HLF 37-4700 G1/2/F

ENGLISH

CE

RETAIN FOR FUTURE USE !

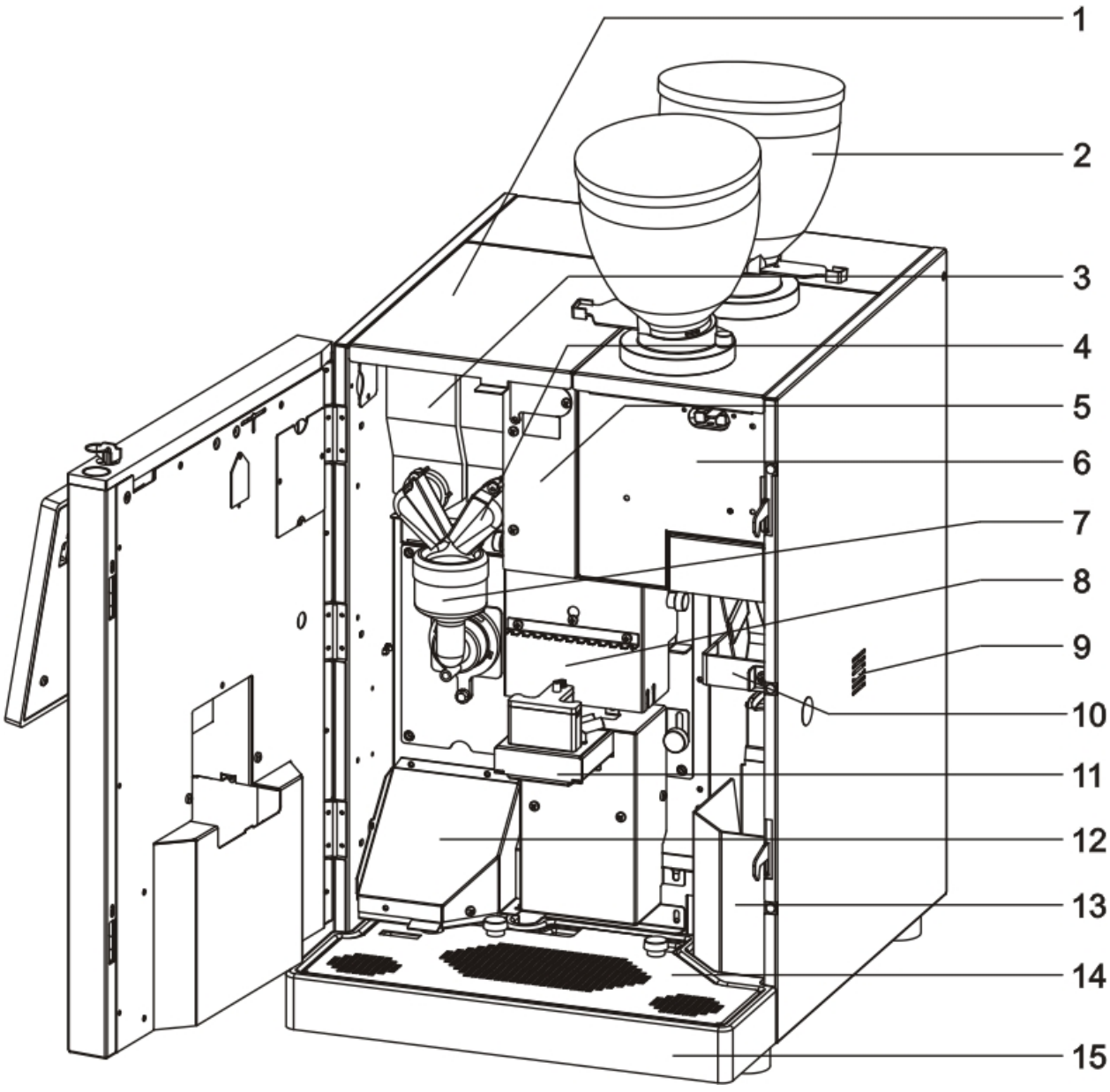
These Operating Instructions must be read and applied by anyone performing work with or on the equipment described.

In particular, it is imperative that all such persons familiarise themselves with the safety instructions.

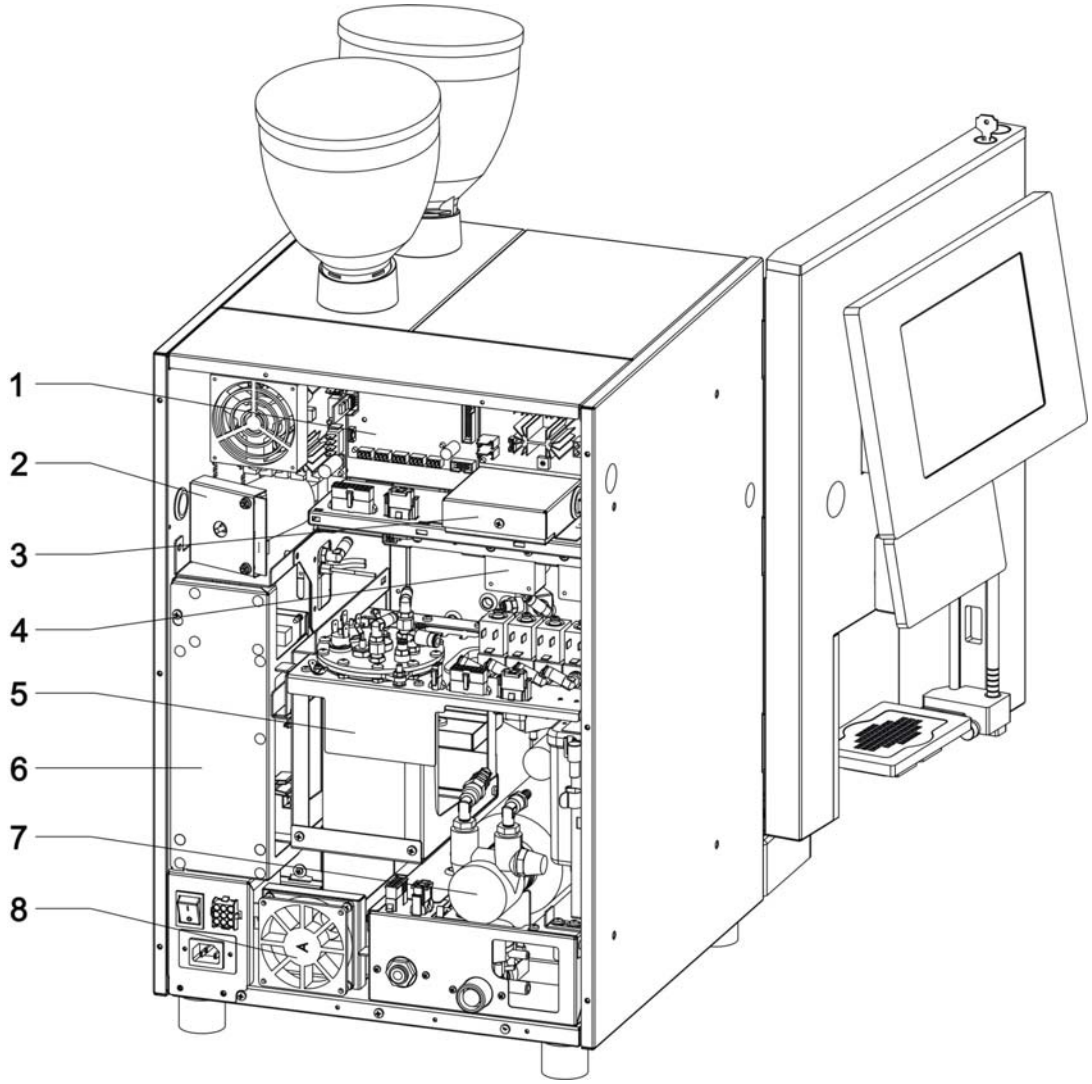
1 User Manual

2 Exploded views

2.1 General exploded view

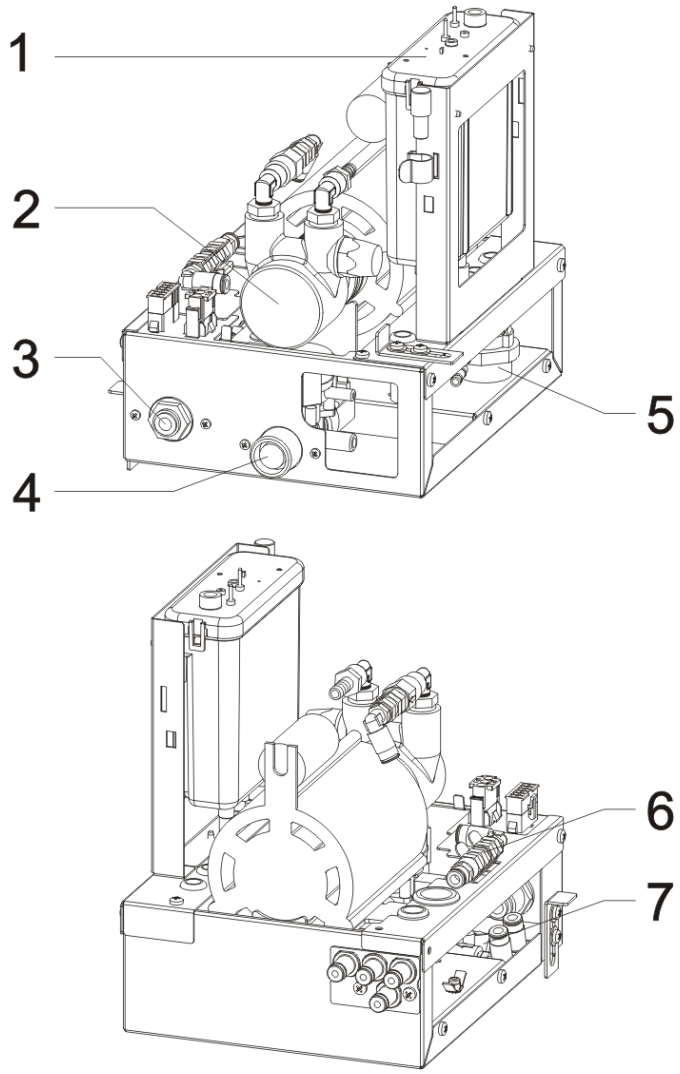


1. Top lid
2. Beans hopper
3. Powder canister
4. Powder funnel
5. Milk module
6. Grinder module
7. Mixing bowl
8. Milk outlet valve cover
9. Coffee group aspirator fan
10. Coffee group
11. Drip catcher
12. Drip tray switch cover
13. Grounds drawer
14. Cup holder grid
15. Drip tray



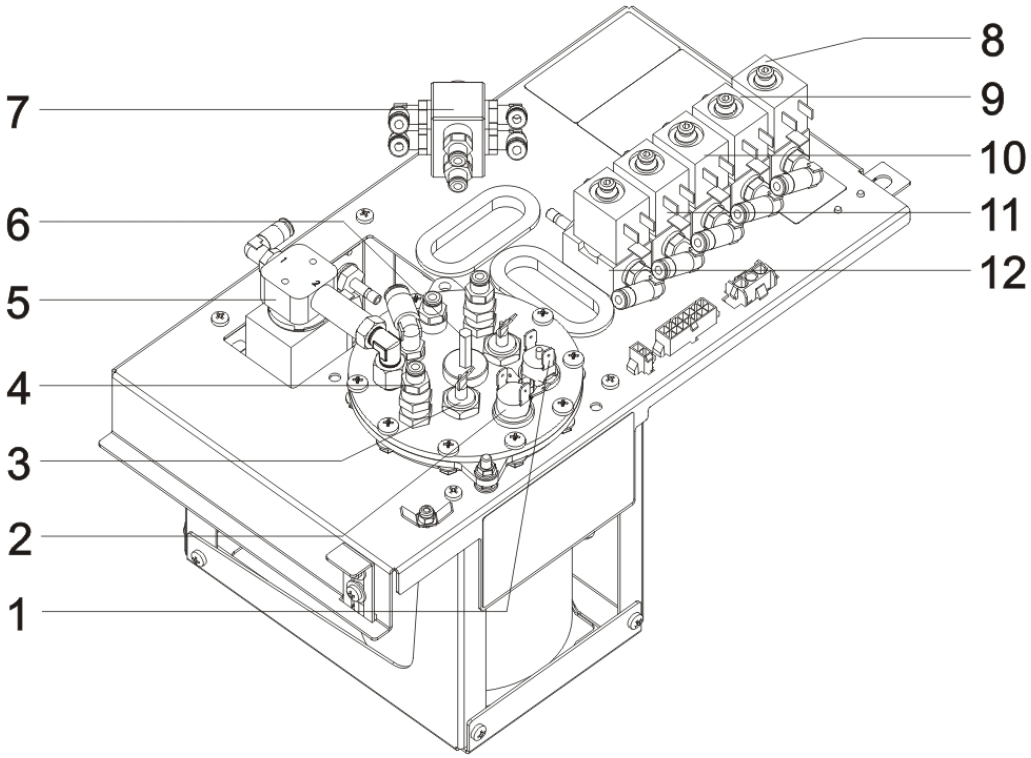
1. Electronic boards module
2. Coffee group gearmotor module
3. Touch screen power supplier
4. Powder gearmotors module
5. Boiler module
6. Power supply module
7. Pump module
8. Fan module

2.2 Pump module exploded view



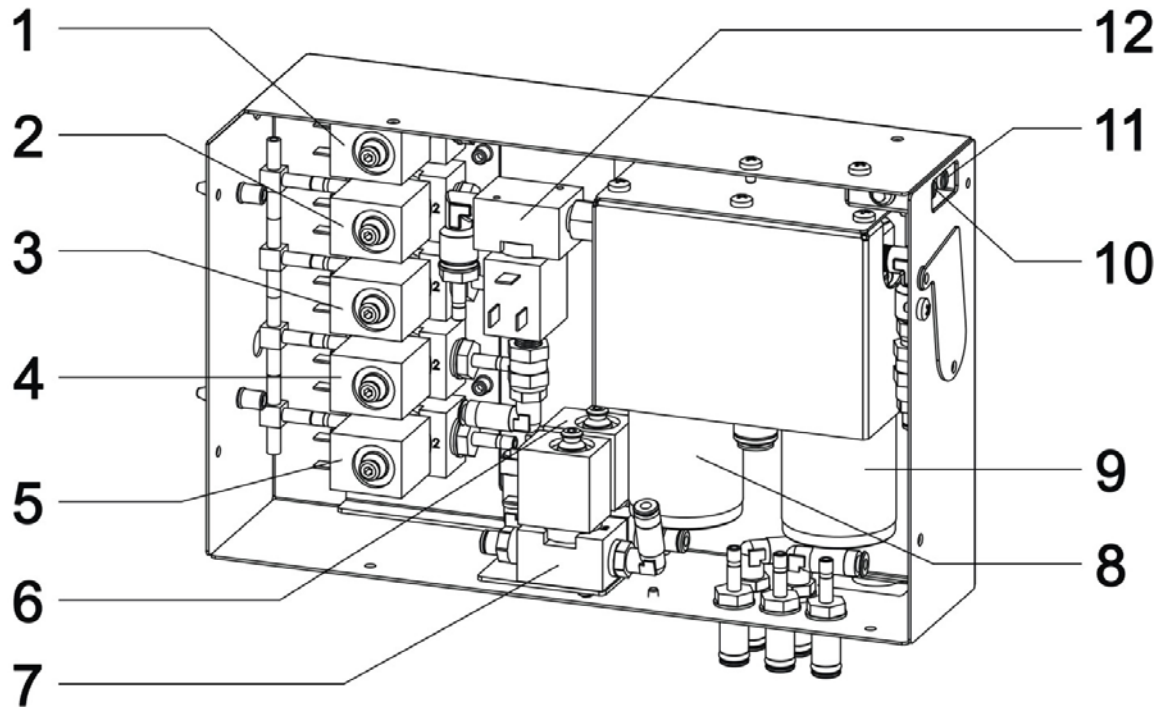
1. Air-break
2. Water pump
3. Cold water inlet fitting
4. Main water inlet valve
5. Milk module flow meter
6. Pump restrictor
7. Flow meter

2.3 Boiler module exploded view



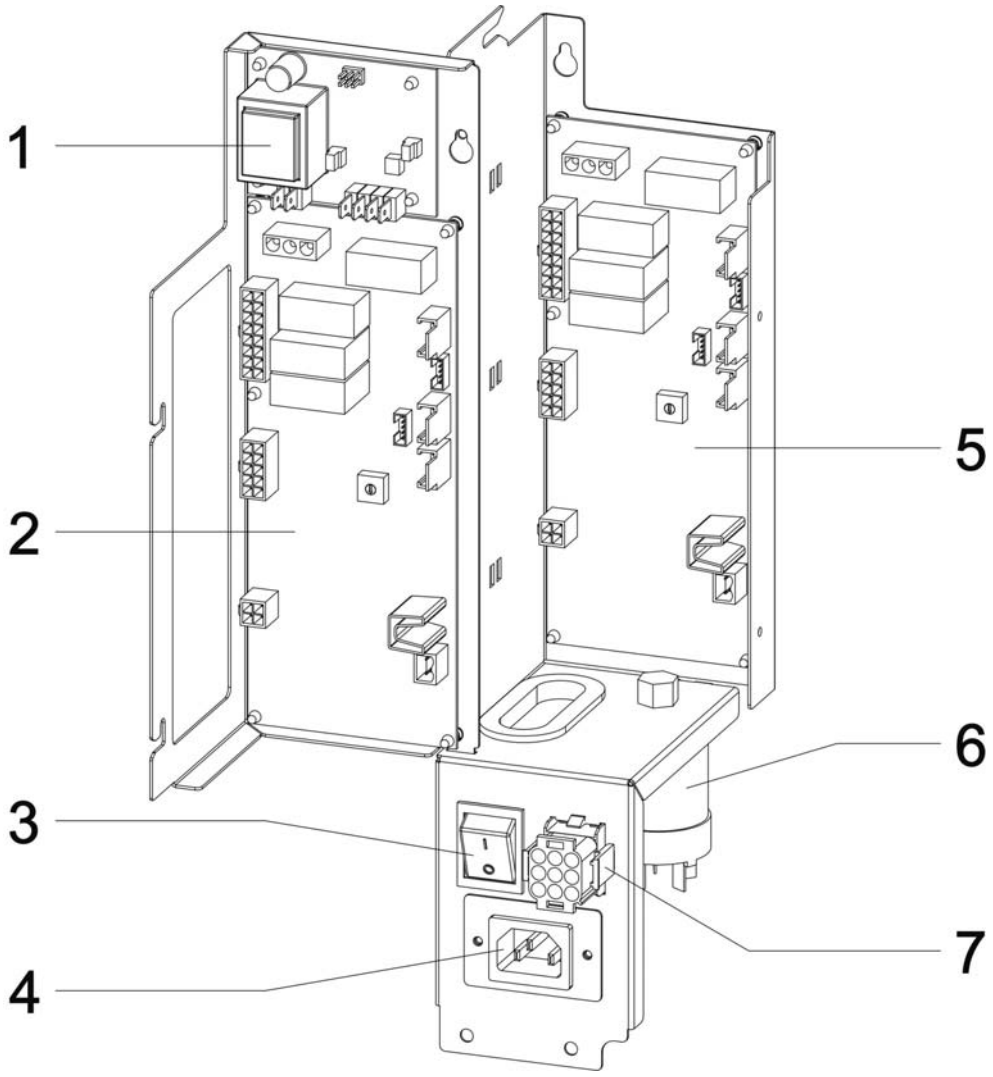
1. Manual thermostat
2. Automatic thermostat
3. Heating element
4. Milk serpentine
5. Coffee valve (3 ways)
6. Temperature probe
7. Water splitter
8. Mixer 3 valve (2 ways) **[Only for 4700 G1-G2 (no fresh milk)]**
9. Mixer 1 valve (2 ways)
10. Mixer 2 valve (2 ways)
11. Hot water valve (2 ways)
12. Discharge valve (2 ways)

2.4 Milk module exploded view



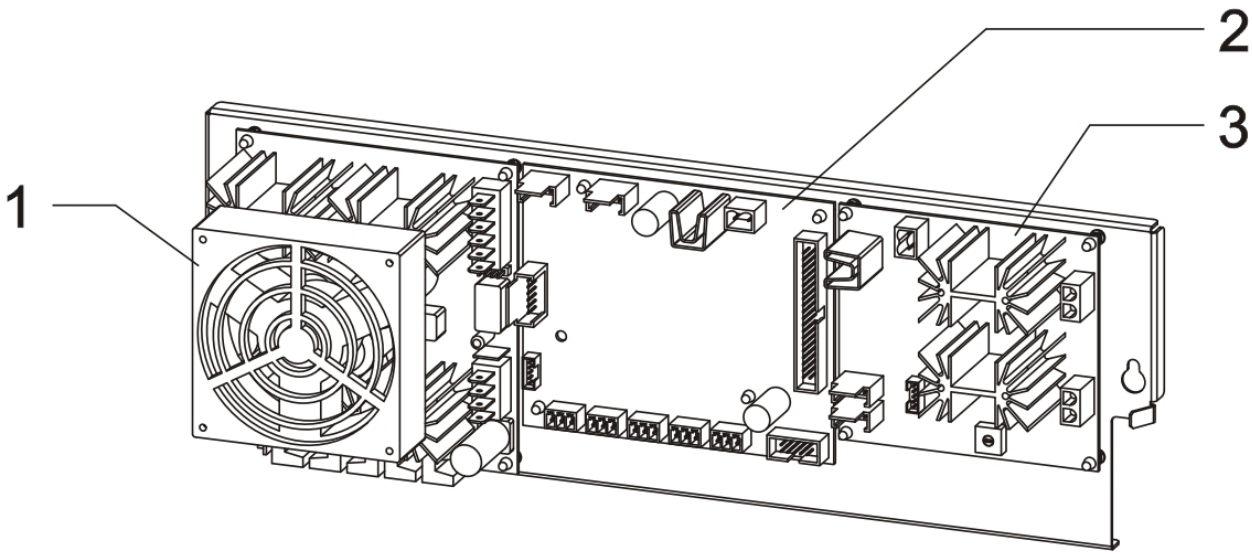
1. Milk rinsing valve (2 ways)
2. Hot milk air valve (2 ways)
3. Cold milk air valve (2 ways)
4. Milk 1 inlet valve (2 ways)
5. Milk 2 inlet valve (2 ways)
6. Cold milk outlet valve (2 ways)
7. Hot milk outlet valve (2 ways)
8. Hot milk pump
9. Cold milk pump
10. Hot milk air regulator
11. Cold milk air regulator
12. Water / hot milk exchange valve (3 ways)

2.5 Power supply module exploded view



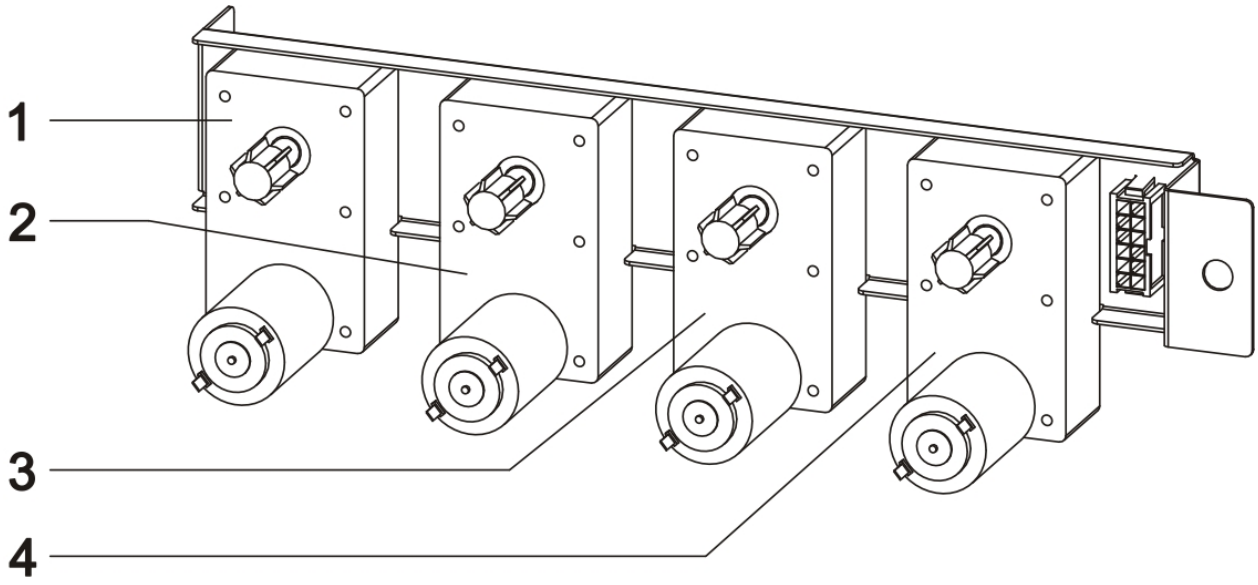
1. Water level board
2. Output board 2
3. Main switch
4. Power cable socket
5. Output board 1
6. Net filter
7. Milk fridge connector

2.6 Electronic boards module exploded view



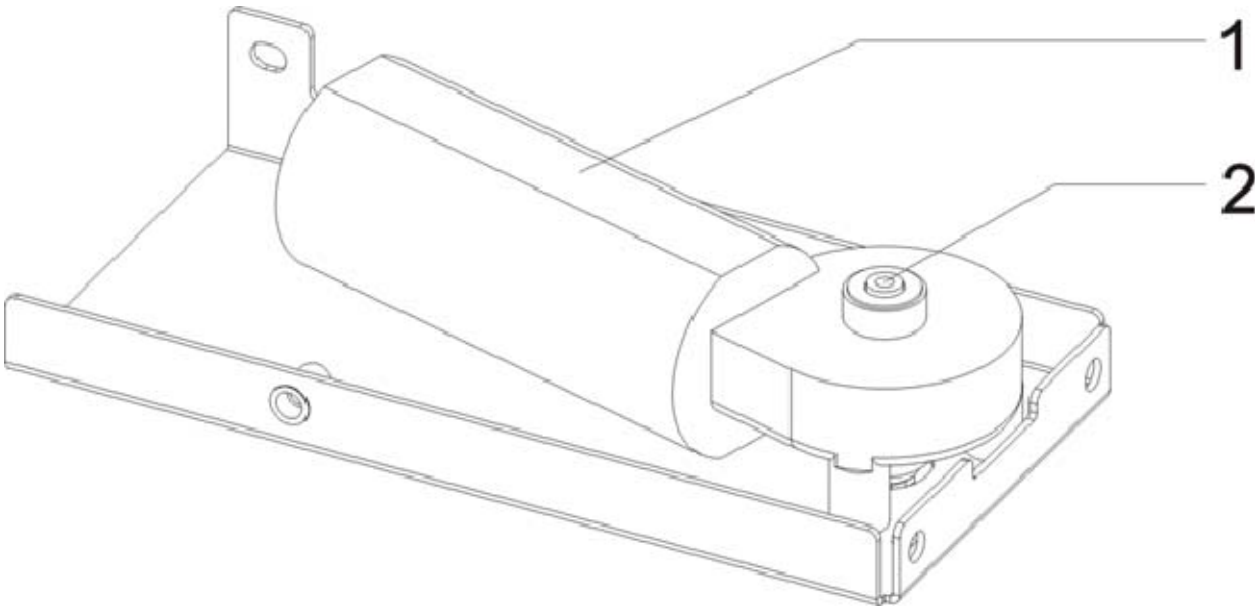
1. Power stabilizer
2. Mother board
3. Triac board

2.7 Powder gearmotors module exploded view



1. Powder gearmotor for soluble 1
2. Powder gearmotor for soluble 2
3. Powder gearmotor for soluble 3
4. Powder gearmotor for soluble 4 **[Only for 4700 G1-G2 (no fresh milk)]**

2.8 Coffee group gearmotor module exploded view



1. Coffee group gearmotor
2. Gearmotor shaft

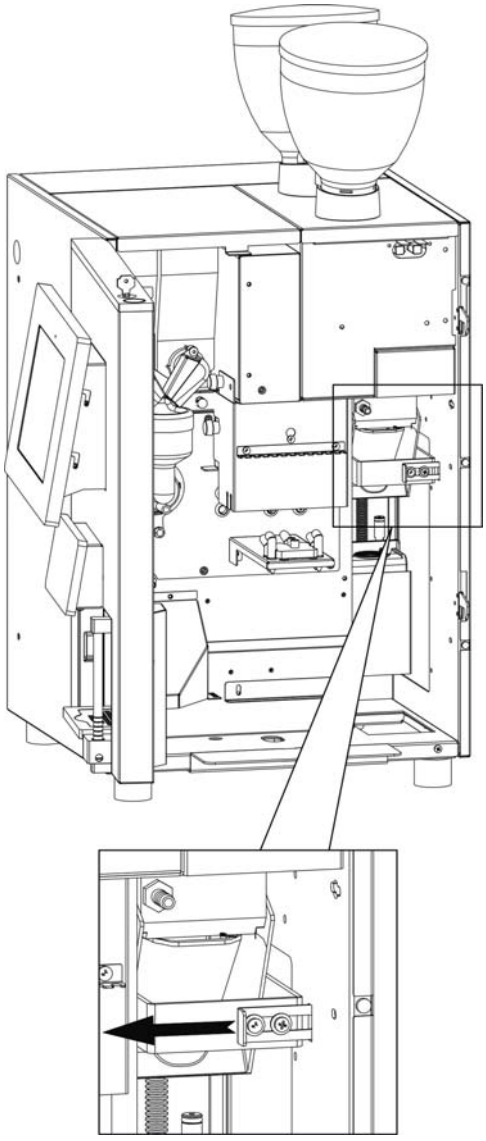
3

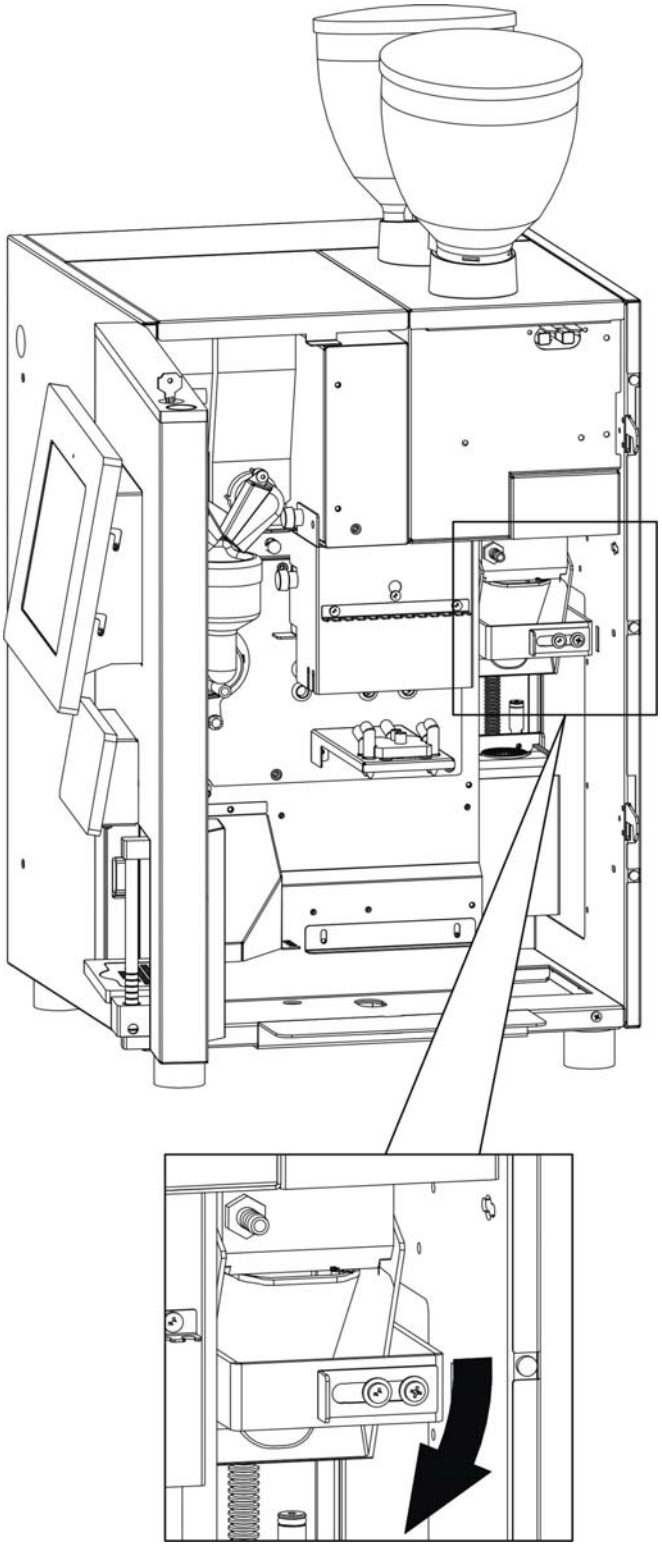
4 Ordinary maintenance

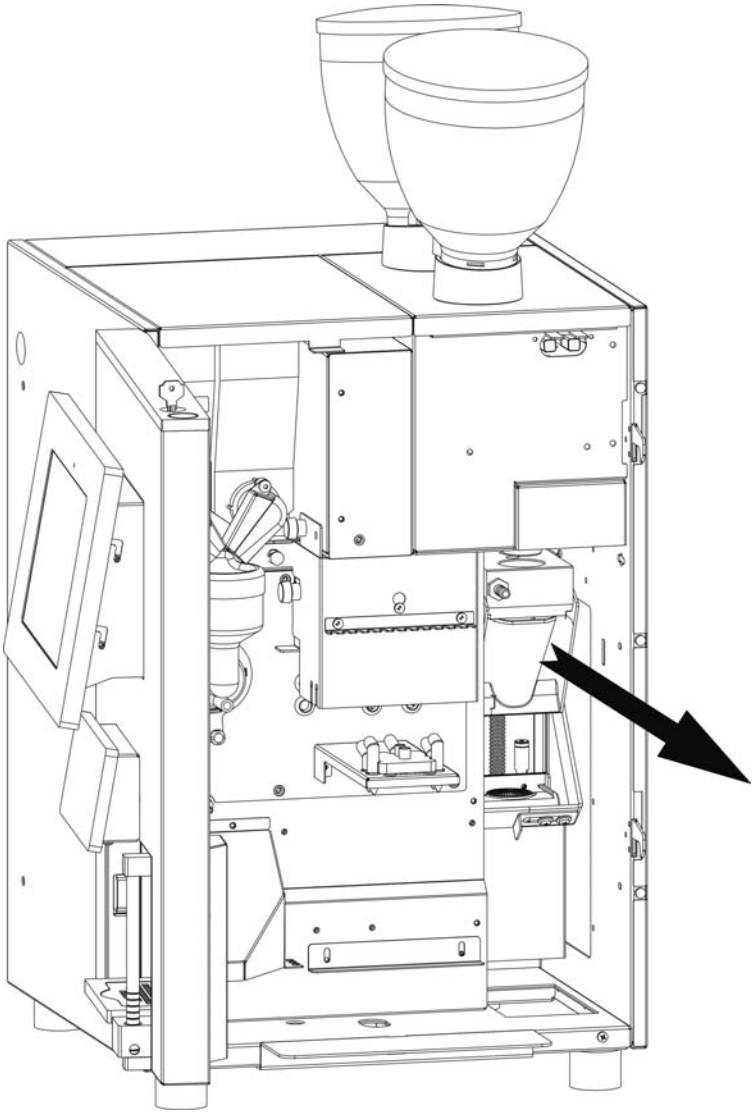
This kind of maintenance has to be considered as a periodical maintenance.

