

SERVICE MANUAL COFFEE MACHINE



Le Cube

EF 472





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1 P R E F A C E

The purpose of this service manual is to provide service personnel all necessary information with regards to the correct handling, maintenance and repair of the EF 472. coffee machine

This manual should be used by technicians as a valuable aid to guarantee the permanent readiness of the machine. and in order to upkeep the full advantages of all the functions, it is absolutely necessary to follow the instructions in this service manual.

The required utility software to read PDF files (Adobe Reader®) for PCs and MAC computers

- is included on the Le Cube Service CD-ROM,
- can be downloadad (under <http://www.adobe.com>) for free - please click logo:



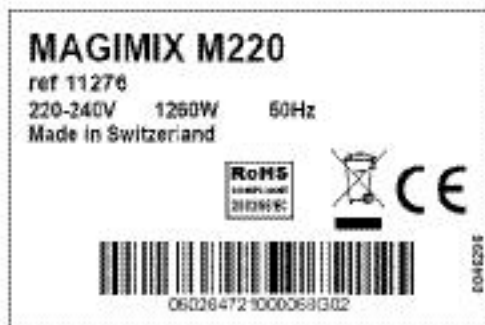
i Please print out this manual and keep it together with the corresponding service documentation. This way you are assured to have the necessary information.



2 STRUCTURE

2.1 Overview of the rating plates

 This overview shows examples of various brands and is not complete.





The rating plate

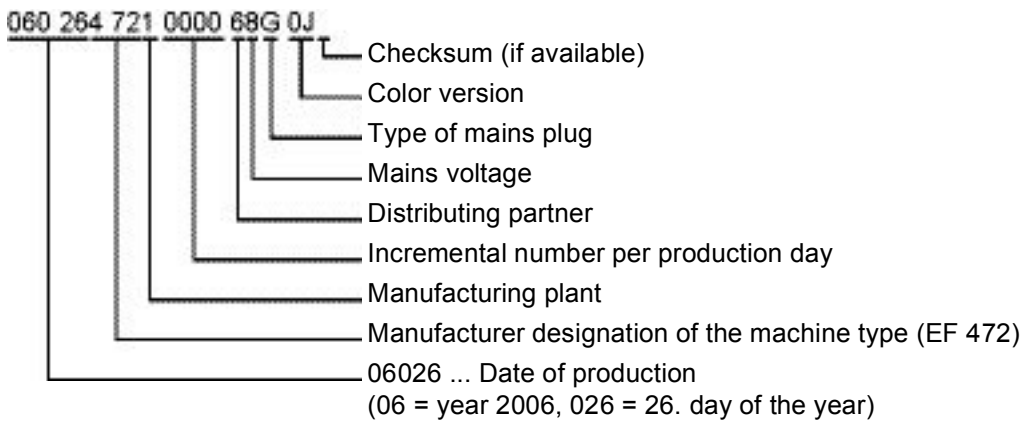
- can be found on the underside of the coffee machine,
- may be of very design, depending on the brand
- carries the following information:



- | | |
|--|--|
| 1) Brand name | 6) Serial number |
| 2) Voltage and power rating | 7) Machine type |
| 3) Place of manufacture | 8) Special disposal icon |
| 4) Conform with RoHS-guidelines (lead free solder, etc.) | (do not dispose with ordinary waste) |
| 5) Barcode | 9) Approval seal (CE, UL etc.) |
| | 10) Article number of the rating plate |

Decoding the alphanumeric serial number

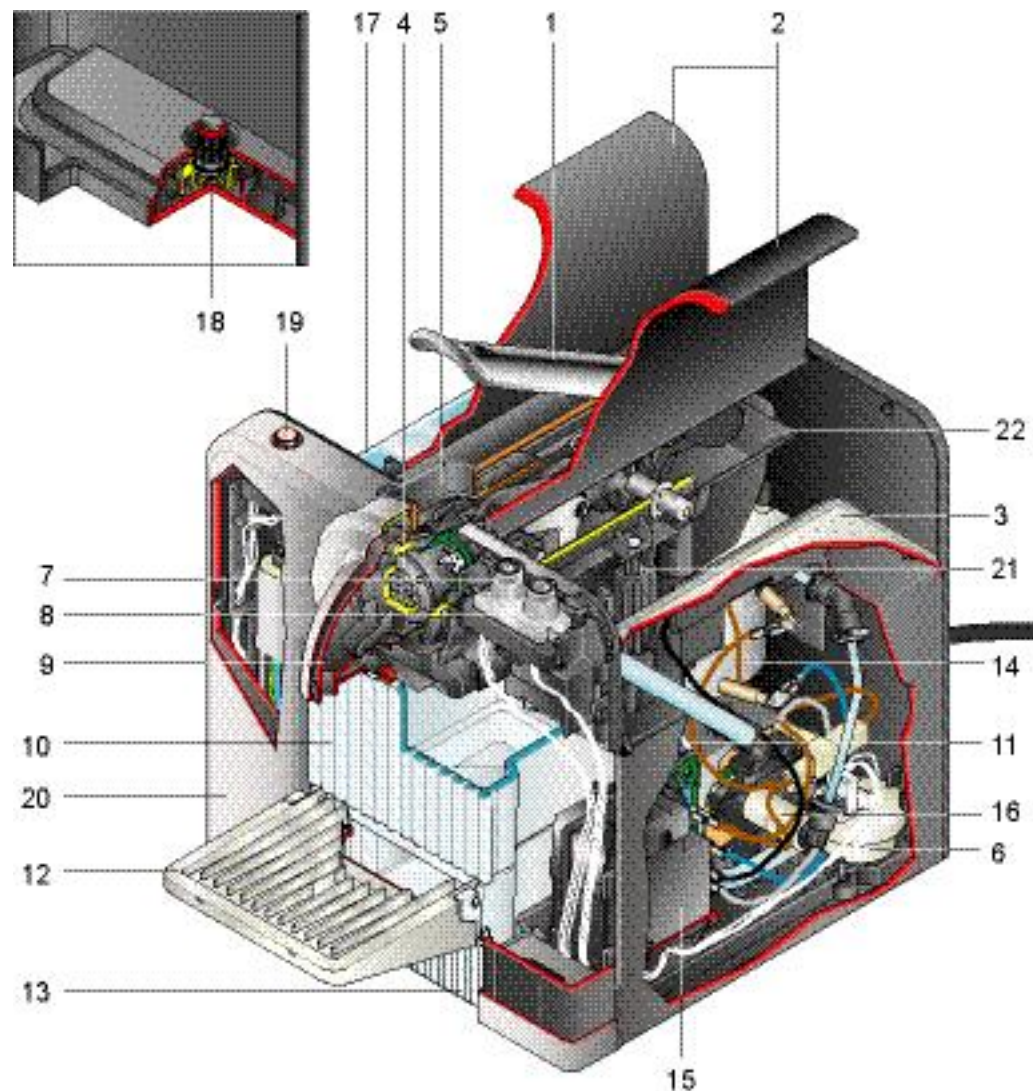
Example:



i By decoding the date of production and machine type, the coffee machine can be identified exactly.



