

EC9885 – LA SPECIALISTA MAESTRO



DATA SHEET AND SERVICE MANUAL



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1. EC9885: Technical Data

1.1. Rating Labels (INT, AU/NZ, CN and US/CA Versions)



Rating Label for EC9885 (INT, AU/NZ, CN and US/CA Versions)

1.2. Pump, Grinder, Solenoid Valves Specifications

COMPONENT	SPECIFICATIONS
Pump	CEME 230Vac – 56W – 19Bar (INT, AU/NZ, CN) CEME 120Vac – 55W – 19Bar (US/CA)
Grinder Motor	230Vac (INT, AU/NZ, CN) 120Vac (US/CA)
Solenoid Valves EV0÷EV6	230Vac (INT, AU/NZ, CN) 120Vac (US/CA)

1.3. Thermoblock Specifications

COMPONENT	SPECIFICATIONS
Temperature Probe	NTC Sensor
Thermal Fuses (TCOs)	192°C
Heating Element	230Vac – 1400W – R≈38Ohm (INT, AU/NZ, CN) 120Vac - 1400W - R≈110hm (US/CA)

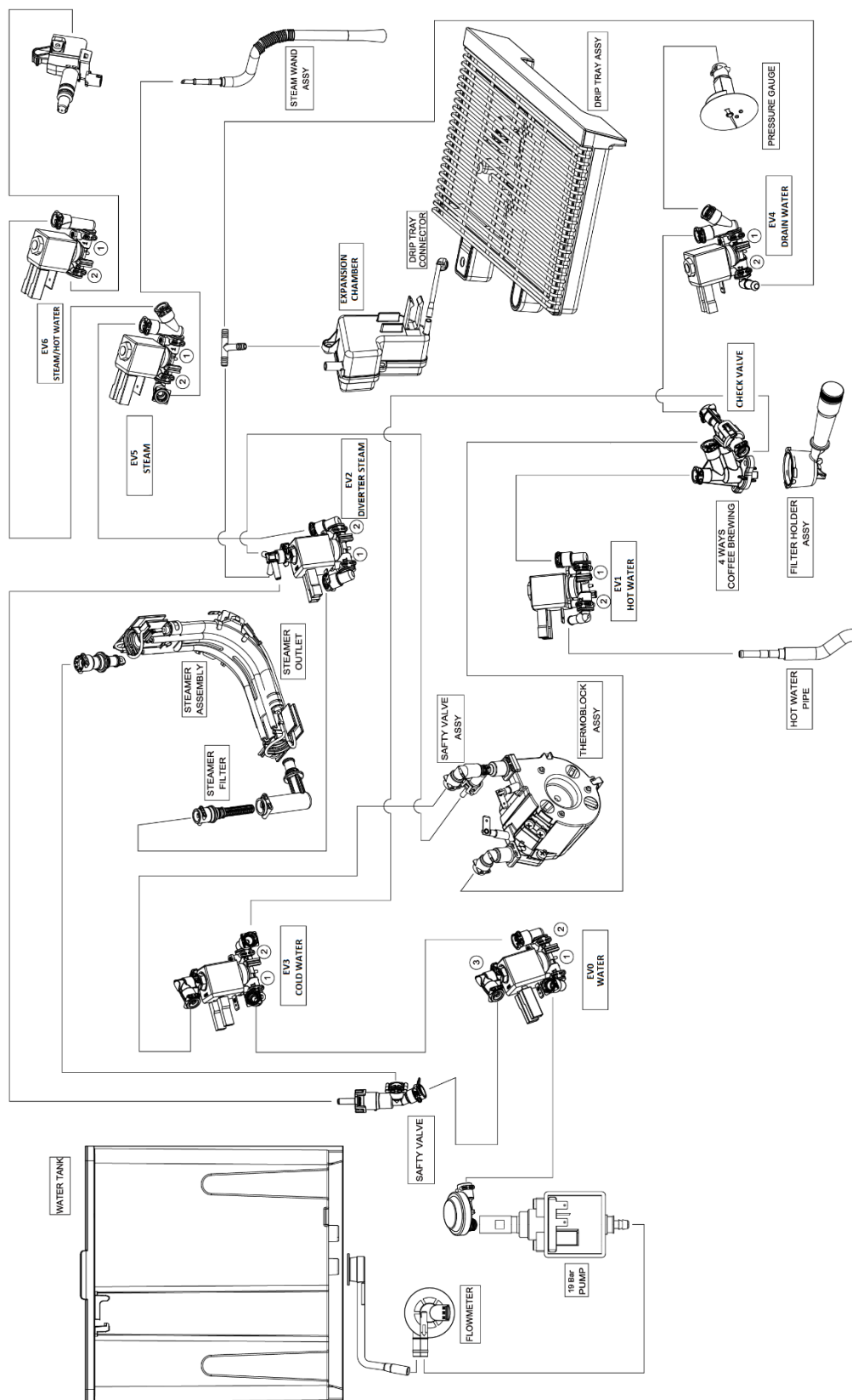
1.4. Steamer Specifications

COMPONENT	SPECIFICATIONS
Temperature Probe	NTC Sensor
Thermal Fuses (TCOs)	318°C
Heating Element	230Vac – 1070W (2x535W) – R≈50Ohm (INT, AU/NZ, CN) 120Vac – 1070W (2x535W) – R≈14Ohm (US/CA)

1.5. NTC Resistance/Temperature Characteristics (Thermoblock and Steamer)

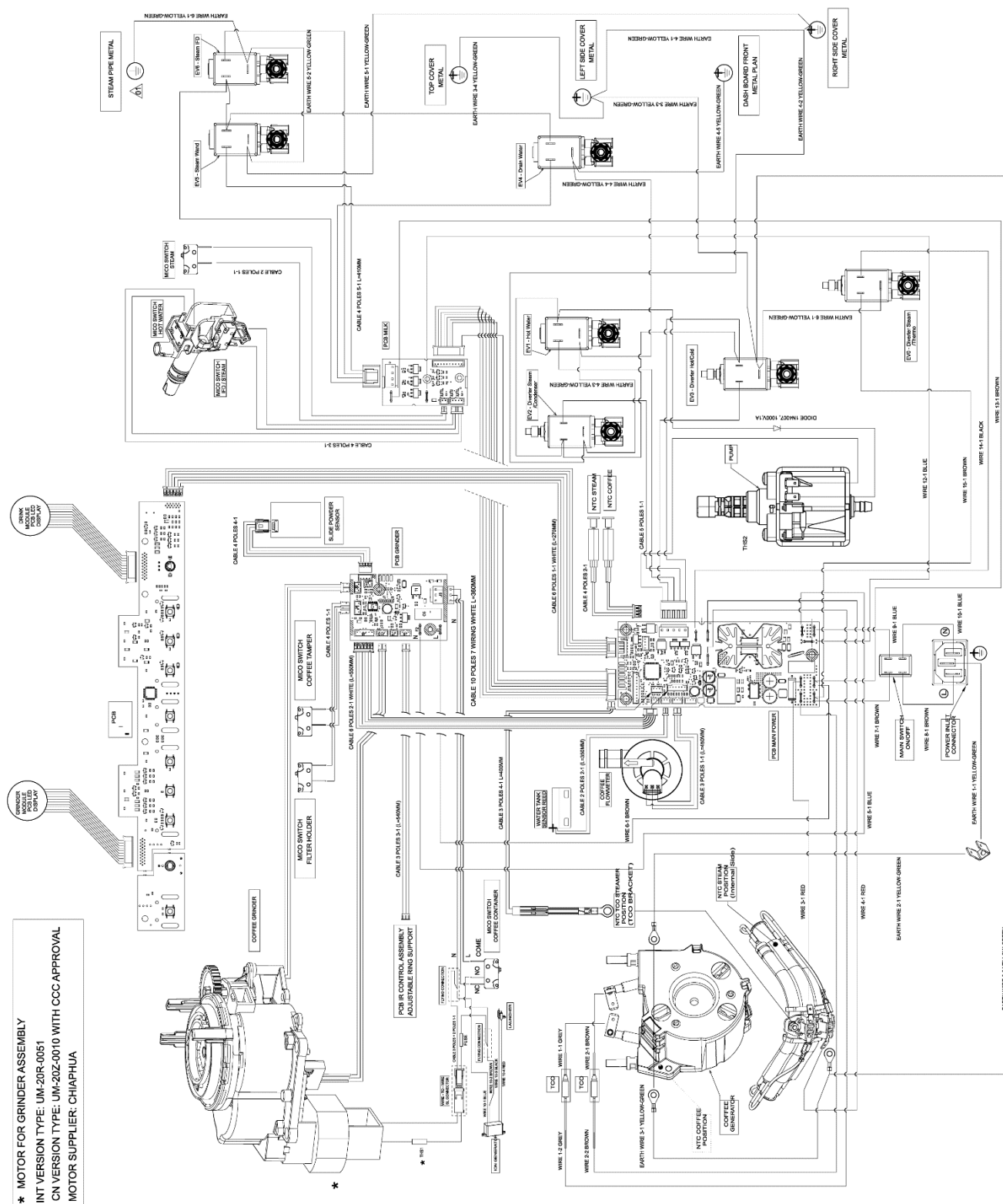
TEMP. °C	MINIMUM k Ω	NOMINAL k Ω	MAXIMUM k Ω	Temp. Accy $\pm$ °C	Resi. Accy $\pm$ %
0.0	310.0	328.9	348.8	1.17	6.05
20.0	118.6	124.6	130.9	1.10	5.00
40.0	50.75	52.85	55.02	1.01	4.10
60.0	23.82	24.61	25.43	0.92	3.31
80.0	12.09	12.41	12.73	0.81	2.62
100.0	6.557	6.691	6.825	0.60	2.00
120.0	3.664	3.759	3.855	0.94	2.55
140.0	2.161	2.228	2.296	1.22	3.06
160.0	1.327	1.375	1.423	1.51	3.51
180.0	0.8445	0.8781	0.9126	1.82	3.93
200.0	0.5541	0.5783	0.6033	2.14	4.32