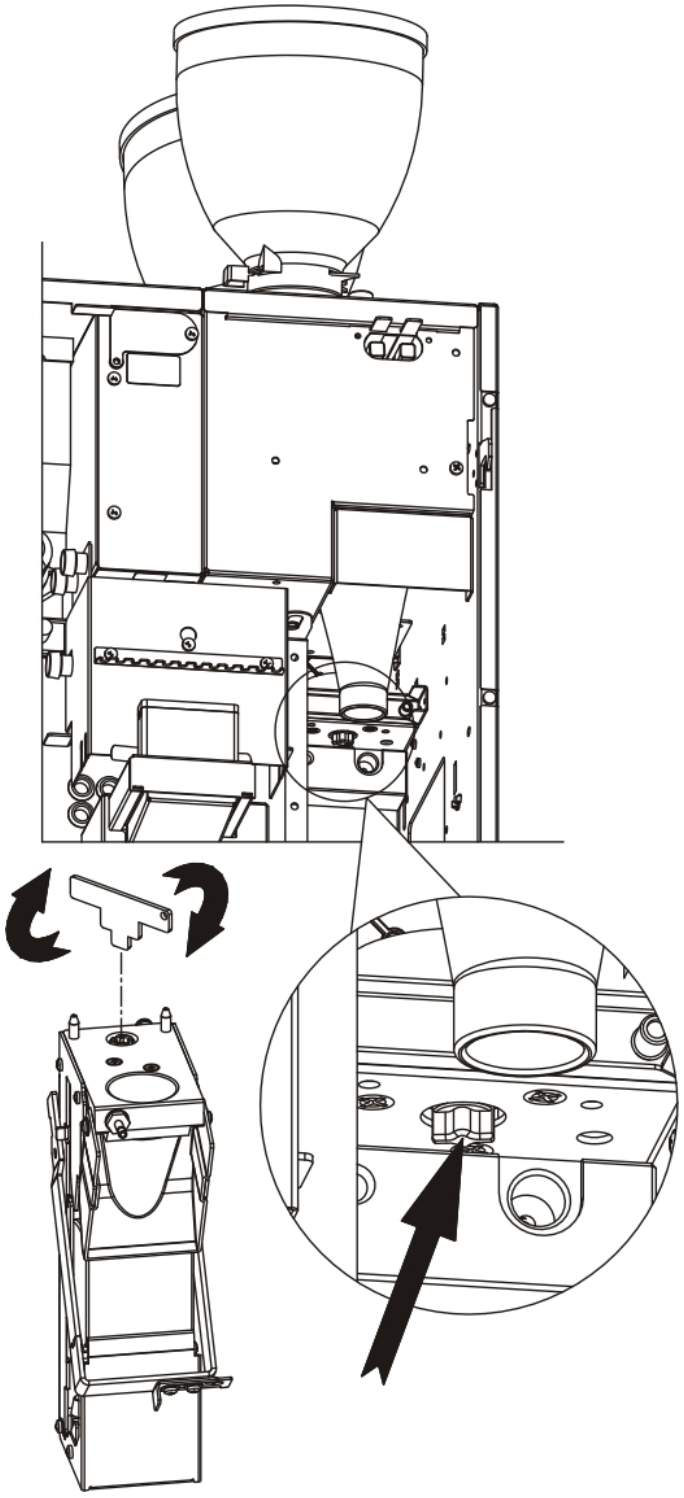
It consists in all those operations to do after an estimated period, according to the factory recommendations.

4.1 Removing the coffee group

Step	Action	Illustration
1	Remove the **drip tray** and the **grounds drawer**. Disconnect the silicon tube and unlock the blue **coffee group lock lever**.	

Step	Action	Illustration
2	Turn the **coffee group lever** downward and let the **coffee group** to go down.	

Step	Action	Illustration
3	Pull the **coffee group** toward you and take it off the machine.	

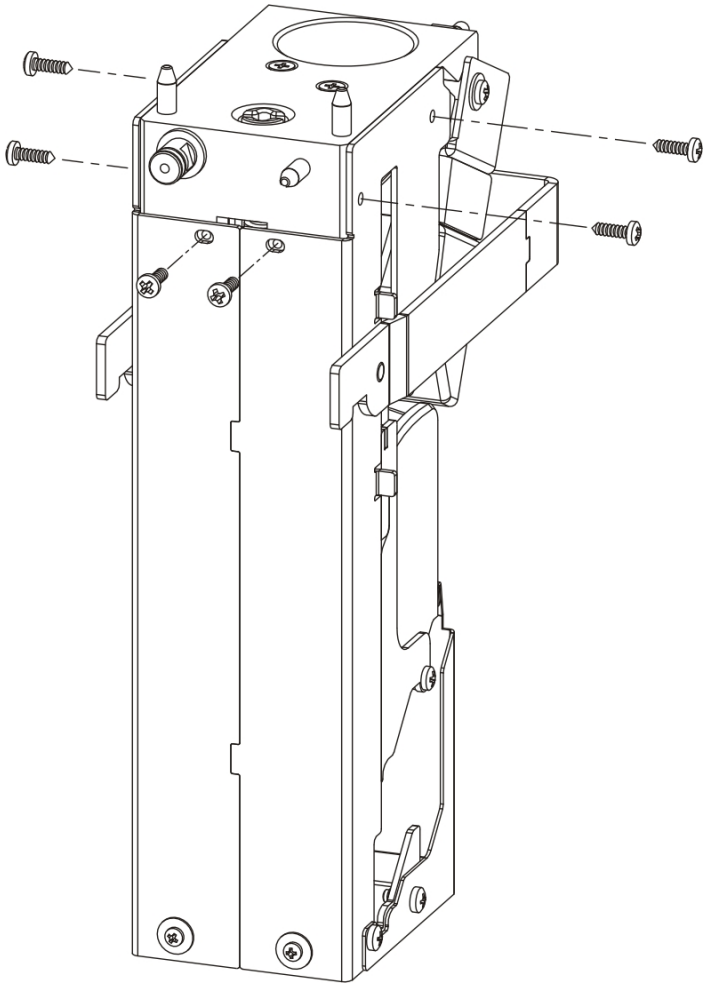
Step	Action	Illustration
4	Put back the **coffee group**, following the above procedure backwards. If you find difficulty in putting the coffe group back in its original position, use the key supplied with the machine to slightly turn the **coffee group's shaft**, paying attention to align its position to the one of the **motor's shaft**, as shown in the picture.	

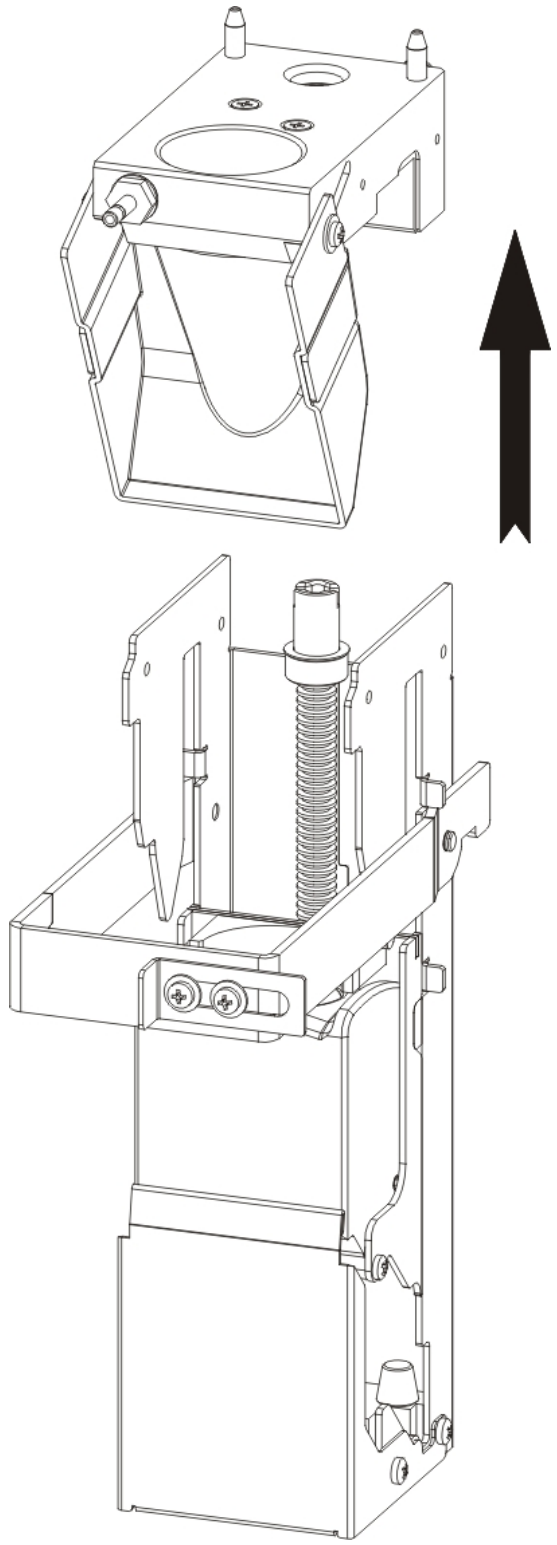
4.2 Sealings and filters replacement (10000 Cycles Kit Installation)

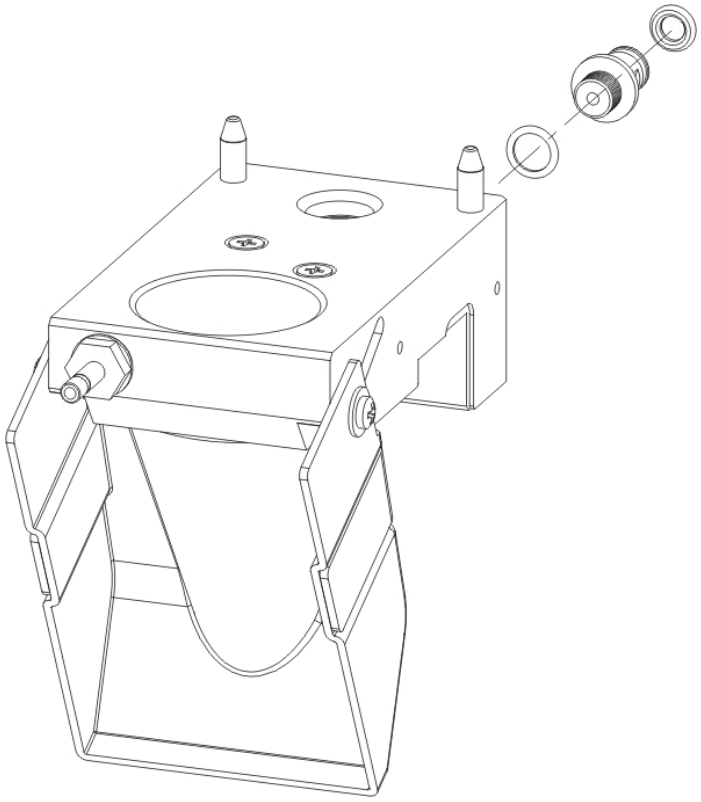
Before to do this operation follow the procedure described on paragraph **4.1 Removing the coffee group**.

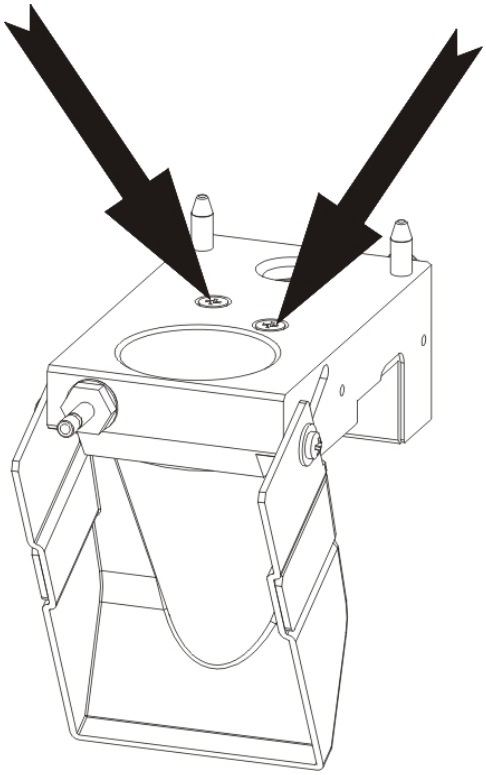
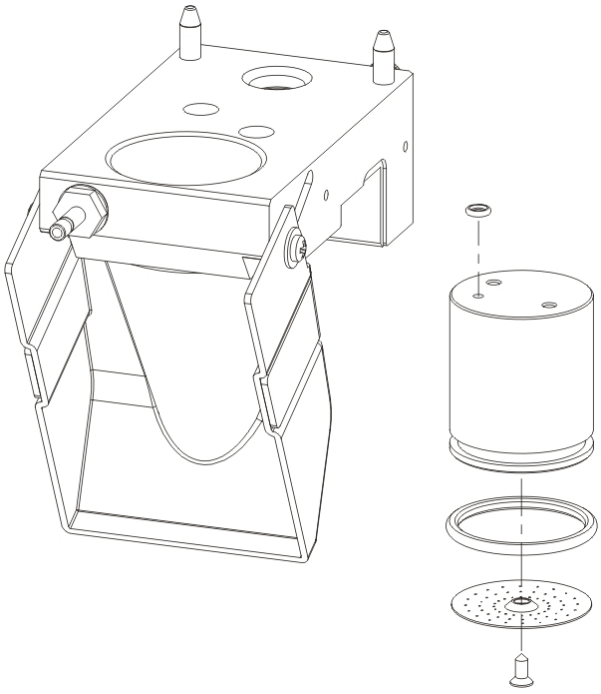
Components required:

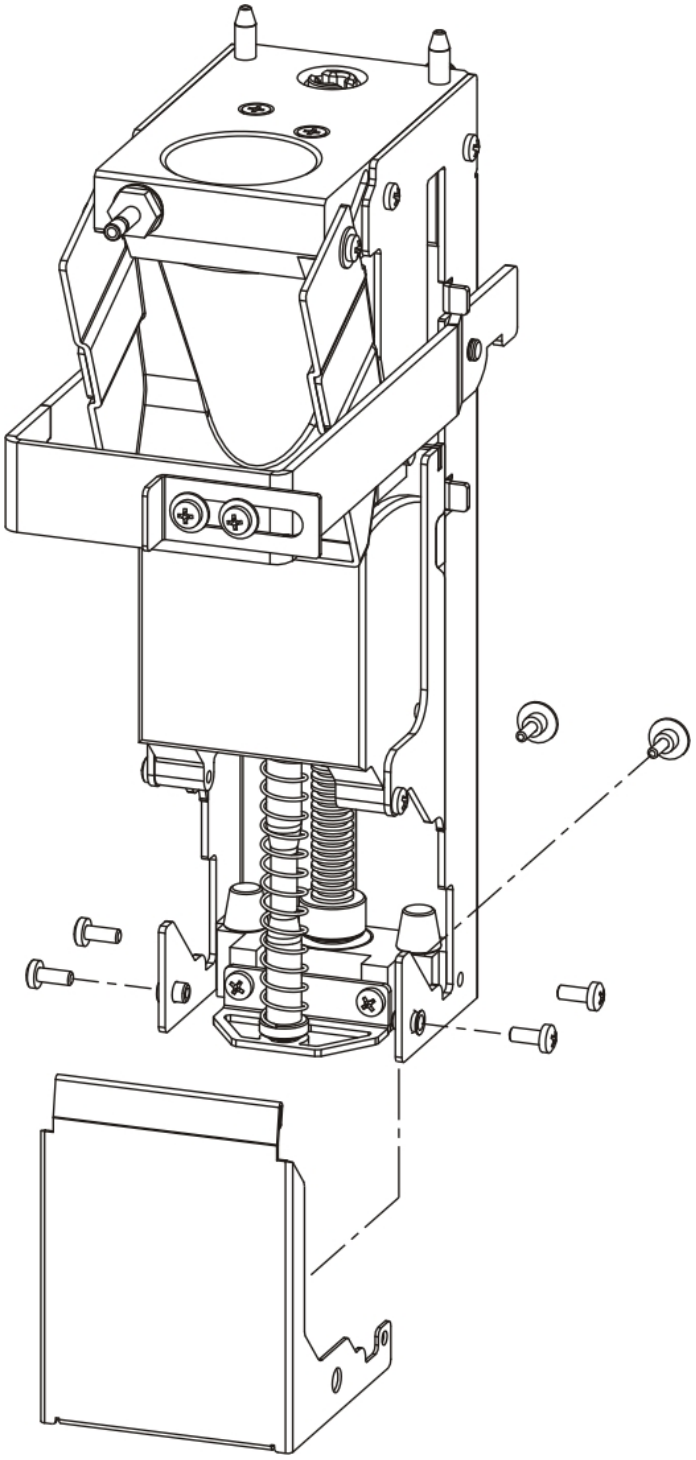
DESCRIPTION	ILLUSTRATION	QUANTITY	NAME
Silicon brush 19 x 70 x 2 mm		1	A
Coffee group filter D.40 mm		2	B
Red silicon O-ring 3024 6,02 X 2,62 mm		2	C
Star silicon gasket		1	D
Red silicon O-ring 03037 9,19 X 2,62 mm		1	E
Red silicon O-ring 04143 36,10 X 3,53 mm		1	F
Red silicon O-ring 2015 3,68 X 1,78 mm		1	G
Red silicon O-ring 2037 9,25 X 1,78 mm		2	H
Silicon lip gasket		1	I
Red silicon O-ring 3150 37,7 X 2,62 mm		1	J

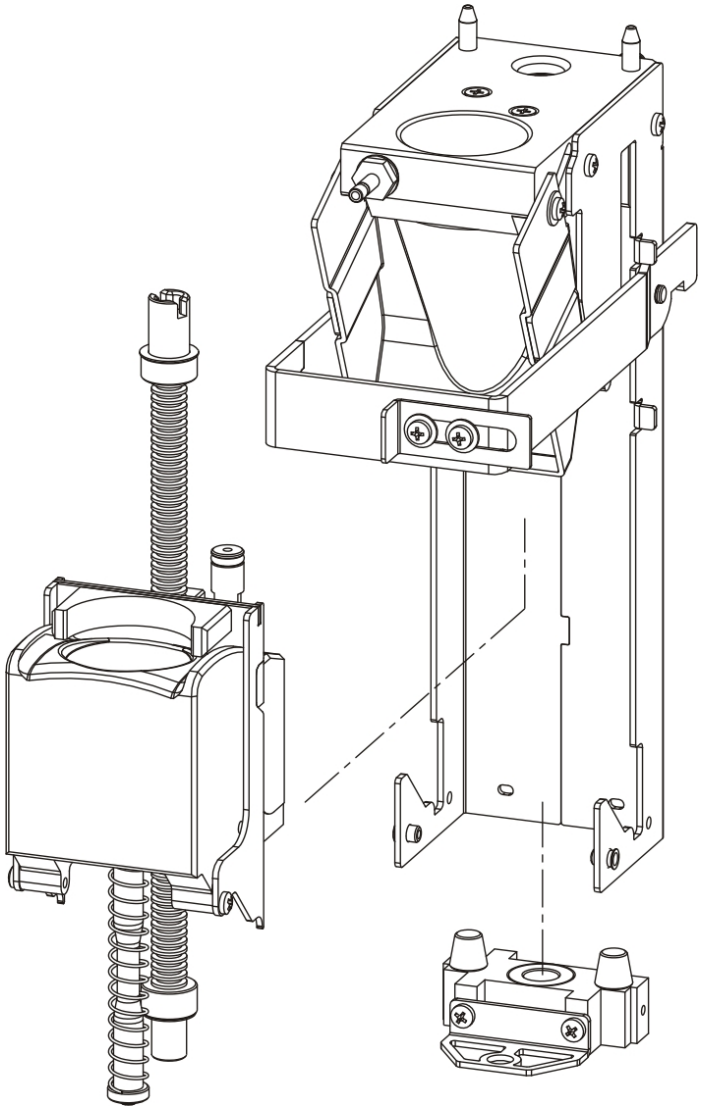
Step	Action	Illustration
1	Remove the 6 screws that hold the **coffee group upper base**.	

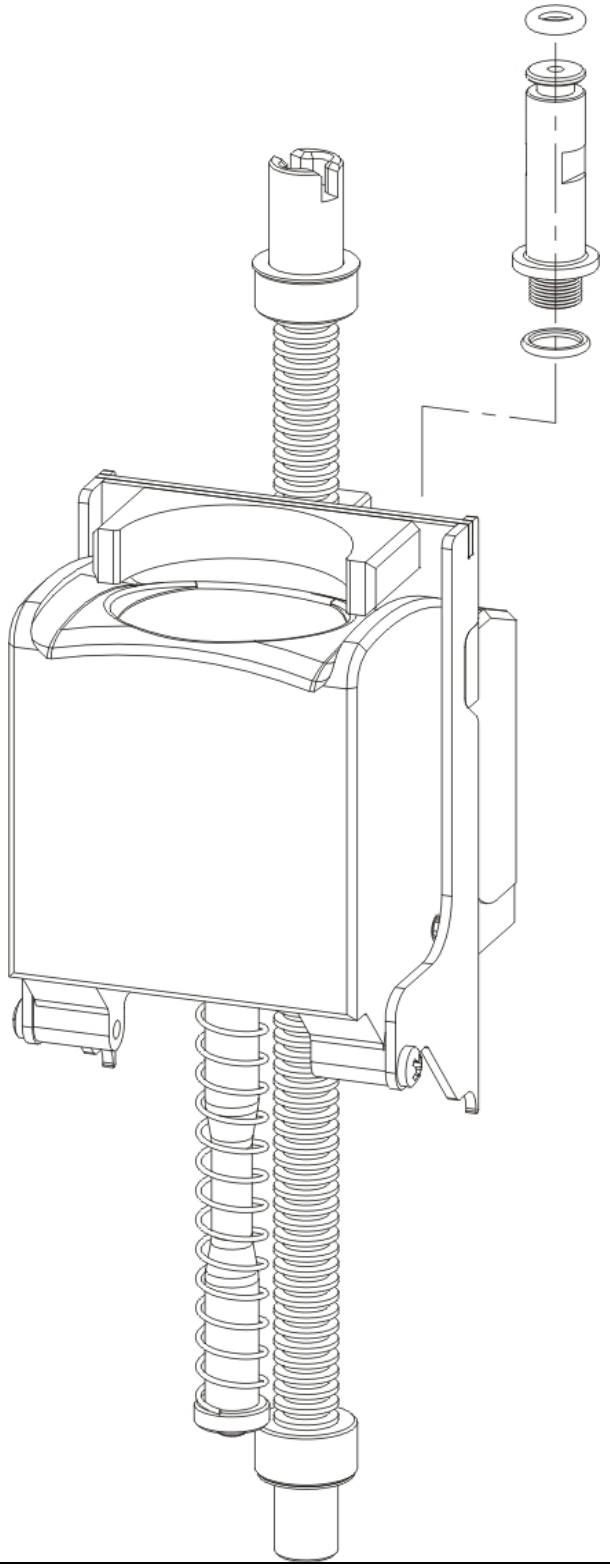
Step	Action	Illustration
2	Take off the **coffee group upper base**.	

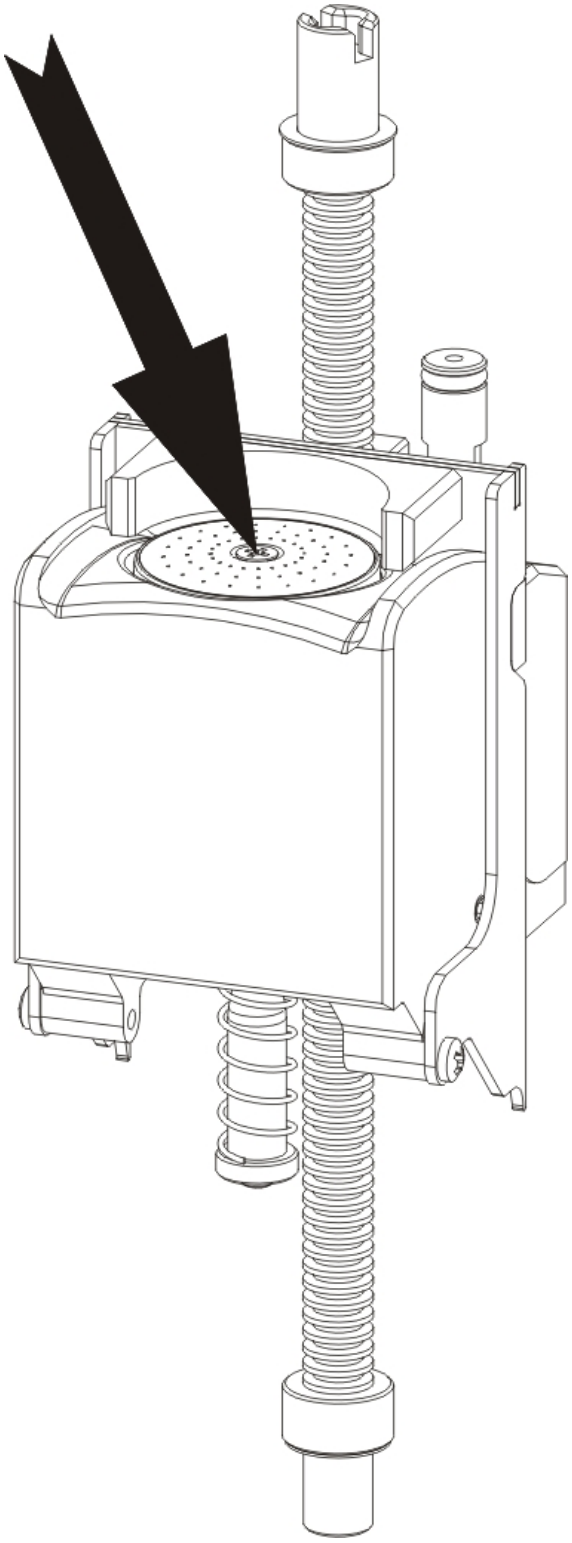
Step	Action	Illustration
3	Unscrew the **coffee group inlet nozzle** and replace the O-Rings **C** and **H**. Put it back.	

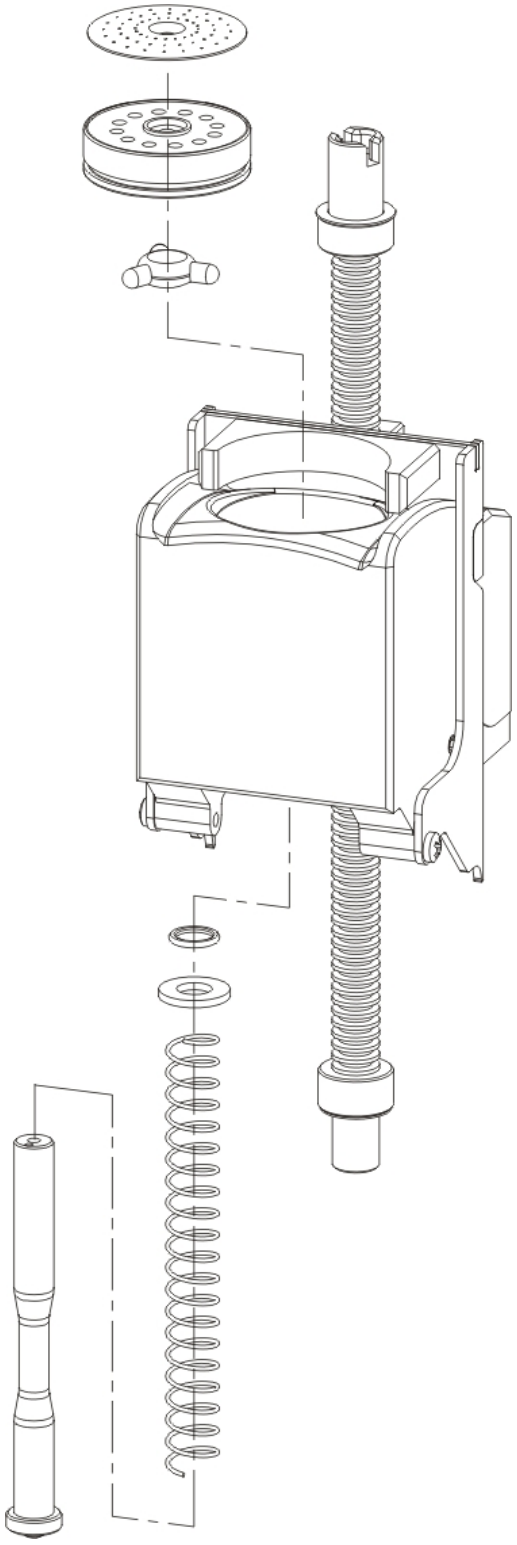
Step	Action	Illustration
4	Remove the 2 screws that hold the **coffee group top piston** and remove it.	
5	Replace: - O-Ring **F** - O-Ring **G** - Filter **B** Put everything back.	

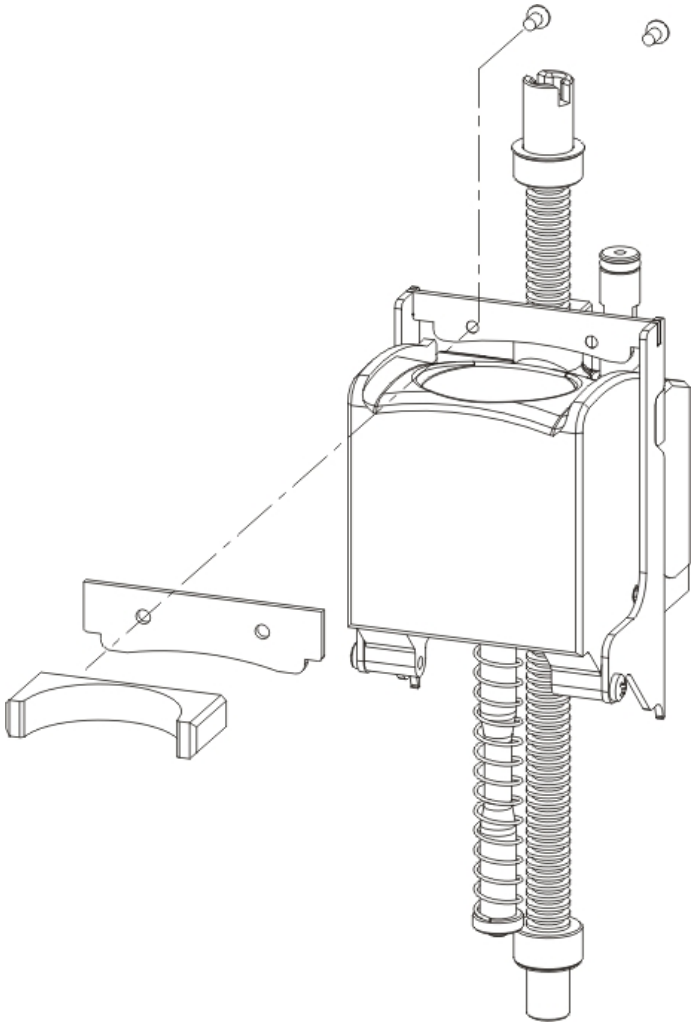
Step	Action	Illustration
6	Remove the 6 screws that hold the **coffee group lower base** and the **cover**.	

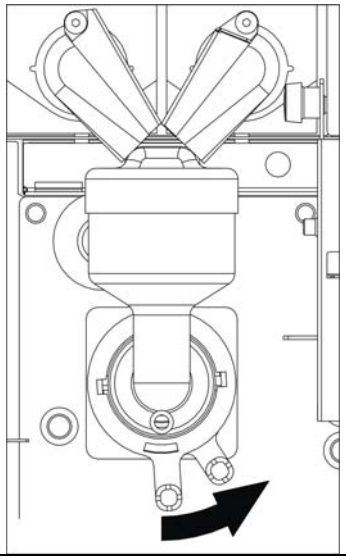
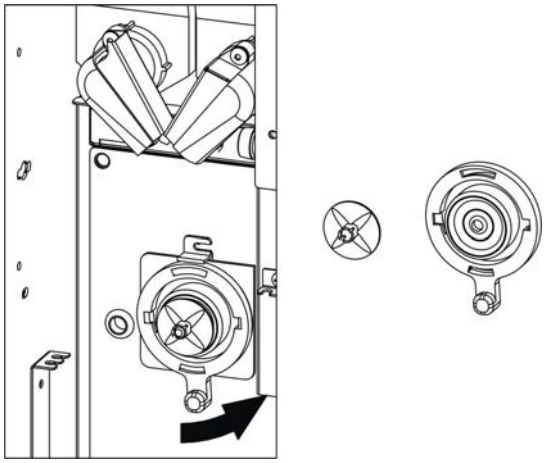
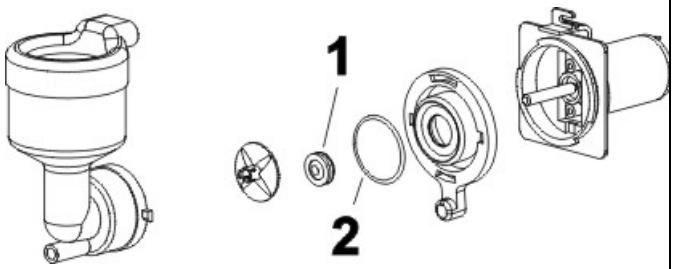
Step	Action	Illustration
7	Take off the **coffee group lower base**. Take off the **coffee group chamber**.	

Step	Action	Illustration
8	Unscrew the **coffee group chamber inlet nozzle** and replace O-Rings **C** and **H**. Put it back.	

Step	Action	Illustration
9	Remove the screw that holds the **coffee group bottom head** to the **coffee group shaft**.	