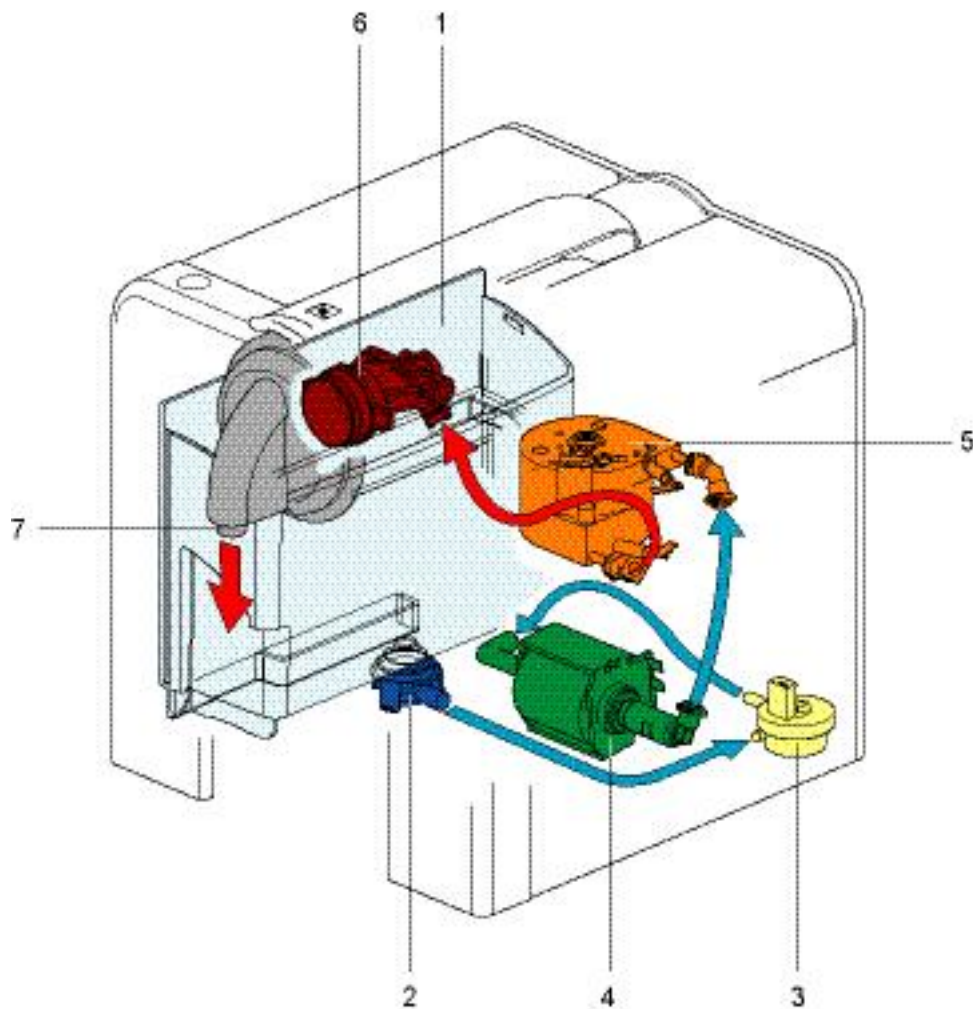
2.2 Overview



- | | |
|--|--------------------------------------|
| 1) Closing handle | 12) Cup tray, foldable |
| 2) Cup cover, foldable | 13) Drip tray |
| 3) Warming plate or tray
(depends on model) | 14) Thermoblock TB 2003 |
| 4) Compact Brewing Unit (CBU) | 15) Mainboard with housing |
| 5) Capsule inlet | 16) Pump CP.04.098.0/ST/S/P |
| 6) Flow meter | 17) Water tank with valve, foldable |
| 7) "Small cup" button, back lighted | 18) Connector (below the water tank) |
| 8) "Large cup" button, back lighted | 19) Connector On/Off - switch |
| 9) Coffee outlet | 20) Front cover |
| 10) Capsule container | 21) Support for compact brewing unit |
| 11) Light guide to the capsule container | 22) Drip tray |



2.3 Water circuit



- | | |
|-----------------------------------|-------------------------------|
| 1) Water tank | 5) Thermoblock |
| 2) Water tank valve and connector | 6) Compact Brewing Unit (CBU) |
| 3) Flow meter | 7) Coffee outlet |
| 4) Pump | |



2.4 Technical data

Mains voltage

Europe	230 V / 50 Hz
USA / Canada	120 V / 60 Hz
Japan.....	100 V / 50-60 Hz

Approvals SEV, CENELEC, CE-conform, to UL, CUL, MITI

Power ratings (for all voltages and frequencies)

Thermoblock.....	1'200 W
Pump	70 W

Performance data

Heating up	approx. 7.5 Wh
1 small cup	(40 ml*) approx. 3.0 Wh
1 large cup.....	(110 ml*) approx. 8.0 Wh
Standby operation in 1 hour	(without cup warmer**) approx. 13 Wh
	(with cup warmer**) approx. 20 Wh

* Default settings

** version dependent machine function

Pump

Pump pressure

- Max. permissible	17.5 bar $\pm$ 1,5 bar
- During coffee preparation (depending on the type of coffee).....	9 - 16 bar

Flow performance..... 120 - 240 ml/min. at 12 bar

Capacities

Water tank	0.9 l
Drip tray.....	approx. 100 ml
Capsule container	12 - 15 pieces

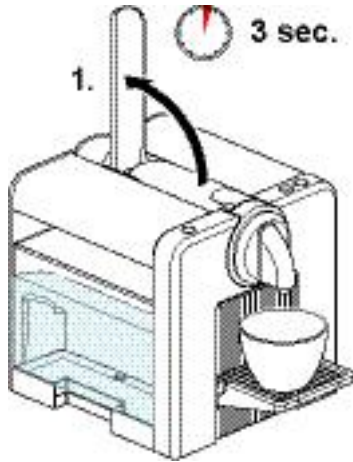
Various data

Preheating time	approx. 45 sec.
Safety temperature (thermal cut-off)	167° C
Coffee temperature at outlet.....	86° C $\pm$ 3° C
Dimensions (width x height x depth)	226 x 230 x 230 mm
Cable length	approx. 1 m
Weight of the coffee machine (without water)	approx. 4.5 kg



3 OPERATIONS

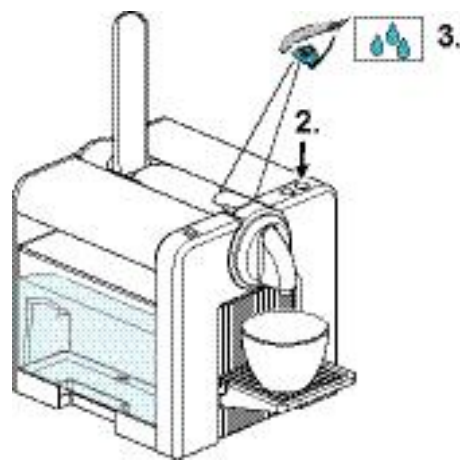
3.1 Filling the water system



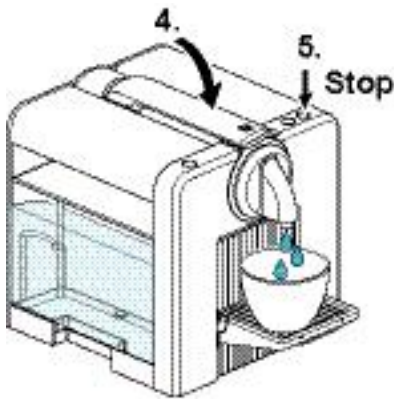
Requirements:

The coffee machine is switched on and has heated up.

- 1) Press the "Large cup" button.
 - The pump starts to work.



- 2) Open the closing handle, push it backwards to the stop and hold it in this position for approximately 3 seconds.
- 3) Check if any water leaks from the capsule inlet.



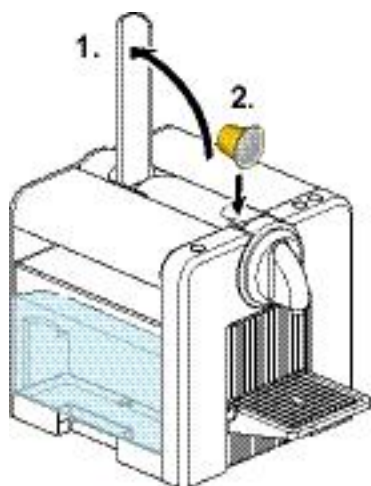
- 4) Close the handle immediately if a leakage is visible.
- 5) Press the "Large cup" button again to stop the pump.
 - The coffee machine is now ready.

i If the coffee machine cannot pump water although there is water in the tank, the water circuit may be empty (also refer to page 12).

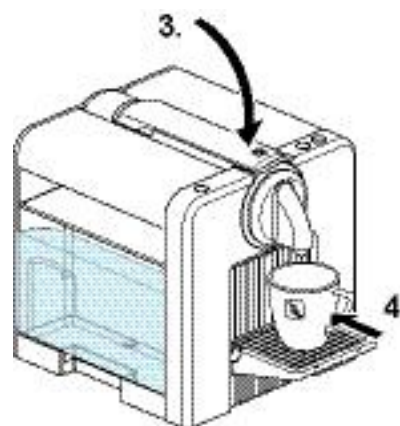
⚠ A small amount of steam may seep through the capsule bay.



3.2 Making a cup of coffee



- 1) Open the closing handle.
- 2) Insert the capsule.

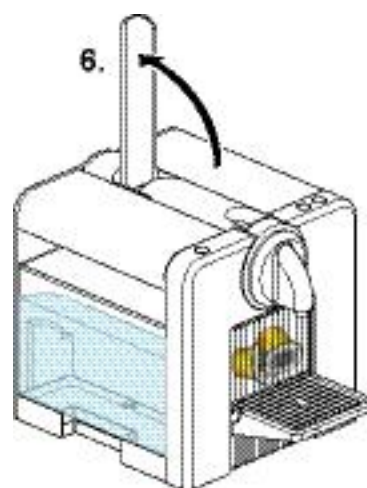


- 3) Close the handle and press it down all the way.
- 4) Place a cup under the coffee outlet.



- 5) Press the "Small cup" or "Large cup" button.
 - Coffee preparation starts and stops automatically.

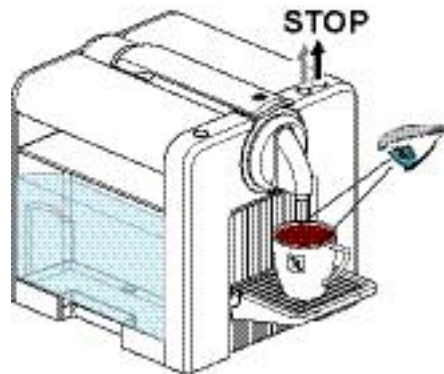
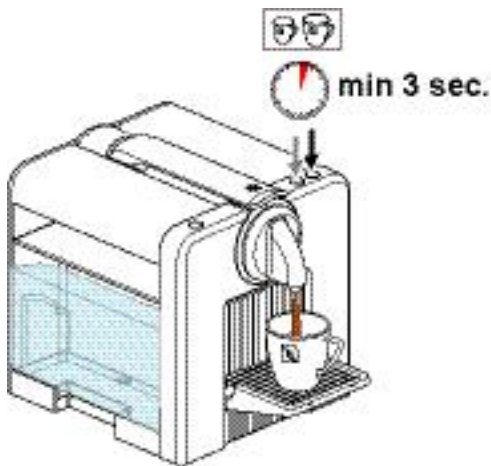
 **Should the cup start to overflow, press the same button again.**



- 6) When the process is completed, briefly open the closing handle to eject the used capsule.