2. EC9885: Hydraulic Diagram

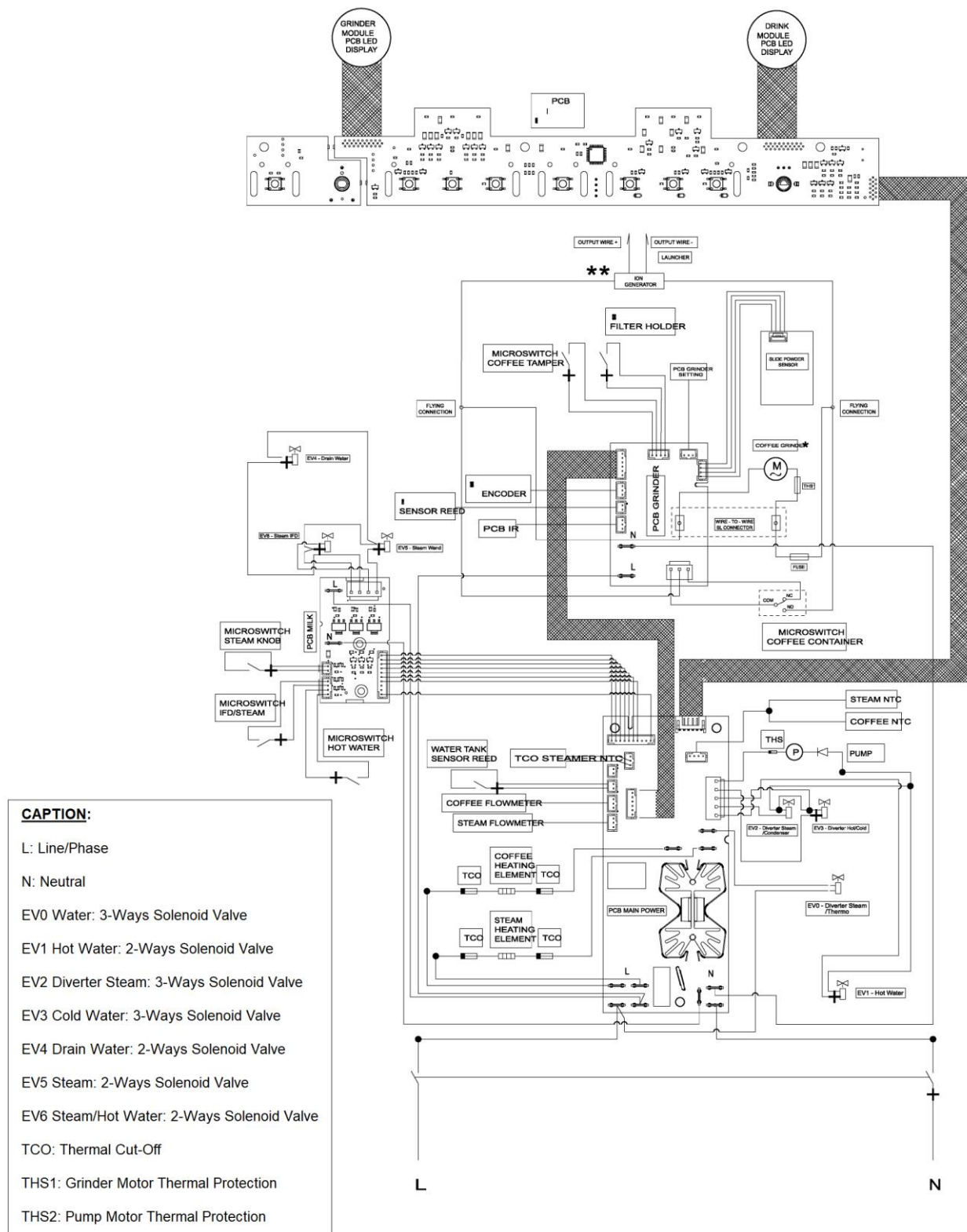


3. EC9885: Wiring Diagrams

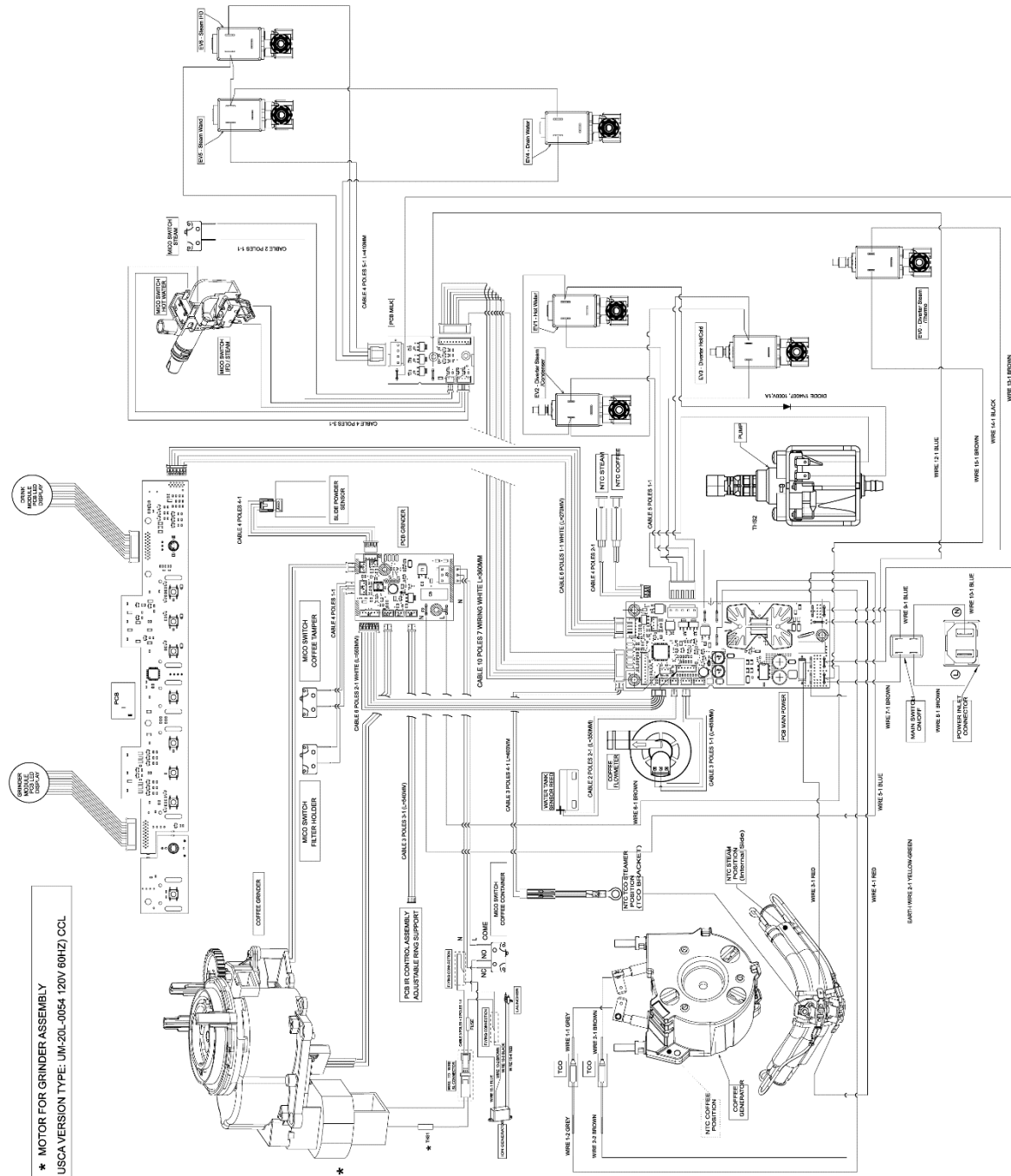
3.1. Practical Outline (230V ÷ 50Hz - INT, AU/NZ, CN)



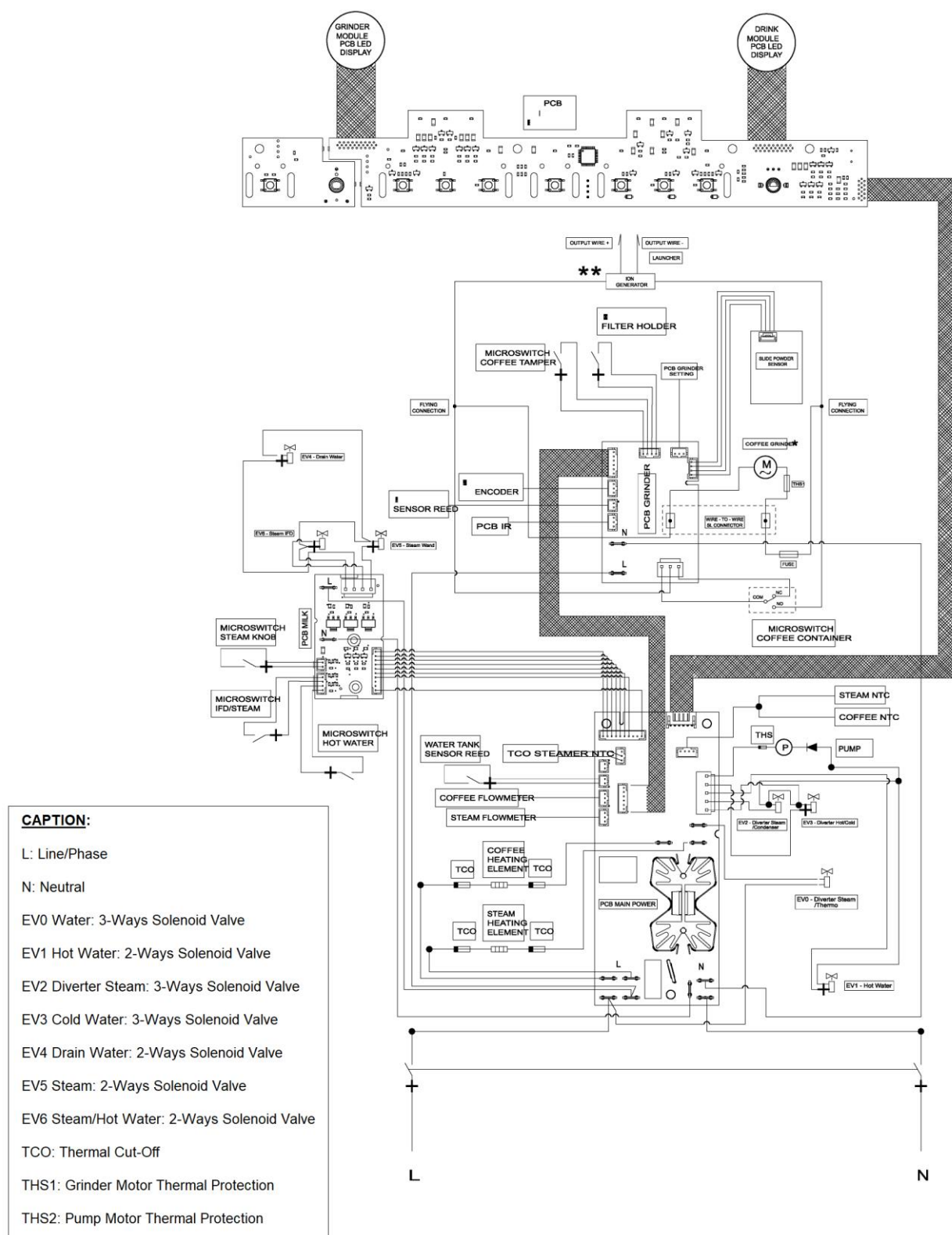
3.2. Theoretical Outline (230V ÷ 50Hz - INT, AU/NZ, CN)



3.3. Practical Outline (120V ÷ 60Hz - US/CA)



3.4. Theoretical Outline (120V ÷ 60Hz - US/CA)



4. EC9885: Working Principle

4.1. Peculiar Components

MICRO-SWITCHES	FUNCTION	LOGIC
Coffee Tamper Micro-Switch	Detects when the tamping is done	CLOSED when the lever is in position "0"
Filter Holder Micro-Switch	Detects when the filter holder is inserted to the Smart Tamping Station	NORMALLY OPEN (NO) when the filter holder is NOT inserted
Beans Container Micro-Switch	Detects when the beans container is inserted	3-pin micro-switch. When the beans container is inserted and the grinder adjustment ring is between 1 and 8: ▪ the contact for the beans container detection is OPEN; ▪ the contact for the grinder power supply is CLOSED
Steam Knob Micro-Switch	Detects when the steam knob is in the I position	NORMALLY OPEN (NO) when the steam knob is NOT in the I position
IFD/Steam Micro-Switch	Detects when the milk jug is connected	NORMALLY CLOSED (NC) when the milk jug is NOT inserted, it opens when the milk jug is inserted

MICRO-SWITCHES	FUNCTION	LOGIC
Hot Water Micro Switch	Detects when the descaling pipe is connected or when the milk jug knob is in the CLEAN position	NORMALLY CLOSED (NC) when the descaling pipe is NOT inserted (or when the jug knob is NOT in the CLEAN position), it opens when the descaling pipe is inserted (or when the milk jug knob is rotated to the CLEAN position)

SENSORS	FUNCTION	LOGIC
Water Tank Reed Sensor	Detects when the water level is at minimum	
Slider Powder Capacitive Sensor	Detects when the coffee funnel fills with grounds coffee	When the coffee funnel starts to fill with ground coffee, the dedicated icon on the user interface illuminates to indicate the user the potential risk of clogging.