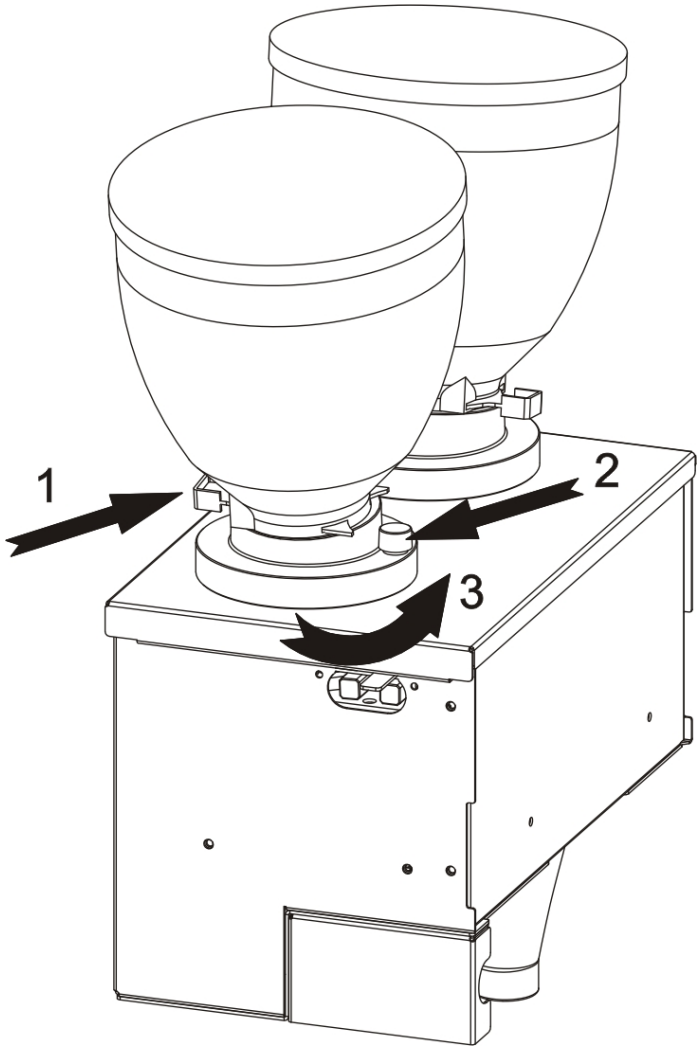
Step	Action	Illustration
10	Remove the **coffee group shaft**. Replace: - filter **B** - gasket **D** - O-Ring **E** Insert the **coffee group shaft** into the **coffee group chamber** and screw back the bottom head.	

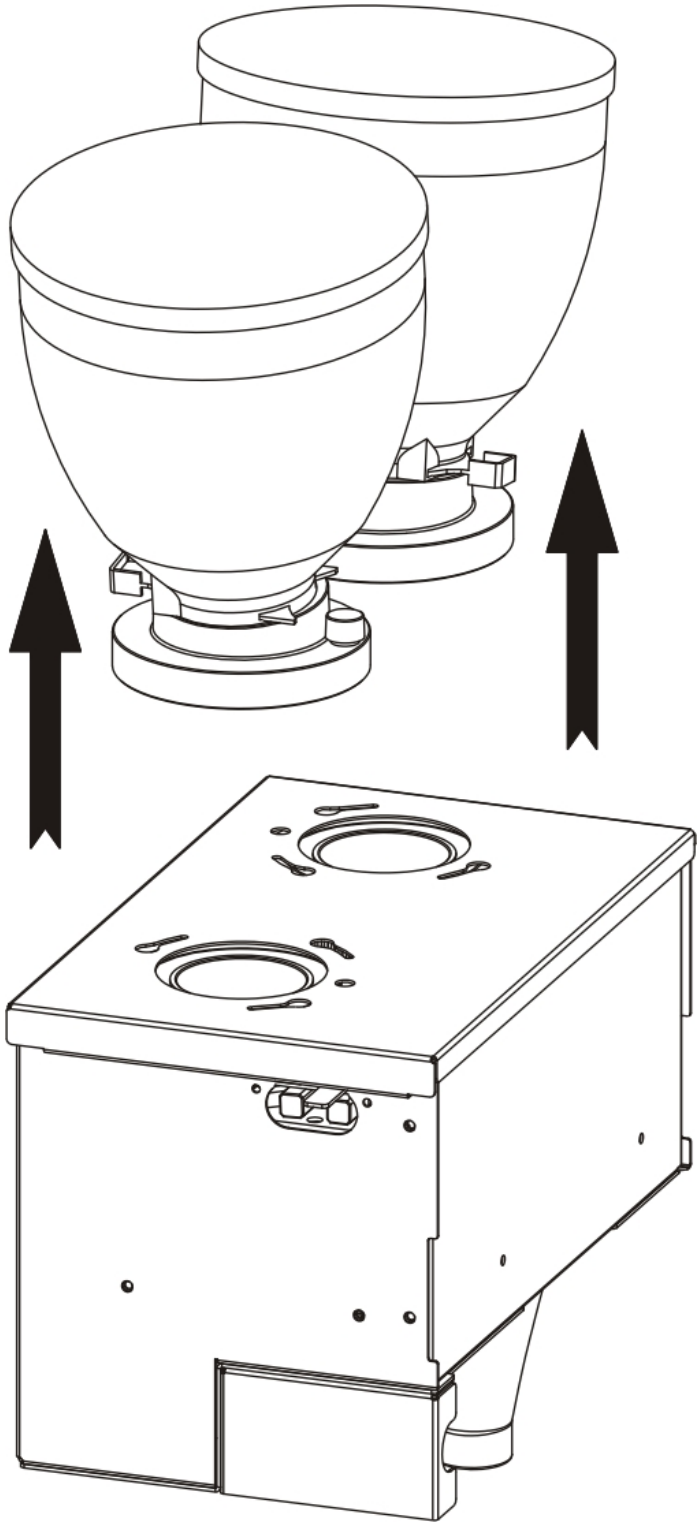
Step	Action	Illustration
11	Remove the 2 screws that hold the **coffee group brush holder** and replace the silicon brush “**A**”. Put back the **coffee group brush holder**. Put everything back.	

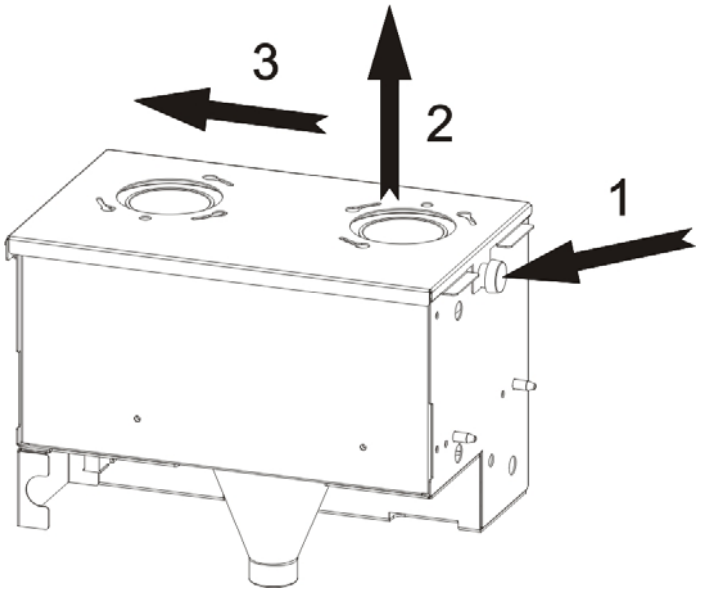
Step	Action	Illustration
12	Turn right the **mixing bowl holder** and pull out the **mixing bowl**. Pull out the **mixing blade**.	
13	Turn right the **mixing bowl holder** till the end and pull it out.	
14	Replace the lip gasket **I** and the silicon O-ring **J**.	

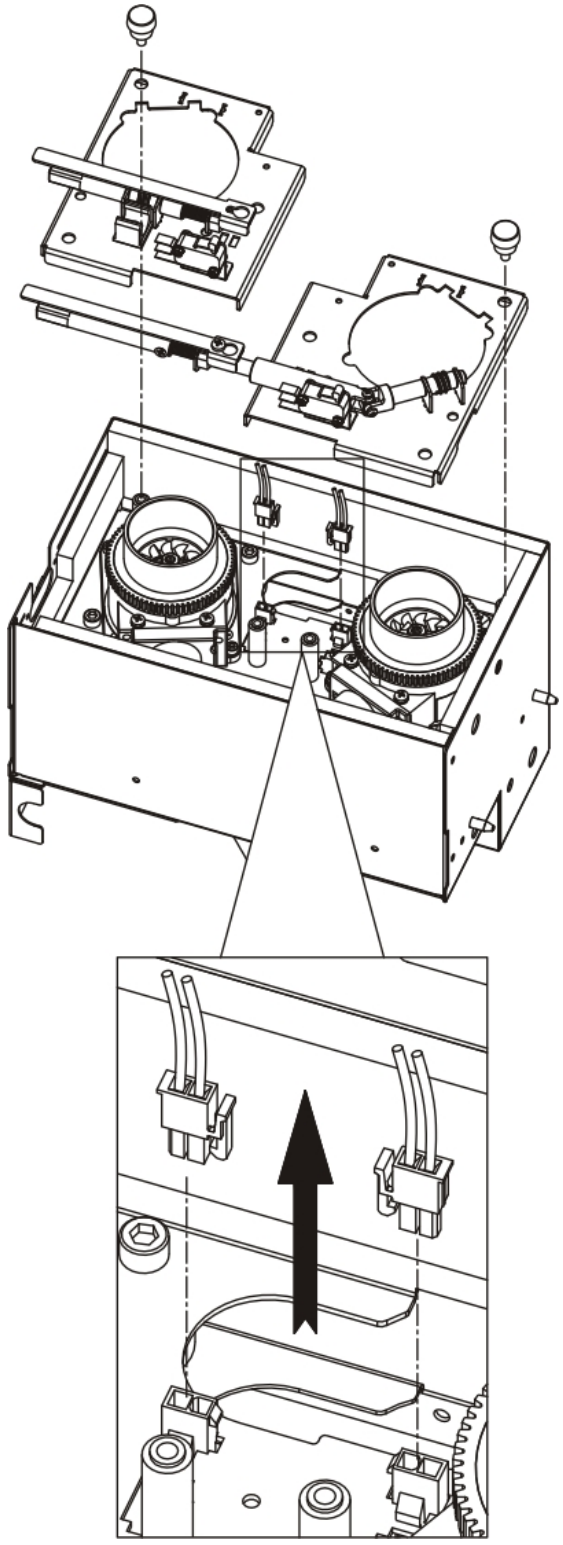
4.3 Grinder blades replacement

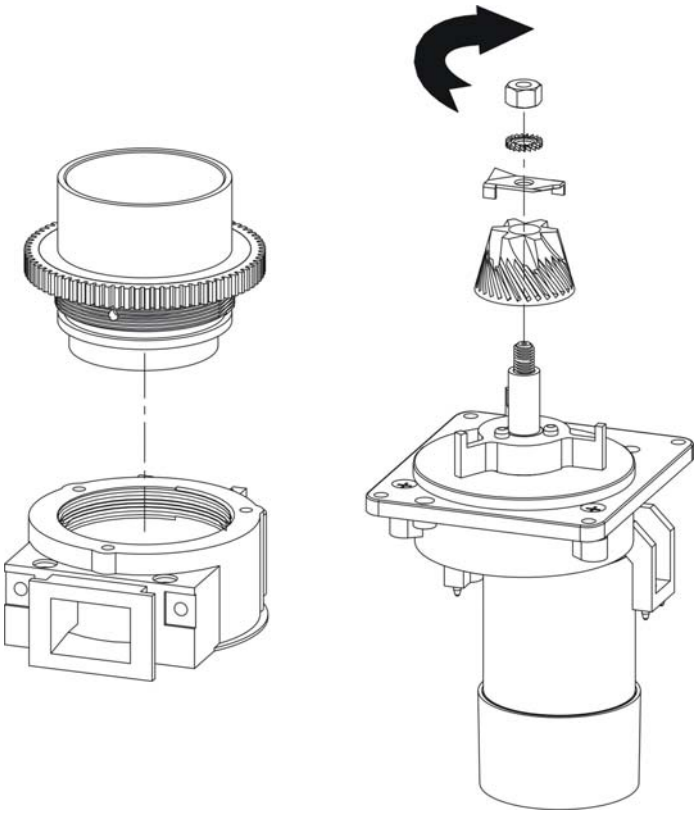
Before to do this operation, follow the procedure described on paragraph **8.1 Removing the grinder module** and paragraph **6.1.2 Removing the top lid**.

Step	Action	Illustration
1	Close the **beans hopper stoppers**. Lift up the shaft that blocks the **black supports**. Turn counterclockwise the **black supports**.	

Step	Action	Illustration
2	Remove the **beans hoppers** and clean all the remaining beans using a vacuum.	

Step	Action	Illustration
3	Unscrew the **top lid holding knob**. Lift the back part of the **top lid**. Push it to the front to remove it.	

Step	Action	Illustration
4	**Note:** before taking off the grinder 1 is necessary to remove the **grinder 2 adjuster** from the basement. Unscrew the 3 knobs that hold the **grinder plate**, lift it up and unplug the connector.	

Step	Action	Illustration
5	Turn the **grinder head** countern-clockwise until it's completely out of the base. Put a new **grinder head**. Remove the **bottom blade holding nut** and replace the **bottom blade**. ATTENTION: the nut has to be turn clockwise to unscrew.	

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6 Extraordinary maintenance

This kind of maintenance has to be considered in case of faults.

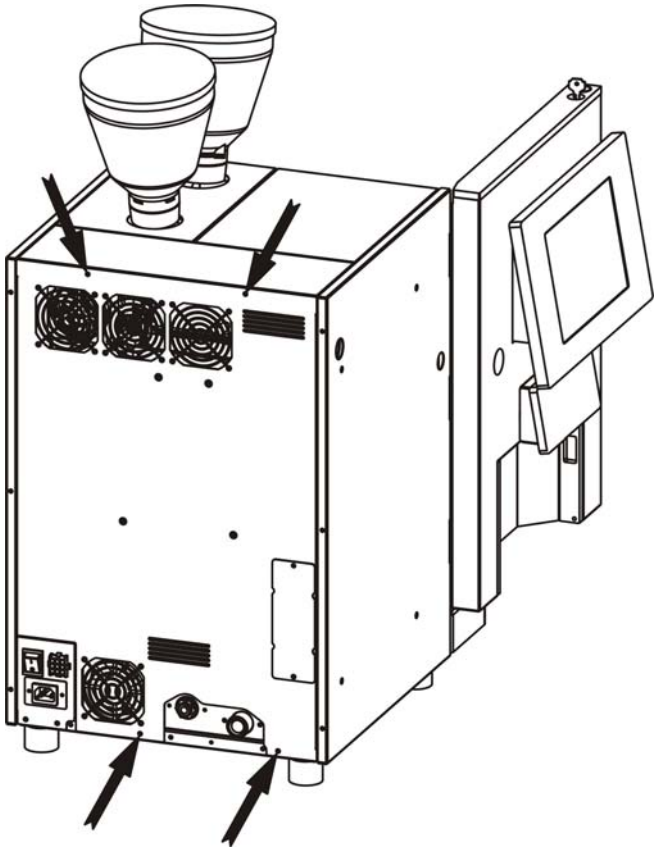
WARNING

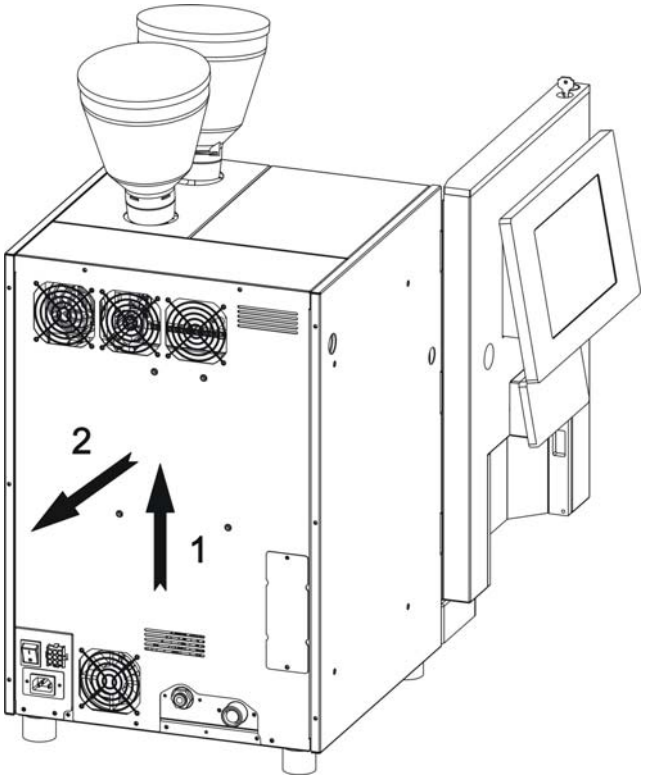
All the operations contained in this chapter has to be performed with the machine switched OFF and the power cord removed.

6.1 Removing the various metal plates

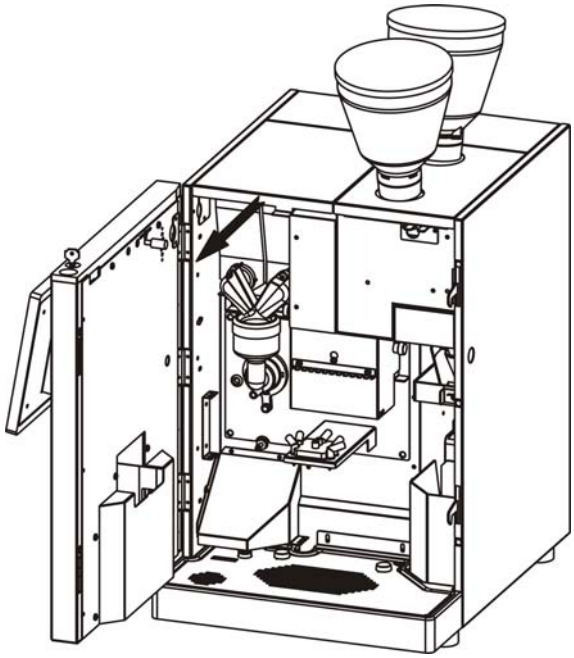
This paragraph shows hot to remove the various machine metal plates to reach the components.

6.1.1 Removing the back panel

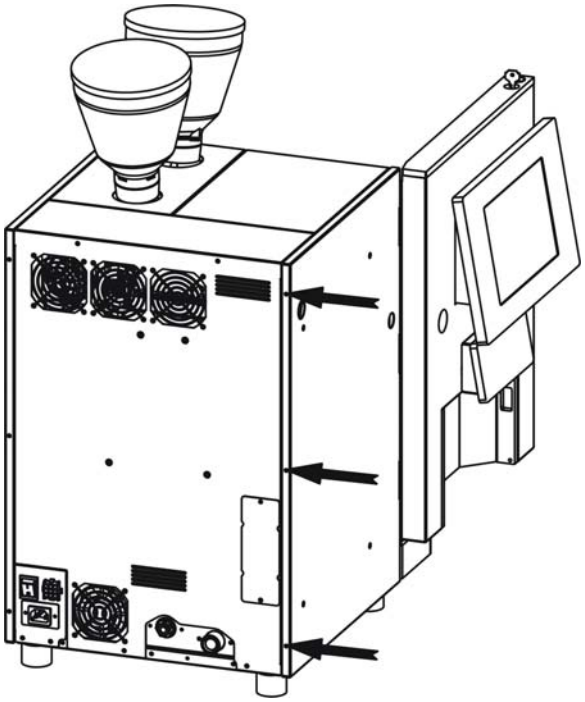
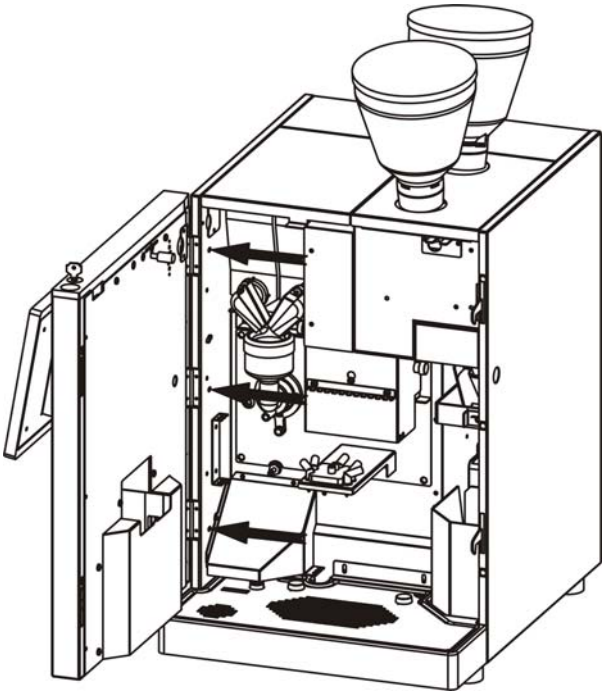
Step	Action	Illustration
1	Unscrew the 4 screws that hold the **back panel**.	

Step	Action	Illustration
2	Lift the **back panel** and than pull it toward you.	

6.1.2 Removing the top lid

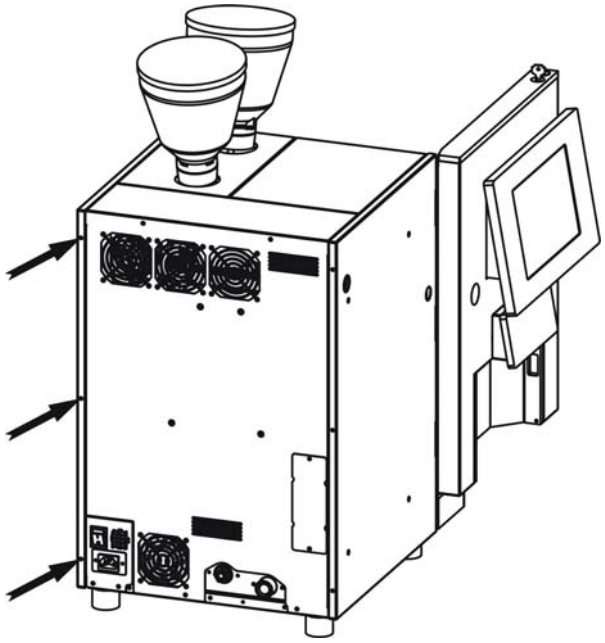
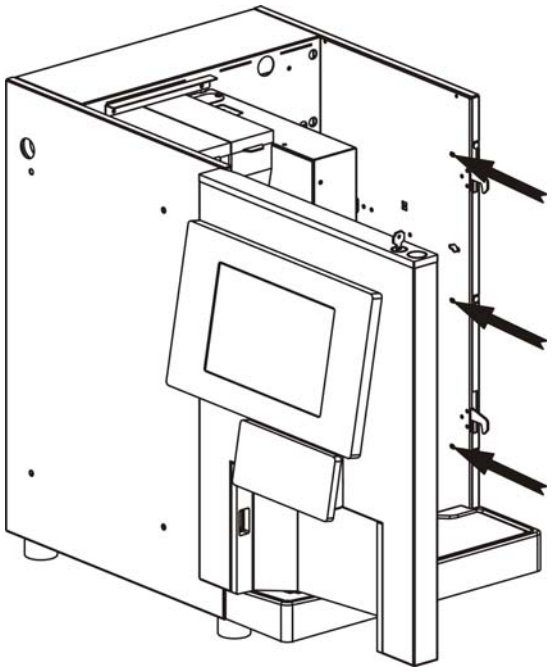
Step	Action	Illustration
1	Pull the **top lid** toward you.	

6.1.3 Removing the left side panel

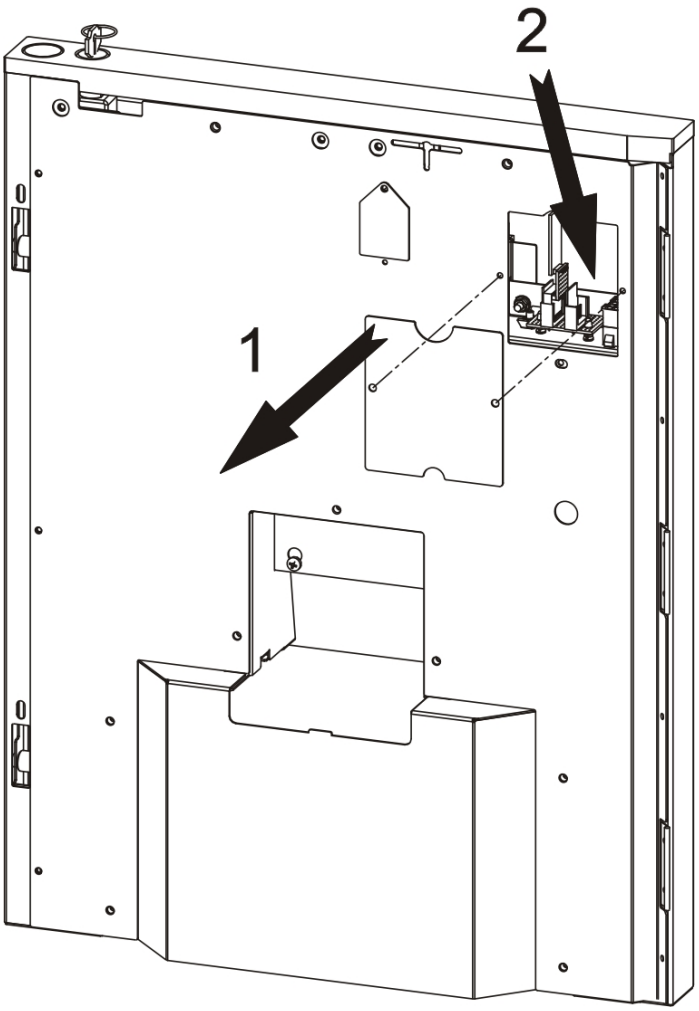
Step	Action	Illustration
1	Remove the 3 screws that hold the **left side panel** to the back of the machine.	
2	Remove the 3 screws that hold the **left side panel** to the internal side of the machine.	

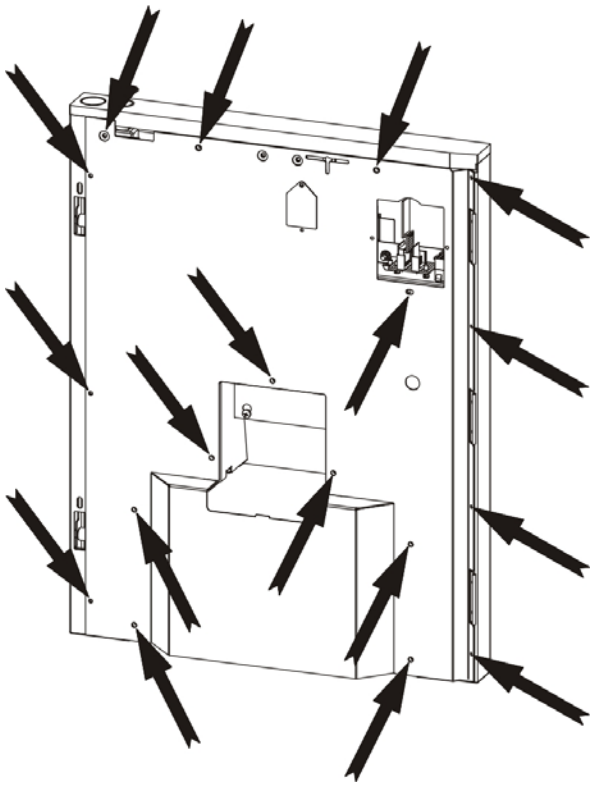
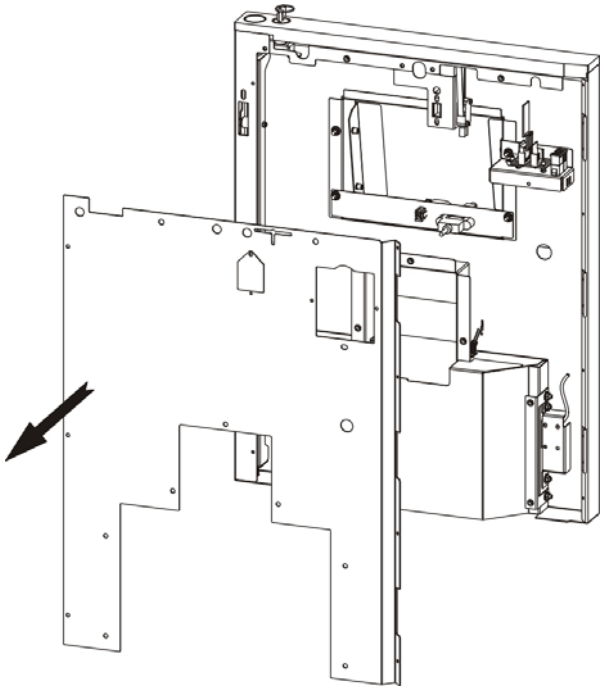
6.1.4 Removing the right side panel

Before to do this operation, follow the procedure described on paragraph **8.1 Removing the grinder module** and paragraph **6.1.2 Removing the top lid**.

Step	Action	Illustration
1	Remove the 3 screws that hold the **right side panel** to the back of the machine.	
2	Remove the **grounds drawer**. Remove the 3 screws that hold the **right side panel** to the internal side of the machine.	

6.1.5 Removing the door cover

Step	Action	Illustration
1	Remove the 2 screws that hold the **door connector cover** and remove it. Unplug the **door connector**, the **Bluetooth cable** and the **ground cable**.	

Step	Action	Illustration
2	Remove all the screws that hold the **door cover**.	
3	Remove the **door cover**.	

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8 Removing modules

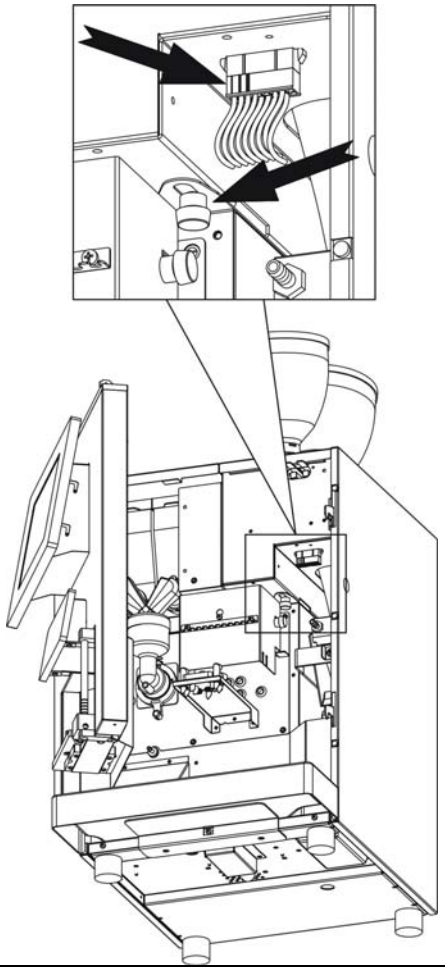
This kind of maintenance has to be considered in case of faults.

WARNING

All the operations contained in this chapter has to be performed with the machine switched OFF and the power cord removed.

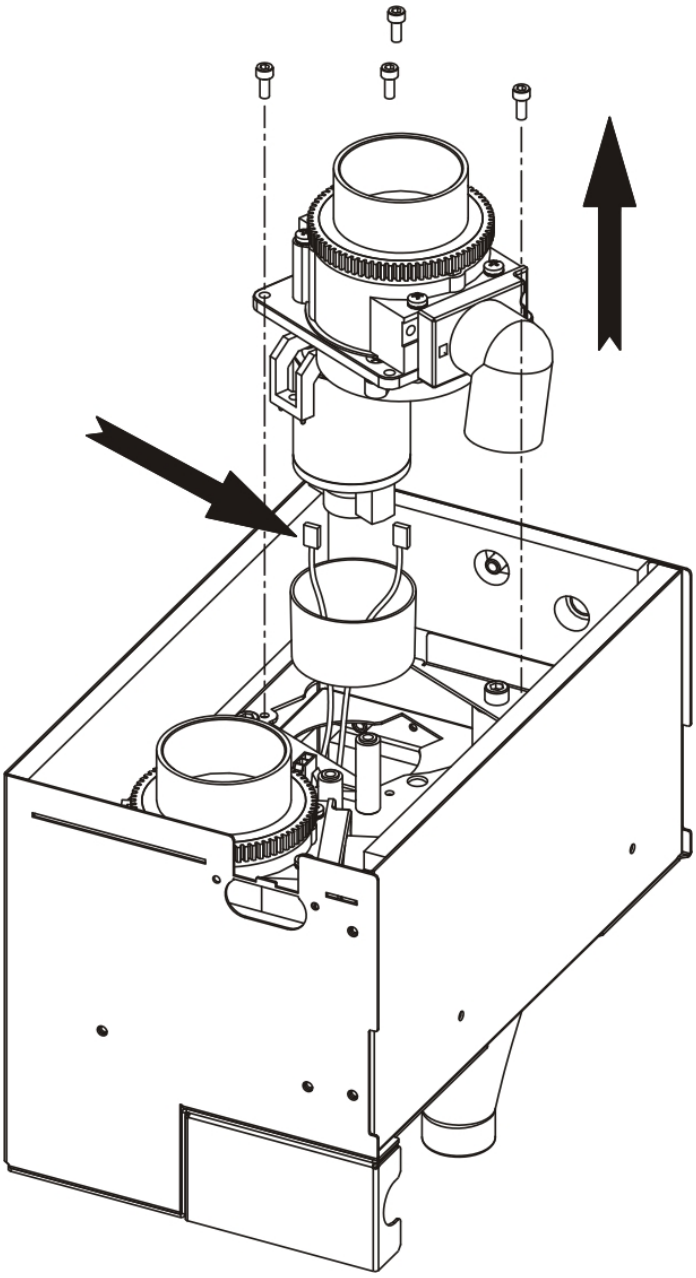
8.1 Removing the grinder module

Before to do this operation, follow the procedure described on paragraph **6.1.2 Removing the top lid**.