3.3 Programming the fill level



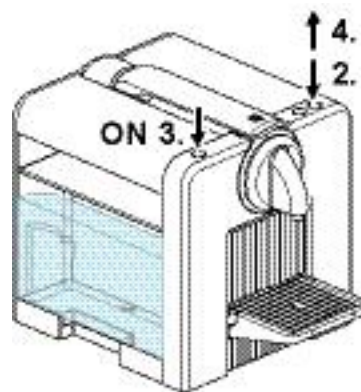
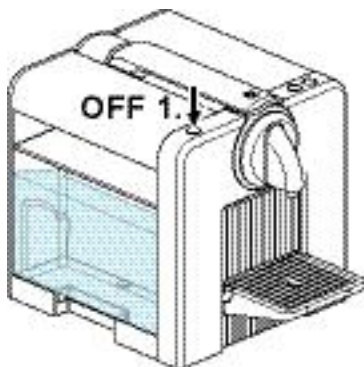
i The fill level of the cups has been pre-set by the manufacturer.

Small cup 40ml

Large cup 110ml

- 1) Prepare coffee as usual (see "Making a cup of coffee" on page 10), but keep the coffee button pressed for at least three seconds in order to start programming mode.
 - 2) Only release the button when the desired fill level is reached.
- ☛ The procedure is the same for both cup sizes (fill level 10 - 750 ml).**

3.4 Resetting the fill level to the factory default



- 1) Switch off the coffee machine.
- 2) Press and hold the "Large cup" button.
- 3) Switch on the coffee machine.
- 4) Release the button

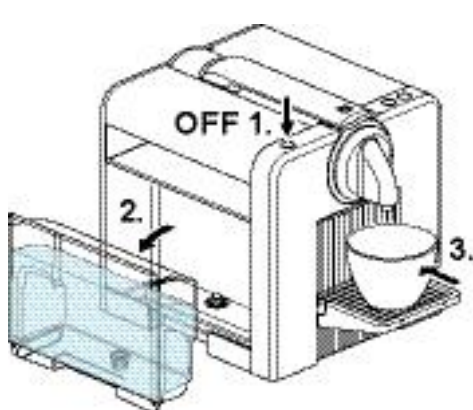


3.5 Emptying the water system

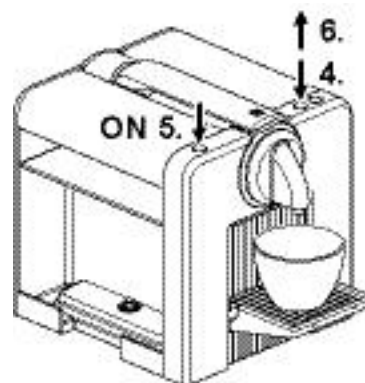
i After every operation, some water remains in the coffee machine. Therefore the water system must be emptied

- if the coffee machine will not be used for a long time
- as antifreeze measure
- for repairs and shipment.

i After this procedure, the coffee machine will not be ready for approx. 10 min (until the thermoblock cools to below 100 °C).



- 1) Switch off the coffee machine.
- 2) Pull out or remove the water tank.
- 3) Place a beaker under the coffee outlet.



- 4) Press and hold the "Small cup" button.
- 5) Switch the coffee machine on again.
- 6) Release the "Small cup" button.



- The pump starts to drain the water system and stops automatically.
- The On/Off switch and the lights of the capsule container blink simultaneously.



- 7) Switch off the coffee machine.



3.6 Light signals

The meaning of the symbols

Symbols for	On/Off switch	"Small cup" button	"Large cup" button
Illumination off			
Illumination on			
Normal blinking			
Fast blinking			
Irregular blinking			

The various operating modes and occurring errors are indicated by light signals (see tables).

Indicators

Status / Error	On/Off switch	*"Small cup" button	"Large cup" button
Off			
Heating up			
Ready			
Coffee for a small cup / programming / rinsing			
Coffee for a large cup / programming / rinsing			
Descaling ready / quit			
Emptying the water system			
Standby (after emptying water system)			
Error			



4 TROUBLESHOOTING

4.1 Check list

I With an acceptance check in accordance with this checklist, errors are quickly found and corrected with the appropriate measure. Therefore, adhere to the sequence of the check list. Repair every occurring error and work the check list until it is completed.

Check	Error symptoms	Measure / repair work	Further measures / repair work
1 Check the coffee machine for visible damage	1.1 Housing parts broken or damaged	YES - replace housing parts if necessary NO - continue with point 1.2	
	1.2 Mains cable damaged	YES - replace the mains cable NO - connect the cable from machine to the mains and continue with point 2.1	
2 Check mechanical components	2.1 When the coffee machine is switched off, the cup tray remains in the vertical position	YES - continue with point 2.2	
		NO - check if the capsule container and the cup tray are correctly inserted and mounted	YES - replace damaged or deformed cup tray
	2.2 Closing handle functions	YES - continue with point 2.3	
		NO - it is very difficult or almost impossible to close the handle and to press it all the way down	YES - replace the compact brewing unit
	2.3 The capsule is ejected correctly	YES - continue with point 2.4 NO - replace compact brewing unit	
	2.4 Seal on the capsule cage is damaged (check seal with your finger)	YES - replace the compact brewing unit NO - continue with point 3	
3 Fill water tank	3.1 Water tank leaks	YES - replace water tank NO - continue with point 4	
4 Activate the On-Off switch to perform the automatic self test.	4.1 Cup tray folds down	YES - continue with point 4.2	
		NO - locking mechanism works	YES - replace damaged or deformed cup tray NO - replace locking mechanism
	4.2 The coffee machine is not working (does not function)	YES - a) mains cable is okay	YES - continue with point b) NO - replace mains cable
		YES - b) on-off switch is okay	YES - continue with point c) NO - replace on off switch
		YES - c) pump works (press a coffee button)	YES - continue with point f) NO - continue with point d)
		YES - d) both coffee buttons are working	YES - continue with point e) NO - replace the entire electronics
		YES - e) fine wire fuse (128°C) on the pump is defective	YES - replace fine wire fuse NO - replace pump
		YES - f) fine wire fuse(s) (167°C) on the thermoblock defective	YES - replace entire electronics, if necessary, even replace thermoblock NO - continue with point g)



Check	Error symptoms	Measure / repair work	Further measures / repair work
4 Continuation	4.2 Continuation	YES - g) wiring is okay	YES - replace the entire electronics NO - replace defective cables
		NO - continue with point 4.3	
	4.3 Capsule container is illuminated	YES - continue with point 4.4	
		NO - replace mainboard	
	4.4 Both coffee buttons are blinking 3x fast	YES - thermoblock is hot	YES - replace NTC-temperature sensor NO - replace thermoblock
		NO - self test ok. Continue with point 5	
5 Measure coffee temperature during preparation (see "Measuring the coffee temperature" on page 36)	5.1 No coffee	YES - a) water system is empty	YES - for further procedures, see "Filling the water system" on page 9 NO - continue with the point b)
		YES - b) flow meter blocked	YES - clean or replace NO - continue with point c)
		YES - c) pyramide plate blocked	YES - replace the compact brewing unit NO - continue with point d)
		YES - d) coffee machine is calcified	YES - descale coffee machine (see "Descaling" on page 37)
		NO - continue with point 5.2	
	5.2 Temperature is too low (below 83°C)	YES - Descal coffee machine (see "Descaling" on page 37) NO - continue with point 5.3	
	5.3 Temperature too high (over 89°C)	YES - replace NTC-temperature sensor NO - continue with point 6	
6 Check for leakage and measure flow rate (see "Measure flow rate" on page 32 or "Pressure and leakage checks" on page 33)	6.1 CBU leaks	YES - replace the compact brewing unit NO - continue with point 6.2	
	6.2 Hose connections leak	YES - replace defective hoses and seals NO - continue with point 6.3	
	6.3 Rate of flow not in the standard range	YES - coffee machine is calcified	YES - descale coffee machine (see "Descaling" on page 37) NO - replace pump
		NO - no errors found according to checklist	for more information please contact Nespresso Service Division
7 Descale coffee machine (if necessary)	7.1 Coffee machine is calcified	YES - Descal coffee machine (see "Descaling" on page 37) NO - continue with point 8	
8 Final cleaning (see "Daily maintenance, cleaning" on page 39)			
End of check list			



i This section contains special safety and assembly notices. Disregarding them may lead to injuries and damages.

i If necessary empty the water system first (see page 12).

⚠ Before disassembly, disconnect the mains plug - the coffee machine must be voltage free.

5 REPAIRS

The components of the coffee machine are mostly connected with latches, meaning without screws.

⚠ When loosening these connections, proceed with care and patience to avoid causing any damage.

Designation of spare parts

The components in the following illustrations are indexed with position numbers. The corresponding designation and spare part number are listed in section "Spare parts" on page 40.

5.1 Tools and accessories

With the following assortment of tools, all repairs described can be made.

