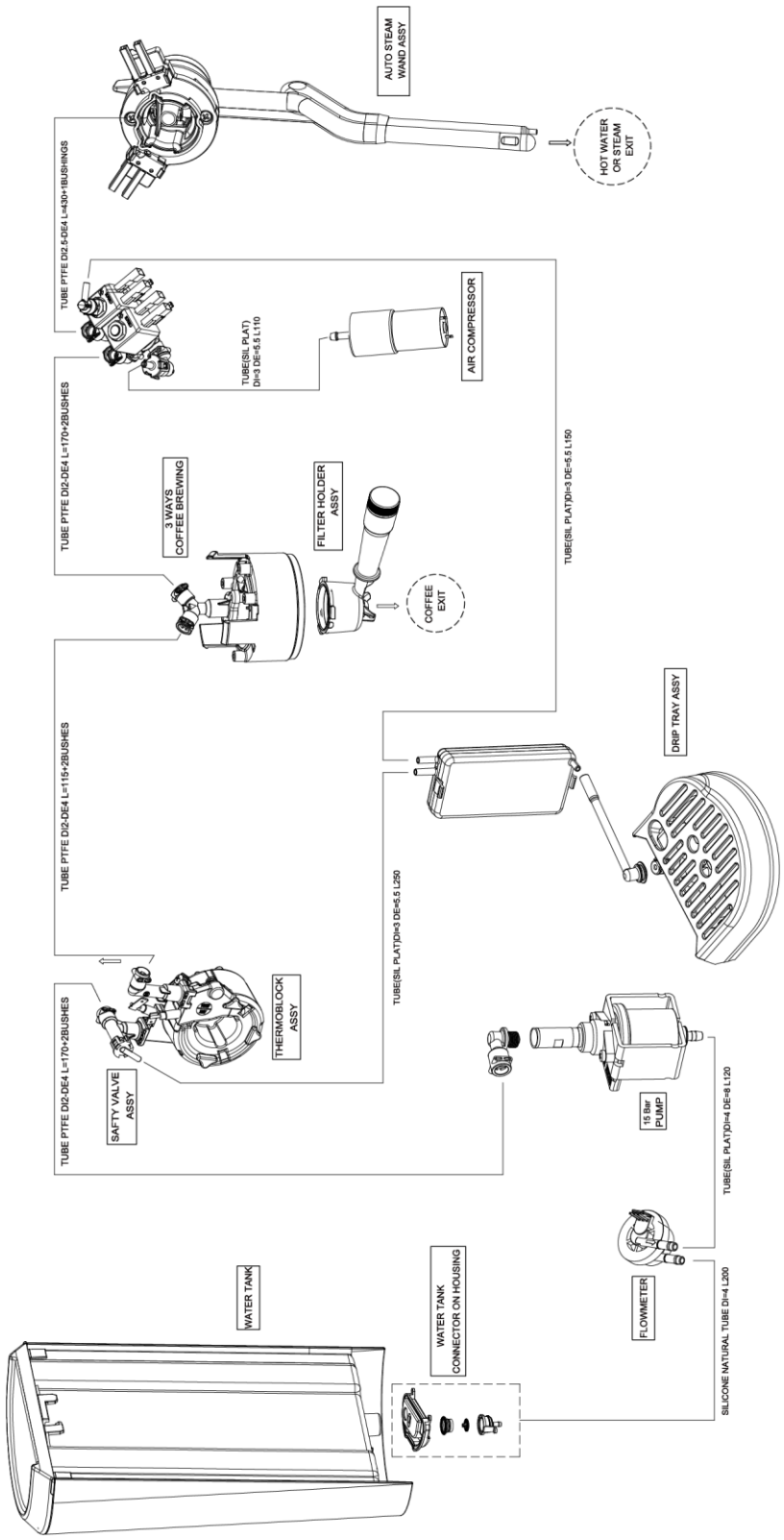
1 TECHNICAL DATA

GENERAL INFO	EC900	EC950
Voltage – Frequency – Input Power	220-240 V – 50 / 60 Hz – 1450 W 120 V – 60 Hz – 1450 W	220-240 V – 50 / 60 Hz – 1450 W 120 V – 60 Hz – 1450 W
Stand-by Button OFF	≈ 0.23 Wh	≈ 0.23 Wh
COMPONENTS		
Pump	220-240 V AC – 48 W – 15 bar 120 V AC – 52 W – 15 bar	220-240 V AC – 48 W – 15 bar 120 V AC – 52 W – 15 bar
Solenoid valves (EV1, EV2)	Not present	EV1 – 2-ways solenoid valve – AC EV2 – 3-ways solenoid valve – AC
Compressor	Not present	12 V DC
Thermoblock:		
Temperature probe	NTC sensor	NTC sensor
Thermal fuse TCO	192 °C	192 °C
Heating element	230 V AC – 1400 W 120 V AC – 1400 W	230 V AC – 1400 W 120 V AC – 1400 W

