

**Data Sheet And Service Manual**

**EC9155 LA SPECIALISTA ARTE (ALL COUNTRIES)**

**Date: 14.06.2021**



**INDEX / INDICE:**

<b>1. TECHNICAL DATA .....</b>	<b>2</b>
<b>2. HYDRAULIC DIAGRAM .....</b>	<b>3</b>
<b>3. 4 WIRING DIAGRAM .....</b>	<b>4</b>
<b>5. WORKING PRICIPLE .....</b>	<b>6</b>
<b>6. TEST MODE .....</b>	<b>7</b>
<b>7. TROUBLESHOOTING .....</b>	<b>12</b>

## 1. TECHNICAL DATA

Voltage 220-240v / 50-60 Hz (INT – AU/NZ)  
120v / 60 Hz (US/CA)

Max. input power 1550 W

### COMPONENTS

Pump 220-240v AC - 48 W (INT – AU/NZ)  
120v AC - 52 W (US/CA)

Grinder motor 230 V Ac (INT – AU/NZ) - 120v AC (US/CA)

Solenoid valves EV1 EV2 230 V Ac (INT – AU/NZ) - 120v AC (US/CA)

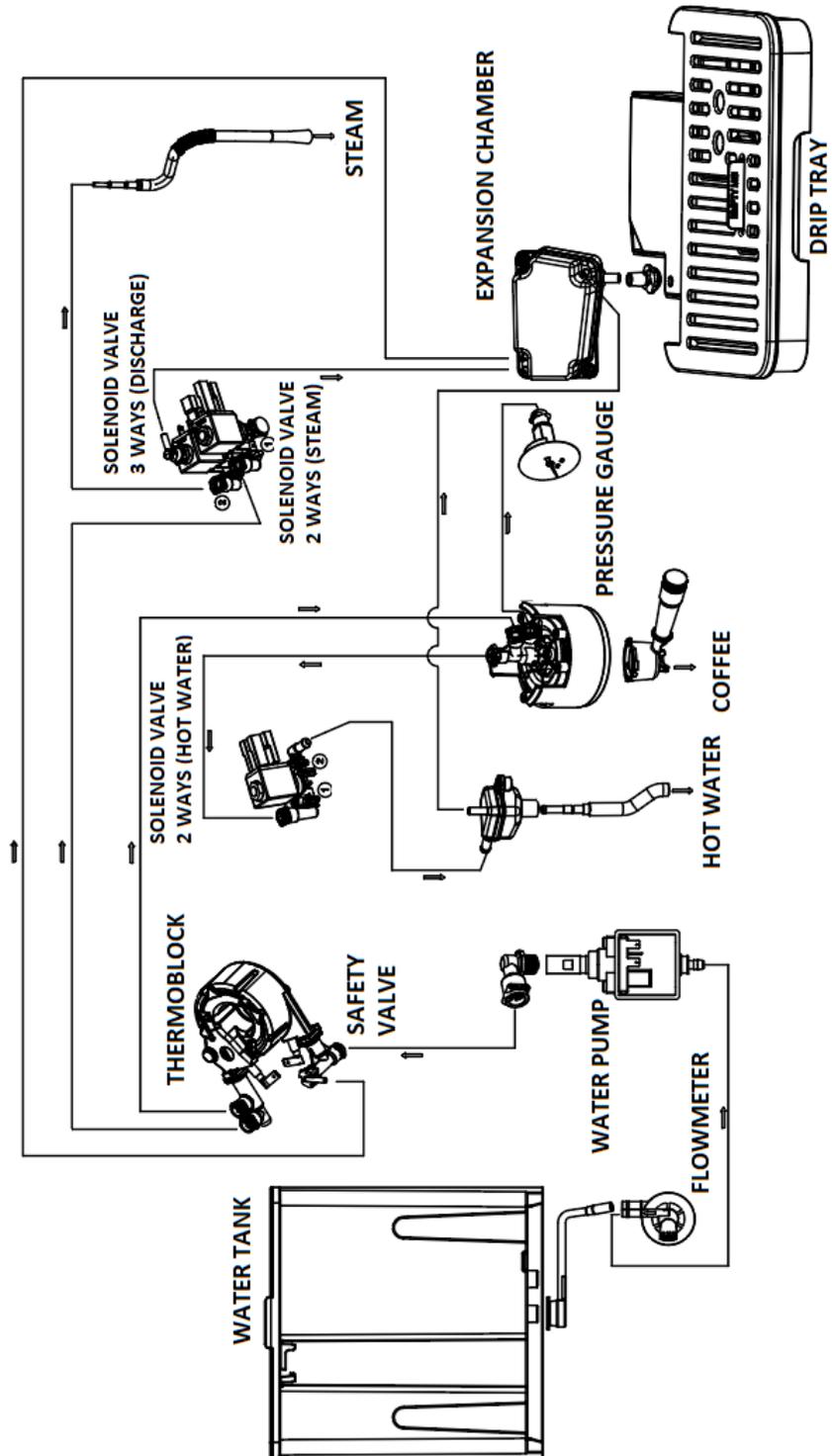
Coffee thermoblock

- Temperature probe NTC sensor
- Thermal fuse TCO 192 °C
- Heating element 230v AC – 1400 W - (INT – AU/NZ)  
120v AC – 1400 W - (US/CA)

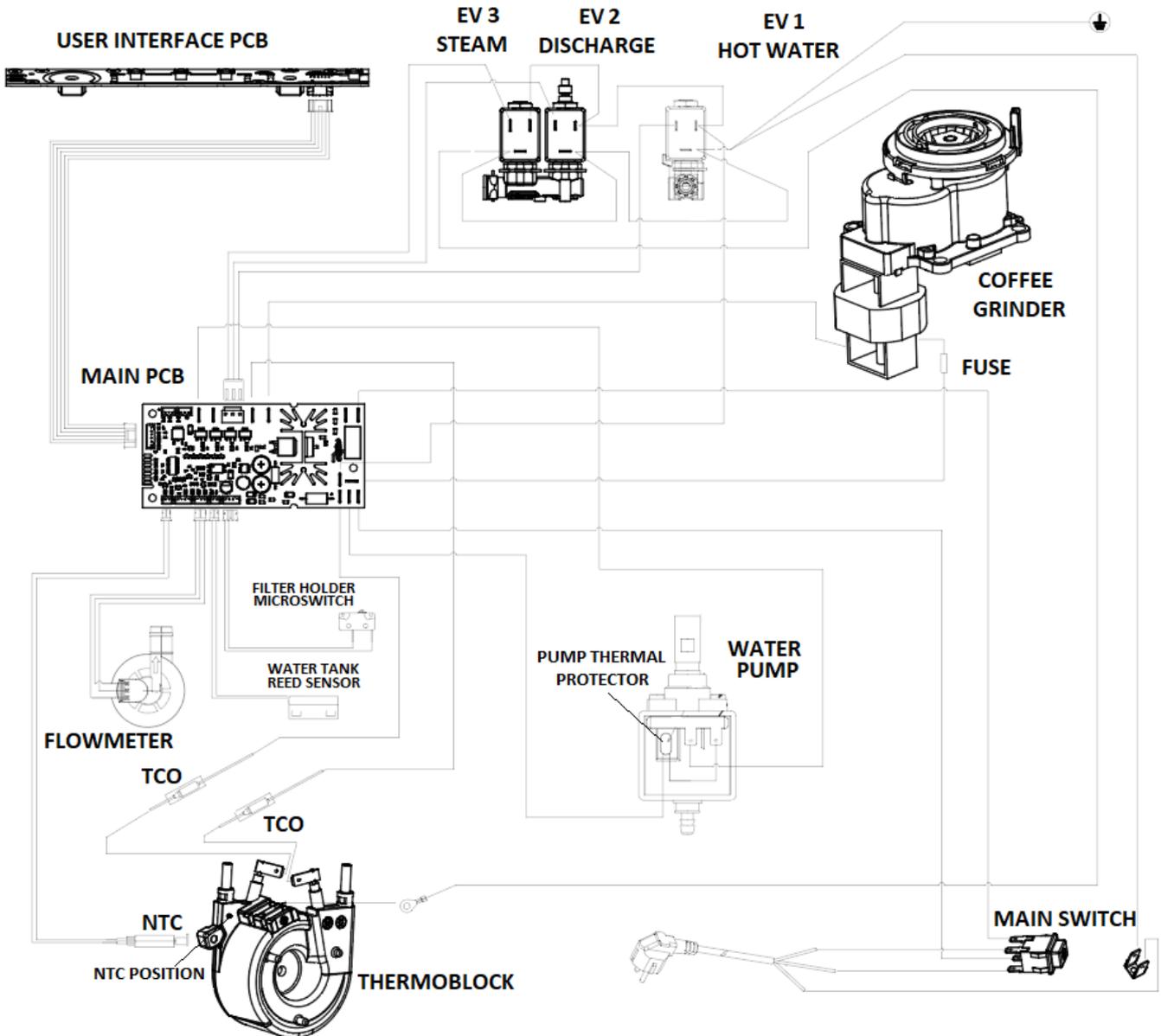
NTC temperature characteristics (thermoblock)