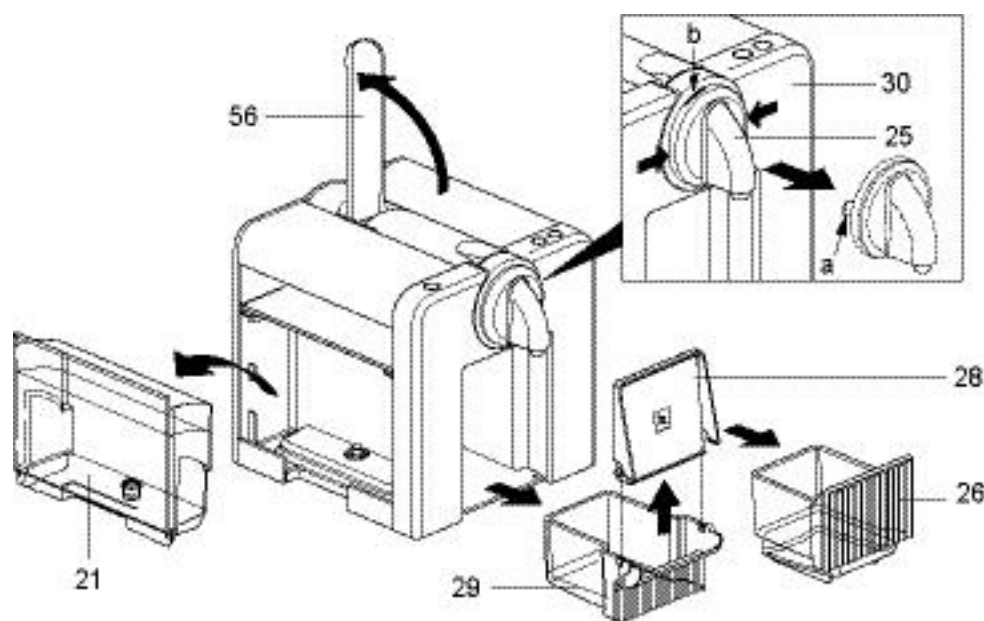
- Oval-screwdriver
- TORX-screwdriver (TX6, TX10, TX20, TX25)
- Screwdriver with approx. 4 mm tool tip
- Hexagonal wrench SW 4
- Flat wrench SW 14, 10 mm AF
- Torque wrench
- Long-nosed pliers
- Beaker and towel to catch and wipe away leaking water

5.2 General disassembly

General disassembly

- gives access to the important machine components
- is required for the following repair instructions.

Depending on the repair done the machine does not have to be fully disassembled.



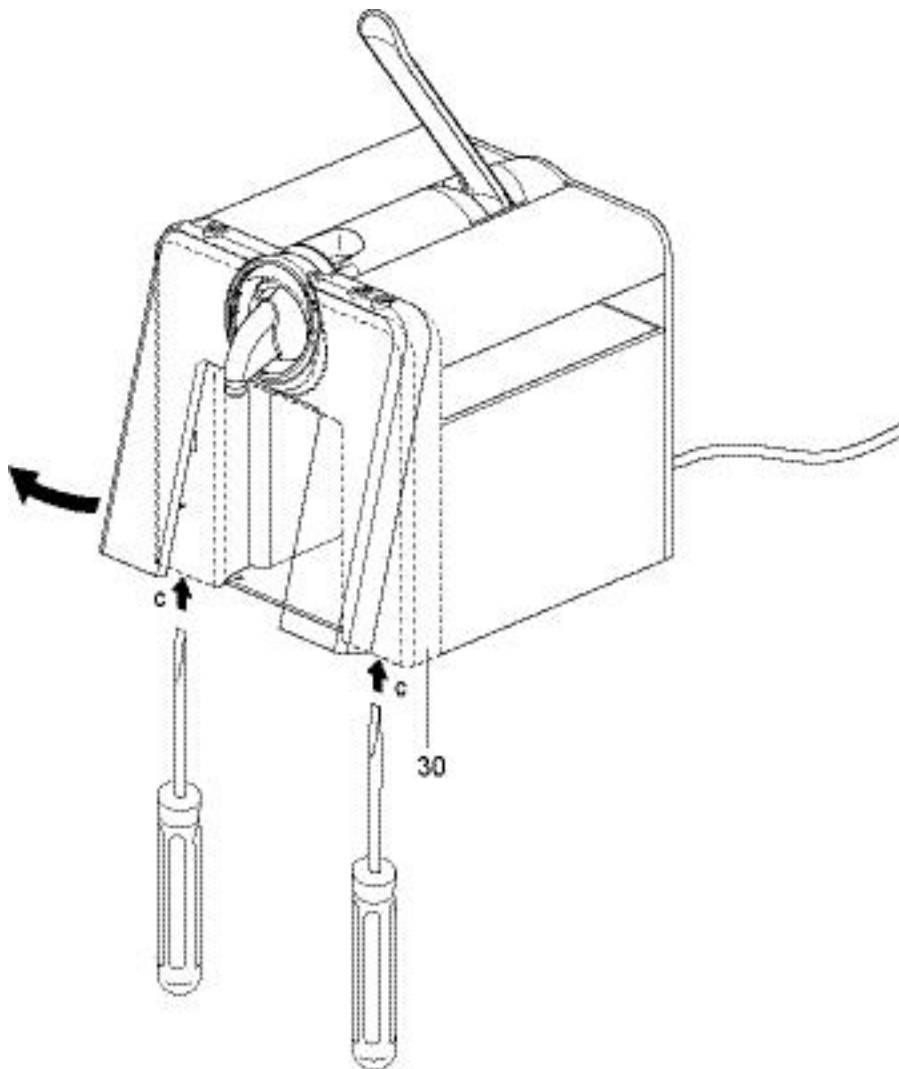


1. Remove the water tank (21), drip tray (29) with cup tray (28) and capsule container (26).
2. Open the closing handle (56)
3. Remove the coffee outlet (25). The coffee outlet is attached with two latching levers on both sides (a).
Press down on both sides of the coffee outlet with your thumb and index finger and remove it (see the details).

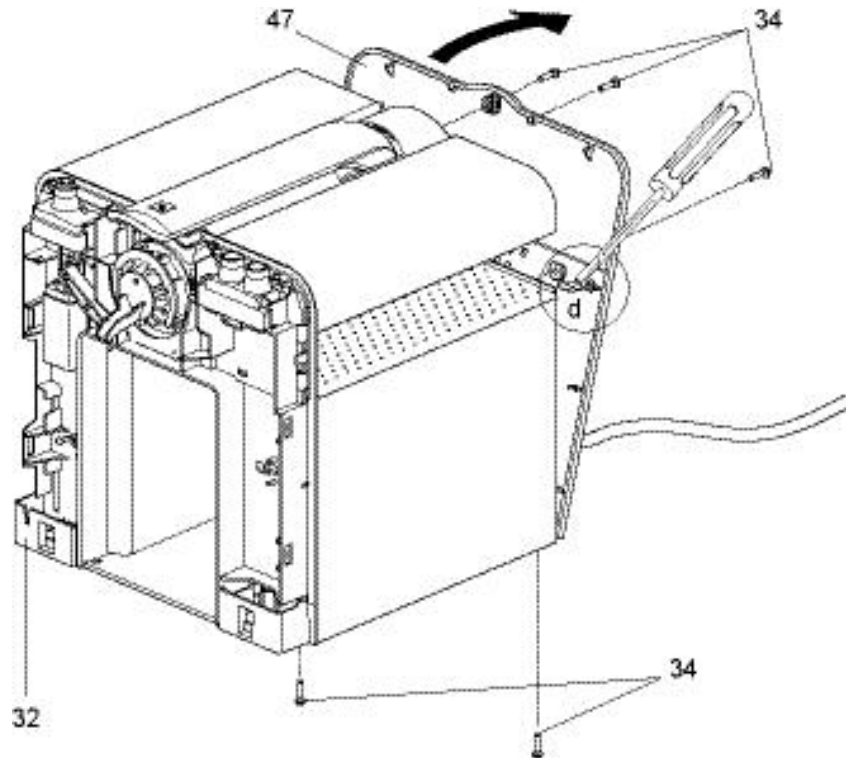
Should any problems occur, then the coffee outlet can be disassembled as follows (see previous illustration):

- Press the coffee outlet downwards until on the left side of the gap in the front panel (30) the groove (b) becomes visible.
- Place the screwdriver tip in the groove, carefully pry the coffee outlet (25) loose and remove it.

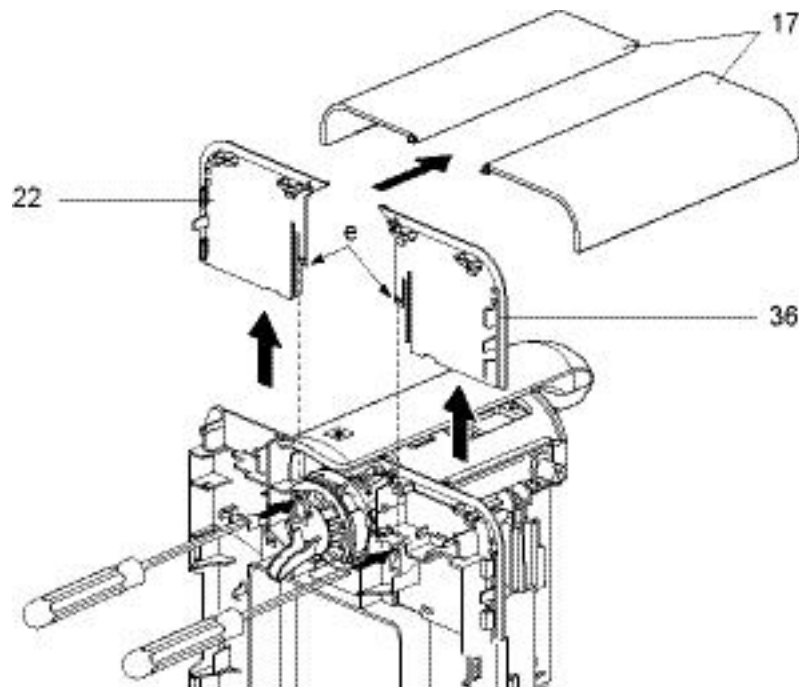
 Alternative disassembly of the coffee outlet.