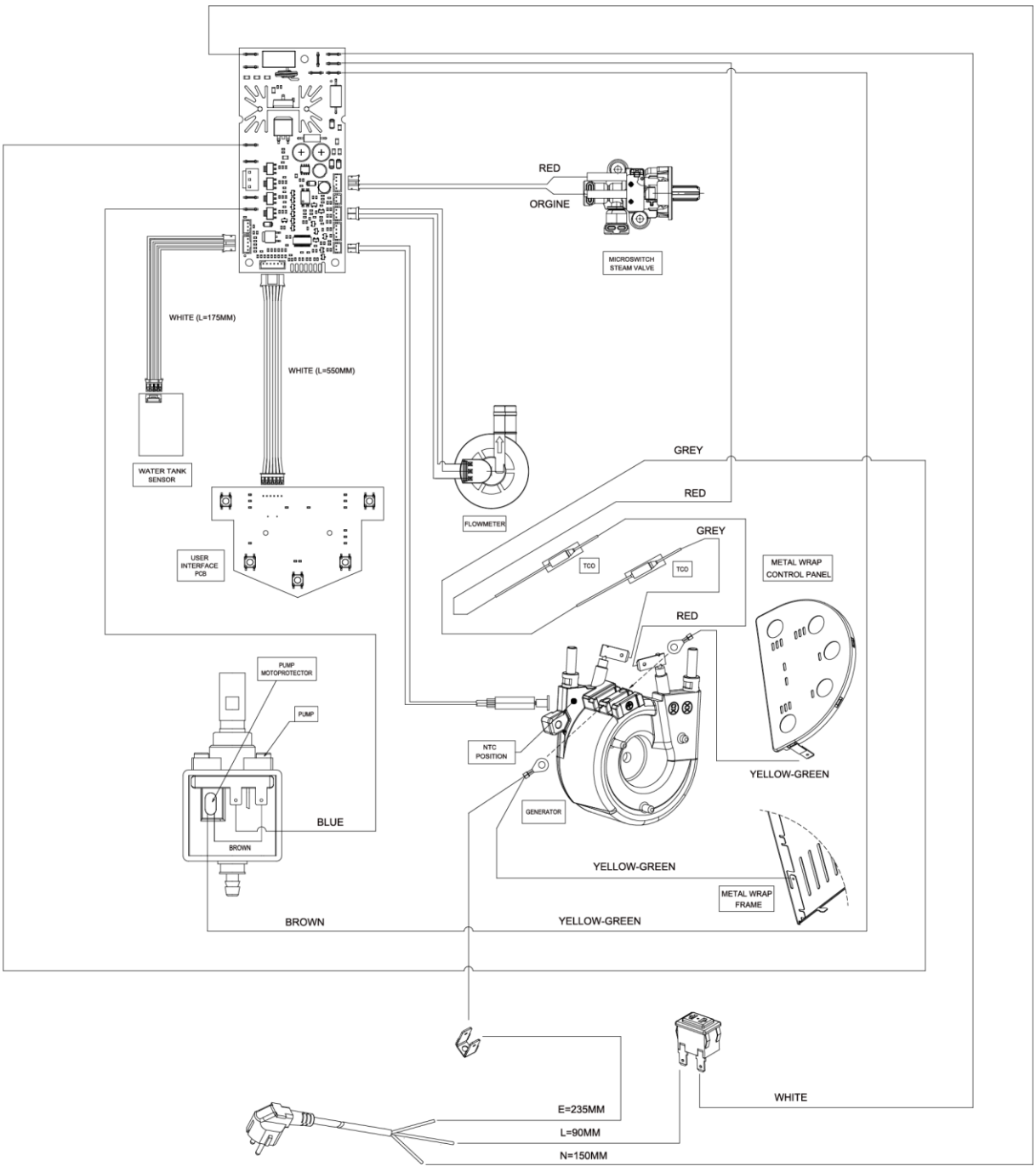
2 EC900: HYDRAULIC DIAGRAM

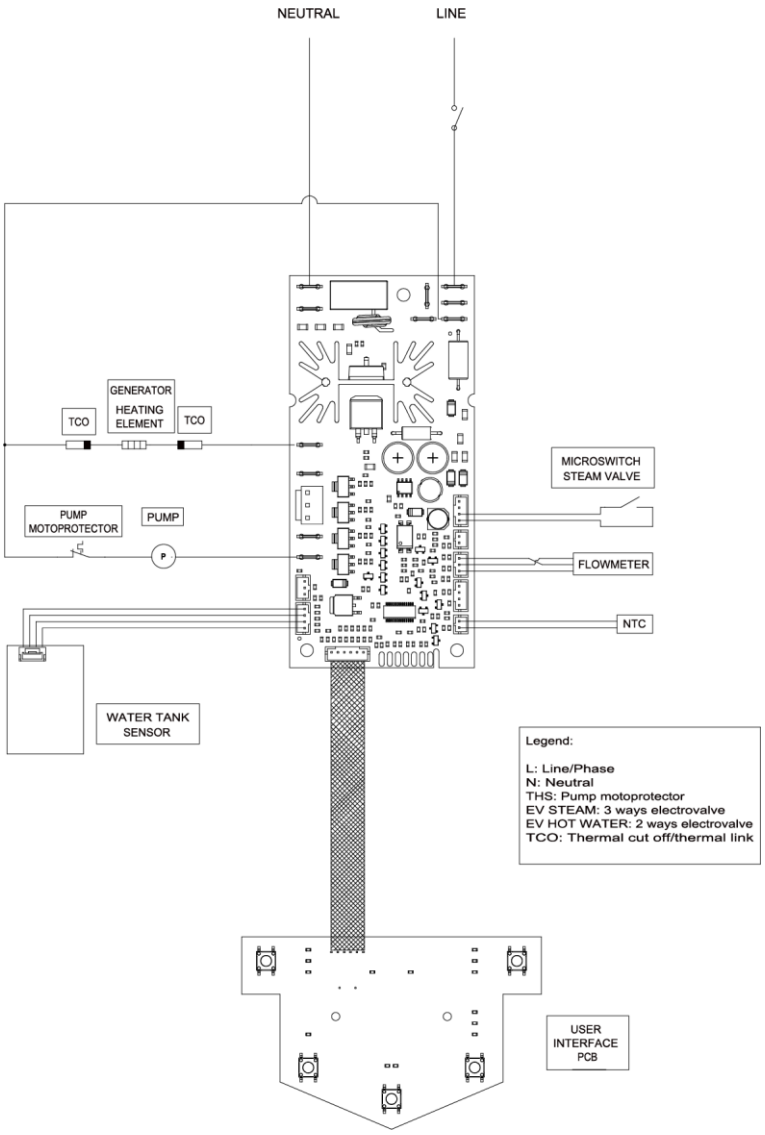


3 EC950: HYDRAULIC DIAGRAM

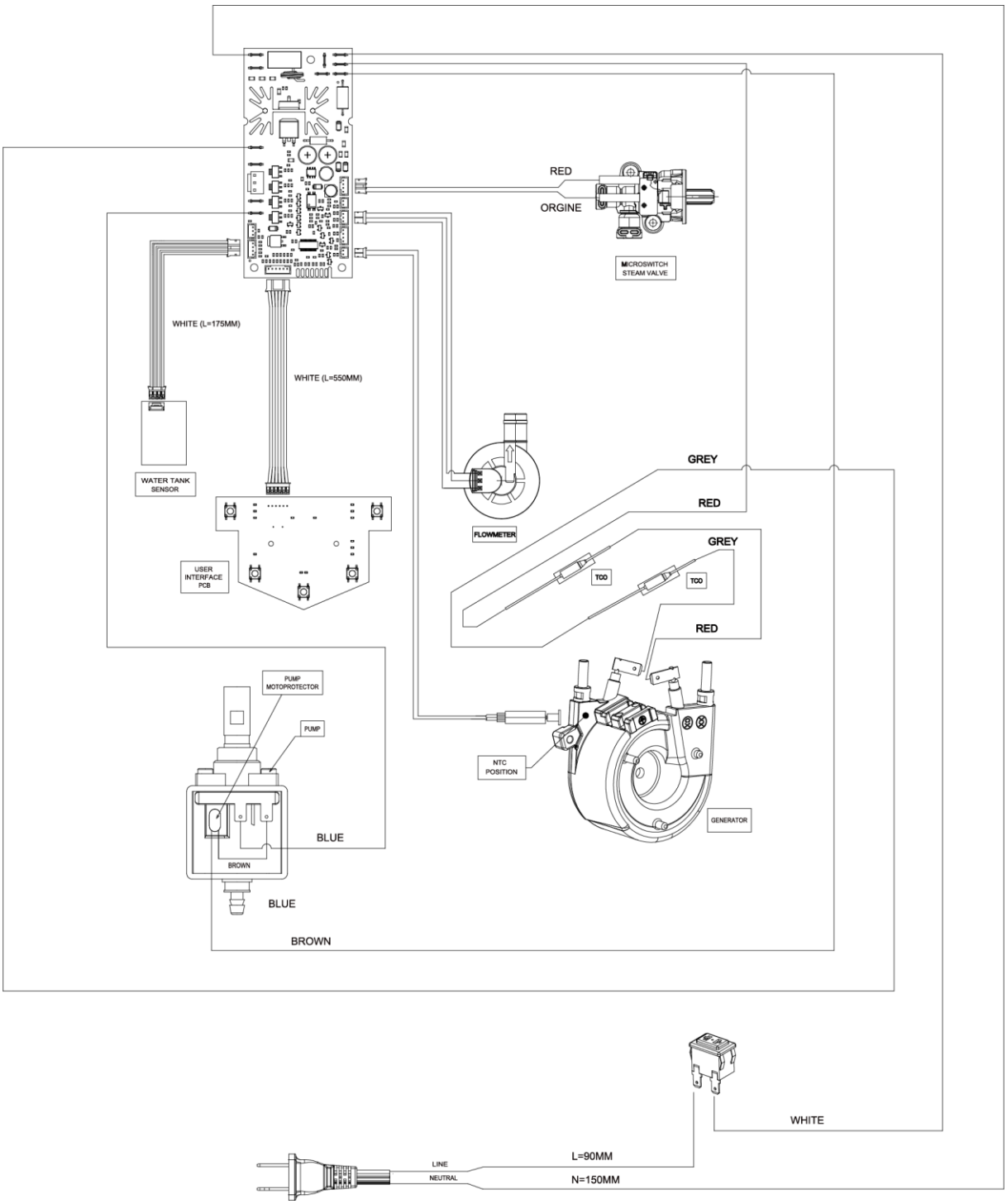


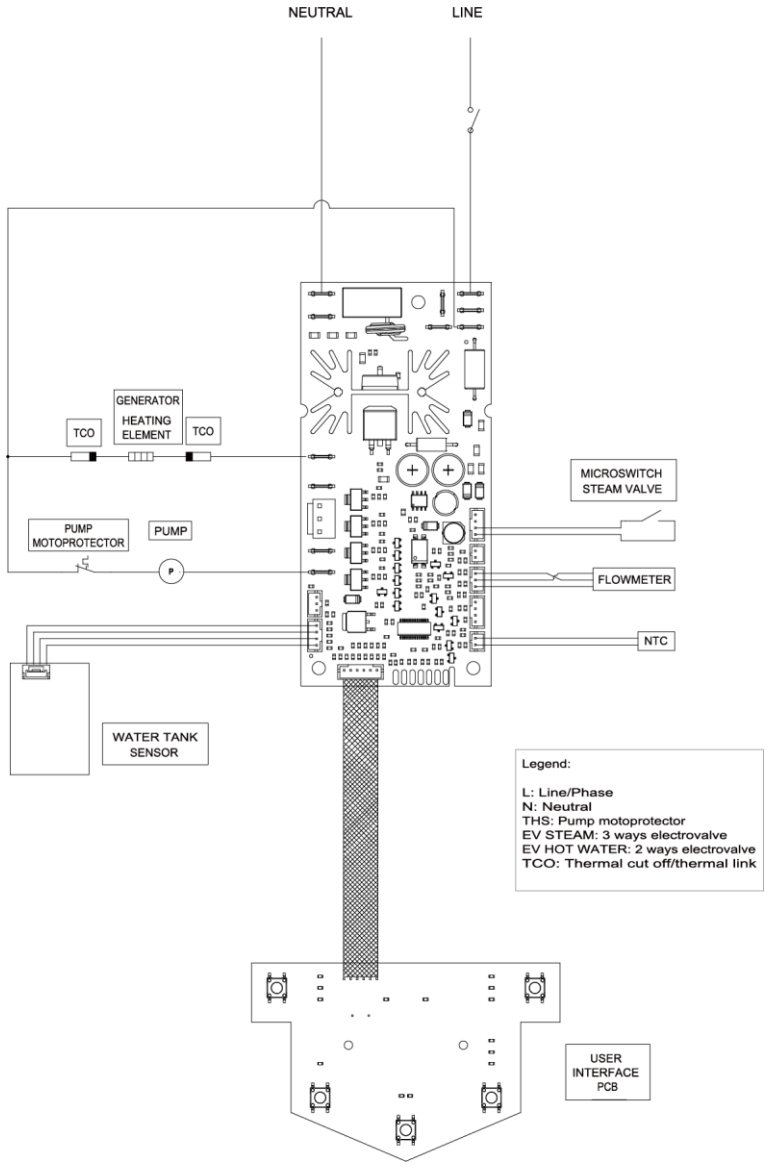
4 EC900: WIRING DIAGRAM - INT VERSION




NEUTRAL
LINE
GENERATOR
HEATING ELEMENT
TCO
TCO
MICROSWITCH STEAM VALVE
PUMP MOTOPROTECTOR
PUMP
P
FLOWMETER
NTC
WATER TANK SENSOR