TEMP. °C	MINIMUM k $\Omega$	NOMINAL k $\Omega$	MAXIMUM k $\Omega$	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

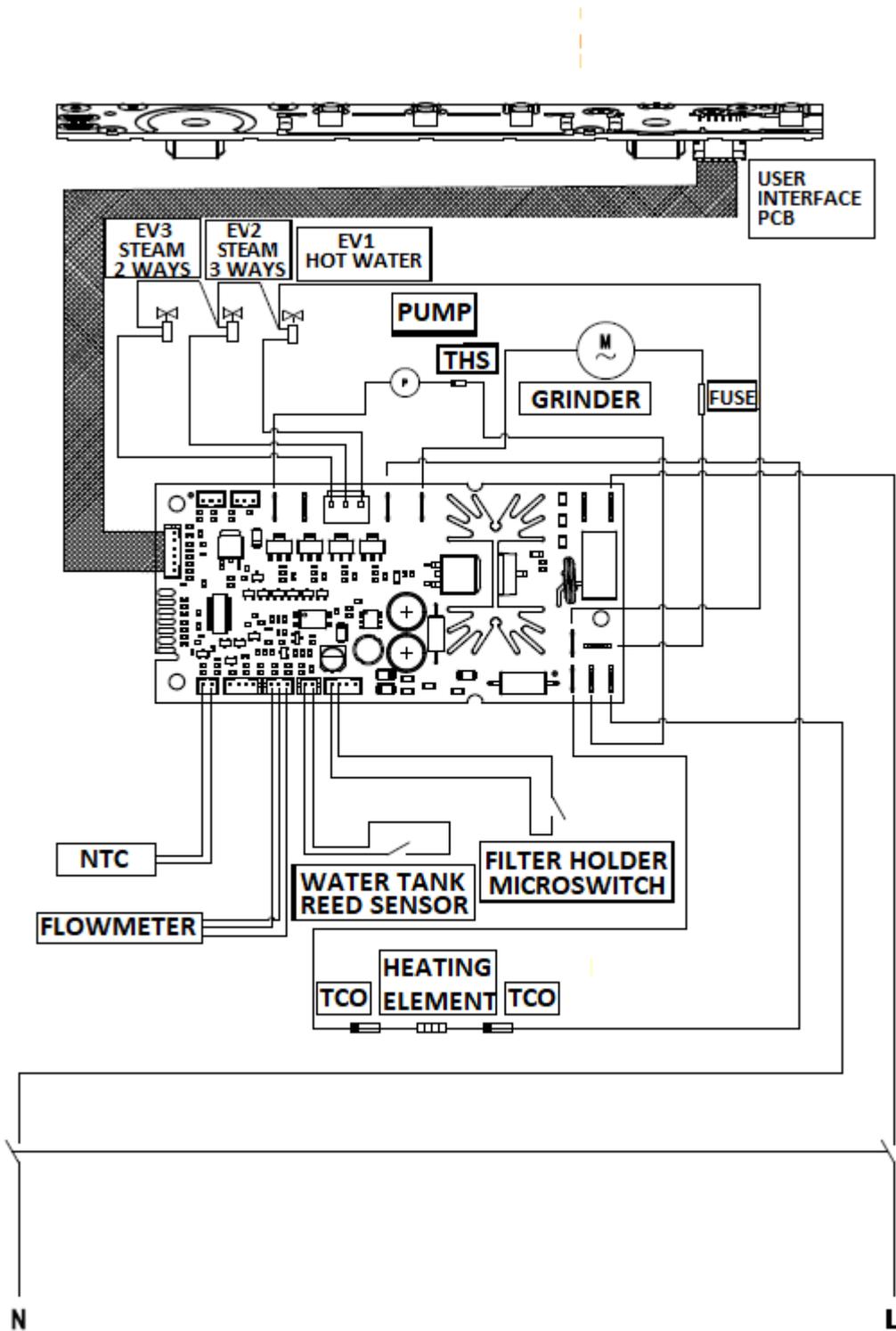
## 2. HYDRAULIC DIAGRAM



### 3. WIRING DIAGRAM



### 3. WIRING DIAGRAM



## 5. WORKING PRINCIPLE

### MICROSWITCHES, SENSORS AND ELECTROVALVES

MICROSWITCHES	Function	Logic
MICROSWITCH FILTER HOLDER	Detects when the sump is inserted In order to start grinding	NO when the sump is NOT inserted

REED	Function
REED SENSOR WATER TANK	Detects when the water level is at minimum

ELECTROVALVES	Function
EV1 = 2 ways HOT WATER solenoid valve	Allows the hot water flow going to the hot water pipe
EV2 = 3 ways STEAM solenoid valve	First allow steam to flow to the EV3. When steam flow stops close the way to EV3 and opens the 3 <sup>rd</sup> way to discharge residual steam pressure on the expansion chamber (then to the drip tray)
EV3 = 3 ways WATER solenoid valve	Allows steam from EV2 to flow up to the steam pipe