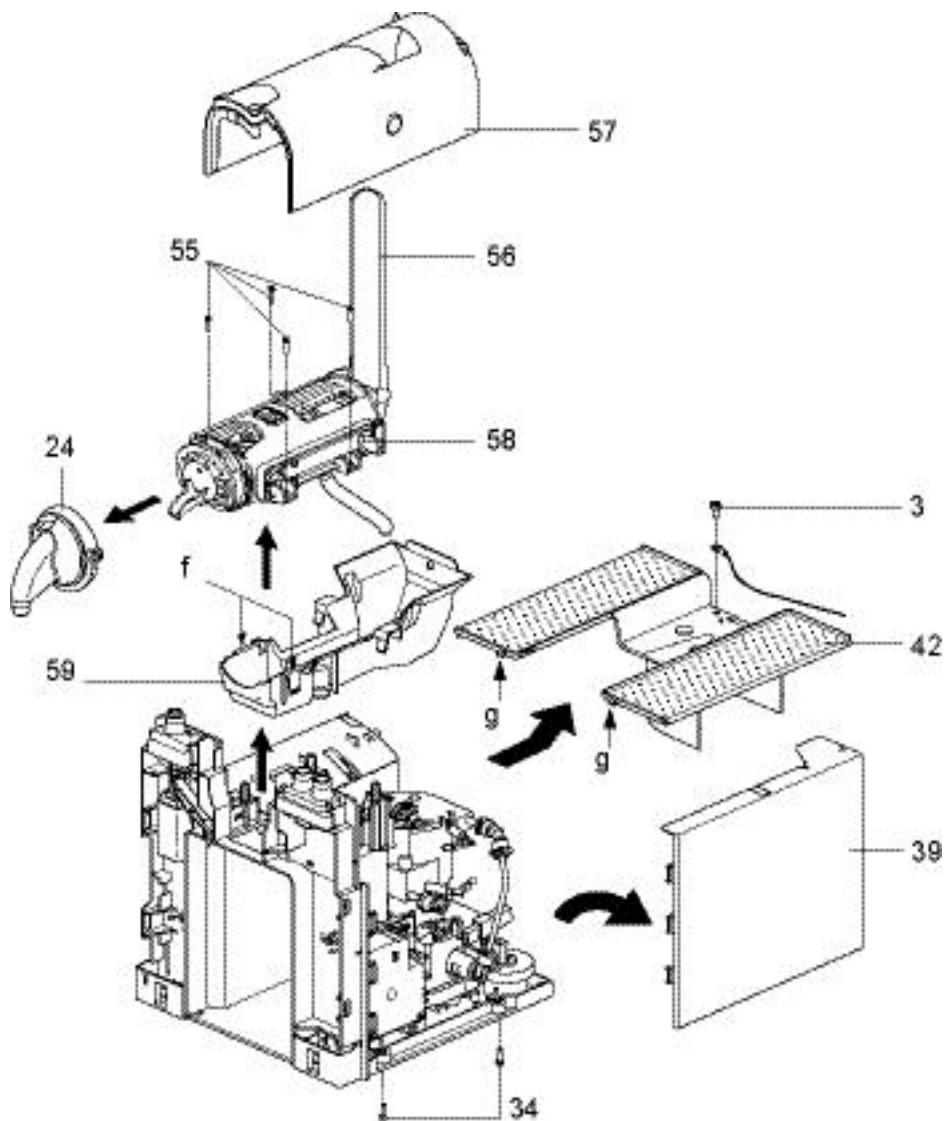
4. Remove the front cover (30) :
First loosen the two latching locks on the bottom.
Place a screwdriver tip alternately in both slots (c) on the housing base and press hard to loosen the locking latches. Simultaneously pull out the underside of the front cover of the same side.



5. Remove the rear panel (47) :
Loosen the two screws (34) behind the housing (32).
Loosen the three screws (34) on the rear panel. Press the locking latch (d) downward with the tip of the screwdriver and remove the rear panel.



6. Remove both cup covers (17).
7. Remove the left (20) and right covers (36) :
Carefully press the tip of the screwdriver in the housing opening in order to loosen the locking latch (e). Pull off the corresponding cover at the same time.



8. Place the closing handle (56) in the vertical position and remove the cover lid (57).
9. Remove the coffee tap (24).
10. Remove the compact brewing unit (58), loosen the four screws (55) and place the compact brewing unit on one side.
11. Remove the drip tray (59) : Loosen the two locking latches on both sides (f) of the capsule bay manually.
12. Remove the cup tray or heating plate (42) (depends on machine type) :
If removing heating plate, loosen the screw (3) of the grounding connection first.
Push the tray or heating plate backwards until both plugs (g) are removed from the housing. Then lift it and remove backwards, diagonally.
13. Remove the side panels (39).
Loosen the two screws (34) on the bottom of the housing and remove the side panels.

The following function test can now be done:

- "Pressure and leakage checks" on page 33

 Function test that can be performed depend on the degree of disassembly.



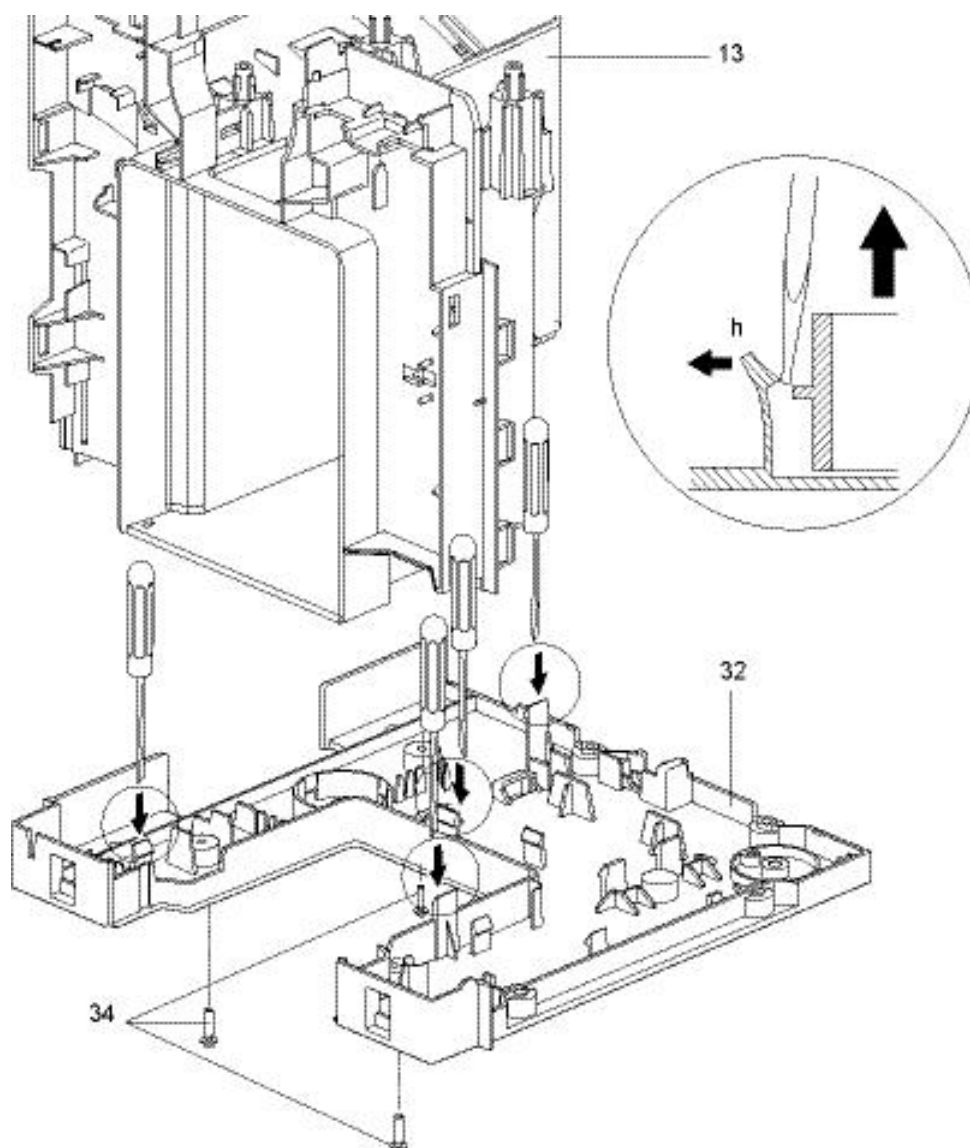
 Repairs that can be done depend on the degree of disassembly.

REPAIRS

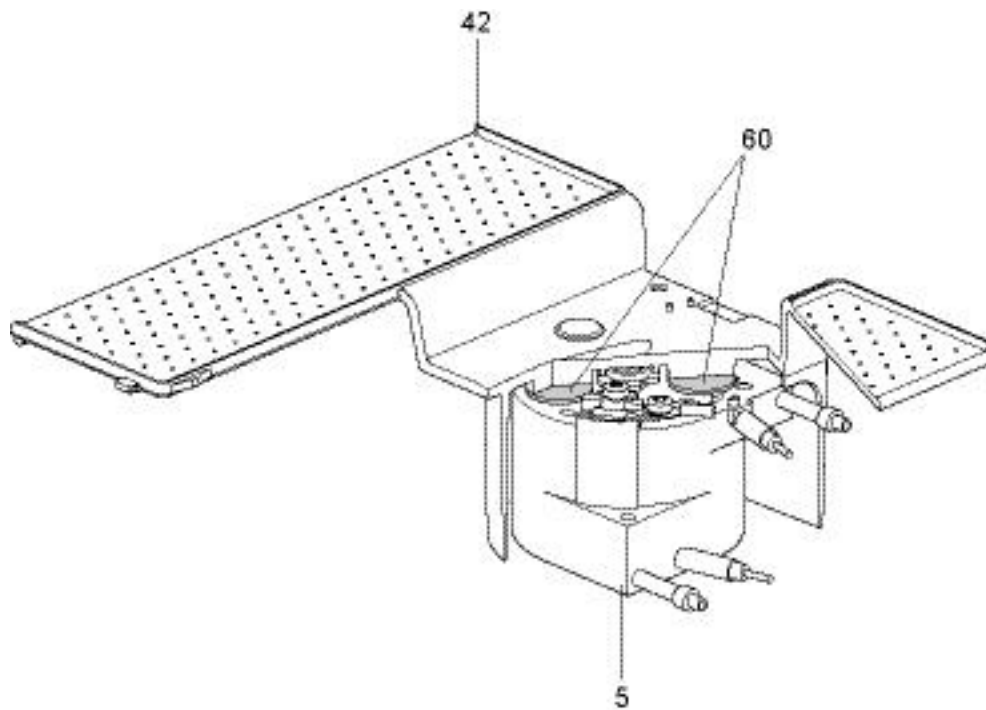
The following repairs can now be done:

- "Replacing the compact brewing unit" on page 22
- Replace NTC-temperature sensor, see "Replacing the thermoblock, NTC-temperature sensor and fine wire fuse(s)" on page 23.
(The thermoblock can only be replaced after the compact brewing unit has been removed, see "Replacing the compact brewing unit" on page 22.)
- "Replacing the flow meter" on page 26

For all other repair works the support (13) of the compact brewing unit must be loosened from the floor (32).