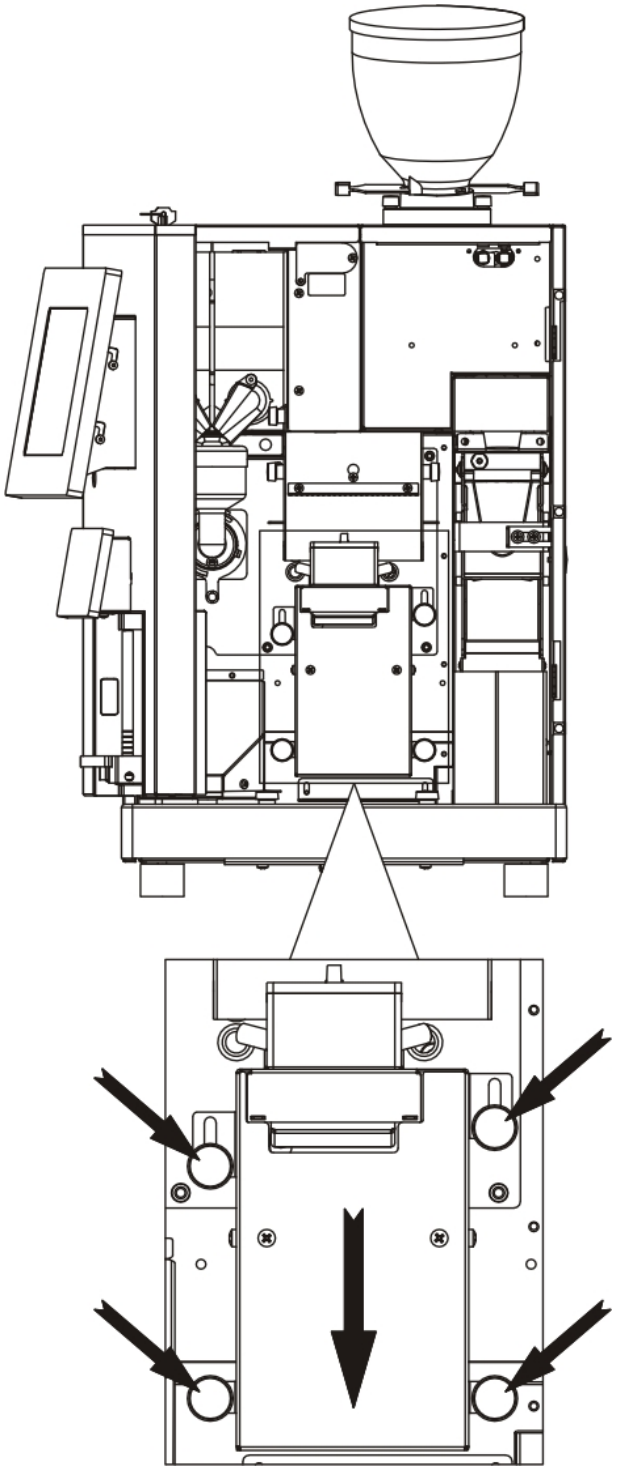
Step	Action	Illustration
1	Unplug the **grinder module connector**. Unscrew the **grinder module holding knob**. Pull out the **grinder module**.	

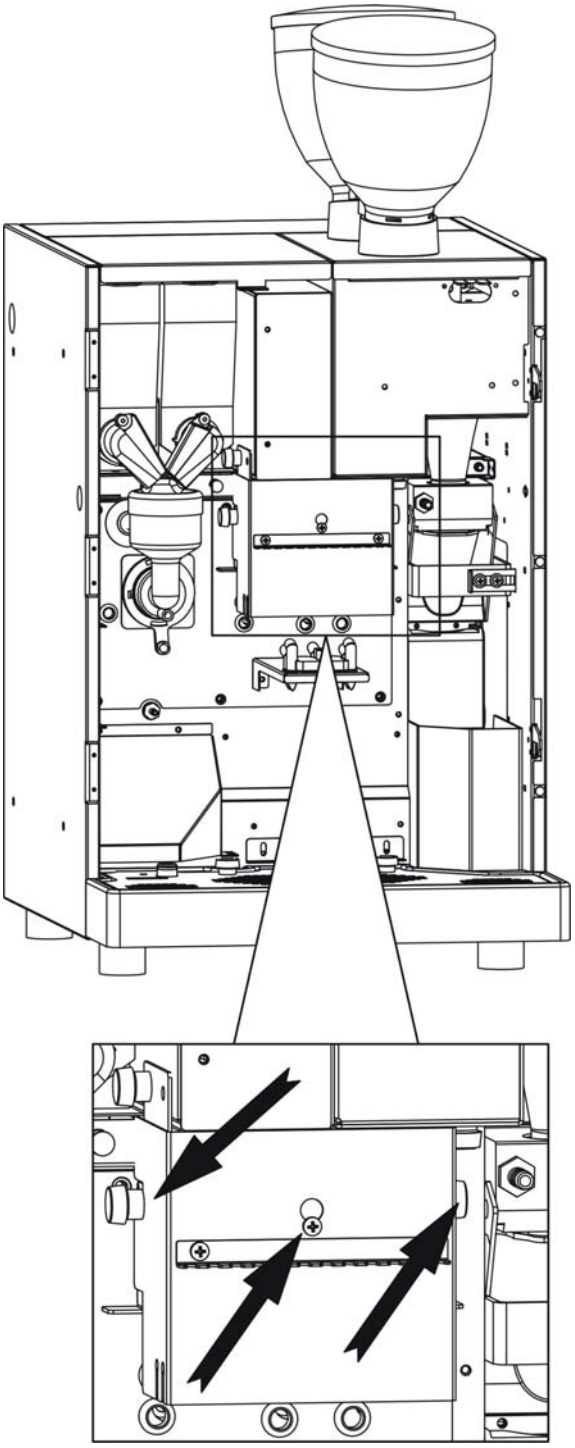
8.1.1 Removing the grinder motor

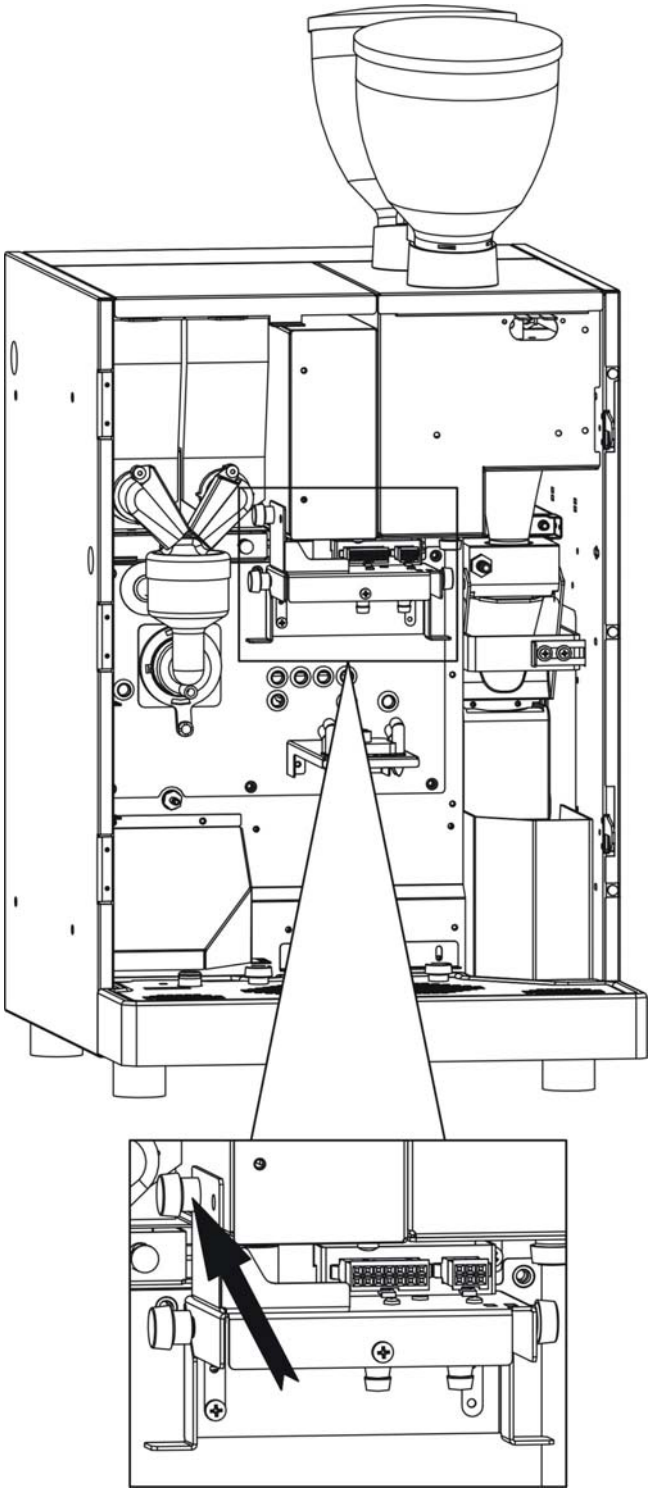
Before to do this operation, follow the procedure described on paraghraph **8.1 Removing the grinder module** and paragraph 4.3 **Grinder blades replacement** (only Steps 1, 2, 3 and 4).

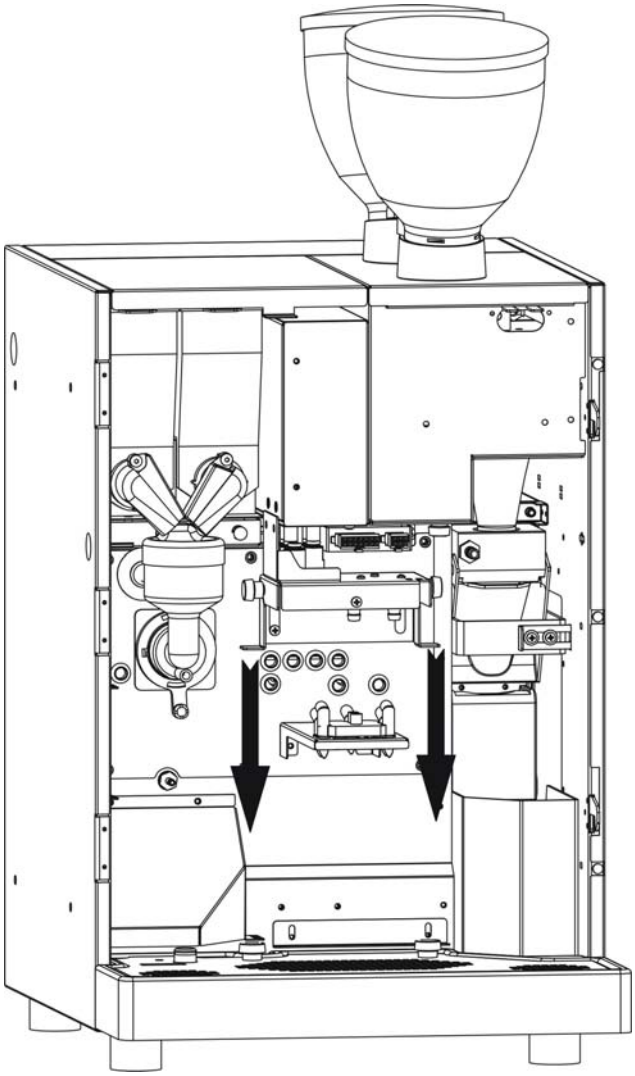
Step	Action	Illustration
1	Remove the 4 screws that hold the **grinder motor** and remove it. **Note:** while removing the **grinder motor**, unplug the cables connected to it.	

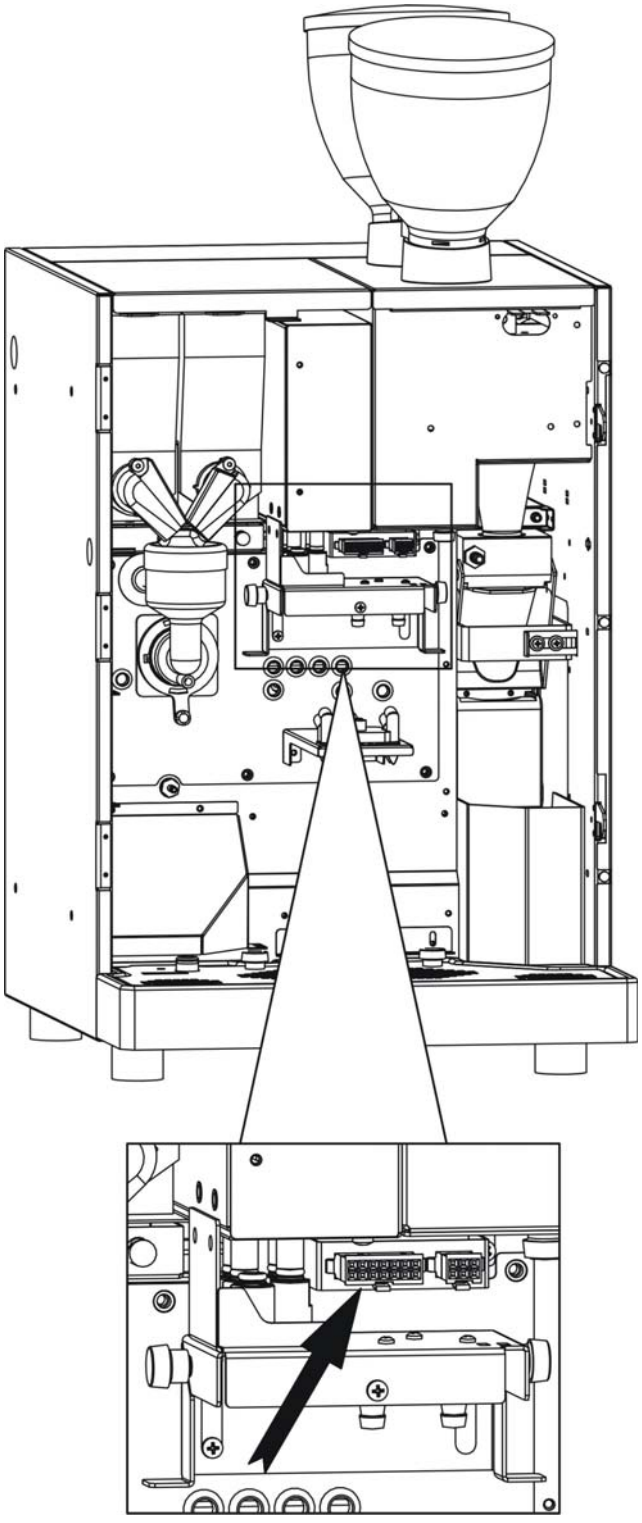
8.2 Removing the milk module

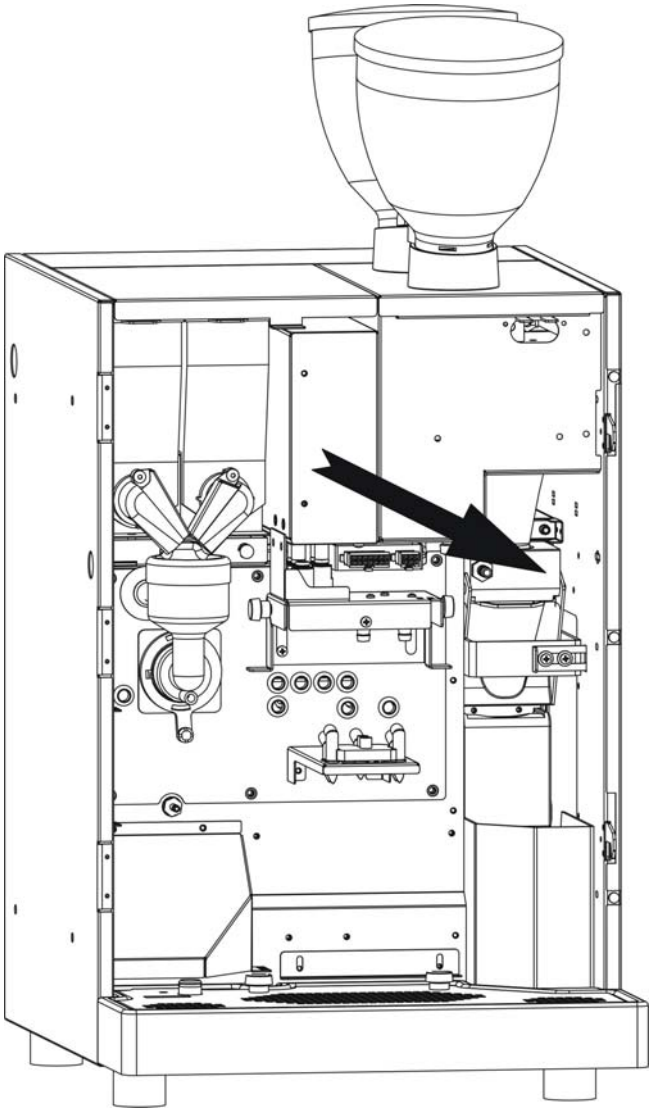
Step	Action	Illustration
1	If installed, loosen the 4 black knobs that hold the **drip catcher module** and pull it down.	

Step	Action	Illustration
2	Loosen the screw (if necessary) and the 2 black knobs that hold the **milk outlet valve cover** and remove it.	

Step	Action	Illustration
3	Remove the **milk module black knob** from the left side of the **milk module**.	

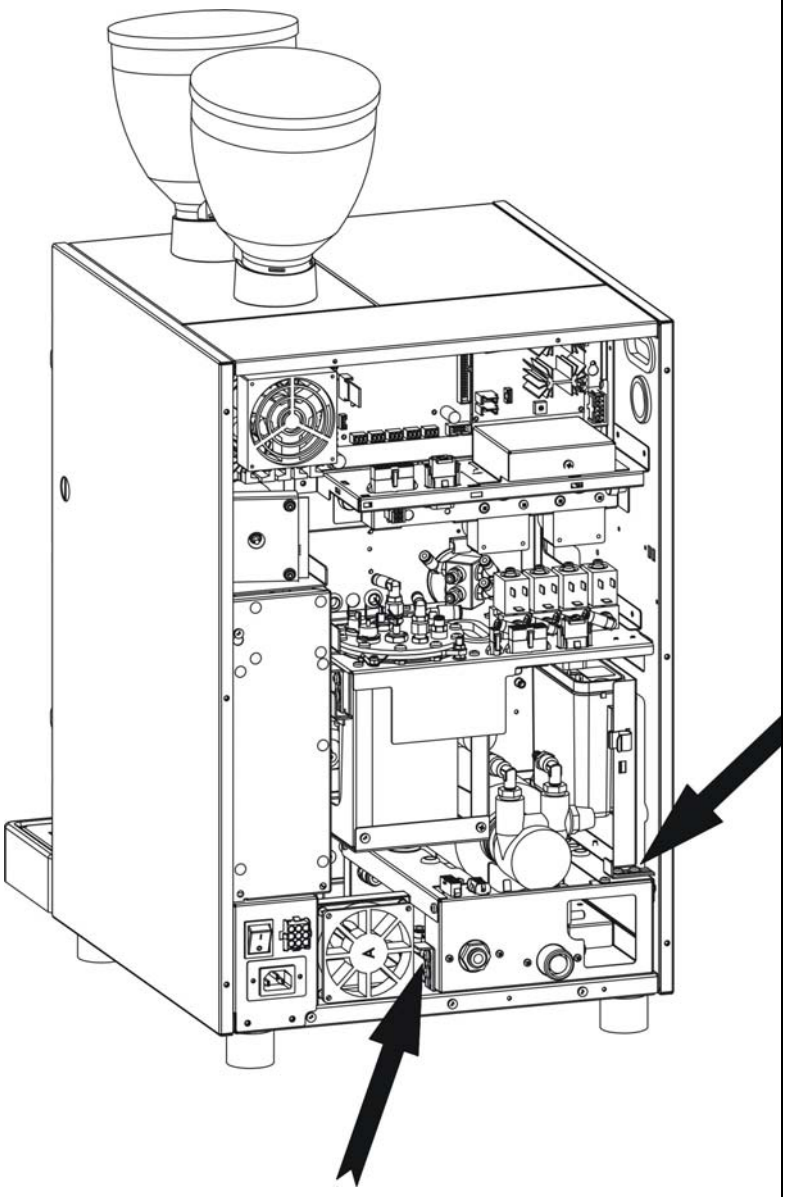
Step	Action	Illustration
4	Pull down the **milk outlet valve module**.	

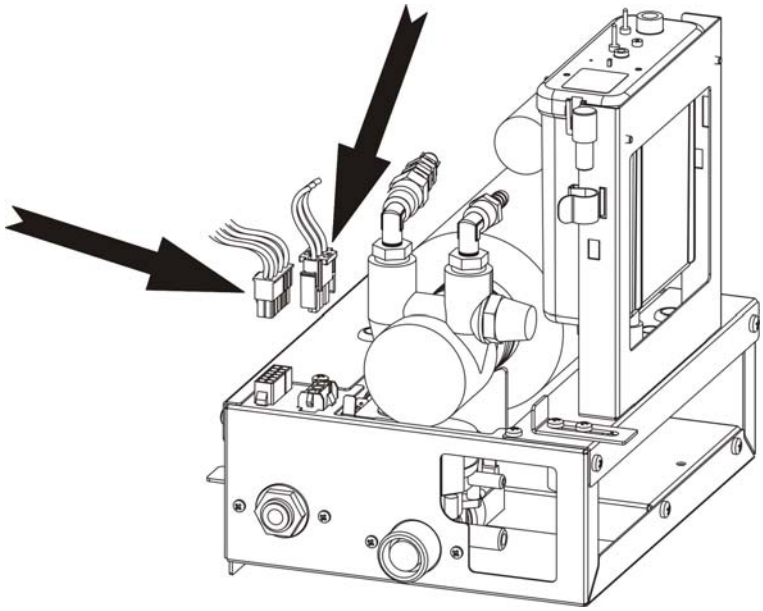
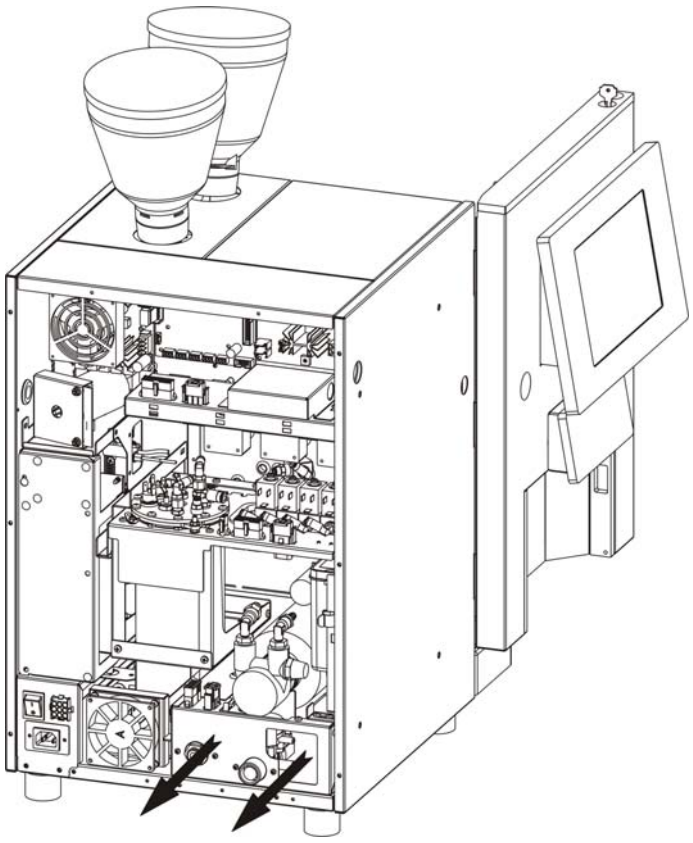
Step	Action	Illustration
5	Unplug the **milk module connector**.	

Step	Action	Illustration
6	Pull out the **milk module**.	

8.3 Removing the pump module

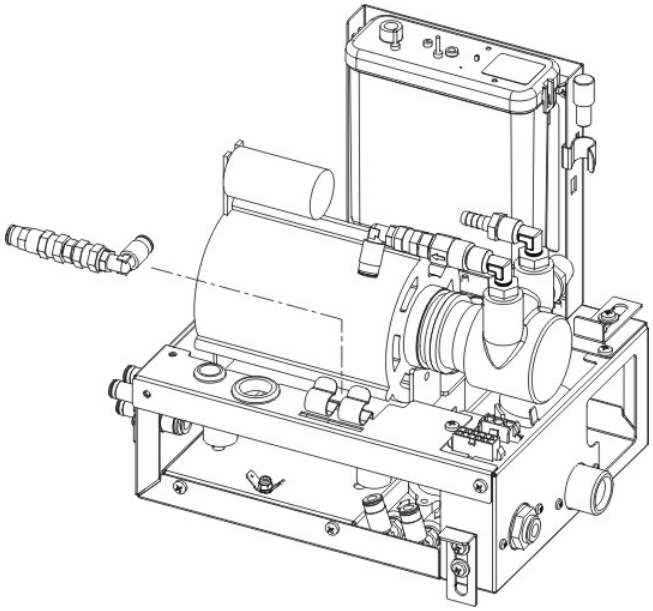
Before to do this operation, follow the procedure described on paragraph **6.1.1 Removing the back panel** and **10.1 Cooling down**.

Step	Action	Illustration
1	Unplug the water line (if necessary). Empty the **air-break**. Unlock the blue **pump module lock levers**.	

Step	Action	Illustration
2	Remove the **pump module connectors**, including the ground cable.	
3	Pull out the **pump module**.	

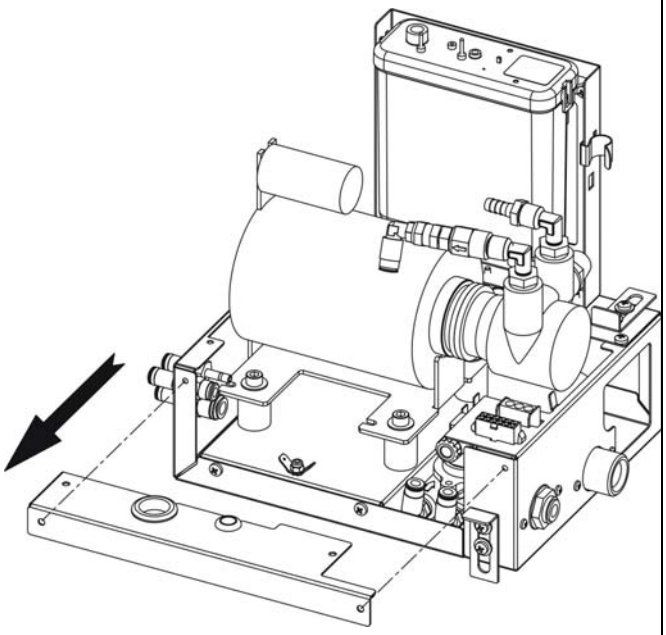
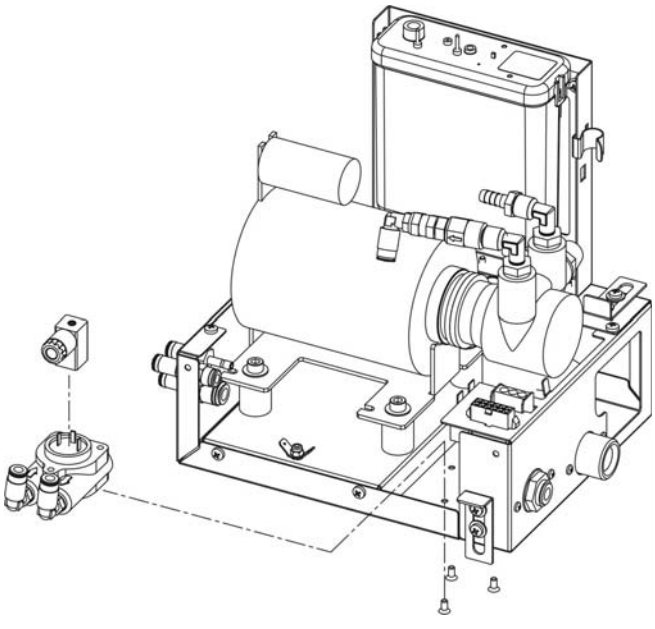
8.3.1 Removing the pump restrictor

Before to do this operation, follow the procedure described on paragraph **8.3 Removing the pump module**.

Step	Action	Illustration
1	Disconnect the tubes from the pump restrictor, and remove it.	

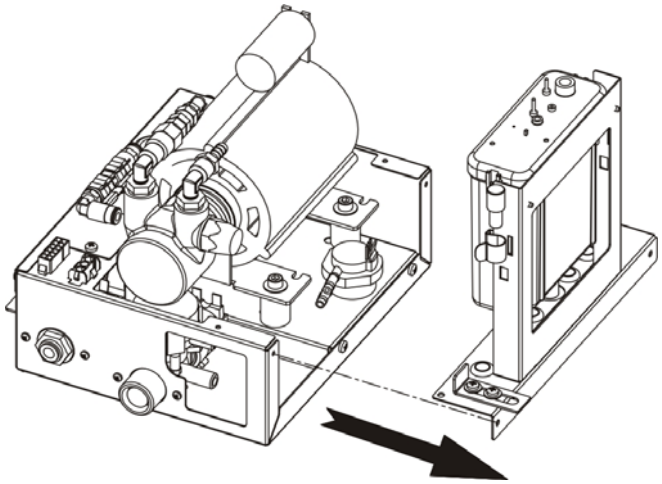
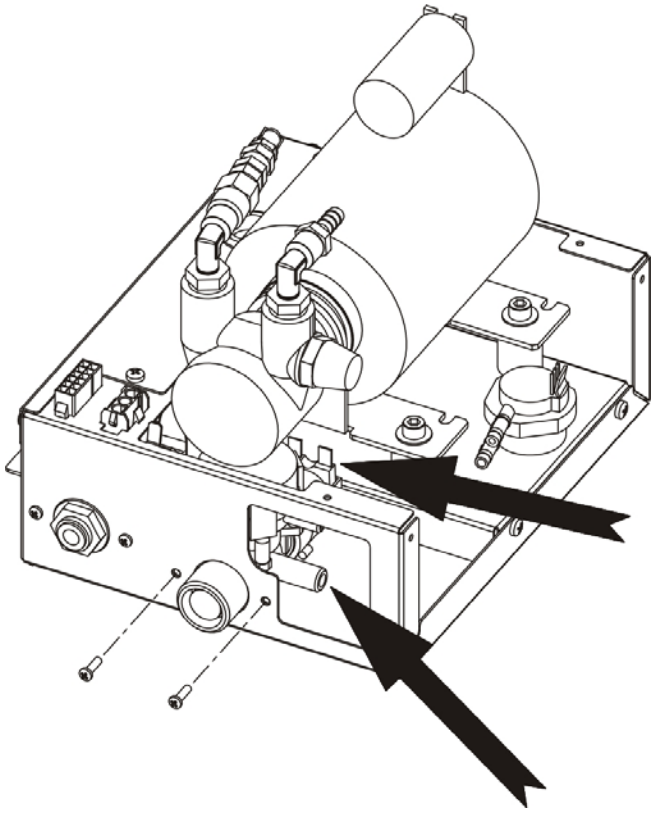
8.3.2 Removing the flow meter

Before to do this operation, follow the procedure described on paragraph **8.3 Removing the pump module** and paragraph **8.3.1 Removing the pump restrictor**

Step	Action	Illustration
1	Loosen the screws that hold the **left cover** and remove it.	
2	Disconnect both teflon pipes from the **flow meter**. Loosen the screw that holds the **flow meter connector** and unplug it. Remove the 3 screws that hold the **flow meter** and remove it.	

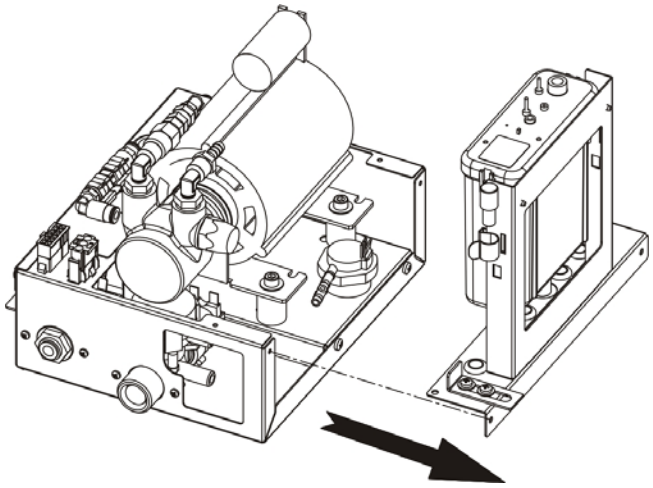
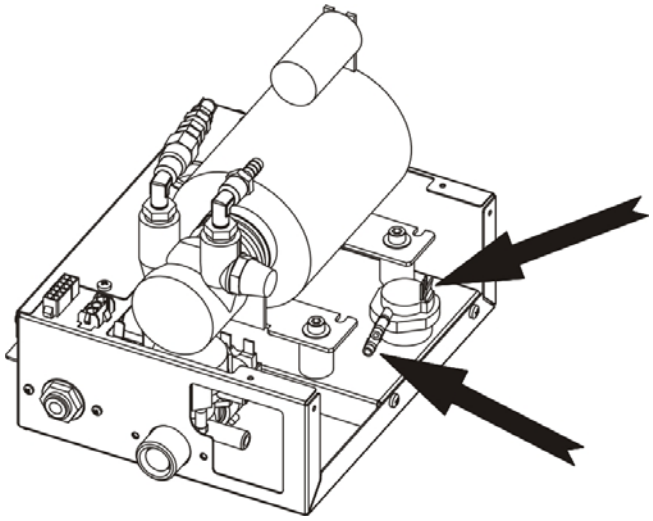
8.3.3 Removing the main water inlet valve

Before to do this operation, follow the procedure described on paragraph **8.3 Removing the pump module**.

Step	Action	Illustration
1	Loosen the screws that hold the **right cover** and remove it.	
2	Unplug the cables and disconnect the tubes from the **main water inlet valve**. Loosen the screws that hold the **main water inlet valve** and remove it.	

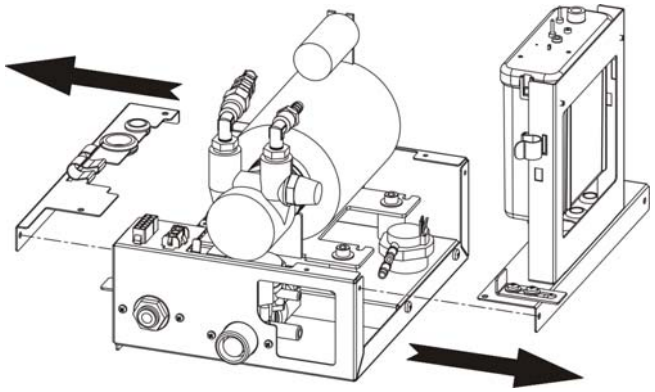
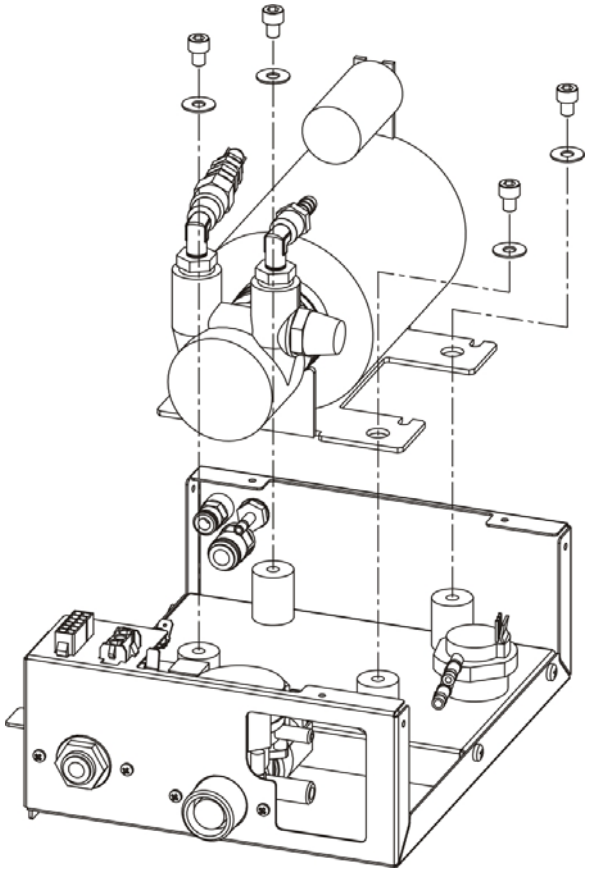
8.3.4 Removing the milk flow meter

Before to do this operation, follow the procedure described on paragraph **8.3 Removing the pump module**.