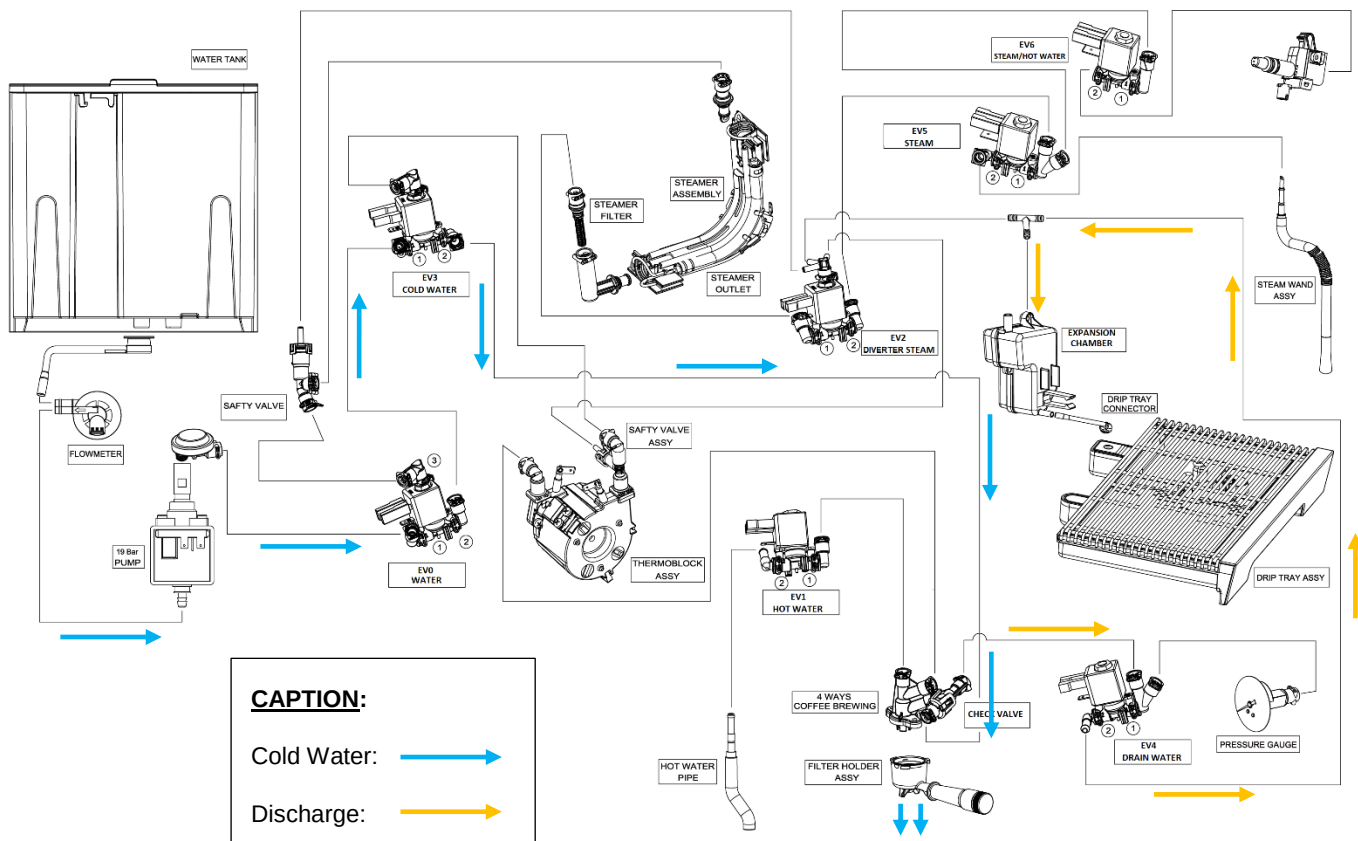
OTHER COMPONENTS	FUNCTION	LOGIC
Ion Generator	Generates ions to compensate the electro-static charge of the coffee powder during the grinding process. This to avoid the coffee powder sticking on the coffee funnel and on the borders of the filter baskets	- When the grinder starts, the ion generator powers ON to generate ions, which will combine to the electro-static charges of the coffee powder. - When the grinder turns OFF, the ion generator turns OFF too.

SOLENOID VALVES	FUNCTION	LOGIC
EV0: 3-Ways WATER Solenoid Valve	When activated, it allows the water coming from the pump to flow towards the Coffee Beverages circuit. When deactivated, it allows the water coming from the pump to flow towards the Steamer.	
EV1: 2-Ways HOT WATER Solenoid Valve	It allows the hot water flow to go to the hot water pipe.	

SOLENOID VALVES	FUNCTION	LOGIC
EV2: 3-Ways DIVERTER STEAM Solenoid Valve	When activated, it allows the steam flow coming out from the Steamer to go to the steam wand or to the IFD connector (depending on which outlet is activated). When deactivated, it discharges the residual pressure of the steam branches to towards the expansion chamber and the drip tray.	
EV3: 3-Ways COLD WATER Solenoid Valve	When activated, it allows the water coming from the EV0 solenoid valve to flow through the Cold Coffee Beverages Circuit. When deactivated, it allows the water coming from the EV0 solenoid valve to flow through the Thermoblock (Hot Coffee Beverages and Hot Water Circuit).	

SOLENOID VALVES	FUNCTION	LOGIC
EV4: 2-Ways DRAIN WATER Solenoid Valve	When the coffee delivery finishes, it activates for 1 second to eliminate the pressure from the coffee circuit (the pressure gauge drops to zero) and, therefore, to dry the coffee pod. The removed pressure is released towards the expansion chamber and the drip tray.	
EV5: 2-Ways STEAM Solenoid Valve	It allows the steam flow to go to the steam wand .	
EV6: 2-Ways STEAM/HOT WATER Solenoid Valve	It allows the steam (or the hot water during the descaling process) to go to the IFD connector .	

4.2. Cold Brew and Espresso Cool Preparation



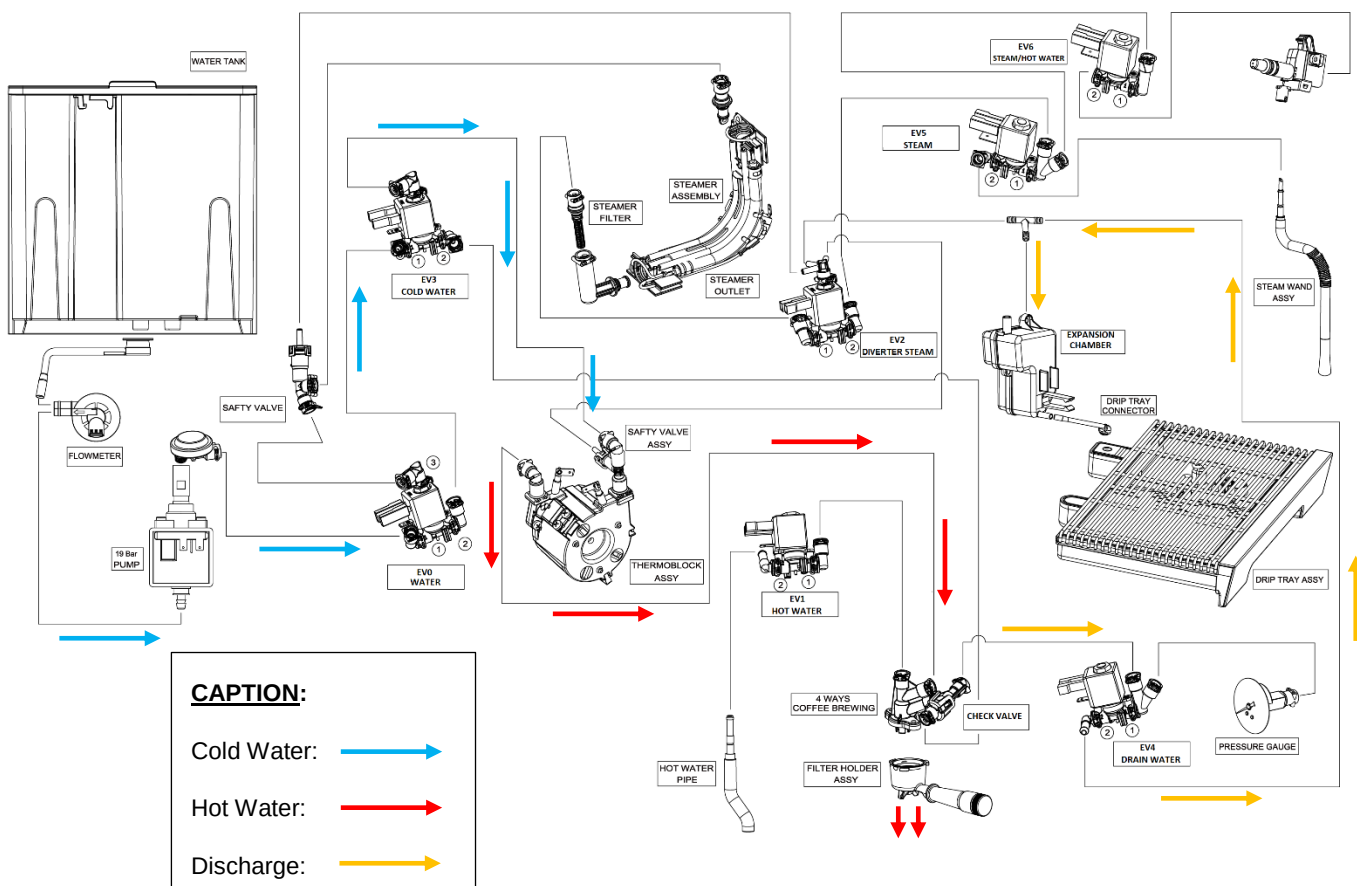
Cold Brew Preparation Steps:

- Coffee filters to be used: **single wall non-pressurized filters**.
- EV0 and EV3 solenoid valves are activated to force the water to flow towards the coffee outlet.
- The pump is activated in very slow pulsing mode to hold the coffee extraction pressure ideally at zero (atmospheric pressure) for the entire Cold Brew coffee delivery.
- At the end of the Cold Brew coffee delivery, the pump, the EV0 and EV3 solenoid valves are deactivated, the EV4 solenoid valve opens for 1 second to drain the residual pressure/water from the coffee filter towards the expansion chamber and the drip tray.

Espresso Cool Preparation Steps:

- Coffee filters to be used: **double-wall pressurized filters**.
- EV0 and EV3 solenoid valves are activated to force the water to flow towards the coffee outlet.
- The pump is activated in very continuous mode to hold the coffee extraction pressure ideally at 9 Bars for the entire Espresso Cool delivery.
- At the end of the Espresso Cool delivery, the pump, the EV0 and EV3 solenoid valves are deactivated, the EV4 solenoid valve opens for 1 second to drain the residual pressure/water from the coffee filter towards the expansion chamber and the drip tray.

4.3. Hot Coffee Beverages Preparation

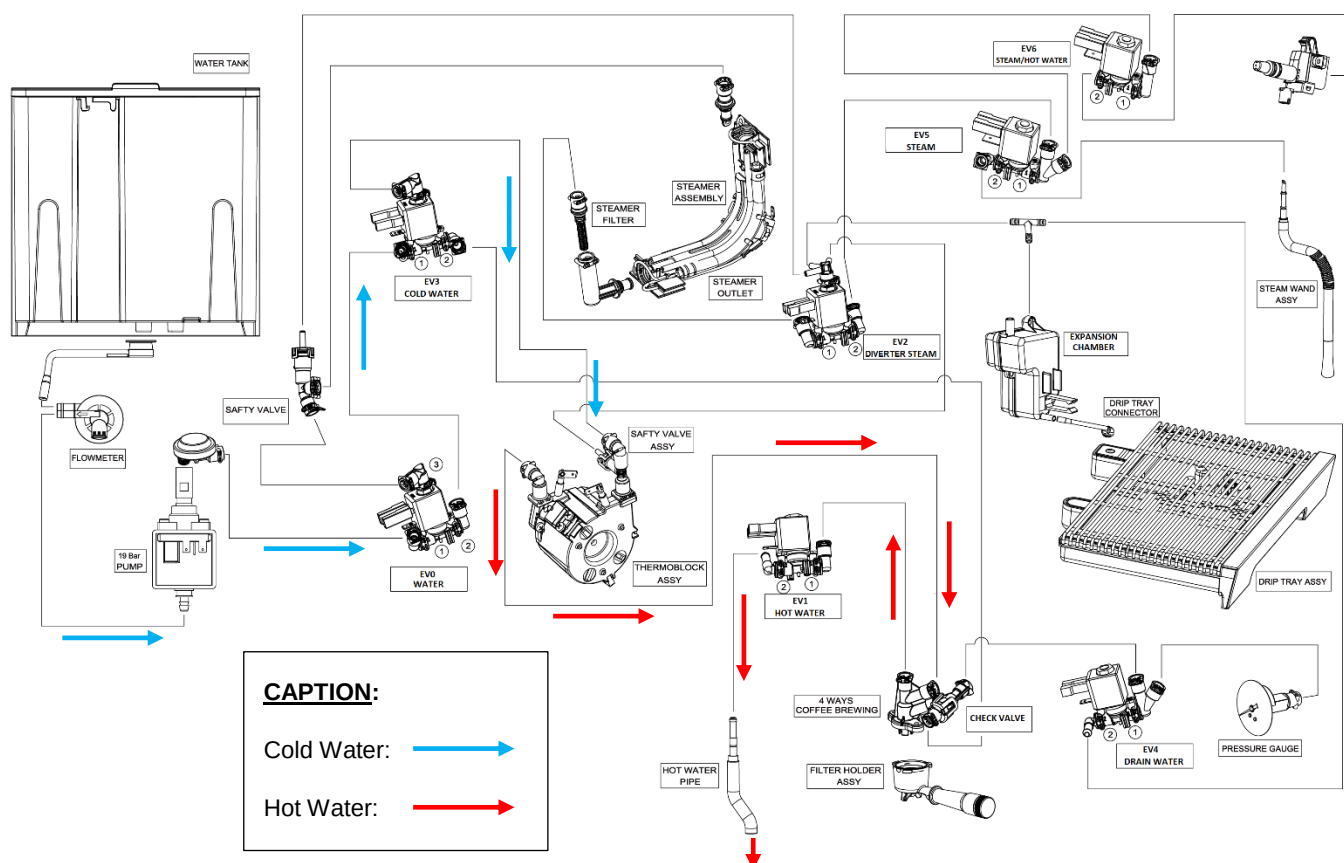


Hot Coffee Beverages Preparation Steps:

- Coffee filters to be used: **single wall non-pressurized filters**.
- The Thermoblock is activated, EV0 solenoid valve is activated, whereas EV3 solenoid valve is deactivated to force the water to flow towards the Thermoblock.
- The pump is activated in continuous mode for the Hot Coffee Beverages delivery.

- At the end of the Hot Coffee Beverages delivery, the pump, the Thermoblock and EV0 solenoid valve are deactivated, the EV4 solenoid valve opens for 1 second to drain the residual pressure/water from the coffee filter towards the expansion chamber and the drip tray.