Legend:
L: Line/Phase
N: Neutral
THS: Pump motoprotector
EV STEAM: 3 ways electrovalve
EV HOT WATER: 2 ways electrovalve
TCO: Thermal cut off/thermal link
USER INTERFACE PCB

5 EC900: WIRING DIAGRAM - US/CA VERSION

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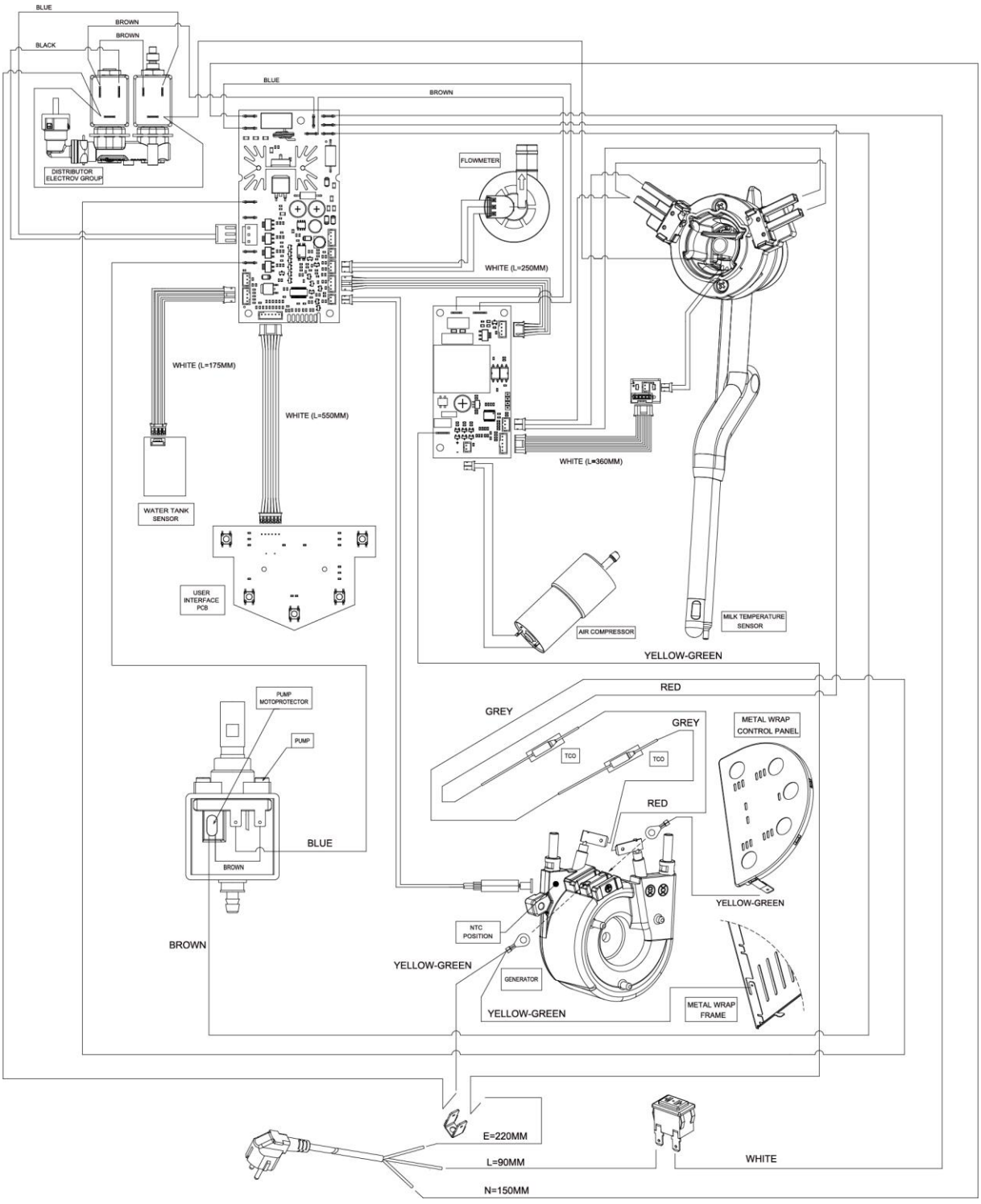
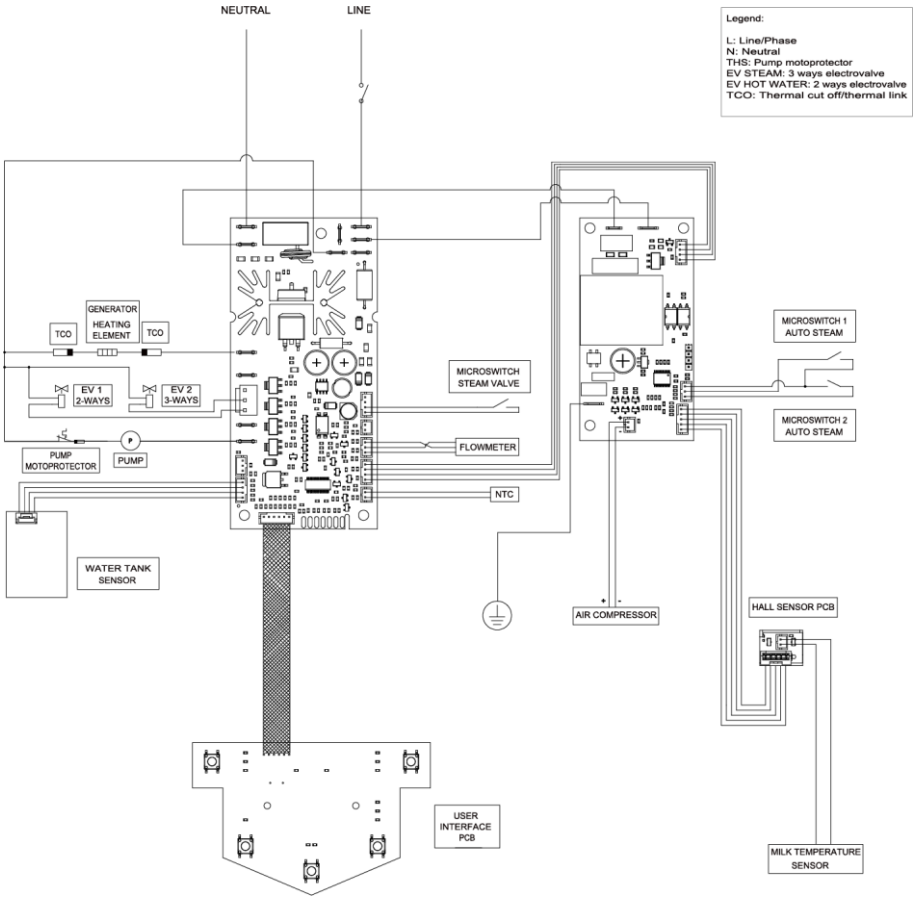
6 EC950: WIRING DIAGRAM - INT VERSION