Step	Action	Illustration
1	Loosen the screws that hold the **right cover** and remove it.	
2	Unplug the connector and disconnect the tubes from the **milk flow meter**, then remove it.	

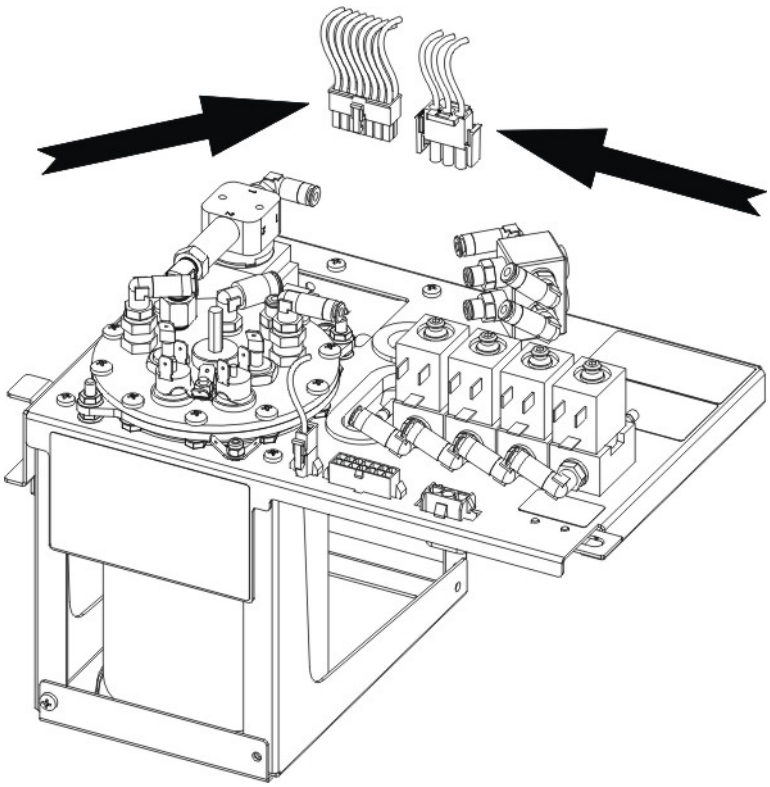
8.3.5 Removing the pump

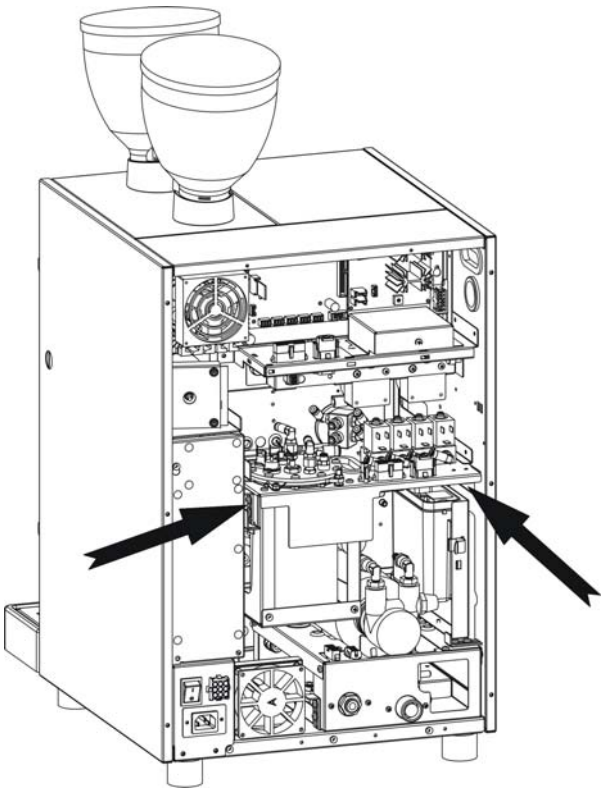
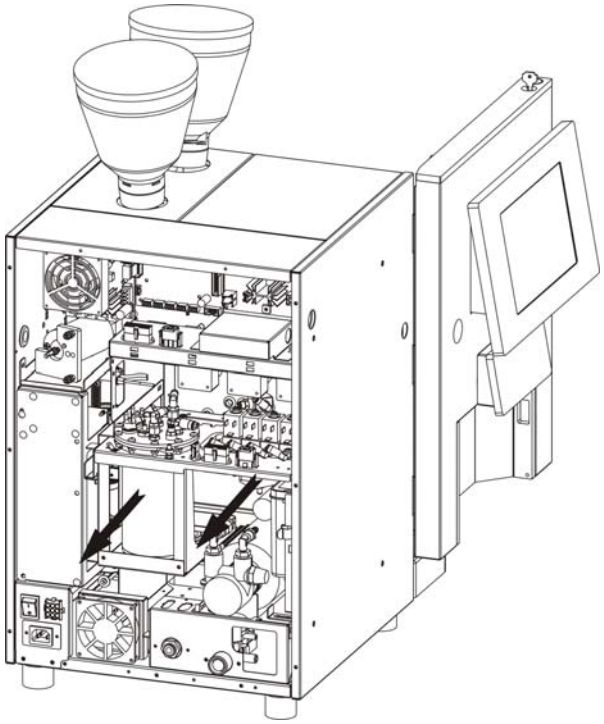
Before to do this operation, follow the procedure described on paragraph **8.3 Removing the pump module** and paragraph **8.3.1 Removing the pump restrictor**

Step	Action	Illustration
1	Loosen the screws that hold the **left cover** and the **right cover** and remove them.	
2	Disconnect the teflon pipe and the silicon tube from the **water pump**. Unplug the cables connected to the **water pump**, including the ground cable. Remove the screws that hold the **water pump** and remove it.	

8.4 Removing the boiler module

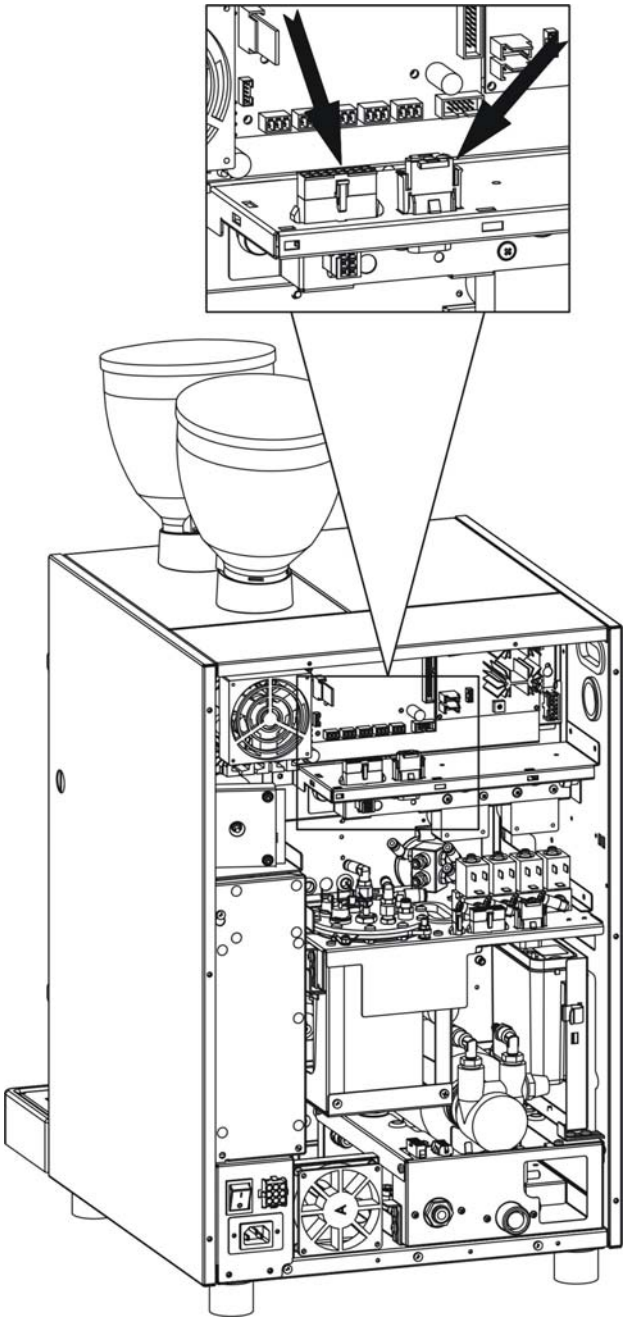
Before to do this operation, follow the procedure described on paragraph **6.1.1 Removing the back panel**, and paragraph **10.1 Cooling down**.

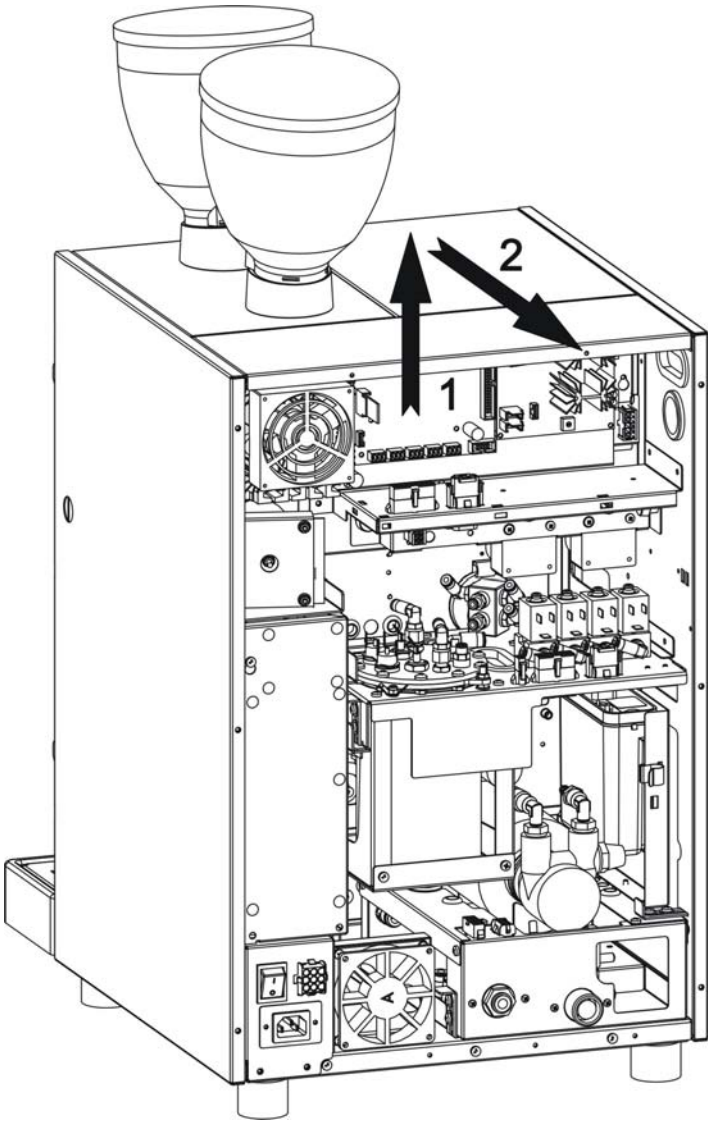
Step	Action	Illustration
1	Unplug the **boiler module connectors**, including the ground cable.	

Step	Action	Illustration
2	Unlock the blue **boiler module lock levers**.	
3	Pull out the **boiler module**.	

8.5 Removing the electronic boards module

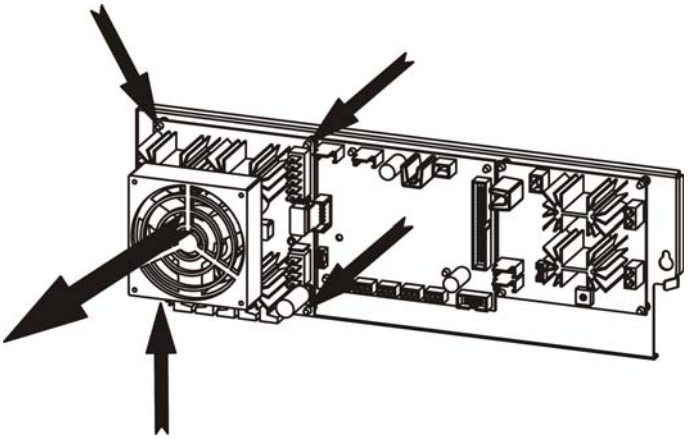
Before to do this operation, follow the procedure described on paragraph **6.1.1 Removing the back panel**.

Step	Action	Illustration
1	Unplug the **electronic boards module connectors**.	

Step	Action	Illustration
2	Lift the **electronic boards module** and then pull it toward you.	

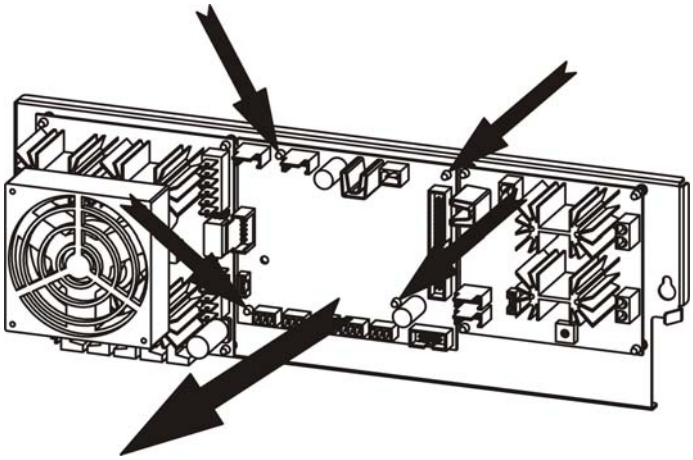
8.5.1 Removing the power stabilizer

Before to do this operation, follow the procedure described on paragraph **8.5 Removing the electronic boards module**.

Step	Action	Illustration
1	Unplug all cables attached to the **power stabilizer**. Remove the **power stabilizer** from its plastic fittings.	

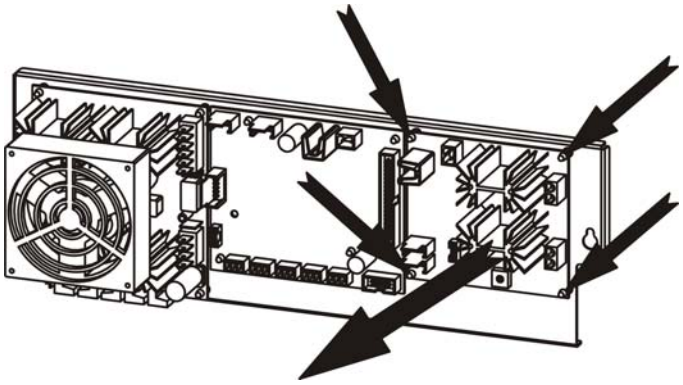
8.5.2 Removing the mother board

Before to do this operation, follow the procedure described on paragraph **8.5 Removing the electronic boards module**.

Step	Action	Illustration
1	Unplug all cables attached to the **mother board**. Remove the **mother board** from its plastic fittings.	

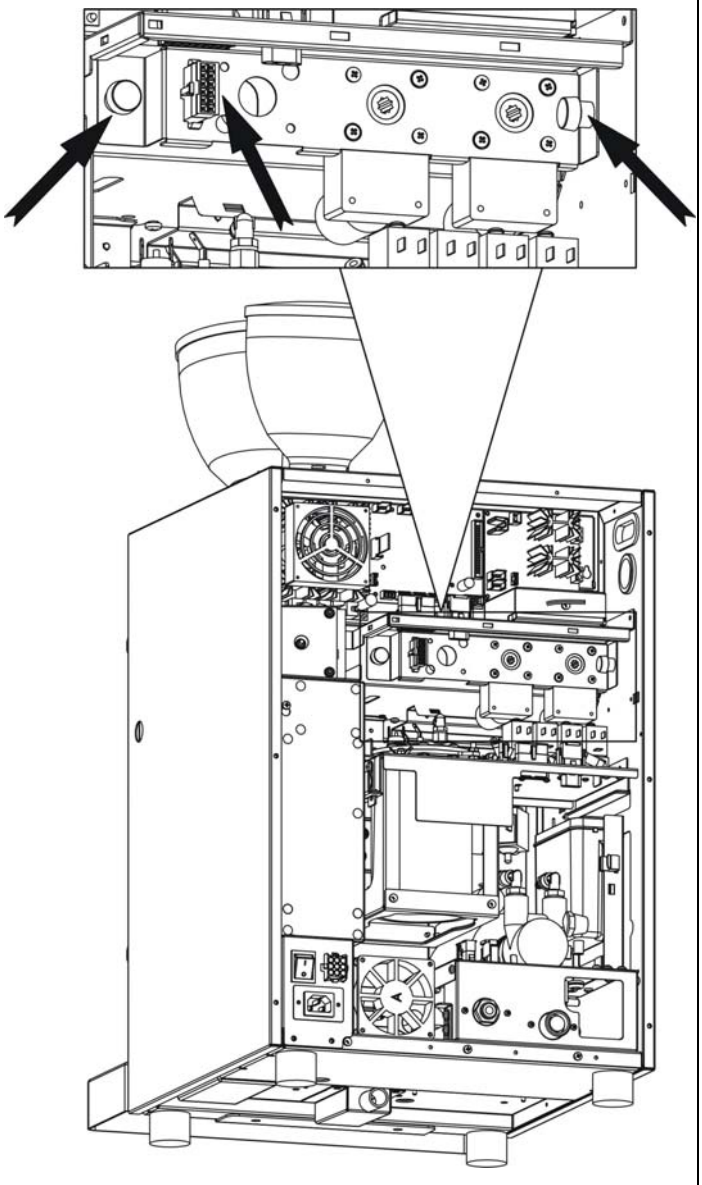
8.5.3 Removing the triac board

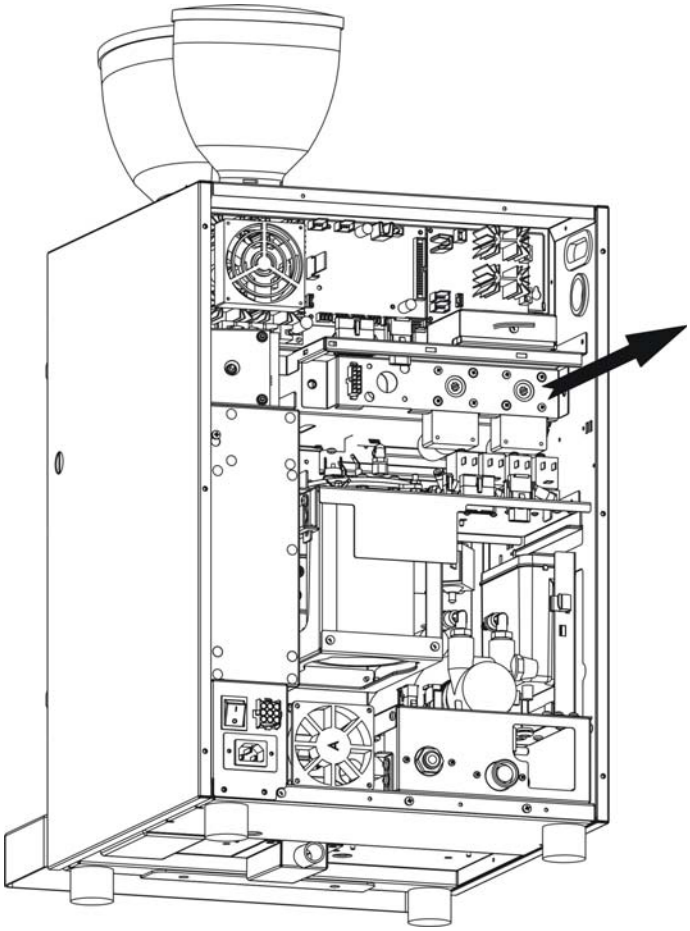
Before to do this operation, follow the procedure described on paragraph **8.5 Removing the electronic boards module**.

Step	Action	Illustration
1	Unplug all cables attached to the **triac board**. Remove the **triac board** from its plastic fittings.	

8.6 Removing the powder gearmotor module

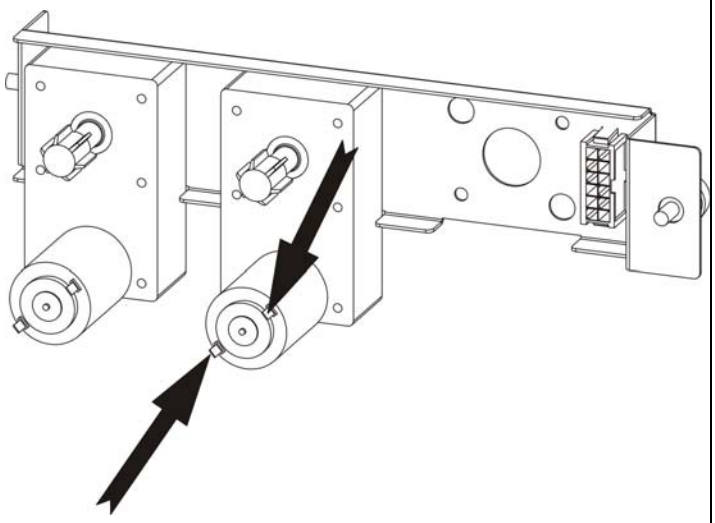
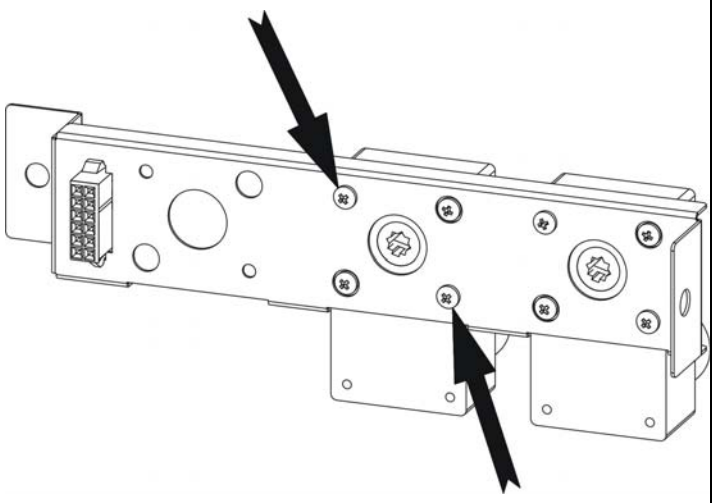
Before to do this operation, follow the procedure described on paragraph **6.1.1 Removing the back panel**.

Step	Action	Illustration
1	Unplug the **powder gearmotor module connector**. Remove the 2 black knobs that hold the **powder gearmotor module**.	

Step	Action	Illustration
2	Pull out the **powder gearmotor module**.	

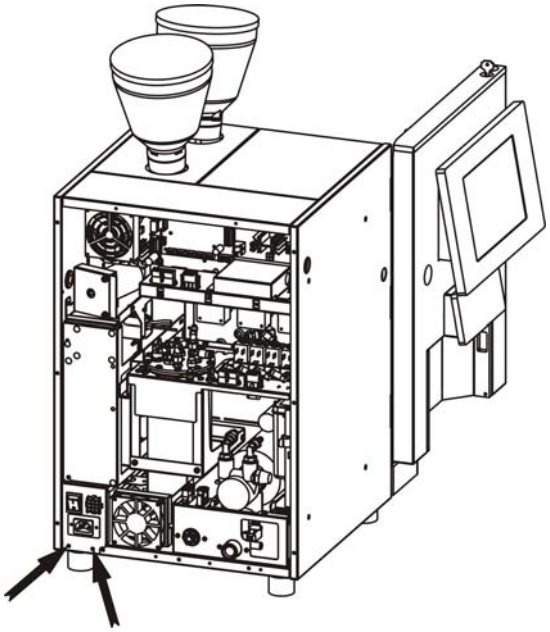
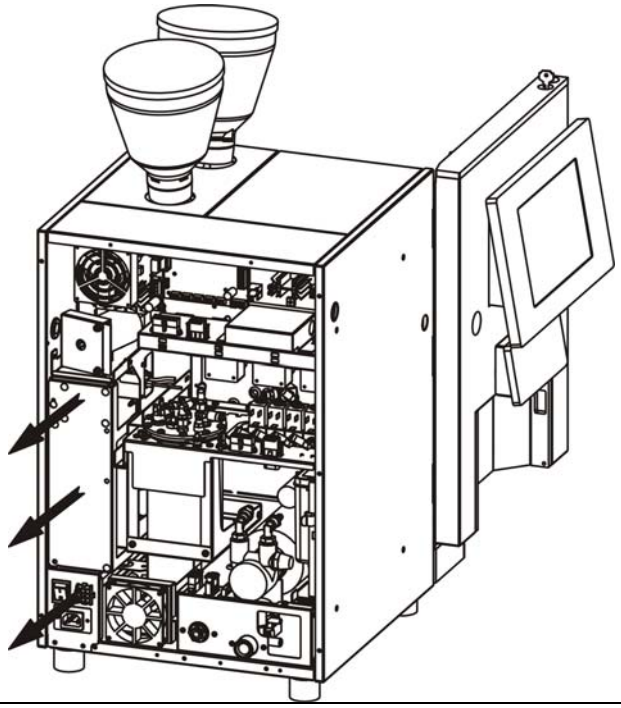
8.6.1 Removing a powder gearmotor

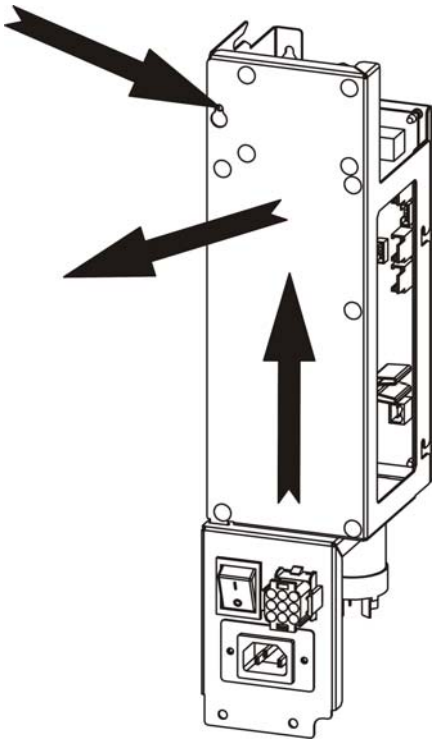
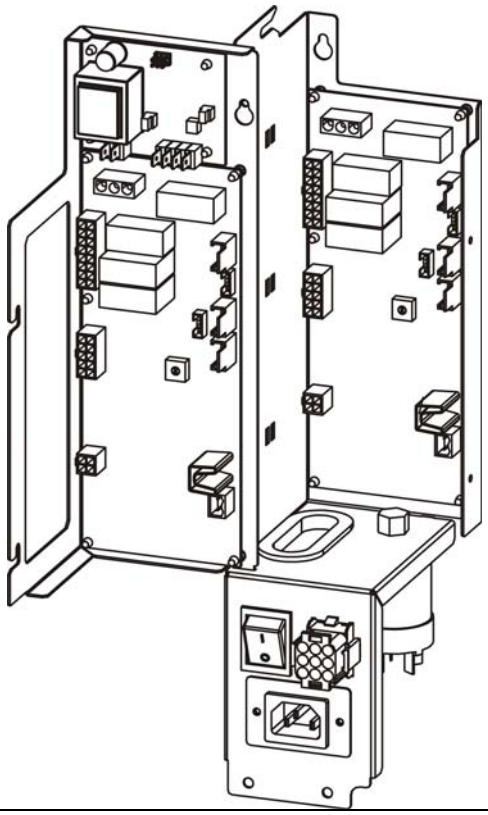
Before to do this operation, follow the procedure described on paragraph **8.6 Removing the powder gearmotor module**.

Step	Action	Illustration
1	Remove the cables attached to the **powder gearmotor**.	
2	Remove the 2 screws that hold the **powder gearmotor** to the plate and remove it.	

8.7 Removing the power supply module

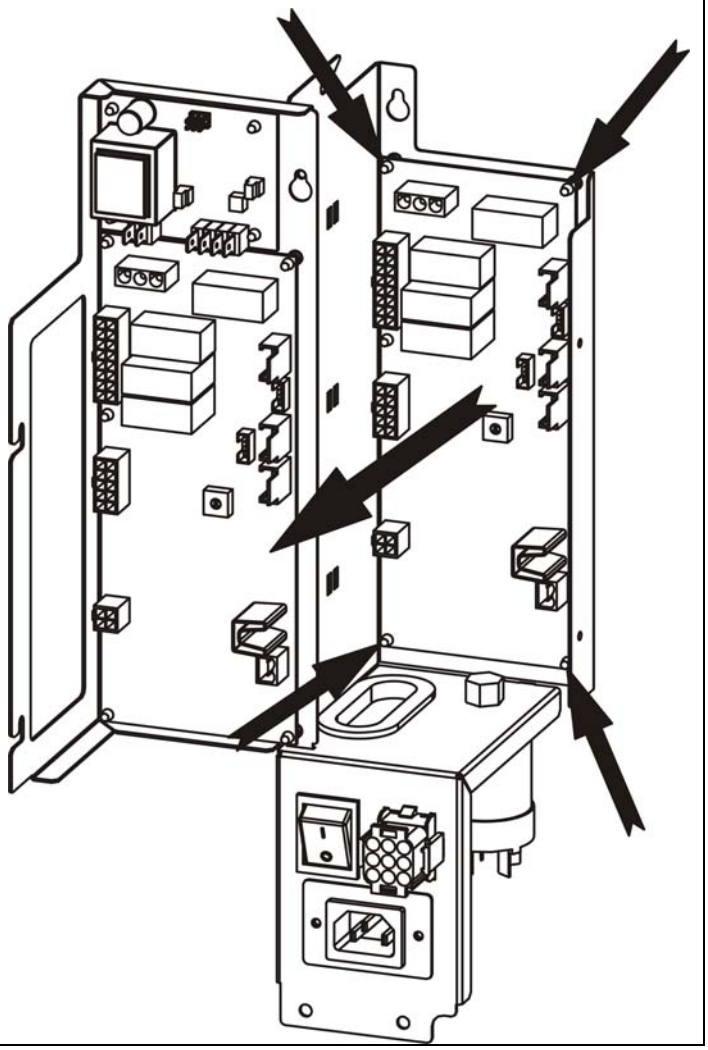
Before to do this operation, follow the procedure described on paragraph **6.1.1 Removing the back panel**.

Step	Action	Illustration
1	Remove the 2 screws that hold the **power supply module**.	
2	Pull out the power **supply module**.	

Step	Action	Illustration
3	Loosen the top screw that holds the mobile plate. Lift it and then pull it out of the holes.	
4	Place the mobile plate as shown in the picture to make operations easier.	

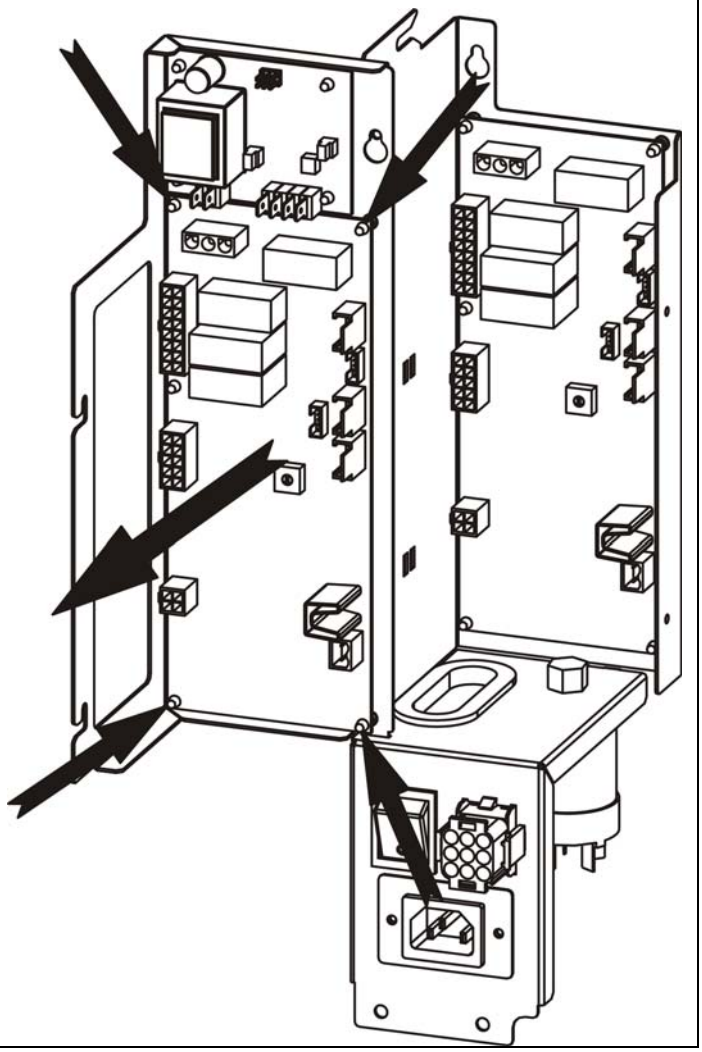
8.7.1 Removing the output board n°1

Before to do this operation, follow the procedure described on paragraph **8.7 Removing the power supply module**.

Step	Action	Illustration
1	Remove all the connectors attached to the **output board**. Remove the **output board** from its plastic fittings.	