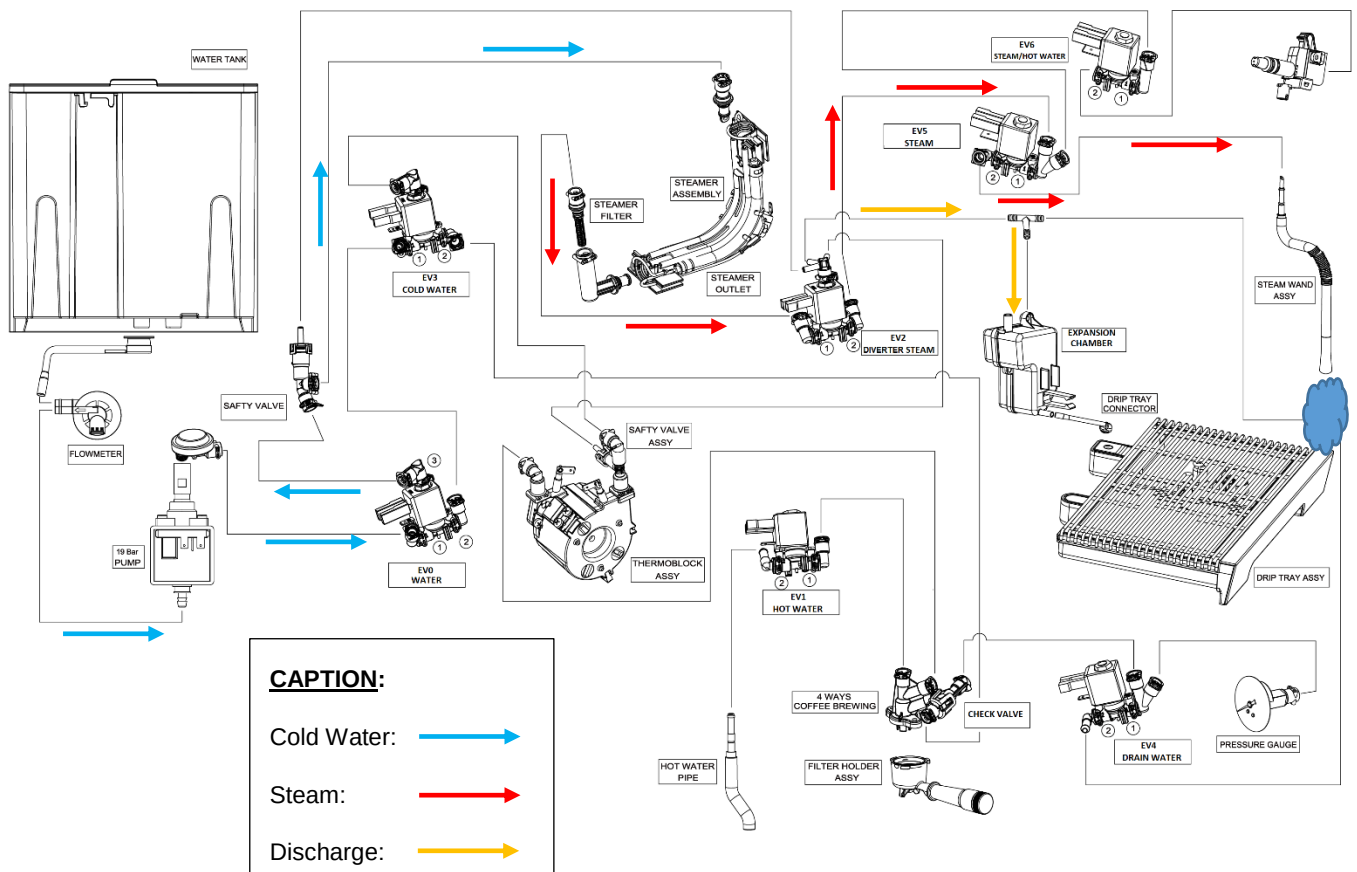
4.4. Hot Water Preparation



Hot Water Preparation Steps:

- The Thermoblock is activated, EV0 solenoid valve is activated, whereas EV3 solenoid valve is deactivated to force the water to flow towards the Thermoblock.
- The pump is activated in fast pulsing mode, EV1 solenoid valve activates to deliver hot water.
- At the end of the hot water delivery, the pump and the Thermoblock turn OFF, EV0 and EV1 solenoid valves are deactivated.

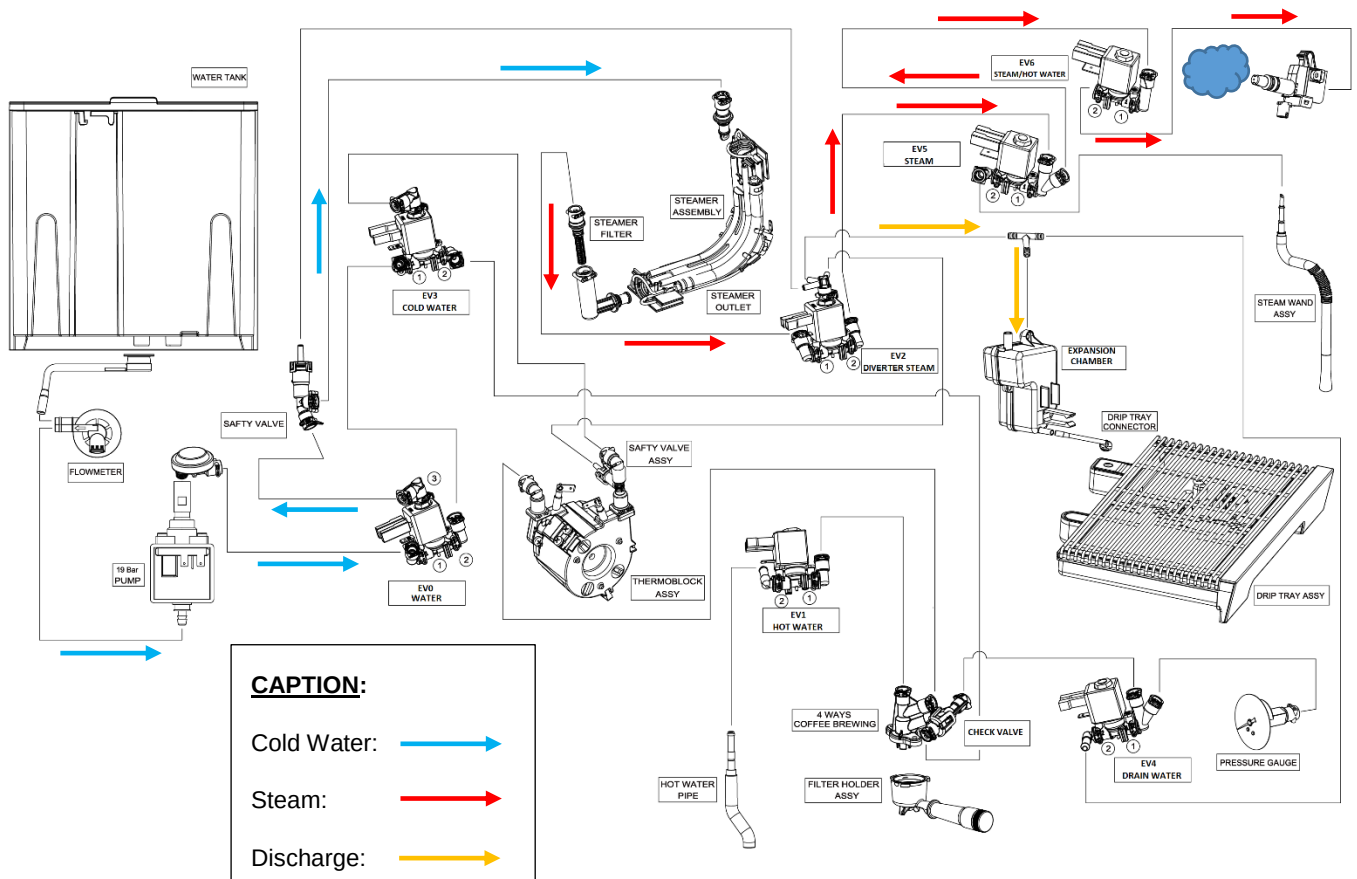
4.5. Steam Preparation



Steam Preparation Steps:

- The Steamer is activated.
- EV0 solenoid valve remains deactivated to allow the water to flow towards the Steamer.
- EV2 solenoid valve is activated.
- The pump is activated in slow pulsing mode to inject water into the Steamer for steam preparation.
- EV5 solenoid valve is activated to deliver steam from the wand.
- The pump and the Steamer turn OFF, EV2 and EV5 solenoid valves are deactivated.
- The residual pressure is discharged from the steam outlet branch towards the expansion chamber and the drip tray.