## 6. TEST MODE

### 6.1. HOW TO ENTER IN THE VARIOUS TEST MODES/STATISTICS

### 6.2. USER INTERFACE TEST

### 6.3. FUNCTIONAL TEST

### 6.4. LOAD TEST

### 6.5. INPUT TEST

### 6.6. STATISTICS

## User Interface CONTROLS



### 6.1.HOW TO ENTER IN THE VARIOUS TEST MODES/STATISTICS

- A. SET THE POSITION OF THE TASTE KNOB AND KEEP THE SWITCH AS FOLLOW:

TEST	DOSE KNOB	BEVERAGES KNOB
USER INTERFACE TEST	MIN	ESPRESSO
FUNCTIONAL TEST	MIN	AMERICANO/LONG BLACK
LOAD TEST	MIN	HOT WATER
INPUT TEST	MIN	DESCALING
STATISTICS	<b>MAX</b>	--

- B. TURN ON THE COFFEE MACHINE BY THE MAIN SWITCH WHILE THE X1/X2 IS PUSHED FOR MORE THAN 5S.
- C. TO EXIT FROM THE TEST MODE SWITCH OFF THE COFFEE MACHINE BY THE MAIN SWITCH.

## 6.2.USER INTERFACE TEST

In this mode while the button is pressed the correspondent led switch on, the potentiometer knobs need to be rotated on the most anti-clockwise position in order to not create interference. When the potentiometer knob will be rotated clockwise (only one at a time) the leds switch on according to the next tables.