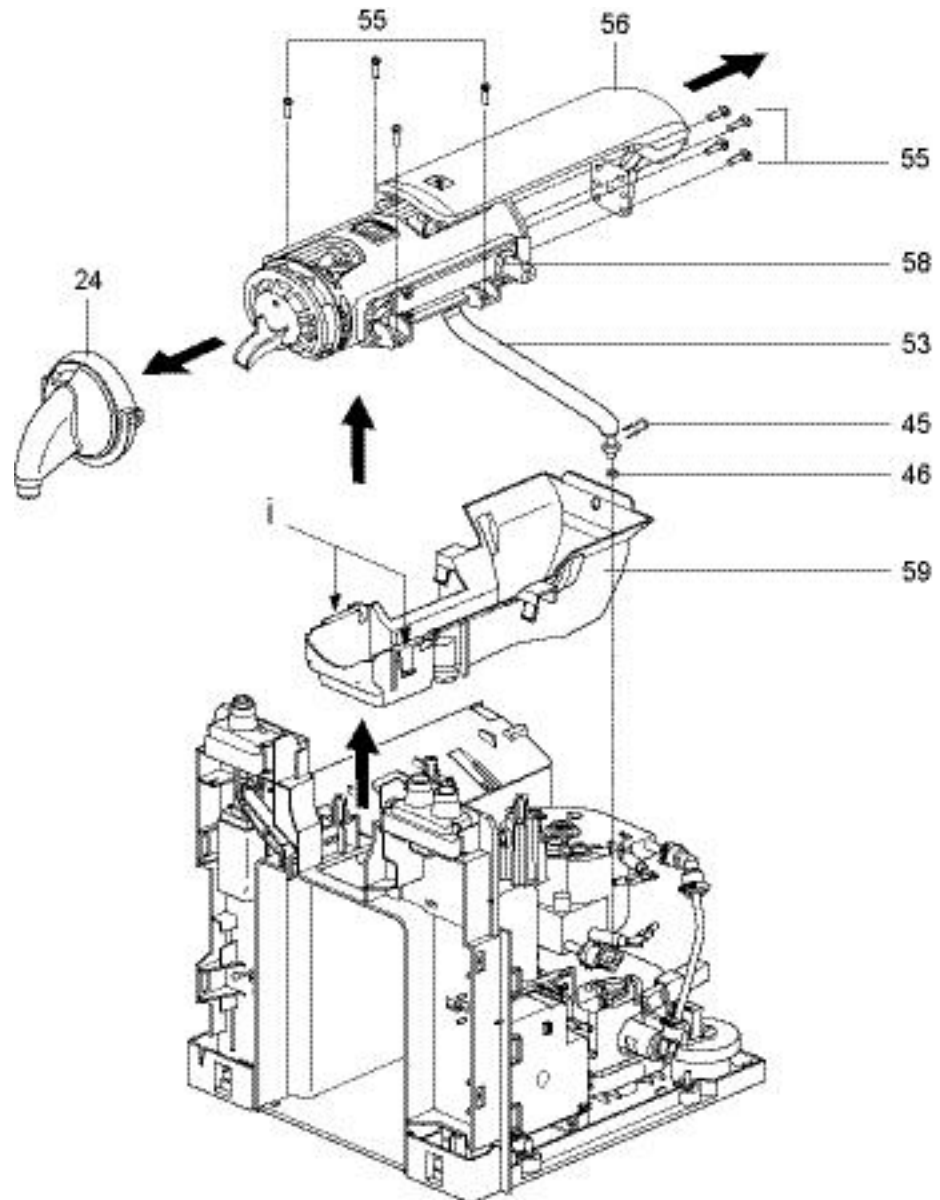


14. Loosen the last three screws (34) on the underside of the housing (32).
15. Use the screwdriver to carefully loosen the four locking latches (h) and to simultaneously pull the support (13) upwards. In the end, carefully move the support forward.
16. Assemble in the reverse sequence after the repair works have been completed.

**Mounting tip for heating plate (depends on machine type)**

- Check if the two heat conductor disks (60) adhere to the heating plate (42) on the correct positions.
- When assembling, make sure that the heating plate (42) with the heat conductor disks (60) is well set on the thermoblock (5).

5.3 Replacing the compact brewing unit

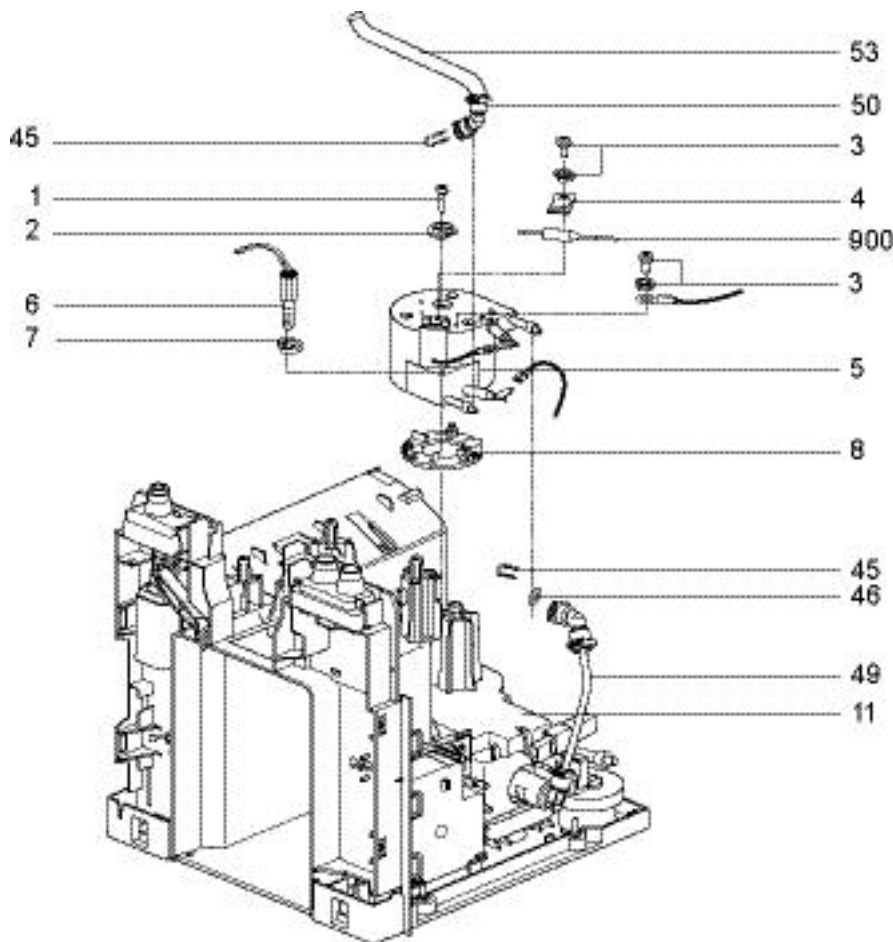


Repair tips

- Remove the drip tray (59): press and loosen the two locking latches on the side (i) of the capsule bay.
- In addition to the compact brewing unit (58) also replace:
 - the coffee tap (24)
 - the O-ring (46) on the thermoblock-hose connection
- The spare compact brewing unit (58)
 - is used in the EF 470 and EF 471 coffee machines,
 - has therefore a longer axes protruding from the side.
- Check the axial and parallel alignment of the closing handle (56) to the housing of the compact brewing unit (58). Should there be any deviations, tighten the mounting screws of the closing handle or replace a bent closing handle.



5.4 Replacing the thermoblock, NTC-temperature sensor and fine wire fuse(s)



Repair tips for the thermoblock

- When mounting the new thermoblock (5) align the positioning holes on the bottom to the damping element (8).

Repair tips for the NTC-temperature sensor

- Do not twist the NTC-cable when plugging and unplugging the NTC-temperature sensor (6) : unplug the NTC-plug from the main board.
- Tighten the new NTC-temperature sensor (6) and spring ring (7) with a torque wrench (90 - 110 Ncm).