4.6. Milk Froth Preparation



Milk Froth Preparation Steps:

- The Steamer is activated.
- EV0 solenoid valve remains deactivated to allow the water to flow towards the Steamer.
- EV2 solenoid valve is activated.
- The pump is activated in slow pulsing mode to inject water into the Steamer for steam preparation.
- EV6 solenoid valve is activated to deliver steam from the IFD connector into the milk jug.
- The pump and the Steamer turn OFF, EV2 and EV6 solenoid valves are deactivated.
- The residual pressure is discharged from the steam outlet branch towards the expansion chamber and the drip tray.

IMPORTANT NOTICE: This function is active only while the milk jug is connected to the IFD nozzle.

4.7. Beverages Quantities

COLD BREW				
Selected Coffee	Quantity	Program. Qty.	Pre-Inf.	Filter Type
Cold Brew	110cc	90÷130cc	No	1 Cup Single-Wall
Cold Brew X2	180cc	160÷220cc	No	2 Cups Single-Wall

ESPRESSO COOL				
Selected Coffee	Quantity	Program. Qty.	Pre-Inf.	Filter Type
Espresso Cool	40cc	30÷50cc	Yes	1 Cup Double-Wall
Espresso Cool X2	80cc	60÷110cc	Yes	2 Cups Double-Wall

ESPRESSO				
Selected Coffee	Quantity	Program. Qty.	Pre-Inf.	Filter Type
Espresso	35cc	25÷90cc	Yes	1 Cup Single-Wall
Espresso X2	70cc	50÷180cc	Yes	2 Cups Single-Wall

COFFEE				
Selected Coffee	Quantity	Program. Qty.	Pre-Inf.	Filter Type
Coffee	70cc	50÷120cc	No	1 Cup Single-Wall
Coffee X2	160cc	120÷240cc	No	2 Cups Single-Wall

AMERICANO/LONG BLACK (*)						
Selected Coffee	Quantity (Coffee + Water)	Pre-Inf.	Filter Type	Program. Coffee Qty.	Program. Water Qty.	Delivery Sequence
Long Black	100cc (35cc+65cc)	Yes	1 Cup Single-Wall	25÷60cc	25÷120cc	1. Water 2. Coffee
Long Black X2	200cc (70cc+130cc)	Yes	2 Cups Single-Wall	50÷120cc	50÷240cc	1. Water 2. Coffee
Americano	120cc (35cc+85cc)	Yes	1 Cup Single-Wall	25÷60cc	25÷120cc	1. Coffee 2. Water
Americano X2	240cc (70cc+170cc)	Yes	2 Cups Single-Wall	50÷120cc	50÷240cc	1. Coffee 2. Water

(*) Long Black recipe will be available only on machines manufactured for the Australian and the UK markets; the appliances for all the other markets will have the Americano beverage.

OTHER FUNCTIONS		
Selected Function	Quantity	Programmable
Steam	120 seconds	No
Hot Water	250cc	No

4.8. Descaling Levels

WATER HARNDNESS	PULSE VALUE	WATER LITRES (*)
Soft Water	312.000	156 litres
Medium Water	168.000	84 litres
Hard or Very Hard Water	96.000	48 litres

(*) IMPORTANT NOTICE: These values consider the usage of machine only for coffee delivery. Hot water production counts 3 times and steam production counts 6 times.

For example, at the highest value of water hardness, 18 litres of water used for coffee preparations and 10 litres of water used for hot water preparations correspond to the descaling alarm target (i.e. $18 + 10 \times 3 = 48$ litres).

5. EC9885: Test Mode

5.1. How to Access the Different Test Modes and Statistics

IMPORTANT NOTICE: To properly access the test modes, make sure the appliance is ON from both the main back switch and from the front ON/STAND-BY switch. Then, turn the appliance OFF from the main back switch and follow the below steps.

- Turn the coffee maker ON from the main power switch while holding both the X1 and X2 button pushed at the same time for more than 5 seconds. Do not release the buttons at the first blinking but wait for the 5 seconds. When only the OK button and the beverage display are illuminated, the appliance is in the test mode.
- Set the beverage knob in one of the below positions to select the corresponding test function and press the OK button to confirm the choice:

Test	Coffee Beverage Knob Position
User Interface Test	Espresso
Functional Test	Americano/Long Black
Load Test	Coffee
Input Test	Espresso Cool
Statistics	Cold Brew

- To change the test mode, turn the appliance OFF from the main power switch on the back and repeat the above steps.
- To quit the test mode, turn the appliance OFF from the main power switch on the back.

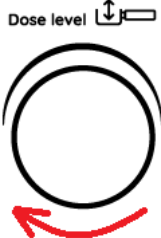
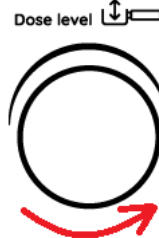
IMPORTANT NOTICE: During the access to the test modes, the portafilter must not be connected to the smart tamping station.

5.2. User Interface Buttons Test

BUTTON PRESSED	LEDs State						
	X2	X2	TEMP.	OK	RINSE	HOT WATER	DESC.
X1	ON	OFF	OFF	OFF	OFF	OFF	OFF
X2	OFF	ON	OFF	OFF	OFF	OFF	OFF
TEMP.	OFF	OFF	ON	OFF	OFF	OFF	OFF
OK	OFF	OFF	OFF	FLASHING (White/Blue)	OFF	OFF	OFF
RINSE	OFF	OFF	OFF	OFF	FLASHING (White/ Blue)	OFF	OFF
HOT WATER	OFF	OFF	OFF	OFF	OFF	ON	OFF
DESC.	OFF	OFF	OFF	OFF	OFF	OFF	FLASHING (White/ Orange)

5.3. Coffee Dose Knob Test

For each position of the coffee dose knob, a series of symbols and segments will progressively turn ON in the coffee dose display and on the user interface:

KNOB ROTATION		LEDs ON
Clockwise 	Anticlockwise 	Steam
		Temperature
		Dose Level Icon
		Grinding Bar
		Tamping Bar
		Brewing Bar
		Milk Bar
		Display Digits (One Position → One Segment)
		Clogging Alarm Orange
		Beans Sensor Red
		ECO Mode White
		Water Tank Red
		General Alarm Red
		Milk Jug Clean Red
		General Alarm Orange
		Beans Sensor Orange
		Water Tank Orange

5.4. Beverage Knob Test

Knob Position 	Display State							
	Espresso Cool 	Cold Brew 	Espresso 	Americano/ Long Black 	Coffee 	Flat White 	Latte ^(*) 	Cappuccino 
Espresso Cool	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Cold Brew	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
Espresso	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF
Americano/ Long Black	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF
Coffee	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF
Flat White	OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF
Latte ^(*)	OFF	OFF	OFF	OFF	OFF	OFF	ON	OFF
Cappuccino	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON

(*) The menu could have the beverage Latte or Latte Macchiato depending on the version of the coffee machine.

5.5. Functional Test

In this test mode, the LED General Alarm is ON of **orange** colour.