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HEATING ELEMENT
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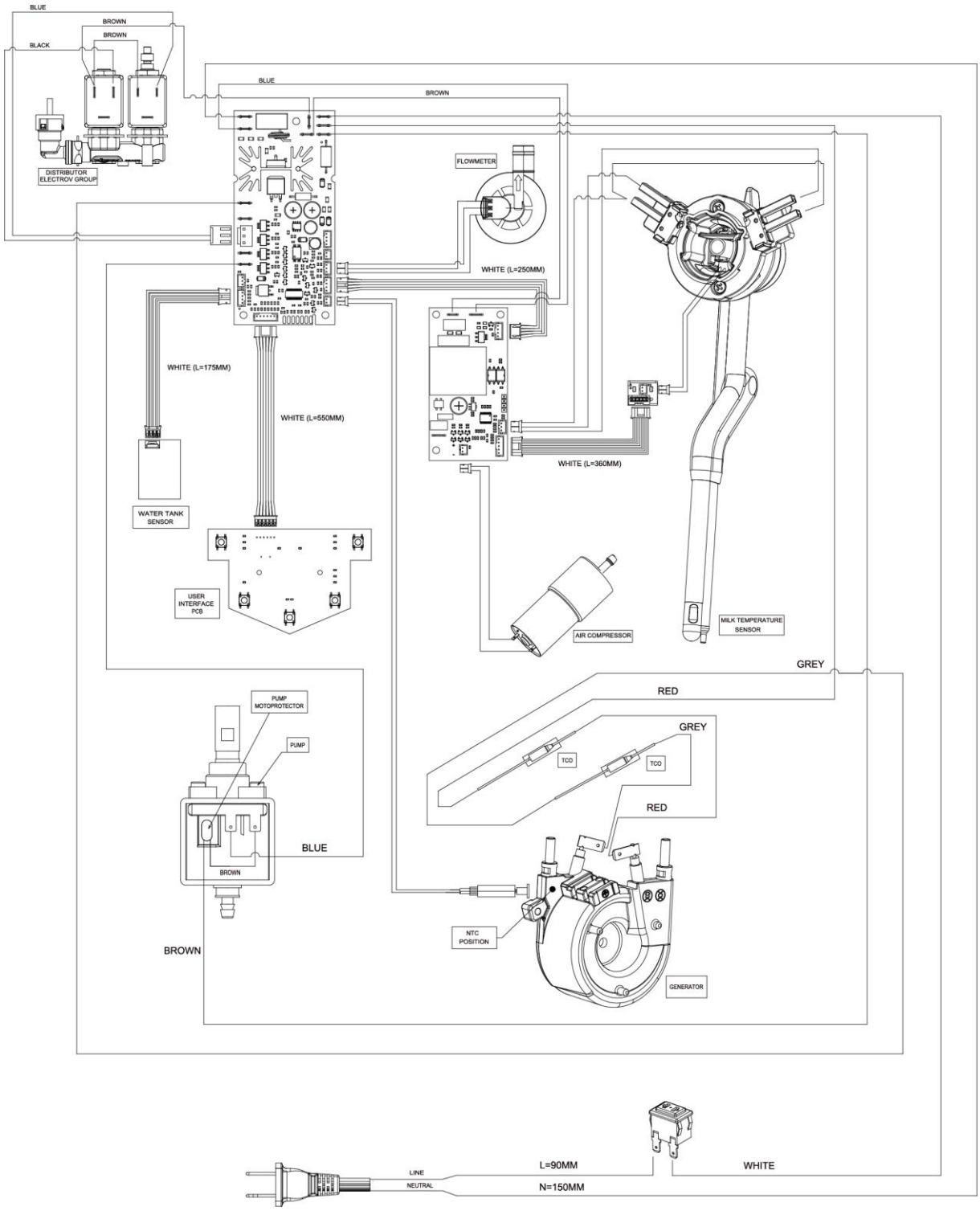
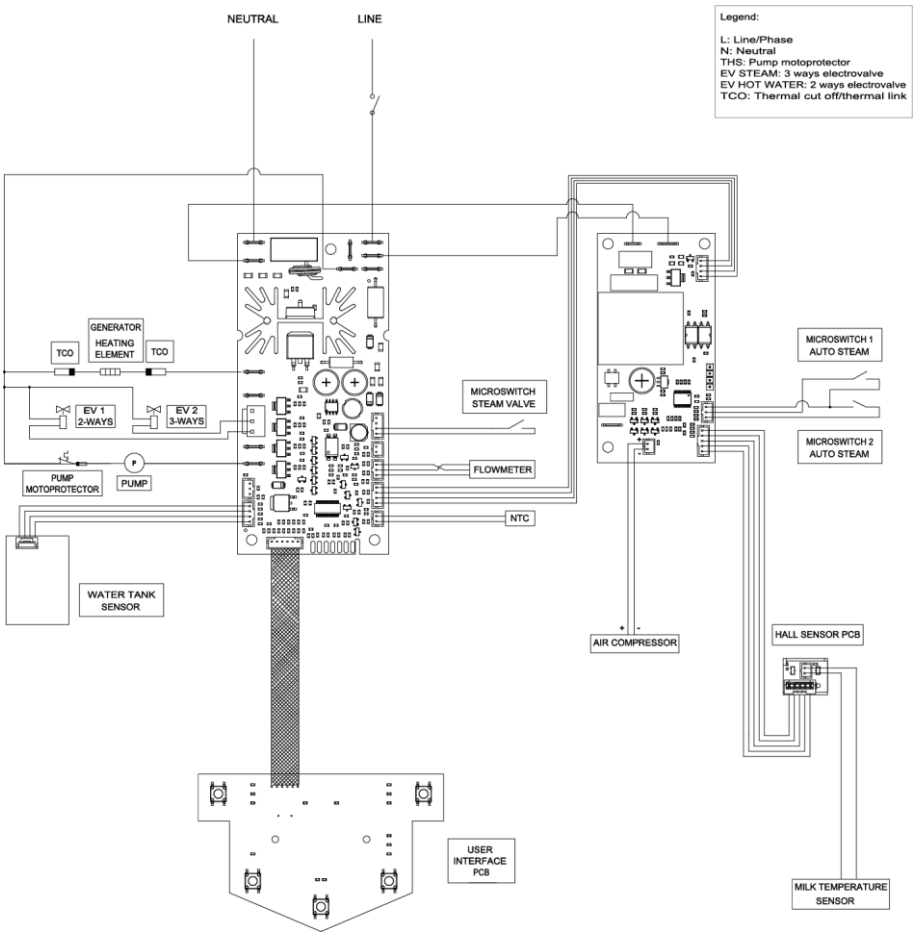
EV 1 2-WAYS
EV 2 3-WAYS
PUMP MOTOPROTECTOR
PUMP
WATER TANK SENSOR
MICROSWITCH STEAM VALVE
FLOWMETER
NTC
MICROSWITCH 1 AUTO STEAM
MICROSWITCH 2 AUTO STEAM
AIR COMPRESSOR
HALL SENSOR PCB
USER INTERFACE PCB
MILK TEMPERATURE SENSOR