Repair tips for the fine wire fuse(s)

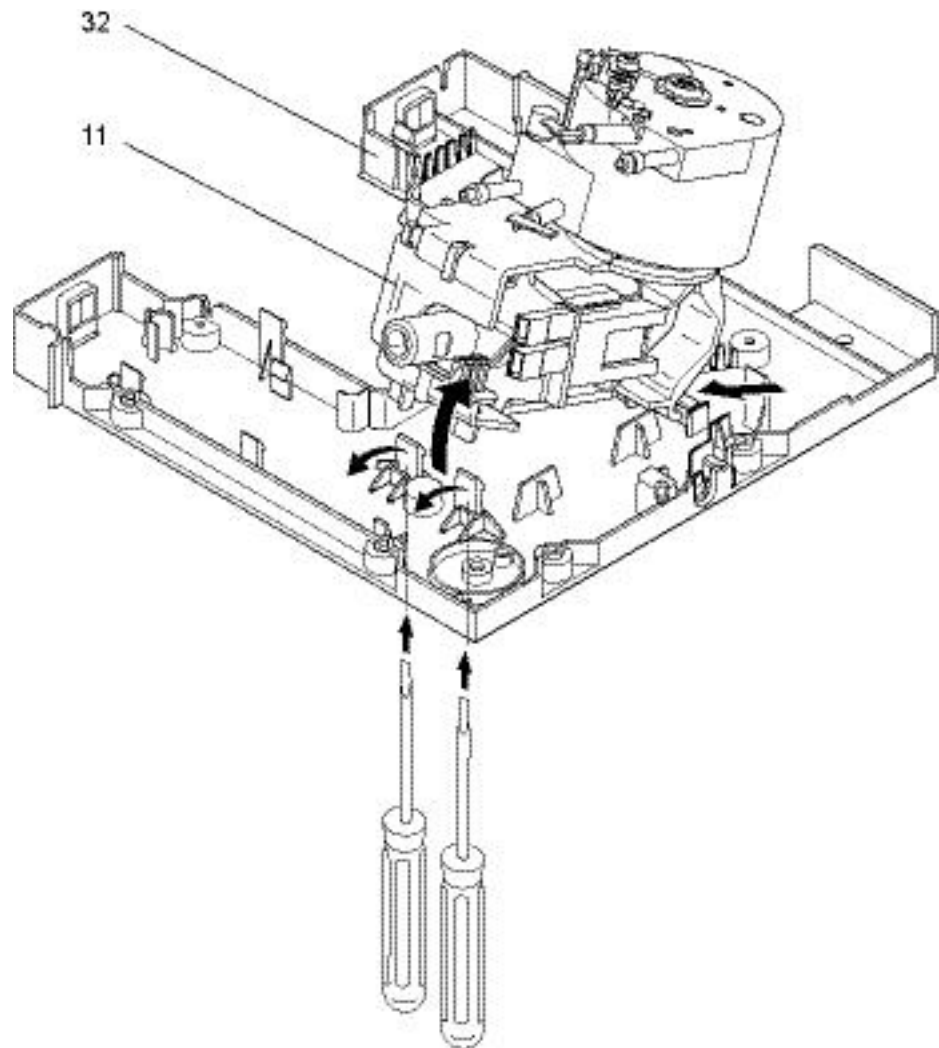
- When mounting the safety clips (4) make sure that the housing of the fine wire fuse (900) is positioned exactly below the safety clips.
- To replace a defective fine wire fuse with in the corresponding wiring, the support (13) of the compact brewing unit must be removed from the floor (32).

 Check if residual water leaks from the thermoblock .

 Depending on the series, one or two fine wire fuses are mounted on the thermoblock (see "Wiring diagrams" on page 29).

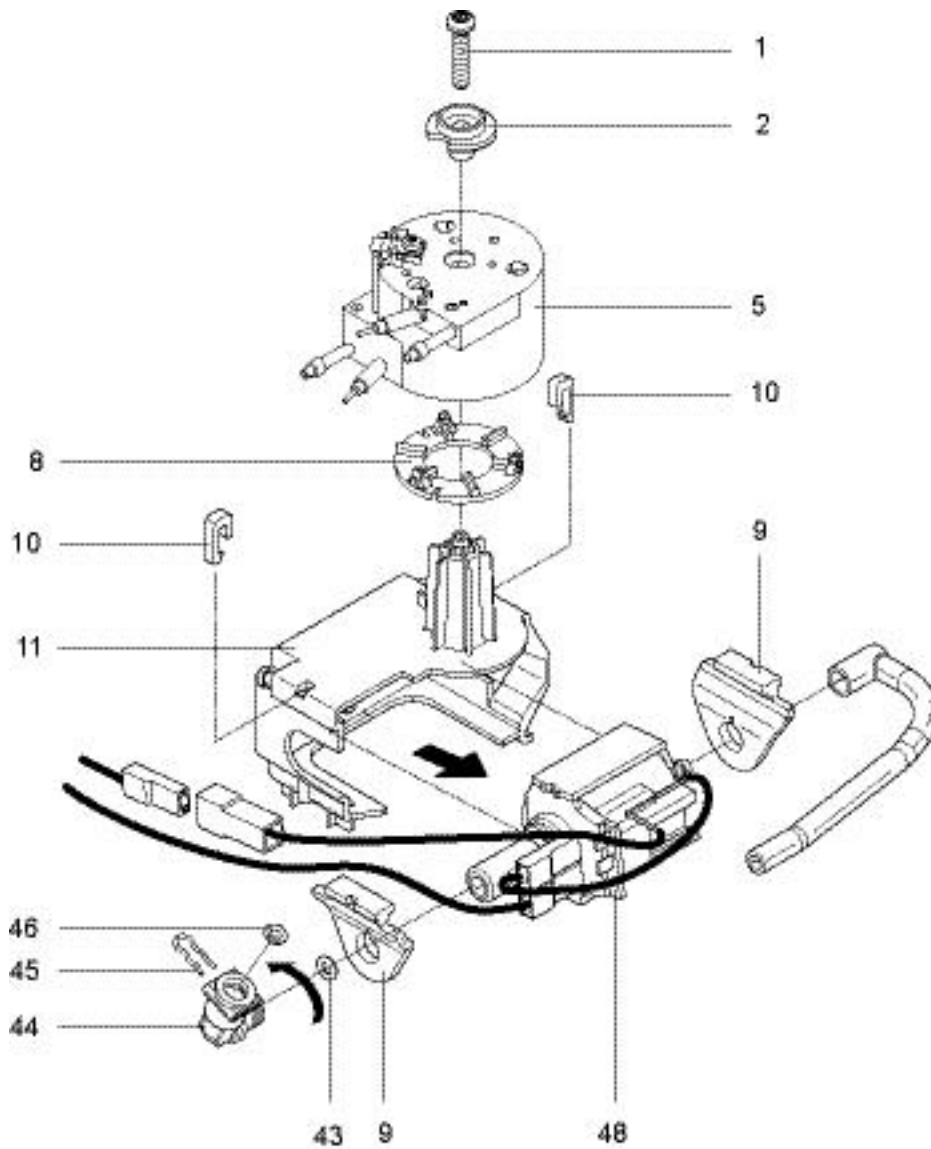


5.5 Replacing the pump with the fine wire fuse



Repair tip for the fluid system support

- Remove the fluid systems support (11) from the floor (32) :
insert the tip of the screwdriver into the slits in the housing base and press and locking latches to one side. Simultaneously lift the support (11). After loosening both locking latches, tilt up the support (11) and pull it out of the anchoring on the other side.



Repair tips for pump

- Always replace a defective pump (48) together with the fine wire fuse.
- When installing a new pump the angled hose connection (44) may have to be realigned: the white plastic lid on the pump is rotatable and has two flat surfaces onto which the flat wrench can be placed.

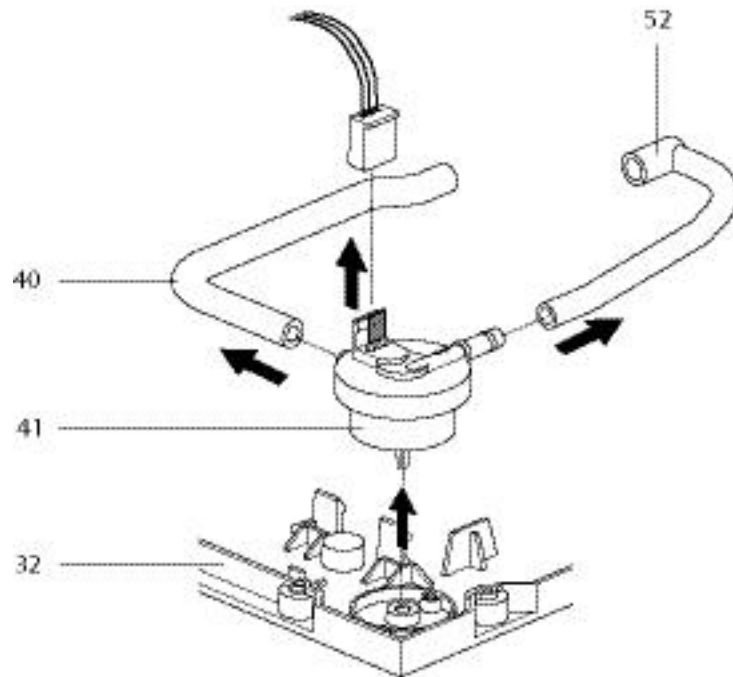
Mounting tip for the thermoblock

- When mounting the thermoblock (5) align the positioning holes on the bottom to the damping element (8) .

 Check for water leaking from the pump.