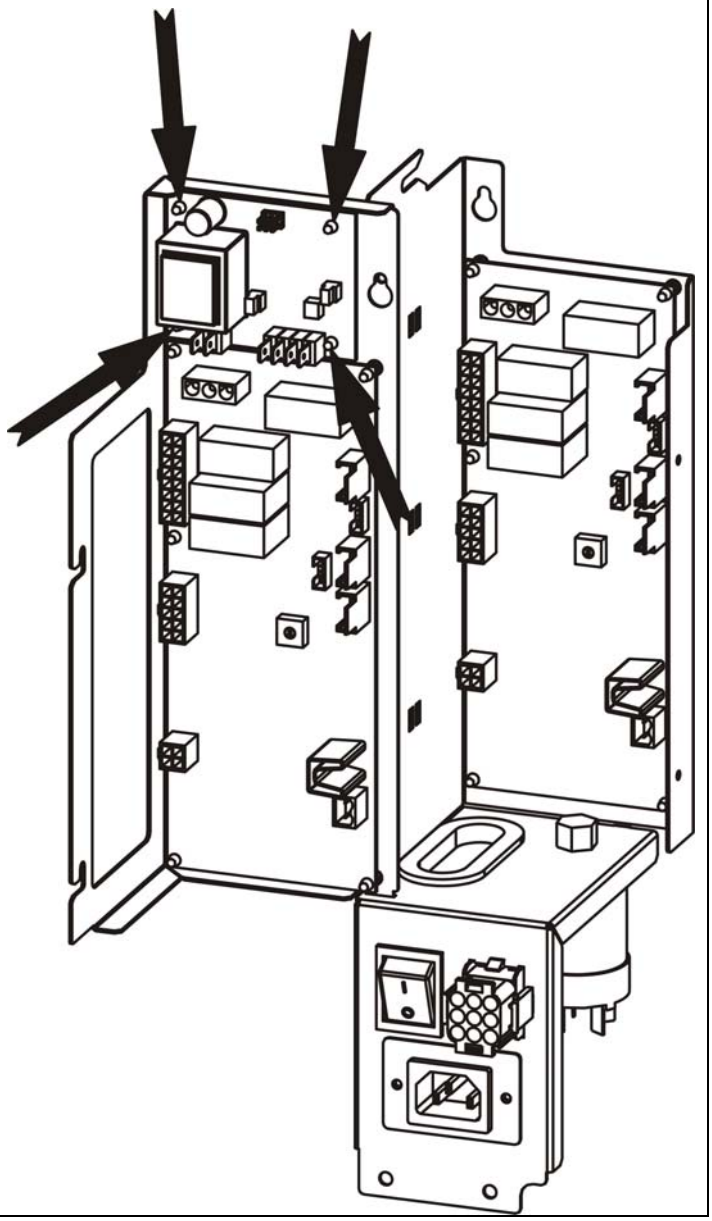
8.7.2 Removing the output board n°2

Before to do this operation, follow the procedure described on paragraph **8.7 Removing the power supply module**.

Step	Action	Illustration
1	Remove all the connectors attached to the **output board**. Remove the **output board** from its plastic fittings.	

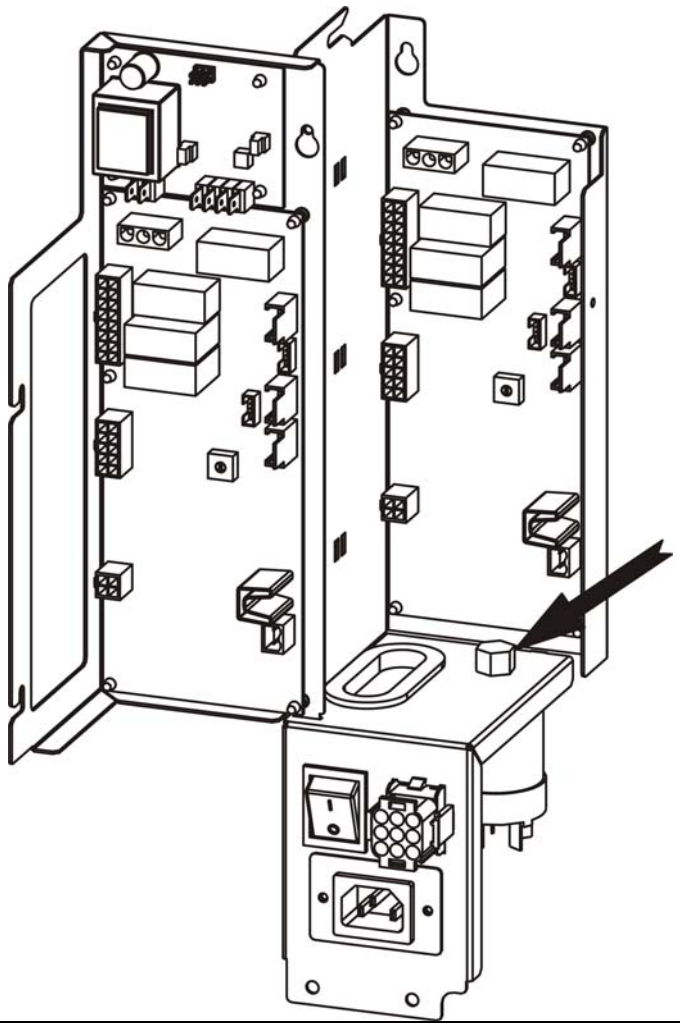
8.7.3 Removing the water level board

Before to do this operation, follow the procedure described on paragraph **8.7 Removing the power supply module**.

Step	Action	Illustration
1	Remove all the connectors attached to the **water level board**. Remove the **water level board** from its plastic fittings.	

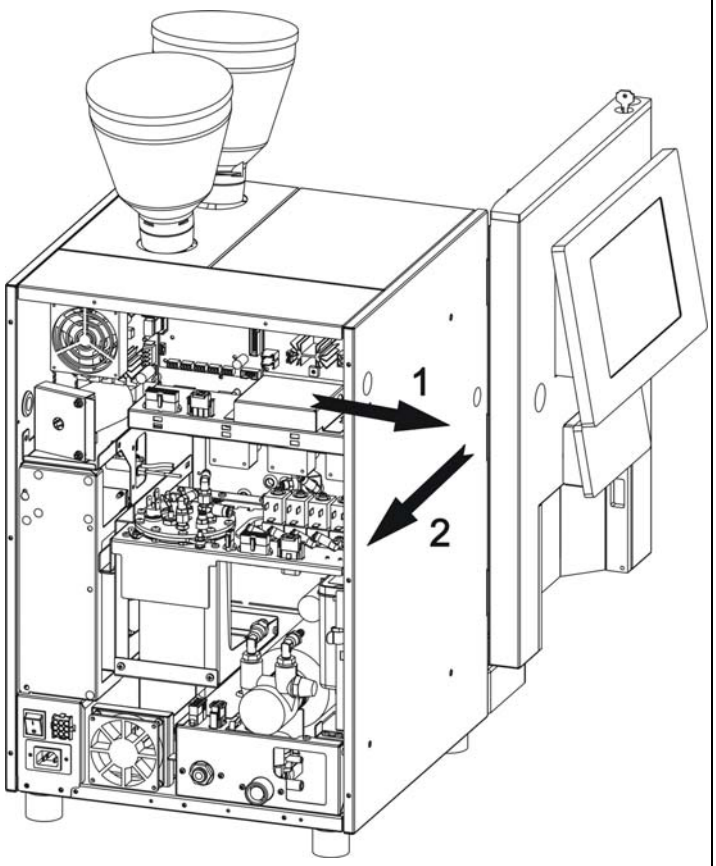
8.7.4 Removing the net filter

Before to do this operation, follow the procedure described on paragraph **8.7 Removing the power supply module**.

Step	Action	Illustration
1	Remove all the connectors attached to the **net filter**. Remove the nut holding the **net filter** and remove it.	

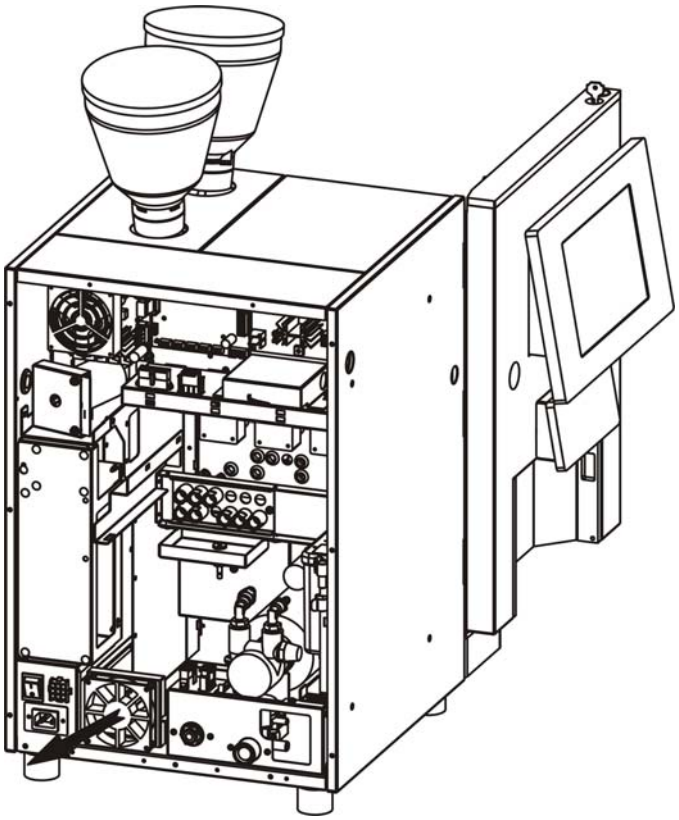
8.8 Removing the touch screen power supplier module

Before to do this operation, follow the procedure described on paragraph **6.1.1 Removing the back panel**.

Step	Action	Illustration
1	Unplug the **touch screen power supplier module connector**. Move the **touch screen power supplier module** to the right and then pull it out.	

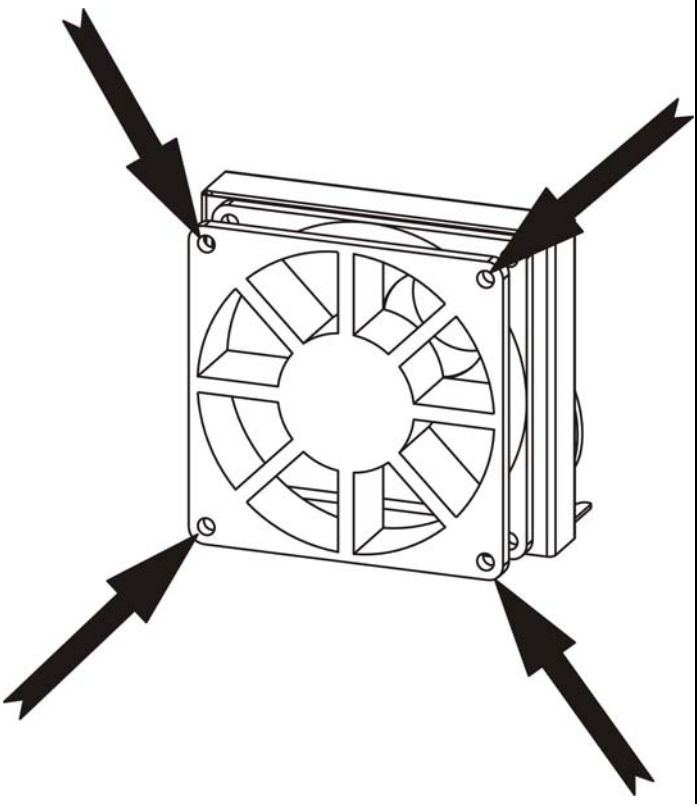
8.9 Removing the fan module

Before to do this operation, follow the procedure described on paragraph **6.1.1 Removing the back panel**, paragraph **8-16 Removing the boiler module** and paragraph **10.1 Cooling down**.

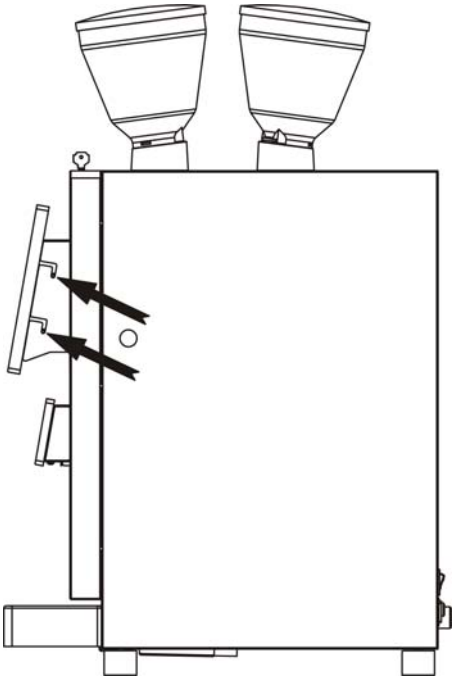
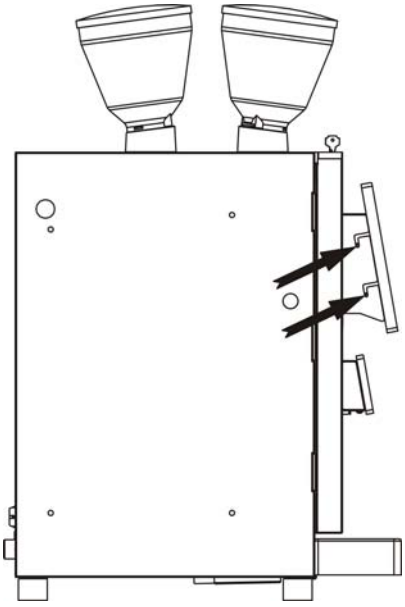
Step	Action	Illustration
1	Unplug the **fan module connector**. Loosen the 2 screws that holds the **fan module** behind it. Remove the **fan module**.	

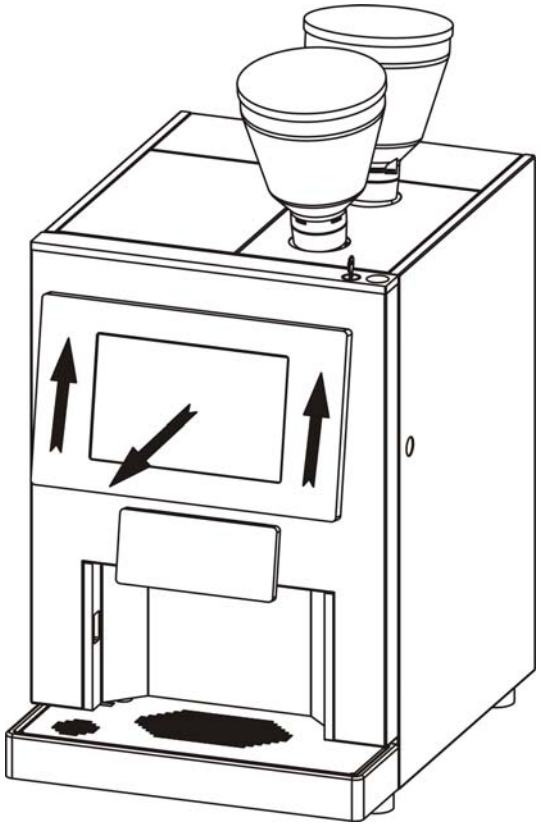
8.9.1 Removing the fan

Before to do this operation, follow the procedure described on paragraph **8.9 Removing the fan module**.

Step	Action	Illustration
1	Remove the 4 screws that hold the **fan** and remove it.	

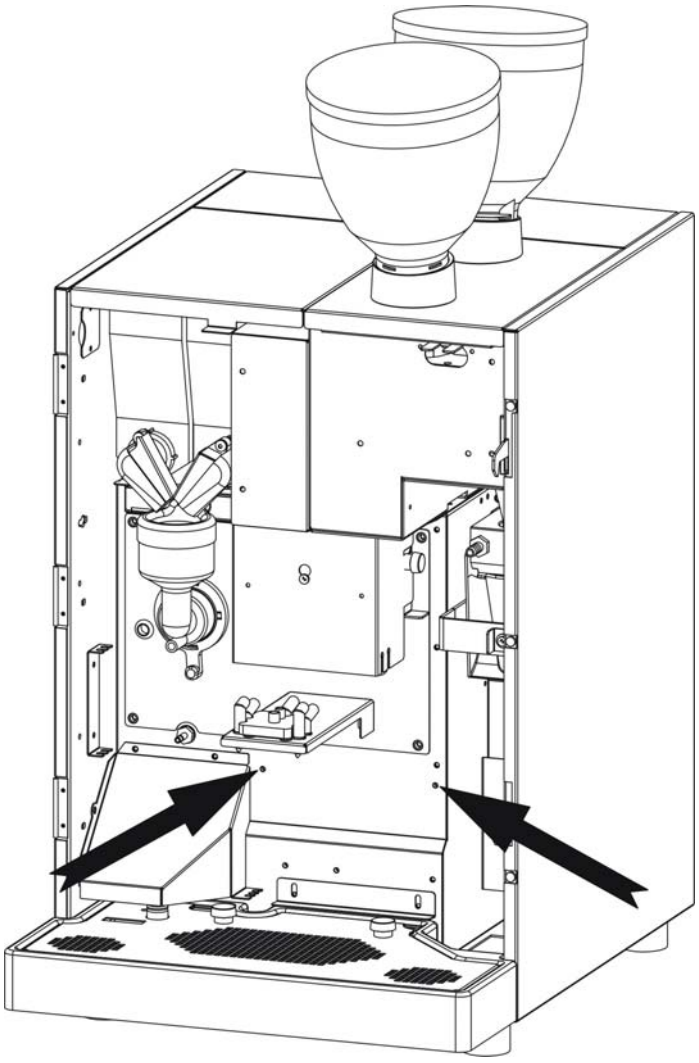
8.10 Removing the touch screen module

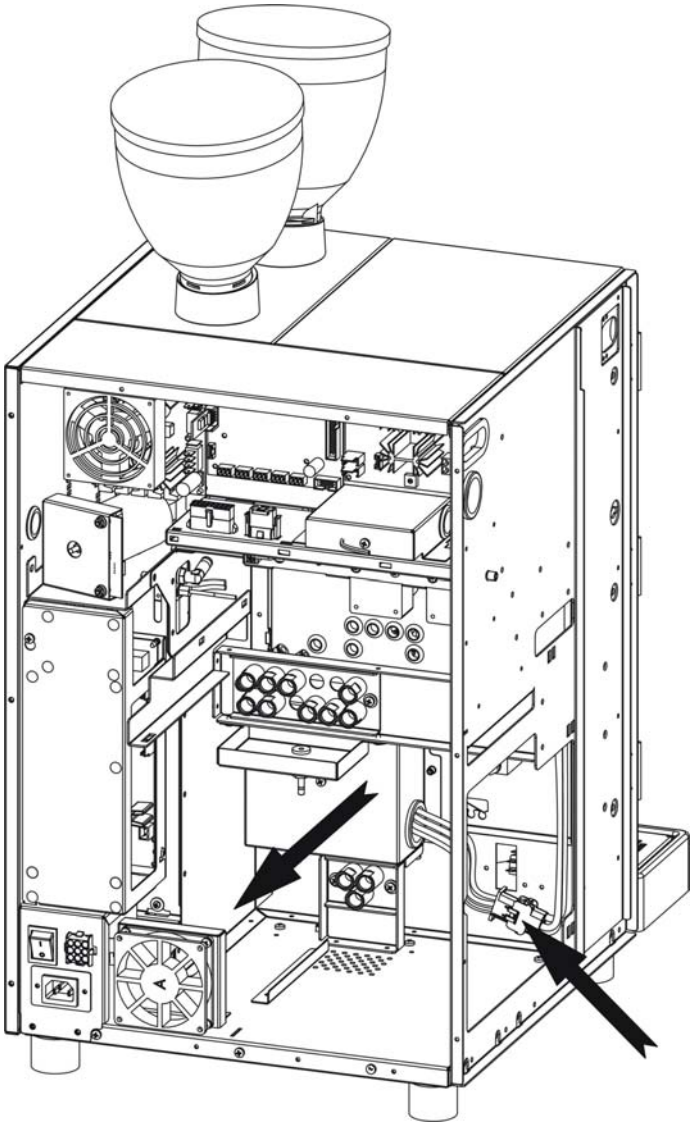
Step	Action	Illustration
1	Loosen the 2 screws from the right side of the **touch screen module**.	
2	Loosen the 2 screws from the left side of the **touch screen module**.	

Step	Action	Illustration
3	Lift the **touch screen module** and then pull it toward you. **NOTE** While removing the **touch screen module** unplug the USB and power connectors.	

8.11 Removing the transformer module

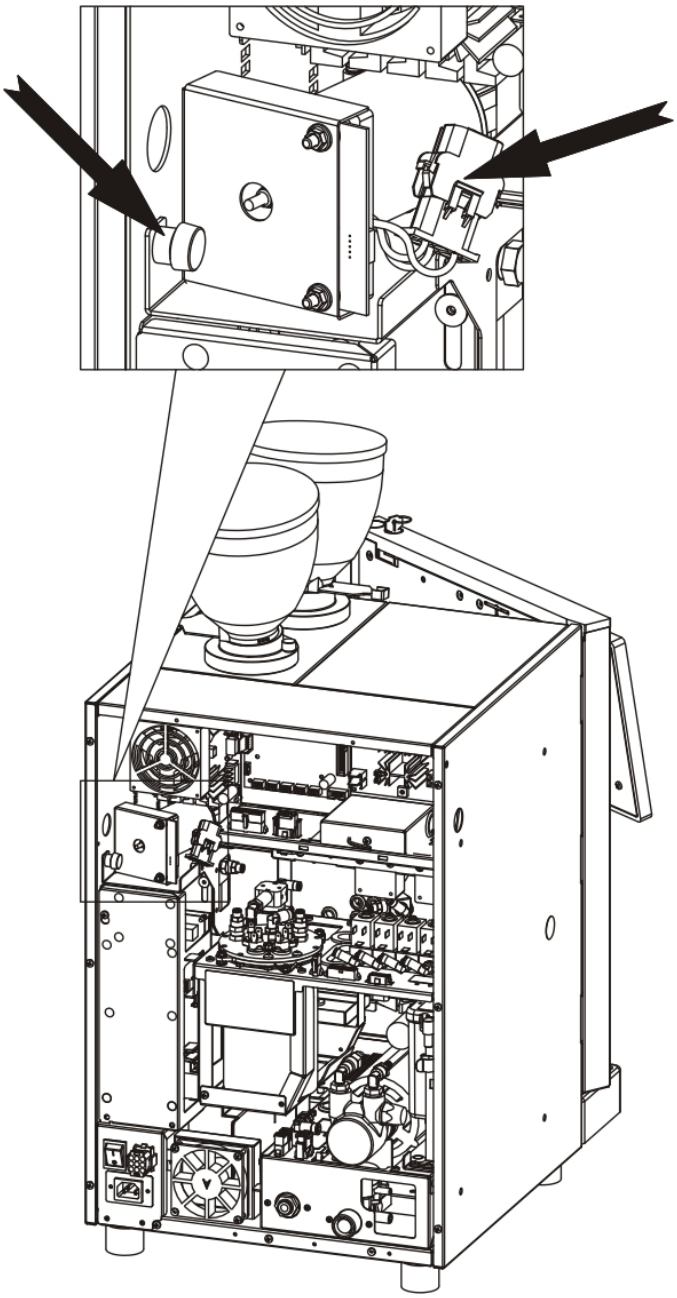
Before to do this operation, follow the procedure described on paragraph **6.1.1 Removing the back panel**, paragraph **8.4 Removing the boiler module**, and paragraph **8.3 Removing the pump module**.

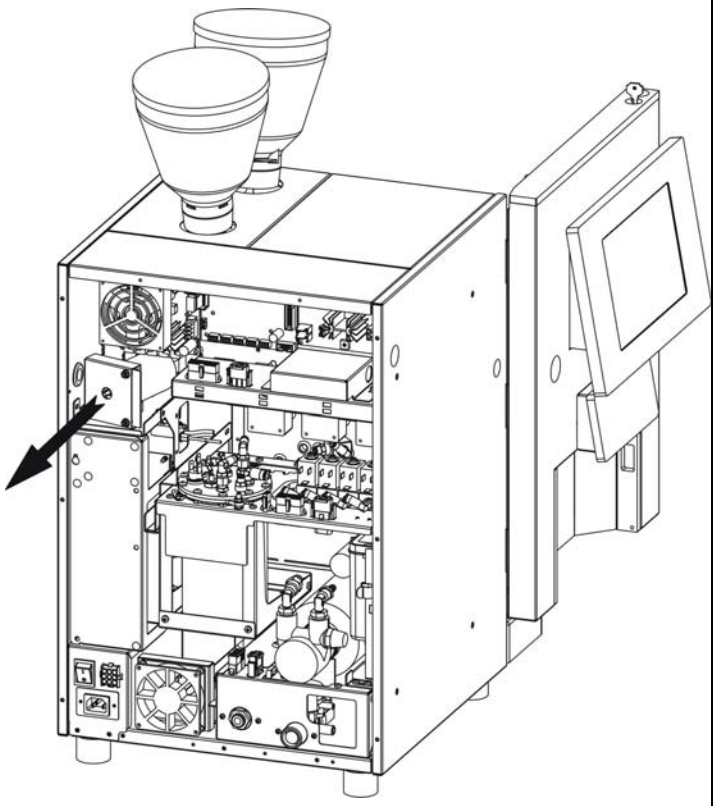
Step	Action	Illustration
1	Remove the 2 screws that hold the **transformer module**.	

2	Unplug the **transformer module** connector and remove the **transformer module**.	

8.12 Removing the coffee group gearmotor module

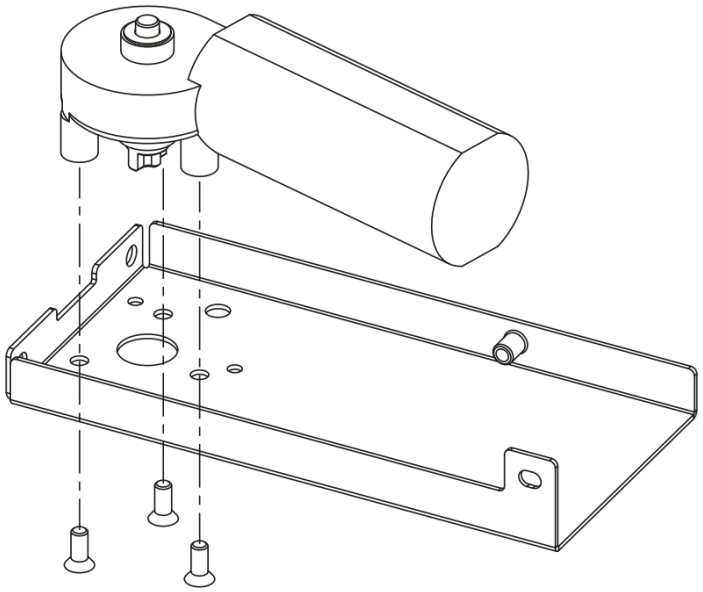
Before to do this operation, follow the procedure described on paragraph **6.1.1 Removing the back panel** and paragraph **4.1 Removing the coffee group** (Steps 1 and 2 only necessary).

Step	Action	Illustration
1	Unplug the **connector**. Remove the black knob that holds the **coffee group gearmotor module**.	

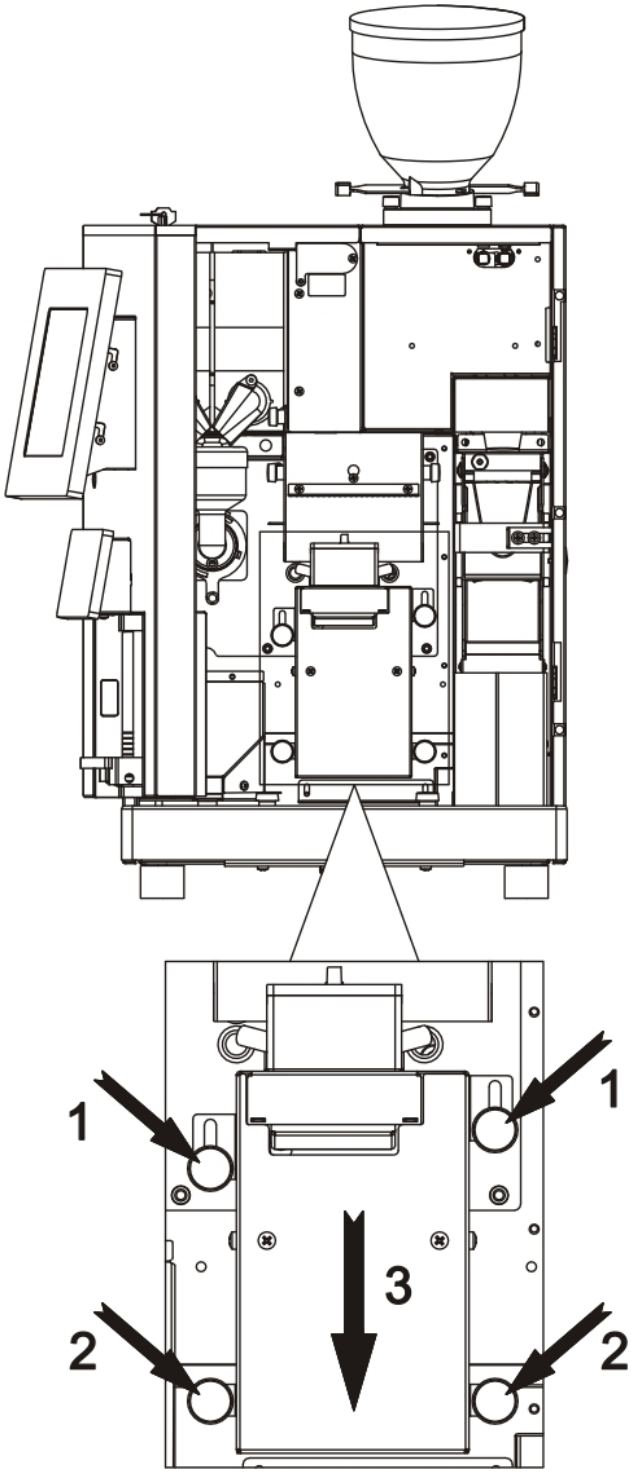
Step	Action	Illustration
2	Pull out the **coffee group gearmotor module**.	

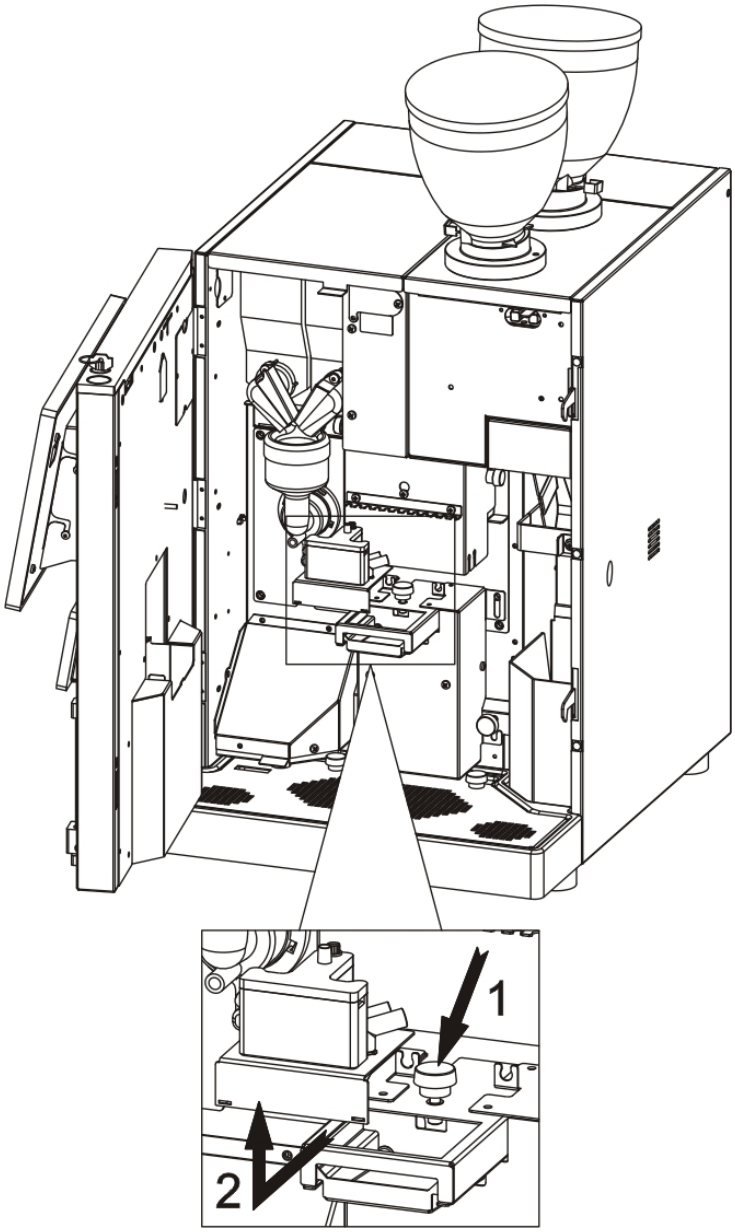
8.12.1 Removing the coffee group gearmotor

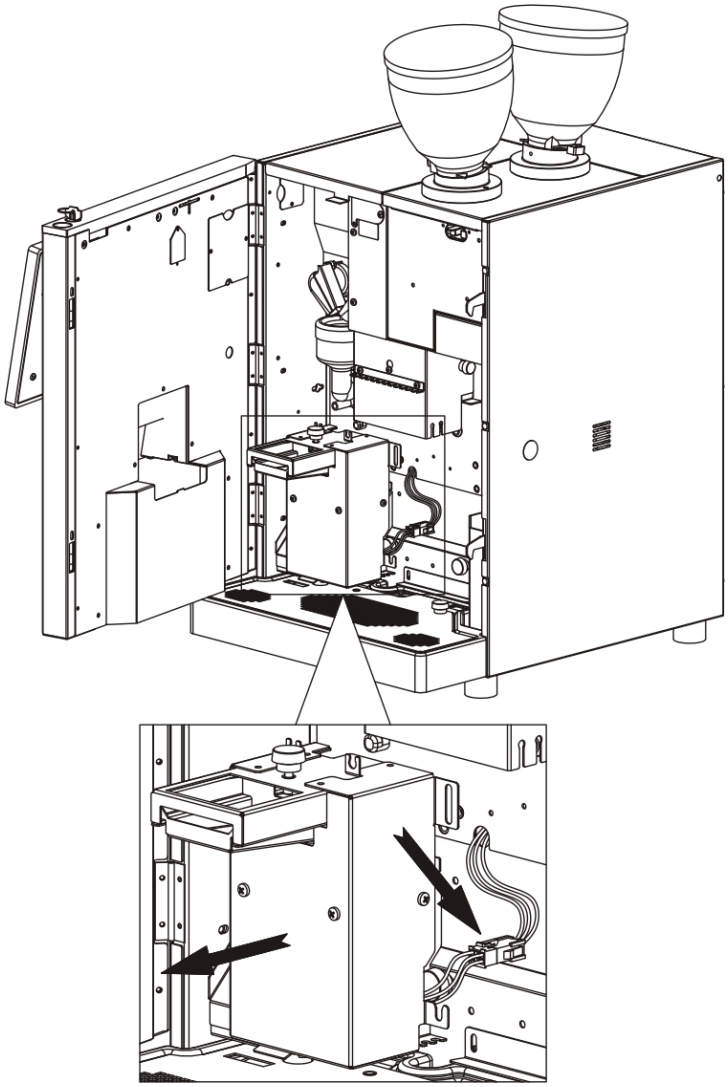
Before to do this operation, follow the procedure described on paragraph **8.12 Removing the coffee group gearmotor module** and paragraph **4.1 Removing the coffee group**.