7 EC950: WIRING DIAGRAM - US / CA VERSION

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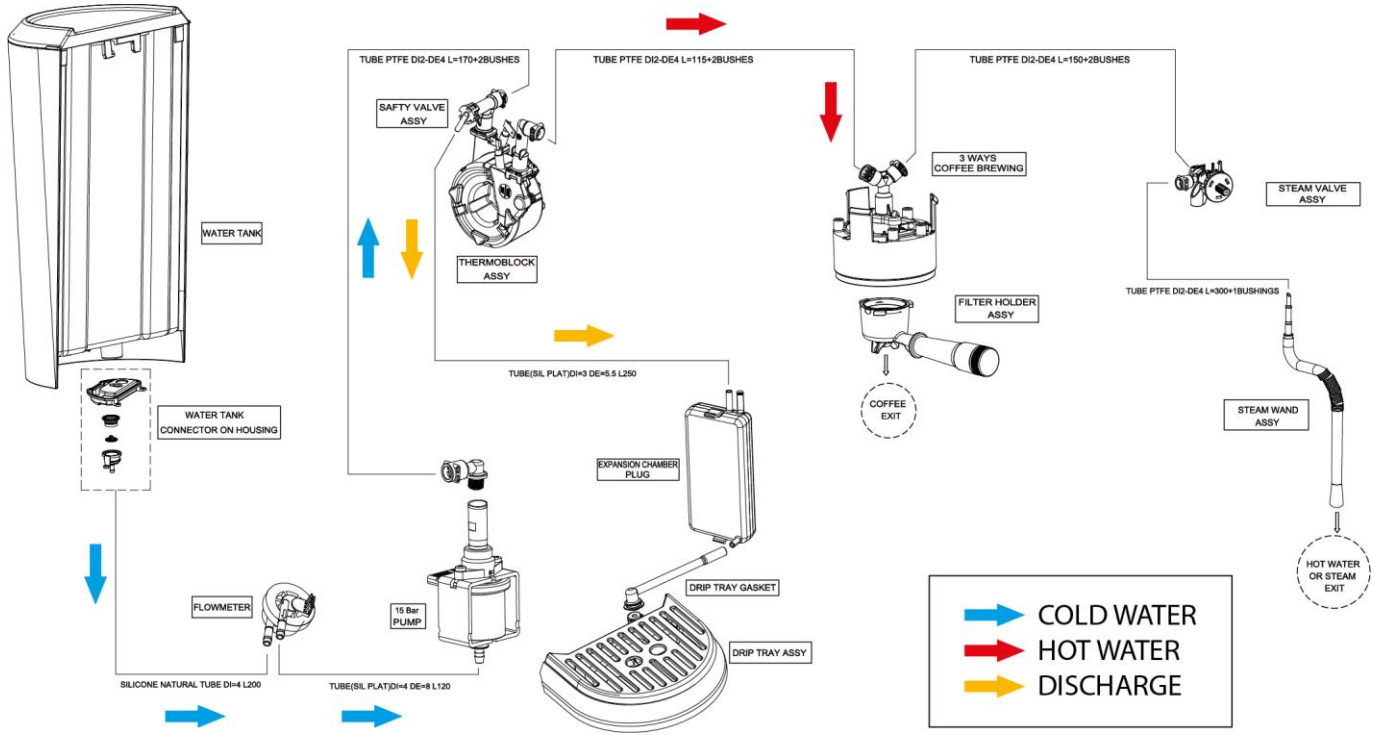
MILK TEMPERATURE SENSOR

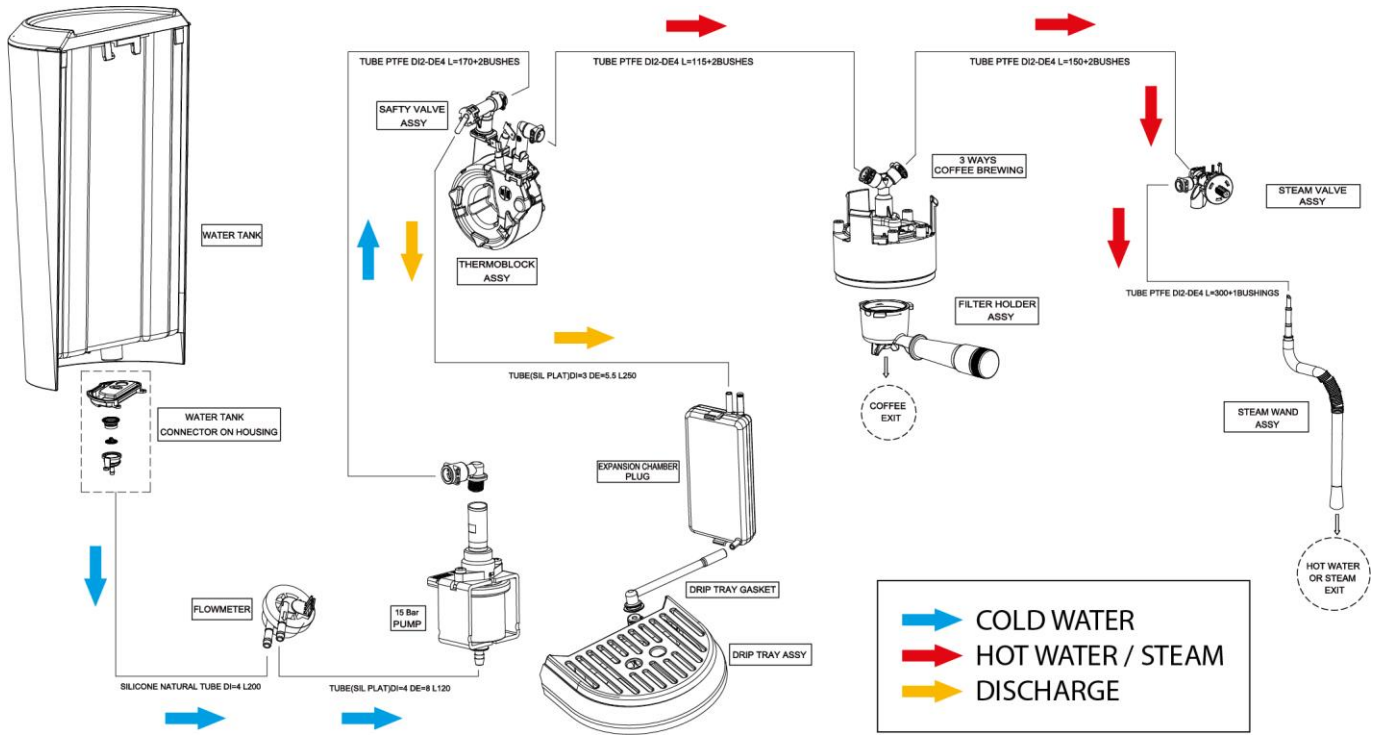
7.1 EC900: COFFEE DELIVERY



Espresso delivery steps:

1. Thermoblock is activated
2. Pump is activated for a couple of seconds for pre-infusion
3. Pump restarts for coffee delivering
4. Pump stops, thermoblock is deactivated

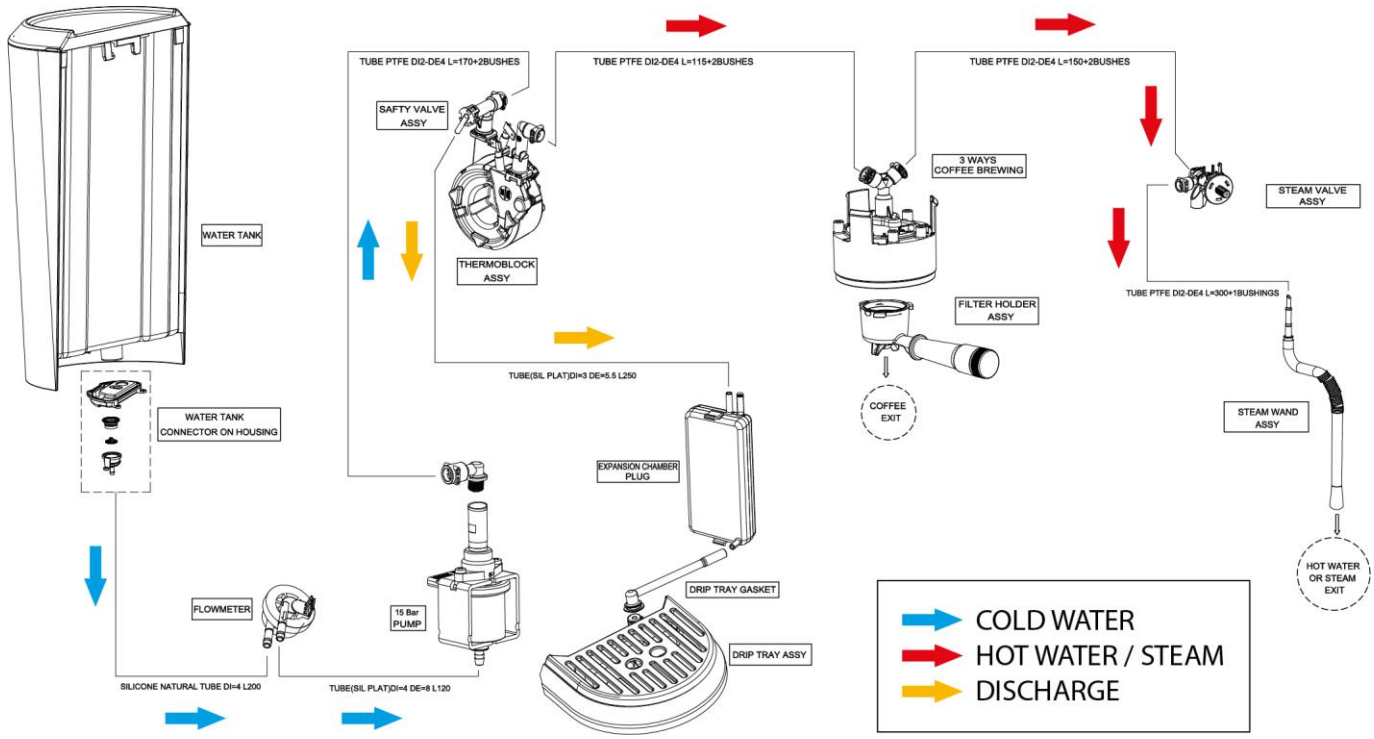
7.2 EC900: HOT WATER DELIVERY



Steam delivery steps:

1. Thermoblock is activated
2. Pump is activated in <u>fast</u> pulsing mode for a certain timing
3. Pump stops, thermoblock is deactivated

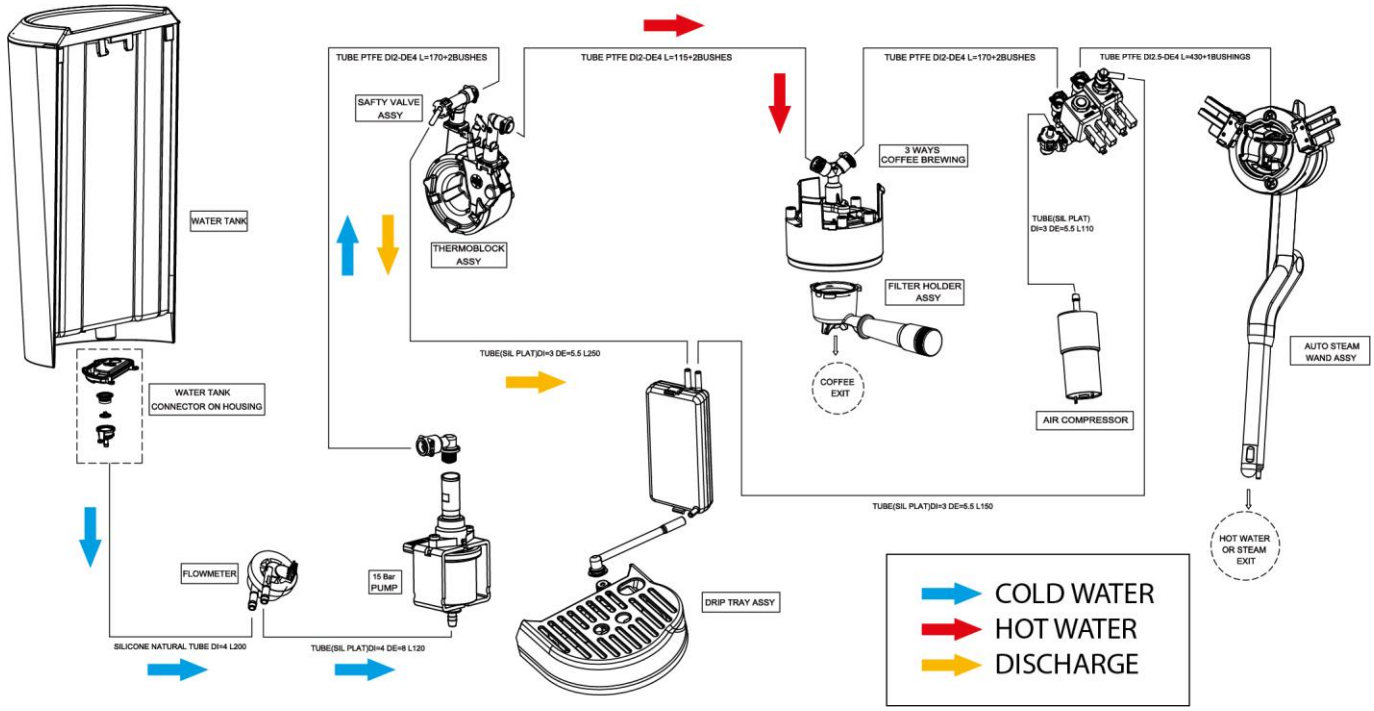
7.3 EC900: STEAM DELIVERY



Steam delivery steps:

1. Thermoblock is activated
2. Pump is activated in slow pulsing mode for a certain timing
3. Pump stops, thermoblock is deactivated