TEST	HOW TO ACTIVATE THE TEST	NOTE	LED	LOAD STATE										
				PUMP	EV0	EV1	EV2	EV3	EV4	EV5	EV6	HEATER	STEAMER	GRINDER
"STEAM" HYDRAULIC CIRCUIT	KEEP X2 PUSHED	Water from Steam Wand	X2 Flash, Others OFF	ON	OFF	OFF	ON	OFF	OFF	ON	OFF	OFF	OFF	OFF
"JUG" HYDRAULIC CIRCUIT	KEEP DESCALE PUSHED	Water from Descale Accessory	Descal Flash, Others OFF	ON	OFF	OFF	ON	OFF	OFF	OFF	ON	OFF	OFF	OFF
"HOT COFFEE" HYDRAULIC CIRCUIT	KEEP OK PUSHED	Water from Coffee Outlet	OK Flash WHITE, Others OFF	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
"COLD BREW" HYDRAULIC CIRCUIT	KEEP X1 PUSHED	Water from Coffee Outlet	X1 Flash WHITE, Others OFF	ON	ON	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
"HOT WATER" HYDRAULIC CIRCUIT	KEEP RINSE PUSHED	Water from Hot Water Spout	RINSE Flash WHITE, Others OFF	ON	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
GRINDER	PUSH TEMP ONCE	Place filter holder under Tamper	TEMP Flash, Others OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	About 5 seconds
EMPTYING HYDRAULIC CIRCUIT	PUSH TEA (Empty water tank before starting)	Solenoid Valves cycle, Heating elements ON, Pump ON to empty the hydraulic circuit												
RESET TO FACTORY DEFAULT	HOLD TEMP PUSHED	RESET ALL PARAMETERS TO FACTORY DEFAULT (also reset "first use")												

5.6. Load Test

In this test mode, the LED General Alarm is ON of **red** colour.

LOAD	LOAD STATE	LOAD STATE											LED
		PUMP	EV0	EV1	EV2	EV3	EV4	EV5	EV6	HEATER	STEAMER	GRINDER	
EV0	RINSE PUSHED	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	Rinse Flash, Others OFF
EV1	X1 PUSHED + STEAM OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	X1 Flash, Others OFF
EV2	DESCALE PUSHED + STEAM ON	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	Descale + Steam Flash, Others OFF
EV3	X2 PUSHED + STEAM OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF	X2 Flash, Others OFF
EV4	DESCALE PUSHED + STEAM OFF	OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF	Descale Flash, Others OFF
EV5	X2 PUSHED + STEAM ON	OFF	OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	X2 + Steam Flash, Others OFF
EV6	X1 PUSHED + STEAM ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF	X1 + Steam Flash, Others OFF
STEAMER	TEA PUSHED + STEAM ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON (120°C)	OFF	Tea + Steam Flash, Others OFF
PUMP	TEMP PUSHED	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	Temp Flash, Others OFF
HEATER	TEA PUSHED + STEAM OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON (110°C)	OFF	OFF	Tea Flash, Others OFF

LOAD	LOAD STATE	LOAD STATE											LED
		PUMP	EV0	EV1	EV2	EV3	EV4	EV5	EV6	HEATER	STEAMER	GRINDER	
GRINDER	OK PUSHED	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	About 15 seconds	

NOTE: To activate the grinder from the Load Test, connect the filter holder to the tamping station.

5.7. Input Test

In this test mode LED Beans Container Missing is ON

INPUT	LED STATE							
	TAMPING BAR 	GRINDING BAR 	CLOGGING ALARM 	BEANS PRESENCE 	STEAM 	WATER TANK 	MILK BAR 	MILK JUG 
TAMPER DOWN	ON	OFF	OFF	ON	OFF	OFF	OFF	OFF
FILTER HOLDER (Grinder Side)	OFF	ON	OFF	ON	OFF	OFF	OFF	OFF
BEANS CONTAINER MISSING	OFF	OFF	ON	ON	OFF	OFF	OFF	OFF
COFFEE BEANS PRESENCE	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
STEAM KNOB ON I POSITION	OFF	OFF	OFF	ON	ON	OFF	OFF	OFF
WATER TANK MISSING	OFF	OFF	OFF	ON	OFF	ON	OFF	OFF
MILK JUG PRESENCE	OFF	OFF	OFF	ON	OFF	OFF	ON	OFF

INPUT	LED STATE							
	TAMPING BAR 	GRINDING BAR 	CLOGGING ALARM 	BEANS PRESENCE 	STEAM 	WATER TANK 	MILK BAR 	MILK JUG 
CLEAN JUG / DESCALING ACCESSORY	OFF	OFF	OFF	ON	OFF	OFF	OFF	ON

GRINDER GEAR POSITIONS	LED STATE				
	X1 x1	X2 x2	TEMP 	OK 	RINSE 
1÷4	ON	OFF	OFF	OFF	OFF
5÷8	ON	ON	OFF	OFF	OFF
9÷12	ON	ON	ON	OFF	OFF
13÷15	ON	ON	ON	ON	OFF
> 15	ON	ON	ON	ON	ON

5.8. Statistics

- Once entered into the statistics menu, the OK LED blinks white.
- Use the right knob to select the beverage corresponding to the desired statistics (see the below table for reference), then press **OK** button to start the statistics reading.
- The left display will show in sequence the digits of the units, tens, hundreds, thousands and tens of thousands for each statistic value.
- Each digit is separated by a 1-seconds interval during which the display stays OFF.

BEVERAGE TO BE SELECTED	STATISTIC VALUE
ESPRESSO 	Total Amount of Hot Coffee Beverages (Espresso + Americano/Long Black + Coffee)
AMERICANO/LONG BLACK 	Litres of Water for Hot Coffee Beverages
COFFEE 	Litres of Water for Hot Water
COLD BREW 	Numbers of Descaling Processes Performed
FLAT WHITE 	Water for Steam Production (counted in Decilitres)
ESPRESSO COOL 	Total Amount of Cold Coffee Beverages (Cold Brew + Espresso Cool)

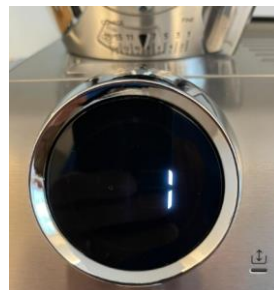
Example of How to Read Statistics

Here below an example of digits displaying sequence while reading statistics for the *Total Amount of Hot Coffee Beverages* delivered (ESPRESSO beverage option):

First digit (Units)



Second digit (Tens)



Third digit (Hundreds)



Fourth digit (Thousands)



Fifth digit (Tens of Thousands)



Therefore, the **Total Amount of Hot Coffee Beverages** delivered is in this case 00013 (i.e. **13**).

6. EC9885: Beverages Performance Tests

6.1. Hot Coffee Temperature Test

To perform a hot coffee temperature test, follow in sequence the below steps:

- Turn the appliance ON.
- Make sure the ECO mode is deactivated (refer to the user manual for more details).
- Set the coffee machine temperature at LEVEL 3.
- Simulate the preparation of four 2x ESPRESSO beverages in a row, by keeping the filter holder with the empty 2-cup single wall (non-pressurized) filter connected to the coffee outlet, to warm-up the entire coffee circuit.
- Set the appliance to prepare a **2x ESPRESSO** beverage (refer to the user manual for more details).
- Start the **2x ESPRESSO** beverage preparation into a unique cup.
- Wait until at least 20 cc of coffee have been delivered into the cup.
- Measure the coffee flow temperature at about 2÷10 mm from the coffee spout, as shown in the below picture:



The optimal indicative temperature measurement for coffee is:

81°C ± 3°C

6.2. Frothed Milk Consistency and Temperature Test

To perform the frothed milk consistency and temperature test, follow in sequence the below steps:

- Turn the appliance ON.
- Fill the milk jug with 300 ml of semi-skimmed milk at a temperature of $5^{\circ}\text{C} \pm 2^{\circ}\text{C}$. Insert the lid to the jug and connect it to the appliance.
- Set the maximum level of froth by rotating the frothing adjustment knob on the jug lid accordingly.
- Place a 300 ml PIREX graduated container under the milk spout.
- Select the **LATTE or LATTE MACCHIATO beverage** and wait until at least 80 ml of frothed milk have been delivered into the container.
- Measure the milk flow temperature during the delivery at about $2\div 10$ mm from the spout, as shown in the below picture:



The **optimal conditions for the frothed milk** (without considering the coffee in cup) should be as resumed below:

- **Froth appearance:** small bubbles without splashes.
- **Milk temperature:** $60^{\circ}\text{C} \pm 5^{\circ}\text{C}$.
- **Froth amount:** finally the container must have 50% milk and 50% froth.