Step	Action	Illustration
1	Remove the 3 screws that hold the **coffee group gearmotor** and remove it.	

8.13 Removing the drip catcher module

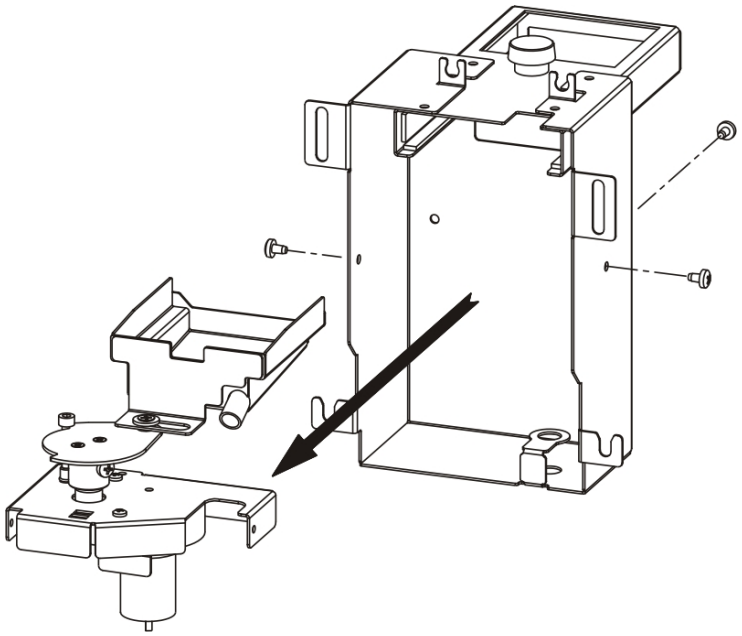
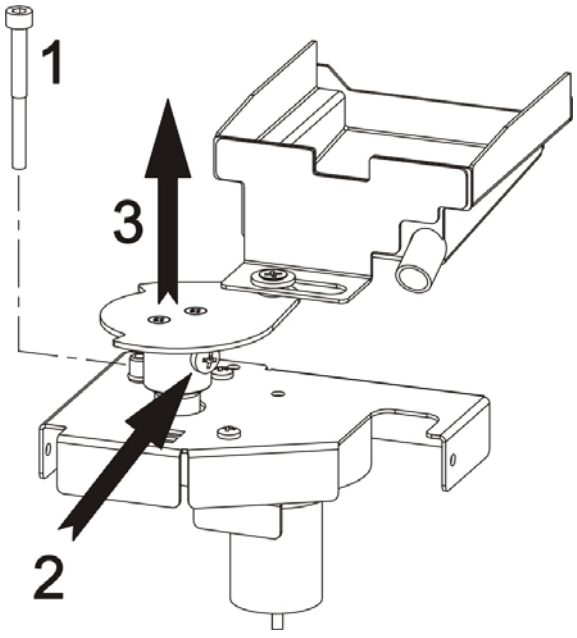
Step	Action	Illustration
1	Remove the 2 upper **black knobs**. Loosen the 2 lower **black knobs**. Pull down the **drip catcher module**.	

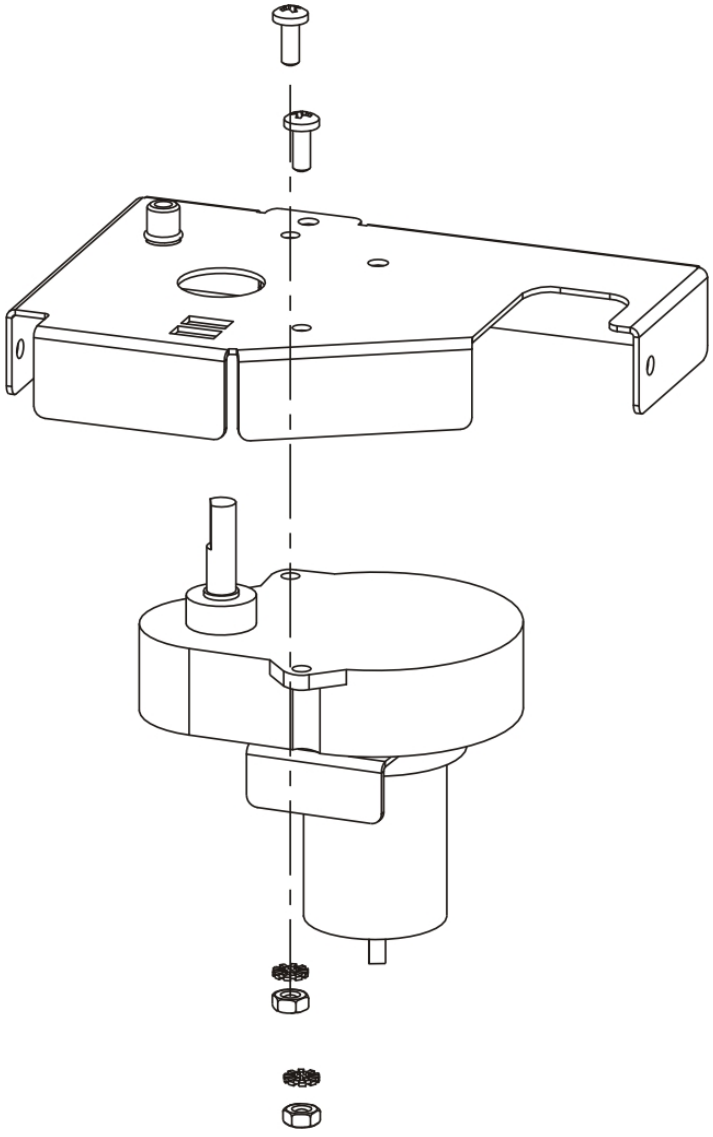
Step	Action	Illustration
2	Loosen the black knob that holds the **spout bracket**. Pull towards to you the **spout bracket** and lift it up.	

Step	Action	Illustration
3	Unplug the connector and take off the **drip catcher module**.	

8.13.1 Removing the drip catcher module gearmotor

Before to do this operation, follow the procedure described on paragraph **8.13 Removing the drip catcher module**.

Step	Action	Illustration
1	Remove the 4 screws that hold the **drip catcher gearmotor bracket** and remove it.	
2	Remove the long screw. Loosen the screw that holds the **bush** and lift it up.	

Step	Action	Illustration
3	Remove the 2 screws that hold the **drip catcher gearmotor** and remove it.	

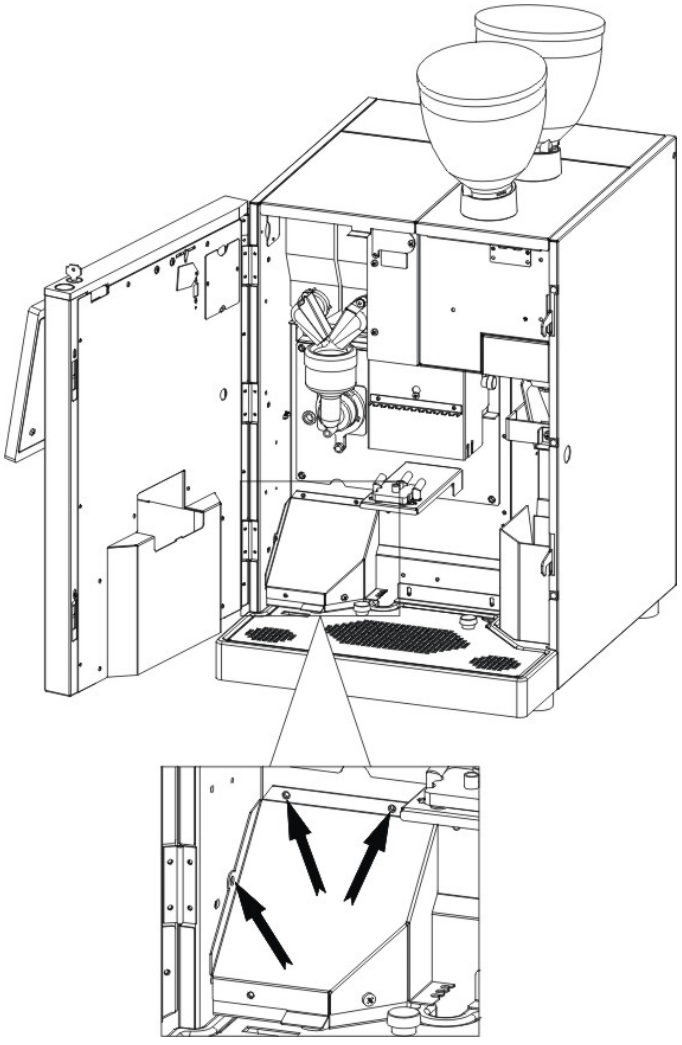
8.14 Removing other components

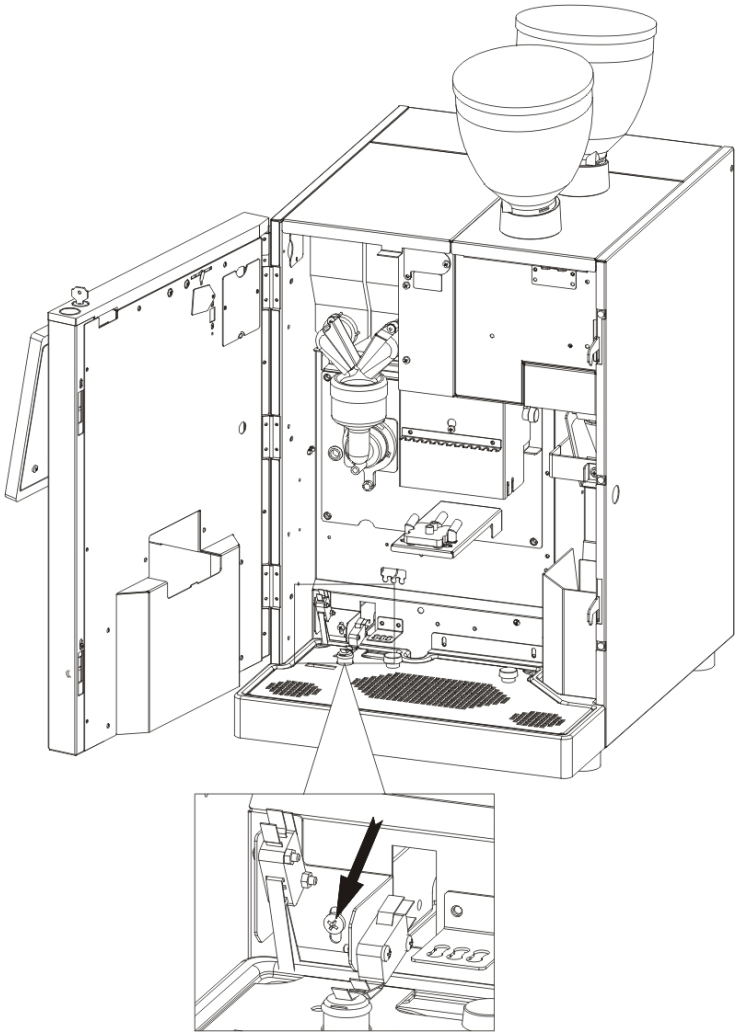
This paragraph regards all that components which are not installed in a module.

WARNING

All the operations contained in this chapter has to be performed with the machine switched OFF and the power cord removed.

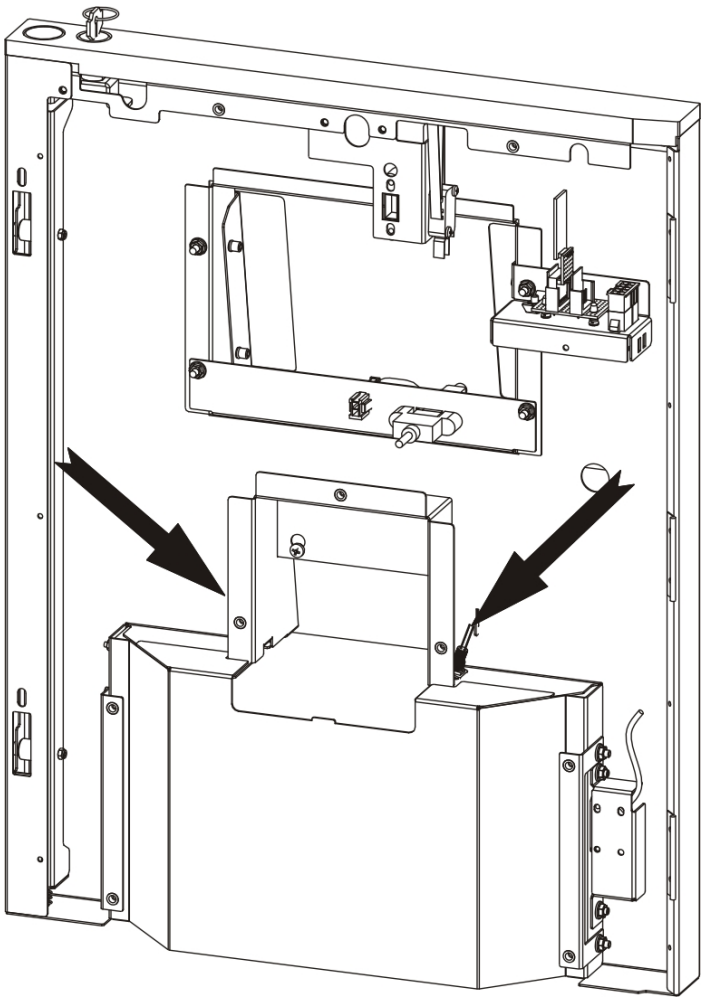
8.14.1 Removing the drip tray switch / drip tray presence switch

Step	Action	Illustration
1	Remove the 3 screws that hold the **drip tray switch cover** and remove it.	

Step	Action	Illustration
2	Remove the cables attached to the **switches**. Remove the 2 screws that hold the **bracket** and remove it. Remove the 2 screws that hold the **drip tray switch** or **drip tray presence switch** and remove it.	

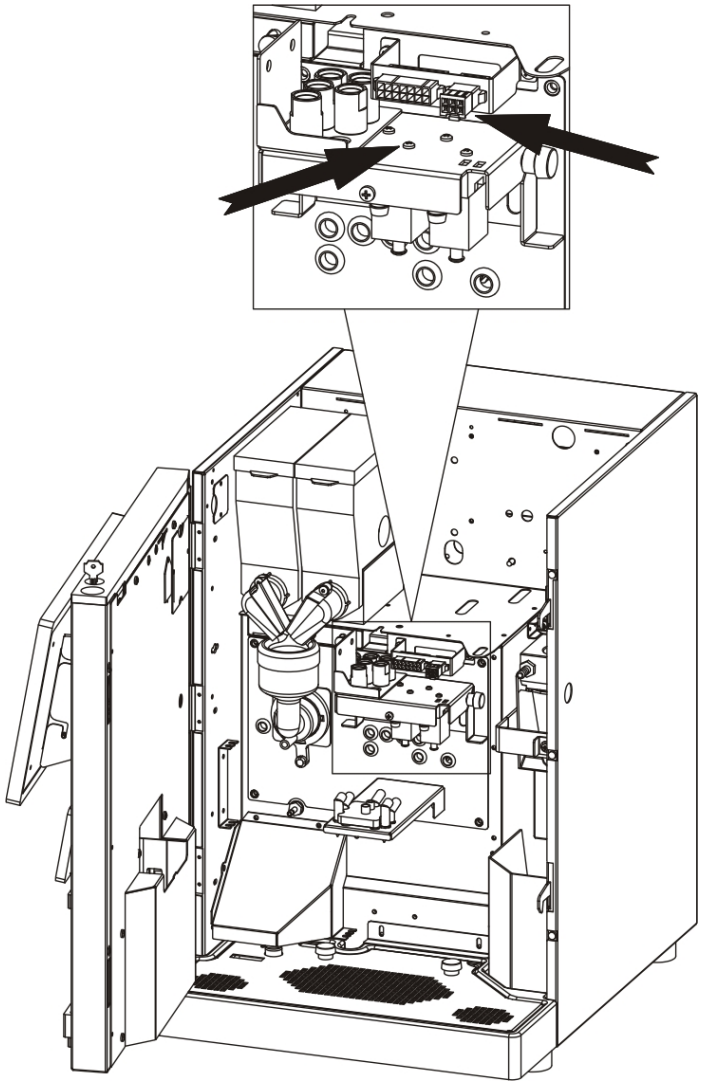
8.14.2 Removing the door LEDs

Before to do this operation, follow the procedure described on paragraph **6.1.5 Removing the door cover**.

Step	Action	Illustration
1	Unplug the **LEDs connectors**. Take out the **LEDs** from the support. Unscrew the nut that holds the **LEDs support** and remove it.	

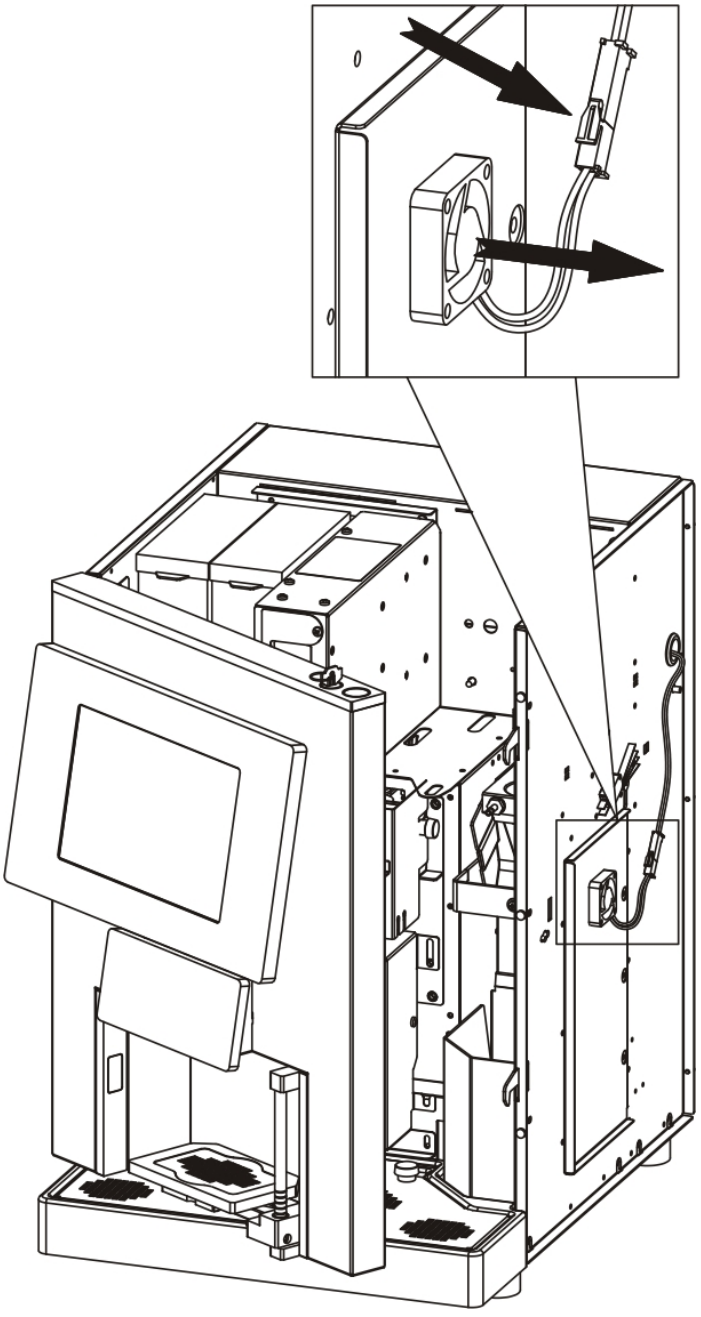
8.14.3 Removing the milk outlet valve

Before to do this operation, follow the procedure described on paragraph **8.1 Removing the grinder module** and paragraph **8.2 Removing the milk module**.

Step	Action	Illustration
1	Unplug the **milk outlet valve** connector. Disconnect the teflon pipes and silicon tubes from the **milk outlet valve.** Remove the screws that hold the **milk outlet valve** and remove it.	

8.14.4 Removing the coffee group fan

Before to do this operation, follow the procedure described on paragraph **8.1 Removing the grinder module** and paragraph **6.1.4 Removing the right side panel**.

Step	Action	Illustration
1	Unplug the connector. Take off the **coffee group fan**.	

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10 Operations on the hydraulic circuit

All the operations described in this chapter needs to put the machine into safety conditions, to avoid any damage to the component and to the operator.

10.1 Cooling down

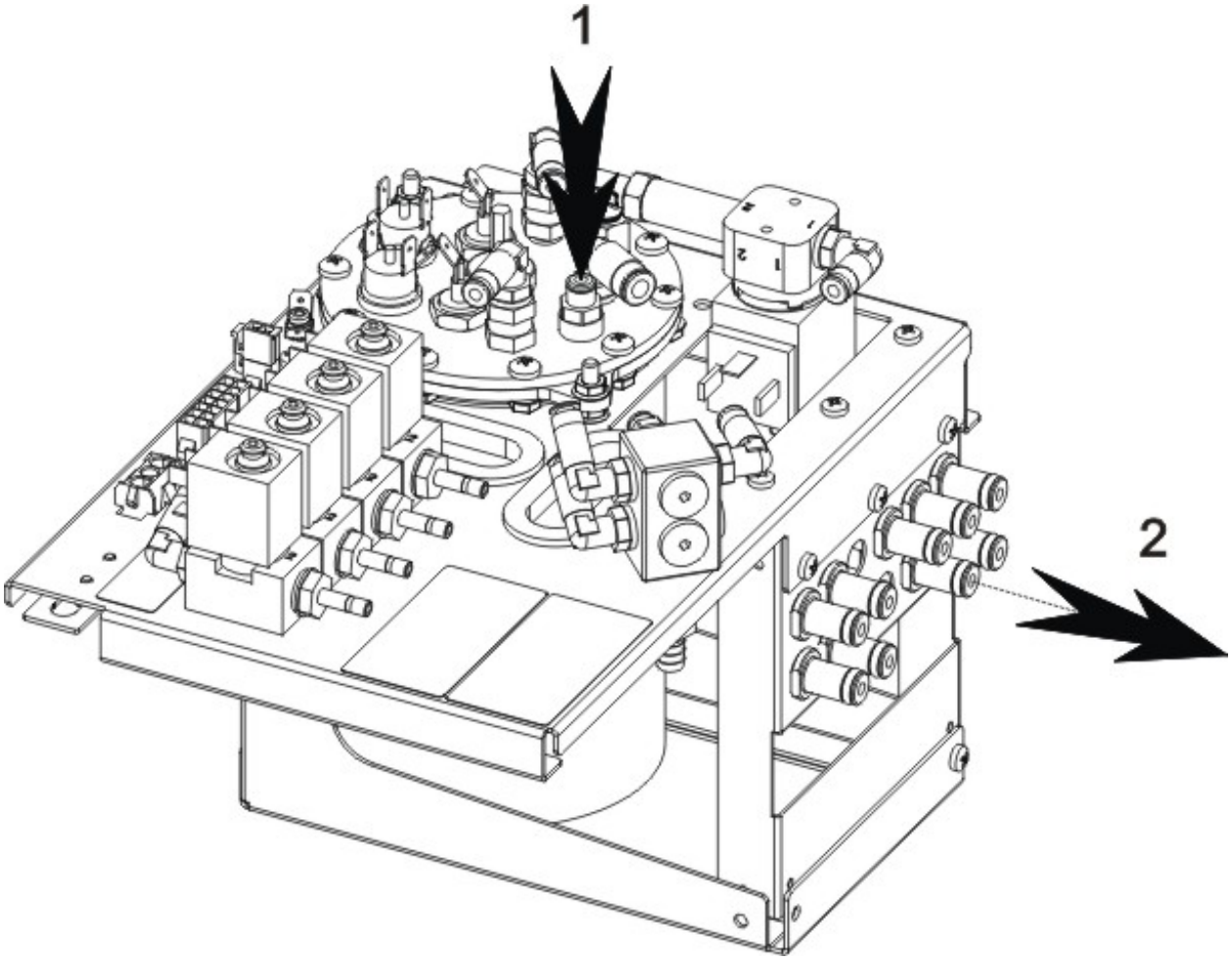
The machine MUST BE COLD. If not, the operator must do the following operations first.

- Switch **OFF** the machine and unplug the power cord;
- Disconnect the **heating element connector** on the **boiler module**.
- Turn **on** the option “HEATING CONTROL” inside the “TECHNICIAN MENU” (see paragraph **5.3.6.2** on the **User Manual**);
- Put back the power cord and switch **ON** the machine;
- Run a “Whipper Cleaning” to cool down the **water boiler**;
- Switch OFF the machine and remove the power cord.

10.2 Emptying the boiler

Before to do this operation follow the procedure described on paragraph **10.1 Cooling down**, paragraph **6.1.1 Removing the back panel** and **8.4 Removing the boiler module**.

- Put compressed air (1 bar maximum) from the fitting n°1. Water will come out from the nozzle n°2.



CAUTION

Don’t connect back the heating element connector previously disconnected from the motherboard, during the time the boiler stays empty.

After the maintenance is finished, remember to switch ON the machine and run some “Whipper Cleaning” routines until water comes out of the drink nozzles, which means the water boiler is completely full of water.

Now the user can switch OFF the machine, connect back the heating element connector and switch back ON the machine.

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12 Operating the computer software

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14 Troubleshooting

This troubleshooting helps technician to find the cause of a problem starting from the error message shown by the **touch screen**.

All these error messages has been covered during the HLF Technical Training Course, where we strongly recommended to have a multimeter always available, in order to check a possible bad connections.

The way to use a multimeter is also covered during the HLF Technical Training Course, as well.

14.1 E11-DRIP TRAY FULL

Why?

The option **DRIP TRAY SENSOR FLOAT** is active and the **drip tray switch** is engaged.

Cause of fault	**Troubleshooting measure(s)**
The **drip tray** is full of waste water;	Remove the **drip tray**, empty and clean it.
The plastic float is blocked;	Check if the plastic float inside the **drip tray** is free to move.
The **drip tray switch** is damaged or doesn't work;	Turn off the option **DRIP TRAY FLOAT SENSOR** inside the programming, to let the machine working anyway (refer to the user manual); Replace the **drip tray switch**.
The connection is compromised	Check the wires from the **drip tray switch** to the **motherboard** (refer to the **Input/Output** table to understand which input number); Replace the **motherboard**.

14.2 E12-PLACE YOUR CUP

Why?

The option **CUP SENSOR** is active and there's no cup placed on the dispensing point

Cause of fault	**Troubleshooting measure(s)**
There's no cup placed on the dispensing point;	Place a cup.
The cup sensor is not installed in the machine;	Turn off the option **CUP SENSOR** (refer to the user manual).
The **cup sensor** doesn't work;	Turn off the option **CUP SENSOR** inside the programming, to let the machine working anyway (refer to the user manual); Replace the **cup sensor**.
The connection is compromised	Check the wires from the **cup sensor** to the **motherboard** (refer to the **Input/Output** table to understand which input number); Replace the **motherboard**.

14.3 E13-FLOW METER K.O.

Why?

The flow meter is not detecting the water passing through the circuit.

Cause of fault	**Troubleshooting measure(s)**
The message appears during a coffee cycle only, and not during a hot water or soluble drink. No coffee comes out or at least a very poor flow:	
▪ The **coffee group** is dirty;	Launch a **Coffee Group Cleaning Cycle**. Wash the **coffee group** under hot water.
▪ The **grinder** is set too fine;	Move the **grinder blades** to a coarser position.
▪ The **coffee valve** may be blocked by lime scale;	Take it off and clean it or replace it.
▪ The **coffee valve** got fault.	Replace it.
▪ The connection is compromised.	Check the wires from the **coffee valve** to the **output board 2** (refer to the **Input/Output** table to understand which output number).
The message appears during the dispensing of a specific product, while is not appearing during the dispensing of all the other products; The water for that specific product doesn't come out:	
▪ The **valve** related to the product that fails may be blocked by lime scale;	Take it off and clean it or replace it.
▪ The **valve** related to the product that fails got fault;	Replace it.

Cause of fault	**Troubleshooting measure(s)**
▪ The connection is compromised.	Check the wires from the **valve** related to the product that fails, to the **output board** (refer to the **Input/Output** table to understand which output board and output number).
The message appears during the stand-by:	
▪ The **discharge valve** may be blocked by lime scale;	Take it off and clean it or replace it.
▪ The **discharge valve** doesn't work.	Replace it.
▪ The connection is compromised.	Check the wires from the **discharge valve** to the **output board 2** (refer to the **Input/Output** table to understand which output number).
The message appears during the dispensing of any product and the water doesn't come out:	
▪ The **air-break** is empty, but no **E-16 CHECK WATER** message appears;	Refer to paragraph **14.5 E16-CHECK WATER**
▪ The **pump** doesn't work:	Check the connection between the **pump** and the **oputput board 1** (refer to the **Input/Output** table to understand which output number).
- The **pump** got fault;	Replace it.
- The **output board 1** got fault.	Replace it.
▪ The **pump restrictor** is blocked;	Check if the **pump restrictor** is blocked. If yes, replace it.

Cause of fault	**Troubleshooting measure(s)**
▪ The **flow meter** is blocked; The message appears during the dispensing of any product and the water comes out for few seconds, then stops:	Check if the **flow meter** is blocked. If yes, replace it.
▪ The connection is compromised;	Check if the green LED of the **motherboard** blinks while the pump is working. It shouldn't. Check the wires from the **flow meter** to the **motherboard** (refer to the **Input/Output** table to understand which input number).
▪ The **flow meter** got fault.	Replace it.

14.4 E15-COFFEE GROUP OUT

Why?

The **coffee group presence switch** is not engaged.

Cause of fault	**Troubleshooting measure(s)**
The **coffee group** is not in the correct position;	Check the **coffee group**.
The **coffee group presence switch** is damaged or doesn't work;	Replace the **coffee group presence switch**.
The connection is compromised	Check the wires from the **coffee group presence switch** to the **motherboard** (refer to the **Input/Output** table to understand which input number). Replace the **motherboard**.

14.5 E16-CHECK WATER

Why?

The machine has asked for water inside the **air-break** for more than the time set on the option **FILLING WATER TIMEOUT**.

Cause of fault	Troubleshooting measure(s)
Switch ON the machine and look if the time the air-break needs to fill up completely is too long. If yes, it means the pressure of the plumb circuit is very low;	Raise up the **FILLING WATER TIMEOUT** option.
The machine is not filling water at all, but the LED on the water level board is ON:	
▪ Maybe the overflow system has been engaged because the machine has been moved without draining the **air-break** first;	Follow the procedure at the end of the paragraph.
▪ The **main inlet water valve** is gone.	Replace it.
The machine is filling water, but once reached the shorter probe, it keeps filling all the time. The LED on the water level board is still ON;	
▪ Wrong sensitivity setting;	Check the sensitivity bridge on the water level board. Only position 1 should be activated.
▪ The **air-break probes** are dirty;	Clean them.
▪ The connection is compromised;	Check the connections from the **air-break probes** to the **water level board**.
▪ The **water level board** got fault.	Replace it.

Cause of fault	Troubleshooting measure(s)
The machine is filling water, but once reached the shorter probe, it keeps filling all the time. The LED on the water level board turns OFF once reached the shorter probes;	
▪ The **main inlet water valve** stays open all the time;	Replace it
▪ The **output board 2** got fault;	Replace it.
▪ The **motherboard** got fault;	Replace it.

How to unblock the main inlet water valve

- Switch OFF the machine;
- Disconnect the water line pipe;
- Disconnect the overflow pipe from the **main inlet water valve** and drain the water inside;
- Switch back ON the machine and wait for the **coffee group** positioning. The **main inlet water valve** opens.
- Switch OFF the machine and connect back the water line pipe and the overflow pipe;
- Switch ON the machine.

14.6 E17-HEATING

Why?

The machine is heating up the **boiler**. Wait for the machine to be ready.

14.7 E18-CLEANING CYCLE REQUIRED

Why?

The option **HEATING CONTROL** is active.

Maybe it’s the first time the machine is installed and it needs a cleaning cycle in order to fill the **boiler** with water, or somebody has switched ON the **HEATING CONTROL** option.

NOTE

Once the option **HEATING CONTROL** is activated, it can’t be turned off from the programming

Access the cleaning routine and run a **WHIPPER CLEANING**.

14.8 E23-EMPTY GROUNDS DRAWER

Why?

The number of coffee set in the **MAX NUMBER OF GROUNDS** option menu has been done.

Follow the instruction manual to clear the message.

14.9 E24-DOOR OPEN

Why?

The front door micro switch is not engaged.

Cause of fault	**Troubleshooting measure(s)**
The **front door** is open;	Close it;
The front door is closed, but the message stays still.	The **front door micro switch** is damaged. Replace it
The connection is compromised	Check the wires from the **front door switch** to the **motherboard** (refer to the **Input/Output** table to understand which input number). Replace the **motherboard**.

14.10 E25-CHECK FILTER

Why?

The number of liters set in the **DESCALING CAPACITY** option has been done and the option **IN-LINE FILTER** is active.

Replace the de-scaling filter with a new one and go into the programming > **COUNTERS** > **TECHNICAL DATA** and clear the liters counter.

14.11 E39-COFFEE GROUP POSITIONING

Why?

The coffee group is moving. Wait for the completion of the movement.

Cause of fault	Troubleshooting measure(s)
The message stays still even if the coffee group doesn't move.	Maybe you've just put back the coffee group. Remove the **door lock** and put it back, or close the **front door**.

14.12 E46-FRIDGE PROBE OVER TEMPERATURE

Why?

The board is measuring a temperature below 0°C

Cause of fault	Troubleshooting measure(s)
The temperature probe got fault.	Replace it.

14.13 E47-FRIDGE PROBE DISCONNECTED

Why?

The board is measuring a temperature above 10°C

Cause of fault	Troubleshooting measure(s)
The temperature probe is disconnected;	Check the connections.
The temperature probe got fault.	Replace it.

14.14 E52-GROUP 1 PROBE OVER TEMPERATURE

Why?

The board is measuring a temperature above 120°C

Cause of fault	**Troubleshooting measure(s)**
The temperature probe got fault; Look at the coffee group heating element LED on the **triac board**.	Replace it. If the temperature on the display keeps raising also above the set point, but the LED has turned OFF, the **main board** got fault. Replace it.