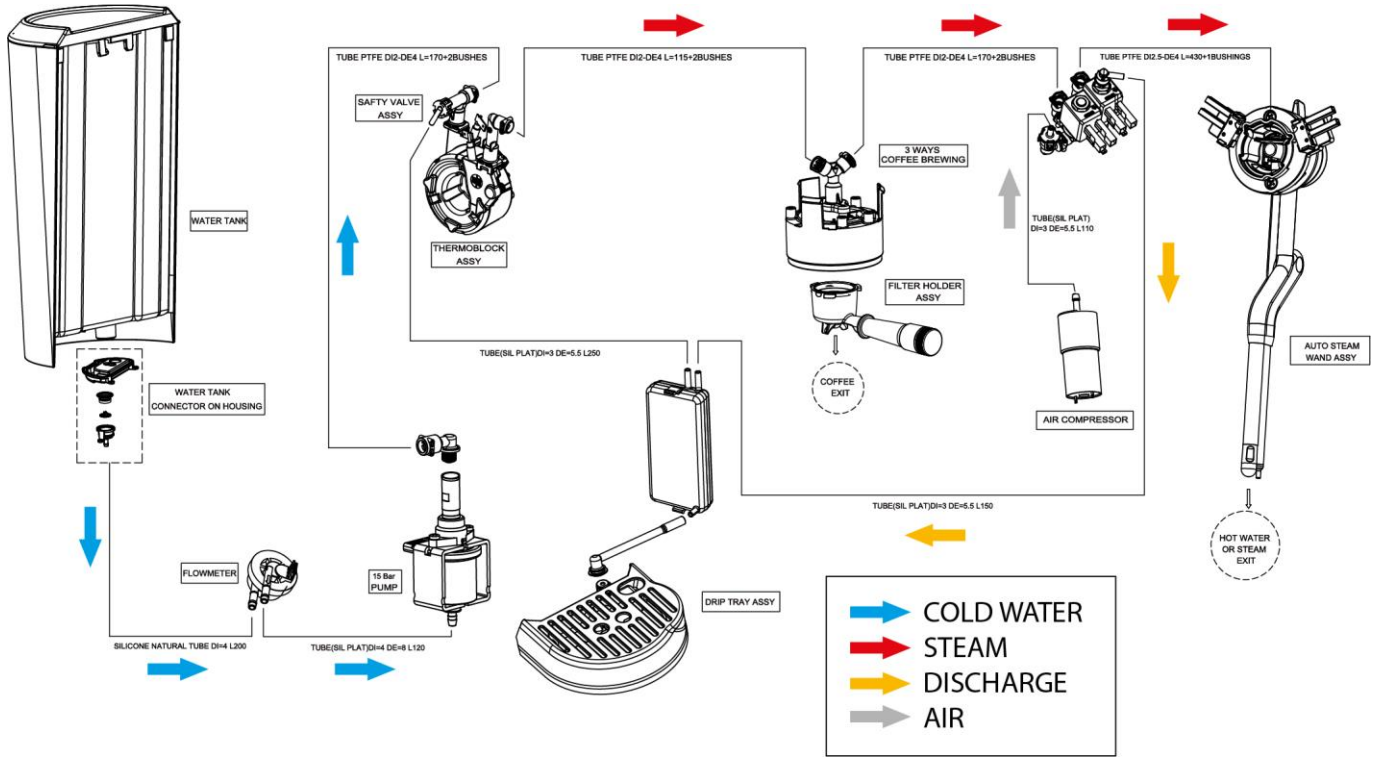
7.4 EC950: COFFEE DELIVERY



Espresso delivery steps:

1. Thermoblock is activated
2. Pump is activated for a couple of seconds for pre-infusion
3. Pump restarts for coffee delivering
4. Pump stops, thermoblock is deactivated

7.5 EC950: STEAM DELIVERY



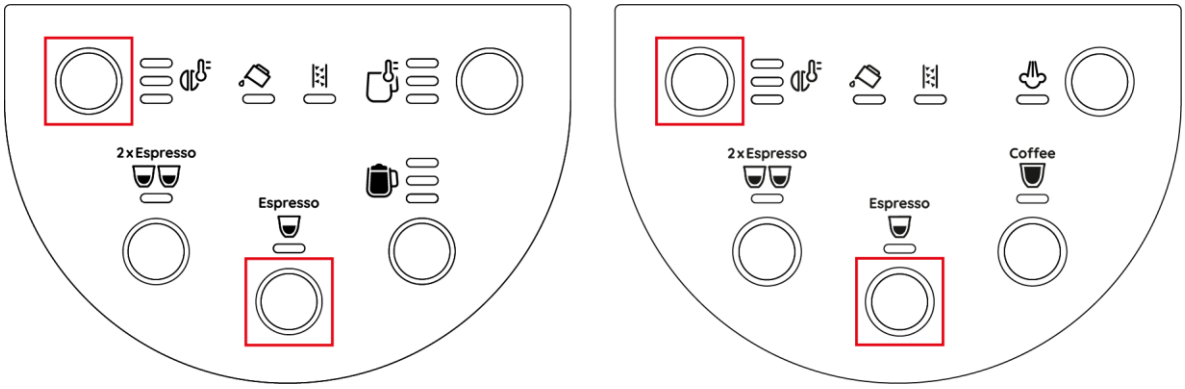
Steam delivery steps:

1. Thermoblock is activated
2. Pump is activated in slow pulsing mode for a certain timing
3. EV1 is activated
4. EV2 remains deactivated for some seconds in order to discharge the initial steam (high humidity)
5. EV2 is activated to let the steam go to the steam wand
6. When the milk reaches 30° C, the compressor is activated for 2 s
7. When the milk reaches a certain temperature, the compressor is activated in order to froth the milk
8. Pump and compressor stops, thermoblock, EV2 (first) and EV1 (second) are deactivated.

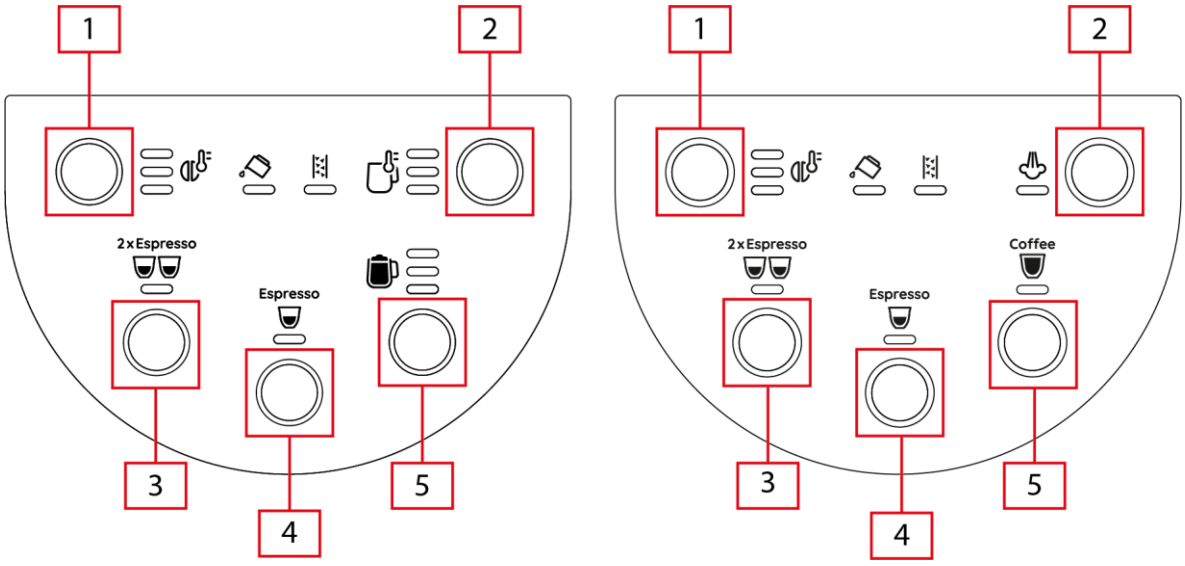
8 TEST MODE

8.1 LOAD TEST MODE

1. The appliance must be plugged-in with the main switch in position 0.
2. Press and hold **Espresso** button + **Infusion temperature** button.
3. Put the main switch in position I.