SWITCH PUSHED	LEDS STATE			
	X1/X2	OK (WHITE/ORANGE)	TEMP1/2/3	STEAM
X1/X2	ON ALTERNATING	OFF	OFF	OFF
OK	OFF	ON ALTERNATING	OFF	OFF
TEMPERATURE	OFF	OFF	ON ALTERNATING	OFF
STEAM	OFF	OFF	OFF	ON

### COFFEE TASTE POTENTIOMETER

KNOB POSITION	LEDS STATE		
	DESCALE	TANK	X2
$\geq 180$	OFF	OFF	ON
$120 \leq \text{ADC} < 180$	OFF	ON	OFF
$60 \leq \text{ADC} < 120$	ON	OFF	OFF
$\text{ADC} < 60$	OFF	OFF	OFF

### BEVERAGE LENGTH POTENTIOMETER

KNOB POSITION	LEDS STATE		
	ESPRESSO	HOT WATER	AMERICANO
DESCALE	OFF	OFF	OFF
HOT WATER	OFF	ON	OFF
AMERICANO/LONG BLACK	OFF	OFF	ON
ESPRESSO	ON	OFF	OFF

### 6.3.FUNCTIONAL TEST

TEST STEP	LOAD STATE							LED
	SWITCH STATE	PUMP	3WAY VALVE	WATER E-VALVE	STEAM E-VALVE	HEATER	GRINDER	
“STEAM” HYDRAULIC CIRCUIT	STEAM	ON	ON	OFF	ON	OFF	OFF	STEAM FLASH, Others OFF
“COFFEE” HYDRAULIC CIRCUIT	OK PUSHED	ON	OFF	OFF	OFF	OFF	OFF	OK Flash, Others OFF
“HOT WATER” HYDRAULIC CIRCUIT	X2 PUSHED	ON	OFF	OFF	OFF	OFF	OFF	X1 Flash, Others OFF
EMPTYING HYDRAULIC CIRCUIT	TEMP PUSHED	Emptying procedure						OK Flash on execution, <b>BLINK TEST and OK ON at the end</b>
FACTORY RESET	TEMP PUSHED + BEV. KNOB ON DESCALING	Reset parameters to default and to first trigger. Reset relative counters to zero.						OK Flash few times

## 6.4.LOAD TEST

LOAD	SWITCH STATE	LOAD STATE						LED STATE
		PUMP	3WAY EV	WATER EV	STEAM EV	HEATER	GRINDER	
3WAY VALVE	X1/X2	OFF	ON	OFF	OFF	OFF	OFF	X1 ON, Others OFF
PUMP	OK	ON	OFF	OFF	OFF	OFF	OFF	OK ON, Others OFF
HEATER	TEMP	OFF	OFF	OFF	OFF	ON 110 °C	OFF	TEMP low ON, Others OFF
ELECTROVALVE	X2+STEAM							Others OFF
STEAM ELECTROVALVE	STEAM	OFF	OFF	OFF	ON	OFF	OFF	Steam ON, Others OFF
GRINDER	GRIND SWITCH	OFF	OFF	OFF	OFF	OFF	ON	

## 6.5. INPUT TEST

INPUT	LED STATE	
FILTER HOLDER (GRINDER SIDE)	<b>DESCALING LED ON IF SWITCH RELEASED</b>	<b>DESCALING LED OFF IF SWITCH PRESSED</b>
TANK REED	<b>TANK ALARM LED ON IF REED OPEN (NO MAGNET)</b>	<b>TANK ALARM LED OFF IF REED CLOSED (MAGNET PRESENT)</b>

## 6.6. STATISTICS

- Turn the Knob to select the correct statistics would you like to show, so press OK to show it
- The number of blinks specifies the units, tens, hundreds, thousands and tens of thousands of every statistic.
- Every digit is separated from the others switching off all LEDs for 2s.