14.15 E53-GROUP 1 PROBE DISCONNECTED

Why?

The board is measuring a temperature below 0°C

Cause of fault	**Troubleshooting measure(s)**
The temperature probe is disconnected; The temperature probe got fault.	Check the connections. Replace it.

14.16 E58-BOILER 1 PROBE OVER TEMPERATURE

Why?

The board is measuring a temperature above 120°C

Cause of fault	Troubleshooting measure(s)
The temperature probe got fault; Look at the boiler heating element LED on the **triac board**.	Replace it. If the temperature on the display keeps raising also above the set point, but the LED has turned OFF, the **main board** got fault. Replace it.

14.17 E59-BOILER 1 PROBE DISCONNECTED

Why?

The board is measuring a temperature below 0°C

Cause of fault	Troubleshooting measure(s)
The temperature probe is disconnected; The temperature probe got fault.	Check the connections Replace it.

14.18 E62-CHECK GRINDER 1 / E61-CHECK GRINDER 2

Why?

The **grinder 1** or **2** is blocked.

Cause of fault	**Troubleshooting measure(s)**
A harder beans has gone into the grinder.	Move as more as possible the **grinder blades** to the coarse position and run a coffee. Check if it's time to replace the blades;
The coffee **grinder** is blocked also with the blades totally opened.	Open the **grinder blades** and check if there is something inside.

14.19 E72-CLEAN COFFEE GROUP

Why?

The machine has detected an unusual current consumption of the **coffee group gearmotor**.

Cause of fault	**Troubleshooting measure(s)**
The **coffee group** is dirty.	Remove the **coffee group** and clean it from the coffee. Put some grease on the main screw and O-Rings.

14.20 E73-FLASH MEMORY ERROR / E102-EEPROM WRITE ERROR MOTHERBOARD

Why?

Error while saving data on the motherboard. Replace it.

14.21 E74-COFFEE GROUP TIMEOUT

Why?

The **coffee group** has taken too much time to finish a positioning than usual.

Cause of fault	**Troubleshooting measure(s)**
The **coffee group** wasn't in the position the machine expected.	Push on the notification to reset the coffee group.

14.22 E75-COFFEE GROUP MOTOR TIMEOUT

Why?

The **coffee group counter** is no more counting.

Cause of fault	Troubleshooting measure(s)
The **coffee group** has suddenly blocked during a movement;	Check that the **coffee group chamber** is not completely on the bottom or on the top of the unit.
The **coffee group** is dirty;	Clean the coffee group.
The **coffee group** is full of coffee puck;	Remove the coffee group and clean it.
The connection is compromised;	Check the connection between the **coffee group motor counter** and the **output board 1**.
The **motor counter** got fault.	Replace it.

14.23 E76-MILK OUTPUT VALVE DISCONNECTED

Why?

The machine is detecting that the connector of the milk output valve is disconnected.

Cause of fault	Troubleshooting measure(s)
The connector is disconnected;	Check the connector.
The connection is compromised;	Check the connection between the connector and the **motherboard.**
The **motherboard** got fault	Replace it.

14.24 E77-MIXING BOWLS DISCONNECTED

Why?

The machine is detecting that the connector of the mixing bowls is disconnected.

Cause of fault	**Troubleshooting measure(s)**
The connector is disconnected;	Check the connector.
The connection is compromised;	Check the connection between the connector and the **motherboard.**
The **motherboard** got fault.	Replace it.

14.25 E78-WATER PUMP MODULE DISCONNECTED

Why?

The machine is detecting that the connector of the pump module is disconnected.

Cause of fault	**Troubleshooting measure(s)**
The connector is disconnected;	Check the connector.
The connection is compromised;	Check the connection between the connector and the **motherboard.**
The **motherboard** got fault.	Replace it.

14.26 E79-FRESH MILK MODULE DISCONNECTED

Why?

The machine is detecting that the connector of the fresh milk module is disconnected.

Cause of fault	**Troubleshooting measure(s)**
The connector is disconnected;	Check the connector.
The connection is compromised;	Check the connection between the connector and the **motherboard.**
The **motherboard** got fault.	Replace it.

14.27 E80-GRINDERS MODULE DISCONNECTED

Why?

The machine is detecting that the connector of the grinders module is disconnected.

Cause of fault	**Troubleshooting measure(s)**
The connector is disconnected;	Check the connector.
The connection is compromised;	Check the connection between the connector and the **motherboard.**
The **motherboard** got fault.	Replace it.

14.28 E81-SOLUBLE MOTORS MODULE DISCONNECTED

Why?

The machine is detecting that the connector of the soluble motors module is disconnected.

Cause of fault	Troubleshooting measure(s)
The connector is disconnected;	Check the connector.
The connection is compromised;	Check the connection between the connector and the **motherboard.**
The **motherboard** got fault.	Replace it.

14.29 E82-BOILER MODULE DISCONNECTED

Why?

The machine is detecting that the connector of the boiler module is disconnected.

Cause of fault	Troubleshooting measure(s)
The connector is disconnected;	Check the connector.
The connection is compromised;	Check the connection between the connector and the **motherboard.**
The **motherboard** got fault.	Replace it.

14.30 E83-DOOR MODULE DISCONNECTED

Why?

The machine is detecting that the connector of the door module is disconnected.

Cause of fault	Troubleshooting measure(s)
The connector is disconnected;	Check the connector.
The connection is compromised;	Check the connection between the connector and the **motherboard.**
The **motherboard** got fault.	Replace it.

14.31 E85-COFFEE GROUP MOTOR COUNTER DISCONNECTED

Why?

The machine is detecting that the connector of the coffee group motor counter is disconnected.

Cause of fault	Troubleshooting measure(s)
The connector is disconnected;	Check the connector.
The connection is compromised;	Check the connection between the connector and the **motherboard.**
The **motherboard** got fault.	Replace it.

14.32 E86-POWER SUPPLY MODULE DISCONNECTED

Why?

The machine is detecting that the connector of the power supply module is disconnected.

Cause of fault	Troubleshooting measure(s)
The connector is disconnected;	Check the connector.
The connection is compromised;	Check the connection between the connector and the **motherboard.**
The **motherboard** got fault.	Replace it.

14.33 E87-BOARDS MODULE DISCONNECTED

Why?

The machine is detecting that the connector of the boards module is disconnected.

Cause of fault	Troubleshooting measure(s)
The connector is disconnected;	Check the connector.
The connection is compromised;	Check the connection between the connector and the **motherboard.**
The **motherboard** got fault.	Replace it.

14.34 E88-CURRENT OVERLOAD

Why?

The machine has detected an unusual current consumption during the stand by.

Cause of fault	**Troubleshooting measure(s)**
The current control cable on the power stabilizer is disconnected;	Check the connector.
The connection is compromised;	Check the connection between the connector and the **motherboard.**
The **motherboard** got fault.	Replace it.

14.35 E92-FLASH WRITE ERROR TRIAC BOARD 1

Why?

Error while saving data on the triac board. Replace it.

14.36 E100-FLASH WRITE ERROR OUTPUT BOARD 1 / E101-FLASH WRITE ERROR OUTPUT BOARD 2

Why?

Error while saving data on the output board 1 or 2. Replace it.

14.37 E102-EEPROM WRITE ERROR MOTHERBOARD

Why?

Error while saving data on the output board 1 or 2. Replace it.

14.38 E111-OUTPUT BOARD 1 VERSION INCOMPATIBLE

Why?

The motherboard has detected an output board 1 software version that is not compatible to its current version.

Usually the problem happens after a manual motherboard software update, because the motherboard software version becomes more recent while the output board software version is too old to suite the motherboard new features.

NOTE

Normally you shoudn’t need to upgrade a board manually, because everytime a new touch screen software version is installed, the touch screen automatically updates the boards according to its features.

Solution:

Make sure to have all the boards upgraded to the latest versions at the same time.

14.39 E112-OUTPUT BOARD 2 VERSION INCOMPATIBLE

Why?

The motherboard has detected an output board 2 software version that is not compatible to its current version.

Usually the problem happens after a manual motherboard software update, because the motherboard software version becomes more recent while the output board software version is too old to suite the motherboard new features.

NOTE

Normally you shoudn’t need to upgrade a board manually, because everytime a new touch screen software version is installed, the touch screen automatically updates the boards according to its features.

Solution:

Make sure to have all the boards upgraded to the latest versions at the same time.

14.40 E113-TRIAC BOARD 1 VERSION INCOMPATIBLE

Why?

The motherboard has detected a triac board software version that is not compatible to its current version.

Usually the problem happens after a manual motherboard software update, because the motherboard software version becomes more recent while the triac board software version is too old to suite the motherboard new features.

NOTE

Normally you shoudn’t need to upgrade a board manually, because everytime a new touch screen software version is installed, the touch screen automatically updates the boards according to its features.

Solution:

Make sure to have all the boards upgraded to the latest versions at the same time.

14.41 E119-CHANGE GIVER INCOMPATIBLE

Why?

The change giver connected to the machine is not compatible to the current machine settings.

Cause of fault	Troubleshooting measure(s)
The base coin of the change giver is different than the one set into the machine.	Check which base coin the change giver uses (refer to the instruction manual of the change giver) and make sure the machine is using the same value.

14.42 E120-CASHLESS DEVICE INCOMPATIBLE

Why?

The cashless device connected to the machine is not compatible to the current machine settings.

Cause of fault	Troubleshooting measure(s)
The base coin of the cashless device is different than the one set into the machine.	Check which base coin the cashless device uses (refer to the instruction manual of the cashless device) and make sure the machine is using the same value.

14.43 E121-BILL VALIDATOR INCOMPATIBLE

Why?

The bill validator connected to the machine is not compatible to the current machine settings.

Cause of fault	Troubleshooting measure(s)
The base coin of the bill validator is different than the one set into the machine.	Check which base coin the bill validator uses (refer to the instruction manual of the bill validator) and make sure the machine is using the same value.

14.44 E122-OUT OF COFFEE GRINDER 1 / E123-OUT OF COFFEE GRINDER 2

Why?

1. The **coffee group** has not been able to press the coffee properly.

Cause of fault	Troubleshooting measure(s)
The **beans hopper** is empty or closed;	Re-fill coffee **beans hopper** with fresh coffee beans and open the coffee stopper making sure the safety pin is completely out of the hopper;
The **grinder** runs, but there's not enough coffee inside the **coffee group chamber**;	The blades need to be changed (verify if 20000 cycles are reached) or the ground is too fine. Open the **grinder adjuster**;
The **grinder** runs but no coffee falls inside the **coffee group chamber**.	The coffee is blocked somewhere. Check the **grinder funnel**.

14.45 E124-COFFEE GROUP CLEANING REQUIRED

Why?

The number of coffee set with the option **NUMBER OF COFFEES FOR CLEANING CYCLE** has been reached.

Enter the cleaning routines and run a **Coffee Group Cleaning**.

14.46 E125-NOT CONNECTED

Why?

The **touch screen** is not connected to the **Bluetooth module** installed on the **motherboard**.

Cause of fault	**Troubleshooting measure(s)**
The screen is stucked;	Switch OFF the machine and back ON again.
The Bluetooth device address target set by the touch screen is not matching the one installed into the machine;	Follow the connection procedure at the end of this paragraph
The **Bluetooth module** got fault.;	Replace it
The **touch screen** got fault.	Replace it.

Bluetooth module connection procedure

Everytime there's the need to replace the **Bluetooth module** or the **touch screen**, the connection must be set up from the beginning.

1. Enter the programming > Settings > BLUETOOTH

2. Press the button **RESET DEVICE LIST** to clear all the devices previously registered. (all the buttons should become unavailable for few seconds)

3. Once the buttons are back available, press **SHOW DEVICES LIST**

4. On the "Bluetooth device search" window Press **SEARCH** again. The touch screen is now searching for any bluetooth device around;

   During the searching, the button **SEARCH** turnes into **STOP**. Once the touch screen has finished the searching it will turn back to **SEARCH** again. (This could take even few minutes);

5. Push on the device that's named with the serial number of the machine (i.e. 140000123) The message **CONNECTING…** will be displayed in yellow;

6. After few seconds the touch screen will ask for a PIN. Put **1234**;

7. In few seconds the message **CONNECTING…** should turn into **CONNECTED** displayed in green;

8. Go all the way back pushing the arrow on the the top left corner.

14.47 E126-DRIP TRAY OUT

Why?

The option **DRIP TRAY SENSOR** is active and the **drip tray presence switch** is engaged.

Cause of fault	**Troubleshooting measure(s)**
The **drip tray** is out of the machine or not placed correctly;	Insert the **drip tray**,
The **drip tray presence switch** is damaged or doesn't work;	Turn off the option **DRIP TRAY SENSOR** inside the programming, to let the machine working anyway (refer to the user manual); Replace the **drip tray presence switch**.
The connection is compromised.	Check the wires from the **drip tray presence switch** to the **motherboard** (refer to the **Input/Output** table to understand which input number); Replace the **motherboard**.

14.48 E127- WASTE DRAWER FULL

Why?

The option **EXTERNAL WASTE DRAWER SENSOR** is active and the **waste drawer switch** is engaged.

Cause of fault	**Troubleshooting measure(s)**
The **waste drawer** into the **waste drawer kit** is full of waste water;	Remove the **waste drawer**, empty and clean it.
The plastic float is blocked;	Check if the plastic float inside the **waste drawer** is free to move.
The **waste drawer switch** is damaged or doesn't work;	Turn off the option **EXTERNAL WASTE DRAWER SENSOR** inside the programming, to let the machine working anyway (refer to the user manual); Replace the **waste drawer switch**.
The connection is compromised.	Check the wires from the **waste drawer switch** to the **motherboard** (refer to the **Input/Output** table to understand which input number); Replace the **motherboard**.

14.49 E128-CASHLESS 2 MALFUNCTION

Why?

The mobile cashless device is reporting a generic malfunction

Cause of fault	**Troubleshooting measure(s)**
Generic malfunction of the mobile cashless device.	Check with the Service and Support of the mobile cashless device.

14.50 E129-BOILER HEATING FAILURE

Why?

The boiler has taken more than 5 minutes to reach the temperature set.

Cause of fault	**Troubleshooting measure(s)**
Push on the message to clear it and see if the LED of the **triac board** is ON:	
The LED is ON but is not heating:	
▪ The **boiler heating element** got fault;	Replace it.
▪ The communication is compromised;	Check the connection between the **boiler heating element** and the **triac board**.
▪ There's no voltage to the **boiler heating element**;	Replace the **triac board**.
The LED is OFF:	
▪ The triac board got fault;	Replace the **triac board**.

14.51 E130-REFUND CASHLESS 1 NOT AVAILABLE

Why?

The cashless device is reporting that it doesn’t have the capability to refund money if a transaction goes wrong.

No solutions

14.52 E131-CASHLESS DEVICE 2 INCOMPATIBLE

Why?

The mobile cashless device connected to the machine is not compatible to the current machine settings

Cause:

The base coin of the mobile cashless device is different than the one set into the machine.

Solution:

Check which base coin the mobile cashless device uses (refer to the instruction manual of the mobile cashless device) and make sure the machine is using the same value.

14.53 E132-REFUND CASHLESS 2 NOT AVAILABLE

Why?

The mobile cashless device is reporting that it doesn’t have the capability to refund money if a transaction goes wrong.

No solutions

14.54 E133-CASHLESS 1 MALFUNCTION

Why?

The cashless device is reporting a generic malfunction

Cause of fault	**Troubleshooting measure(s)**
Generic malfunction of the cashless device.	Check with the Service and Support of the cashless device

14.55 E134-GROUP HEATING FAILURE

Why?

The coffee group has taken more than 10 minutes to reach the temperature set.

Cause of fault	**Troubleshooting measure(s)**
Push on the message to clear it and see if the LED of the triac board is ON:	
The LED is ON but is not heating:	
▪ The **coffee group heating element** got fault;	Replace it.
▪ The communication is compromised;	Check the connection between the **coffee group heating element** and the **triac board**.
▪ There's no voltage to the **coffee group heating element**;	Replace the **triac board**.
The LED is OFF:	
▪ The triac board got fault;	Replace the **triac board**.

14.56 E137-BEANS HOPPER 1 OUT / E167-BEANS HOPPER 2 OUT

Why?

The **beans hopper presence switch** is not engaged.

Cause of fault	Troubleshooting measure(s)
The **beans hopper** is not in the correct position;	Check the **beans hopper**.
The **beans hopper presence switch** is damaged or doesn't work;	Replace the **beans hopper presence switch**.
The connection is compromised.	Check the wires from the **beans hopper presence switch** to the **motherboard** (refer to the **Input/Output** table to understand which input number). Replace the **motherboard**.

14.57 E141-FILLING WATER

Why?

The option **FILLING WATER CONTROL** is active and the machine is filling the **air-break**.

This opton is active by default, because it guarantees that the **air-break** is full of water before to start the dispensing of any drink.

This avoid potential blockage of the milk coil due to a lack of water from the main water line and also makes a possible water line problem more visible.

CAUTION

The decision to switch this option to OFF is completely responsibility of the technician, who must make sure at least to meet the minimum requirements reported on the Instructions Manual of the machine.

14.58 E143-DRIP CATCHER MOVEMENT TIMEOUT

Why?

The machine has detected an unusual current consumption of the **drip catcher gearmotor** or it's not moving at all.

Cause of fault	Troubleshooting measure(s)
The **drip catcher** has suddenly blocked during a movement;	Check that the **drip catcher** is free to move backwards and forwards.
The connection is compromised;	Check the connection between the **coffee group motor counter** and the **output board 1**.
The **drip catcher** got fault.	Replace it.

14.59 E170-DRIP CATCHER DISCONNECTED

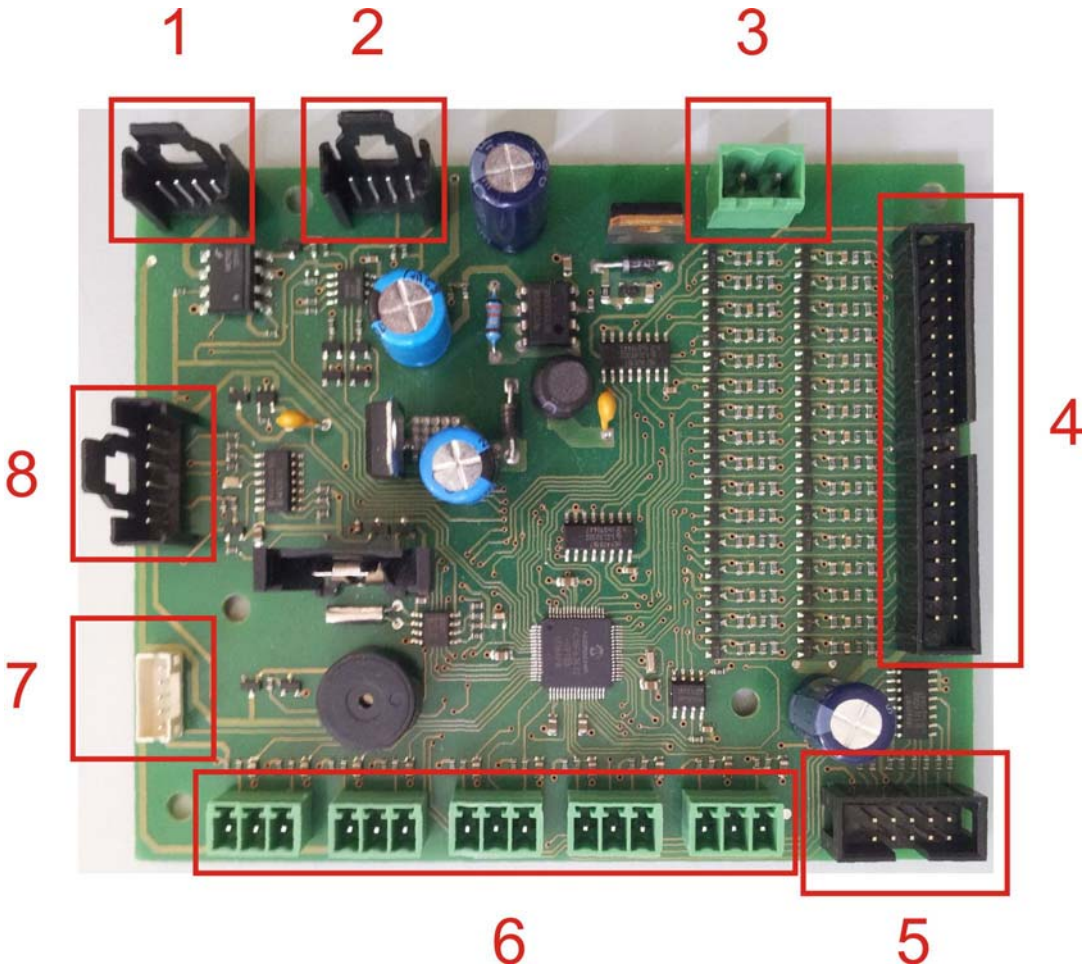
Why?

The machine is detecting that the connector of the drip catcher module is disconnected.

Cause of fault	Troubleshooting measure(s)
The connector is disconnected;	Check the connector.
The connection is compromised;	Check the connection between the connector and the **motherboard.**
The **motherboard** got fault.	Replace it.

15 Electronic boards description

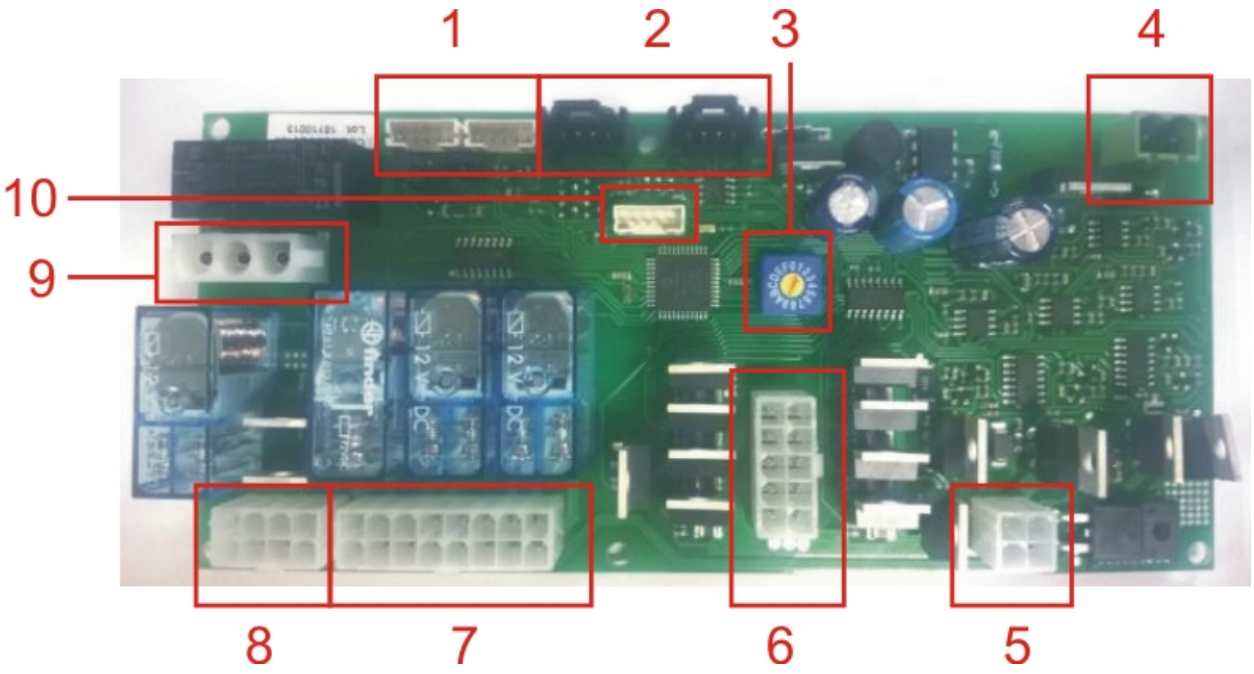
15.1 Mother board



1. Executive / MDB device connector
2. Machine bus connector
3. 24V DC power supply
4. Inputs connector
5. Coin mechanism connector
6. Temperature probes connectors (in order from left to right):
    - Connector 1
        1. Boiler temperature probe
        2. Common cable for boiler and coffee group temperature probes
        3. Coffee group temberature probe
    - Connector 2
        1. Milk fridge temperature probe
        2. Common cable for milk fridge and external cooling unit temperature probes
        3. External cooling unit temperature probe

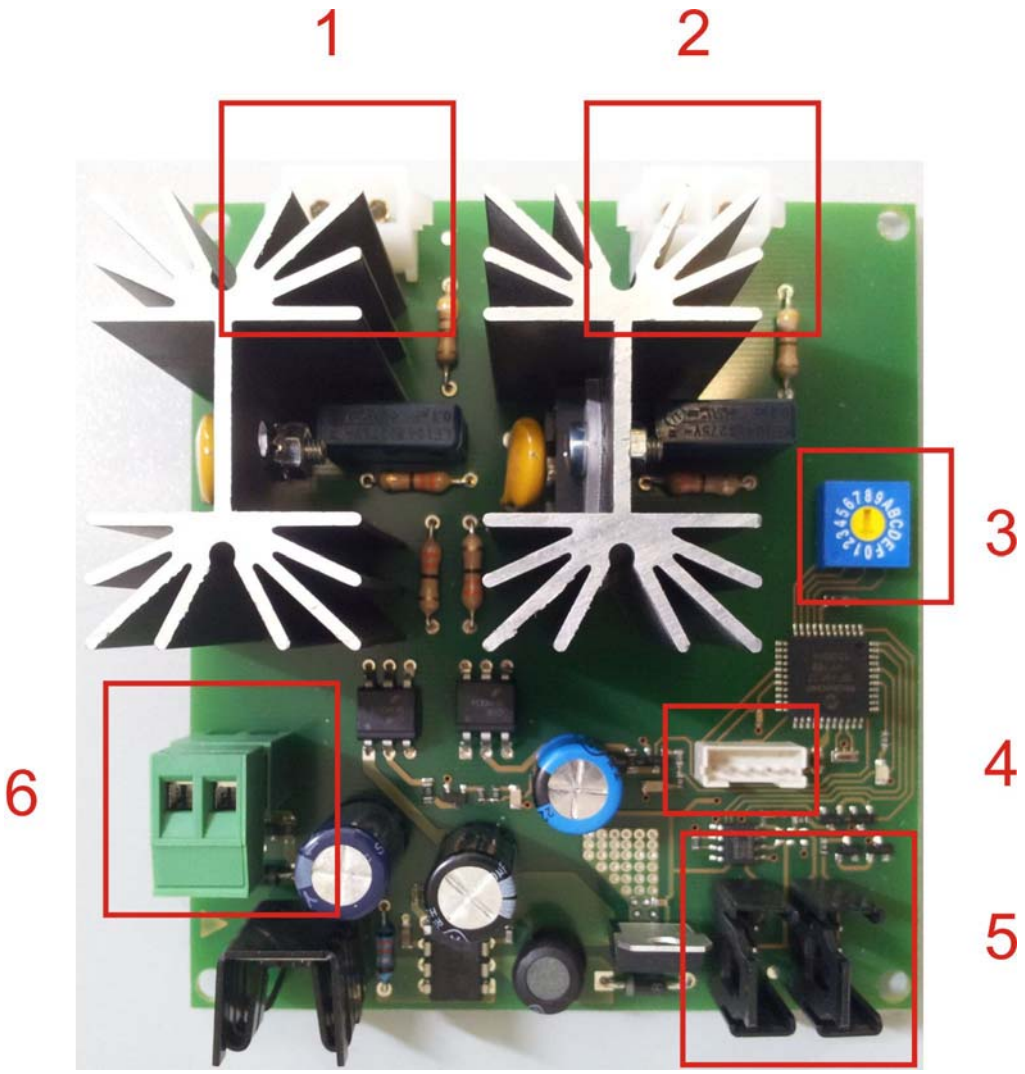
    Remaining connectors are unused
7. Hardware programming (for manufacturer only)
8. Bluetooth module connector

15.2 Output board



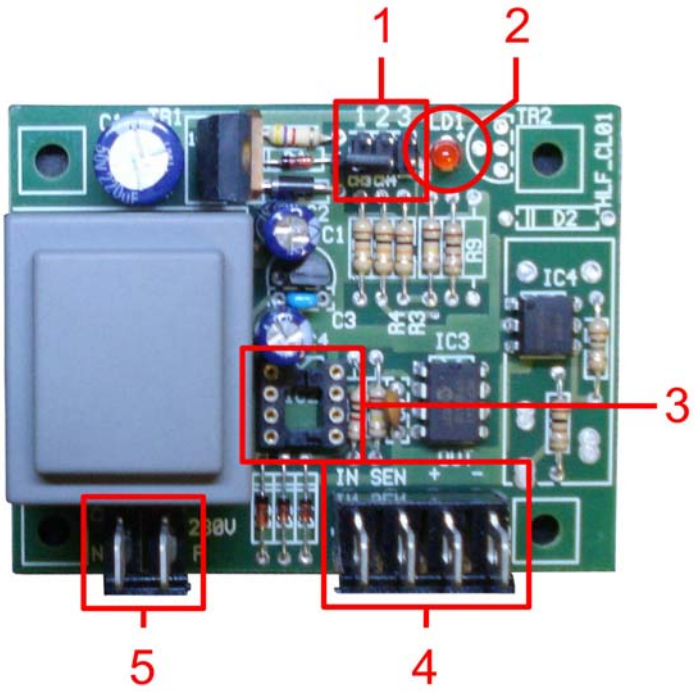
1. Counter connectors
2. Machine bus connectors
3. Board number selector
4. 24V DC power supply
5. Outputs connector n°4
6. Outputs connector n°3
7. Outputs connector n°2
8. Outputs connector n°1
9. Water pump connector
10. Hardware programming (for manufacturer only)

15.3 Triac board



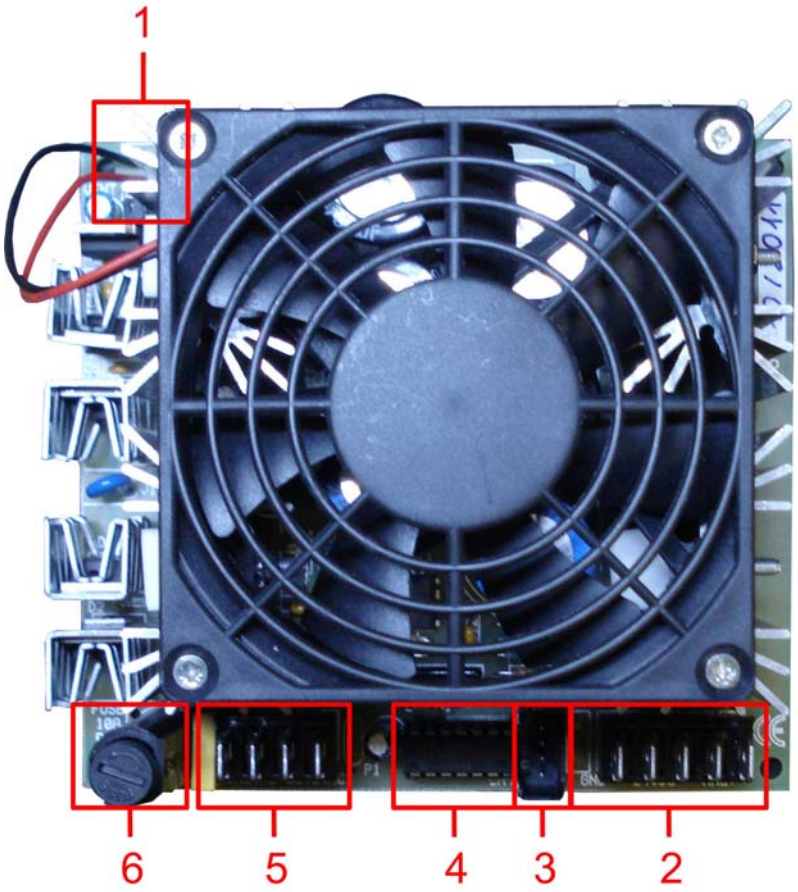
1. Coffee group heating element connector
2. Water boiler heating element connector
3. Board number selector
4. Hardware programming (for manufacturer only)
5. Machine bus connectors
6. 24V DC power supply

15.4 Water level board



1. Sensibility bridge:
   - None = Minimum sensibility. The board feel the presence even of distilled water;
   - 1 = Independently of the sensibility, when filling, in the moment the water level reaches the maximum, the machine will fill for 2 seconds more (default position for air-break);
   - 2 = Less sensibility than None
   - 3 = Less sensibility than 2 (default position for steam boiler)
   - 2+3 = Less sensibility than 3 (for really hard water)
2. Led: lightened when the water level is below the minimum
3. Water level board microchip socket
4. Inputs connection
5. 230V AC connection

15.5 Power stabilizer



1. Fan connection
2. 24V DC connection
3. Output connection
4. Power stabilizer microchip
5. 24V AC connection
6. 10 Amps fuse

16 Planning diagram

- 9BPM37G02 - HLF 3700 PLANNING DIAGRAM
- 9BPM47G02 - HLF 4700 PLANNING DIAGRAM

17 Electric diagram

- ED_9WCBA0351 – MACHINE MODULE 37-4700
- ED_9WCKA0338 – PUMP MODULE 37-4700
- ED_9WCKB0341 – OUTPUT BOARD MODULE 37-4700
- ED_9WCKB0371 – MOTHER BOARD MODULE 37-4700
- ED_9WCKC0375 – BOILER MODULE 37-4700
- ED_9WCKD0326 – DOOR MODULE
- ED_9WCKF0355 – MILK MODULE 37-4700
- ED_9WCKF0373 – 3 WAYS MILK OUTLET 37-4700
- ED_9WCKM0265 – DRIP CATCHER MODULE 27-37-4700
- ED_9WCKM0271 – COFFEE BEANS HOPPER PRESENCE SWITCH
- ED_9WCKM0347 – SOLUBLE MOTOR MODULE 37-4700
- ED_9WCKM0363 – GRINDER MODULE 37-4700
- ED_9WCKS0452 – WHIPPER MODULE 37-4700

18 Hydraulic circuit

3700

- HLF 3700G HYDRAULIC CIRCUIT
- HLF 3700GF HYDRAULIC CIRCUIT
- HLF 3700G PUMP MODULE
- HLF 3700GF PUMP MODULE
- HLF 3700G BOILER MODULE
- HLF 3700GF BOILER MODULE

4700

- HLF 4700G HYDRAULIC CIRCUIT
- HLF 4700GF HYDRAULIC CIRCUIT
- HLF 4700G PUMP MODULE
- HLF 4700GF PUMP MODULE
- HLF 4700G BOILER MODULE
- HLF 4700GF BOILER MODULE

COMMON MODULES

- HC_3SUFM4706 – HLF 37-4700 MILK MODULE

19 Spare part list