The **Water tank indicator** light and the **Descale indicator** light blink (slow blinking) to confirm the correct access in the LOAD TEST MODE.

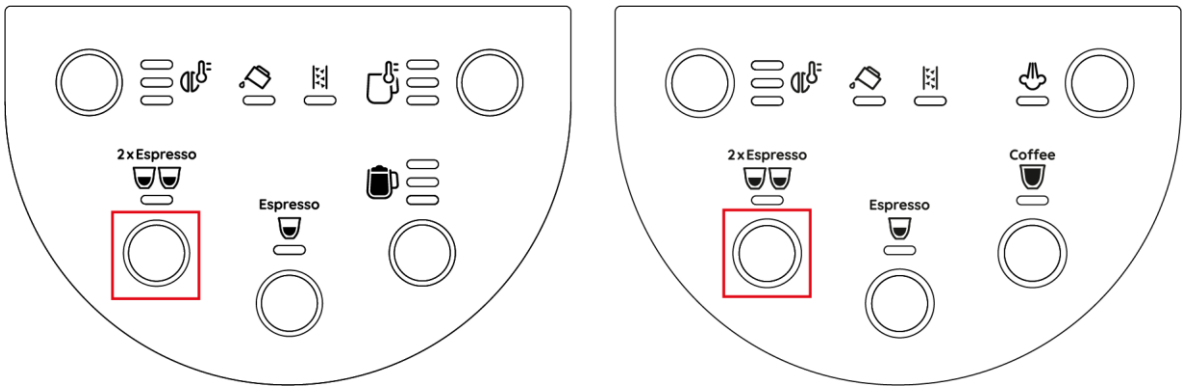


Press the desired button to activate the corresponding load:

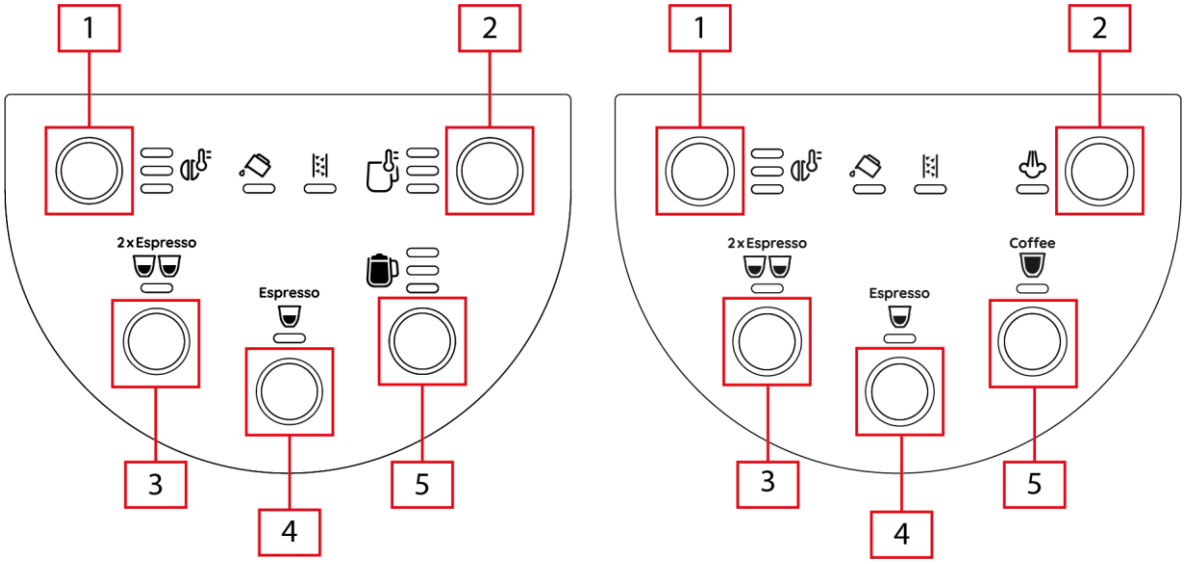
1. **Infusion temperature** button: allows to activate the solenoid valve EV2
2. **Milk temperature** button / **Steam** button: allows to activate the compressor
3. **2 x Espresso** button: allows to activate the thermoblock
4. **Espresso** button: allows to activate the pump
5. **Froth level** button / **Coffee** button: allows to activate the solenoid valve EV1

8.2 STATISTIC MODE

1. The appliance must be plugged-in with the main switch in position 0.
2. Press and hold **2 x Espresso** button.
3. Put the main switch in position I.



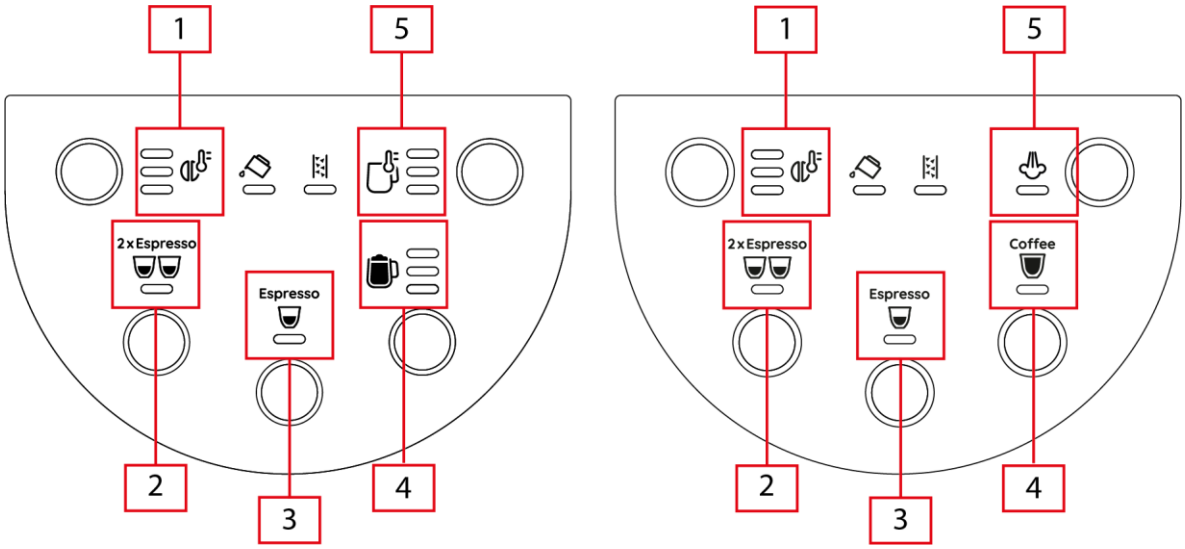
The **Water tank indicator** light and the **Descale indicator** light blink (fast blinking for **Water tank indicator** light, slow blinking for **Descale indicator** light) to confirm the correct access in the STATISTIC MODE.



Press the desired button to display the corresponding statistics data:

1. **Infusion temperature** button: compressor activation total time (1 unity = 1 minute)
2. **Milk temperature** button / **Steam** button: total number of steam production
3. **2 x Espresso** button: absolute water quantity (litres)
4. **Espresso** button: total number of coffee beverages (Espresso + 2 x Espresso + Coffee)
5. **Froth level** button / **Coffee** button: total number of descaling procedure done

After having pressed the desired button, the appliance will display the corresponding statistic value with the sequential flashing of the below lights:



1. **Infusion temperature** light: tens of thousands (10k)
2. **2 x Espresso** light: thousands (1000)
3. **Espresso** light: hundreds (100)
4. **Froth level** light / **Coffee** light: tens (10)
5. **Milk temperature** light / **Steam** light: units (1)