DIGIT	LED
UNITS	STEAM
DOZENS	TEMP LOW
HUNDERS	OK
THOUSANDS	X1
TENS OF THOUSANDS	TANK

BEVERAGE/FUNCTION	STATISTIC	INPUT STATE FOR SELECTION
ESPRESSO	WATER LITERS ON COFFE	BEVERAGES KNOB ON ESPRESSO
AMERICANO/LONG BLACK	WATER DECILITERS ON STEAM	BEVERAGES KNOB ON LONG BLACK
HOT WATER	WATER LITERS ON WATER	BEVERAGES KNOB ON COFFEE
DESCALING	NUMBER OF DESCALINGS PERFORMED	BEVERAGES KNOB ON DESCALING

## 7. TROUBLESHOOTING

PROBLEM	CAUSE	SOLUTION
There is water in the drip tray (A19)	It is normal: due to the internal water circuits operations	Regularly empty and clean the drip tray
No espresso coffee is delivered	No water in the tank (A7)	Fill the tank
	Only the OK light (B6) is on to indicate that the coffee or steam circuit is empty	Press the button corresponding to the <b>OK</b> light to fill the circuit
	The coffee filter (C3) or (C4) is blocked	Rinse the filters under abundant running water.
	Coffee grind too fine or too much coffee	Adjust coffee dose and grinding (refer to Quick Guide)
	The tank (A7) has been inserted incorrectly and the valves on the bottom are not open	Press the tank down lightly to open the valves on the bottom
	Scale in the water circuit	Descale as described in section "9. Descaling"
The portafilter (C1) cannot be attached to the appliance	The ground coffee has not been pressed or is too much	Repeat grinding with new settings. Reduce the powder quantity: check if the filter (single or double filter) is the same size as the selector of grinding quantity (2x (B5) selected or not)
The espresso coffee drips from the edges of the portafilter (C1) rather than the holes	The portafilter is inserted incorrectly	Attach the portafilter correctly and rotate firmly as far as it will go
	The espresso boiler gasket has lost elasticity or is dirty	Have the espresso boiler gasket replaced by Customer Services
	The coffee filter is clogged	<ul style="list-style-type: none"> <li>• Rinse the filters under abundant running water.</li> <li>• Reduce the grinding thickness</li> </ul>
The coffee crema is too light (delivered from the spout too fast)	The appliance settings need reviewing	Refer to Quick Guide for suggestions
The coffee crema is too dark (delivered from the spout too slowly)	The appliance settings need reviewing	Refer to Quick Guide for suggestions
At the end of descaling, the appliance requests a further rinse	During the rinse cycle, the water tank (A7) has not been filled to the MAX level	Complete the rinse cycle from point (8) of section "9. Descaling"
The appliance does not grind the coffee	There is foreign matter that cannot be ground in the coffee grinder	Turn the grinder selector (A2) to 8, vacuum all the beans and particles in the beans container (A3). If the problem persists, address to Customer Service Centre.
		...→

PROBLEM	CAUSE	SOLUTION
If you want to change the type of coffee	You must remove all the beans present in the machine	<ul style="list-style-type: none"> <li>• Empty the beans container (A3) (if necessary, operate the coffee mill without beans or use a vacuum cleaner to remove any remaining beans)</li> <li>• Attach the portafilter (C1) and operate the coffee mill a number of times without beans to free the grinder. Attach the portafilter to the outlet of the grinder (A13). Push the portafilter to start grinding; it stops automatically. Repeat until the filter is empty</li> <li>• Place the new coffee in the beans container</li> <li>• If the amount of coffee ground is not enough to reach the perfect dose, proceed setting the appliance as for the first use</li> </ul>
After grinding, the coffee filter is empty	The coffee grinder funnel is clogged	See section "6. Cleaning the grinder".
After grinding, the ground coffee in the filter (C3) or (C4) does not reach the "perfect dose"	The quantity of ground coffee needs adjusting	Adjust the quantity of coffee with the dial (B4). If the dial is already in the max. position, select the second range of grinding adjustment (see "3. Menu settings"- "Extra grinding adjustment").
	You are using the 2 cup filter (C4)	Make sure the 2X light is on
	Over time the burrs wear down	Address to a Customer Service Centre to change burrs.