5.6 Replacing the flow meter

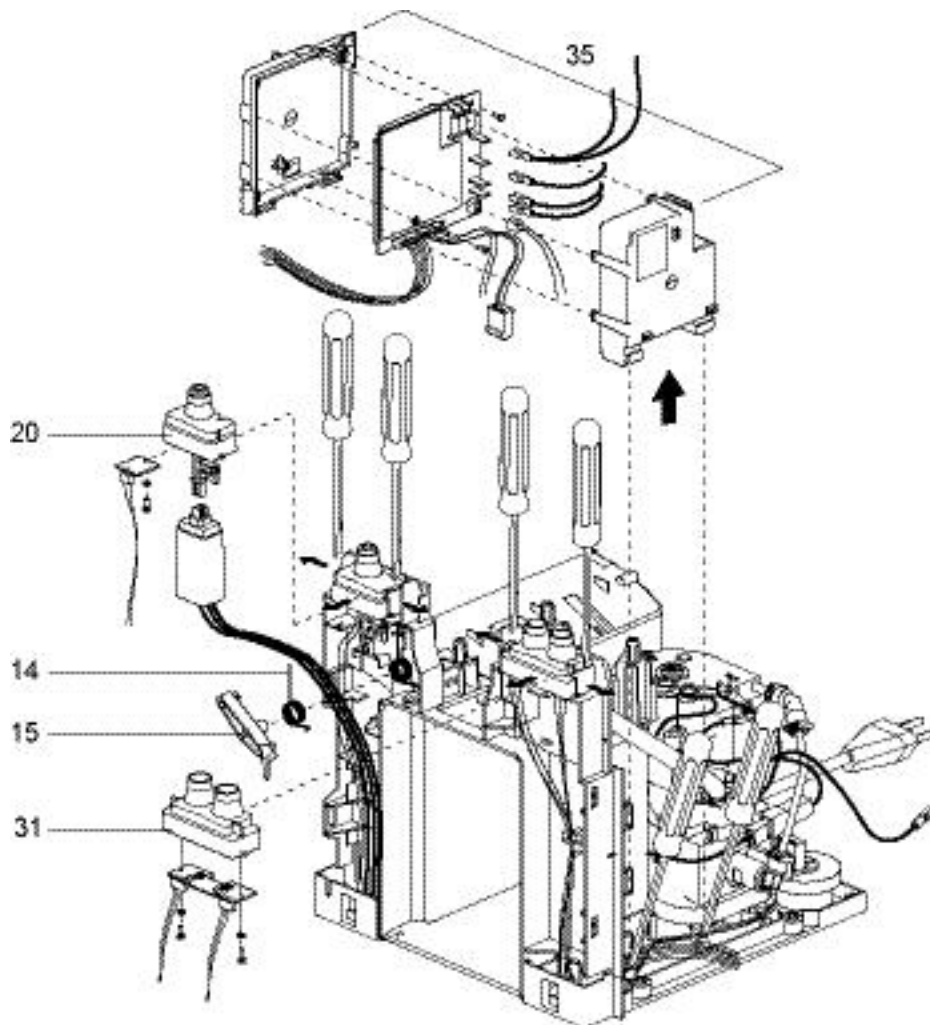


Repair tip for flow meters

- Pull the flow meter (41) firmly upwards to remove it.



5.7 Replacing the mainboard with the button prints

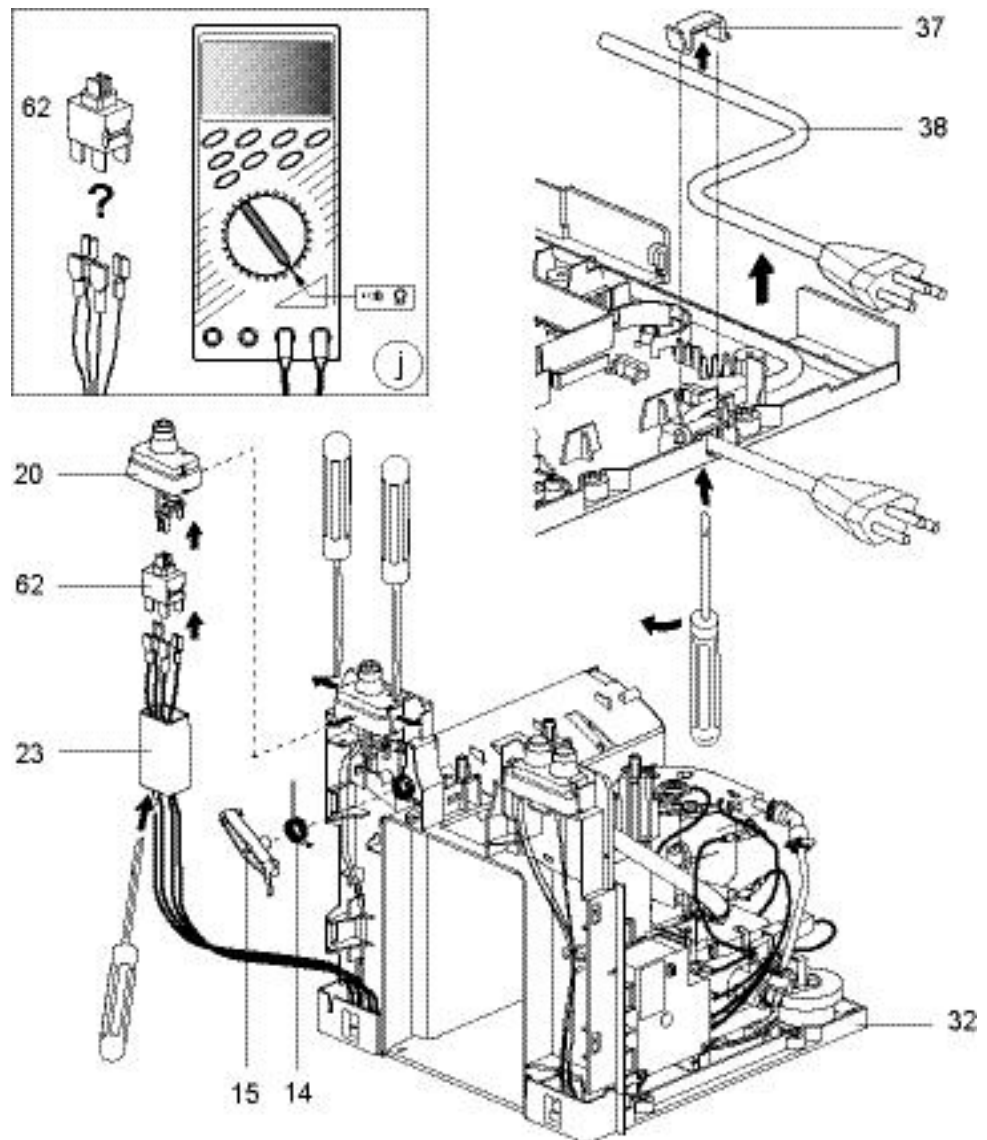


Repair tips

- Check the assembly position of the spring (14).
- A label on the housing of the mainboard (35) contains specifications on the hardware and software version.
- After assembly check the plug arrangement of the mainboard (see "Wiring diagrams" on page 29).

 When installing a new electronic component, the service technician must be earthed with a grounding band.

5.8 Replacing the on/off switch and/or the mains cable



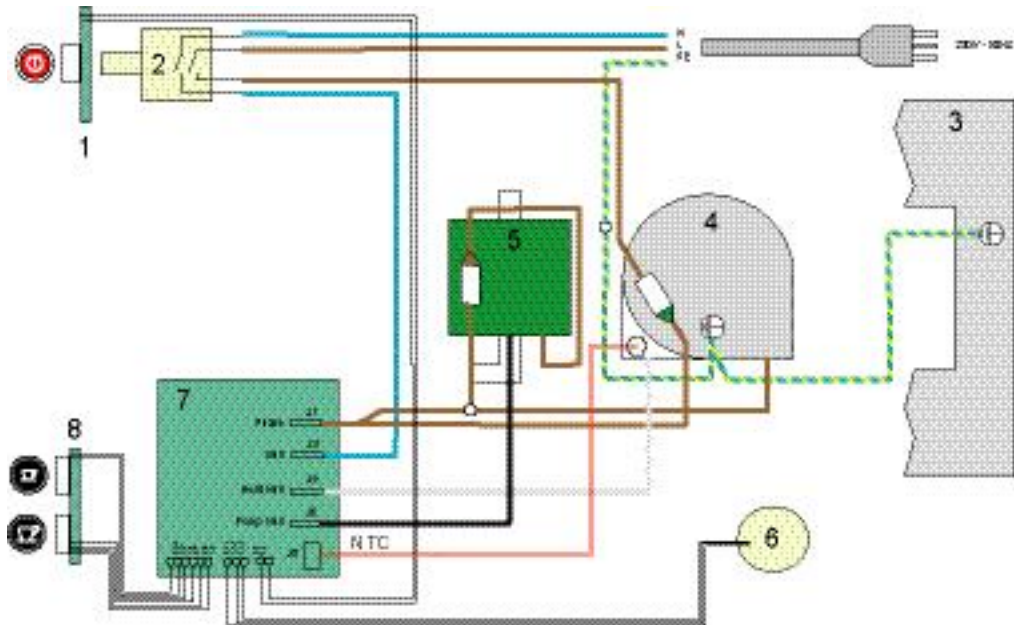
Repair tips

- Check the assembly position of the spring (14).
- Remove the insulation housing (23) : place screwdriver tip from below into the switch housing and force the switch out (62).
- The on-off switch (62) has no markings for the connections. Check its switch functions and wiring with a digital multimeter (j) and compare it with the diagram (see "Wiring diagrams" on page 29).
- The cable strain relief (37) is under tension. Therefore, hold the cable strain relief with your finger when unlatching it.

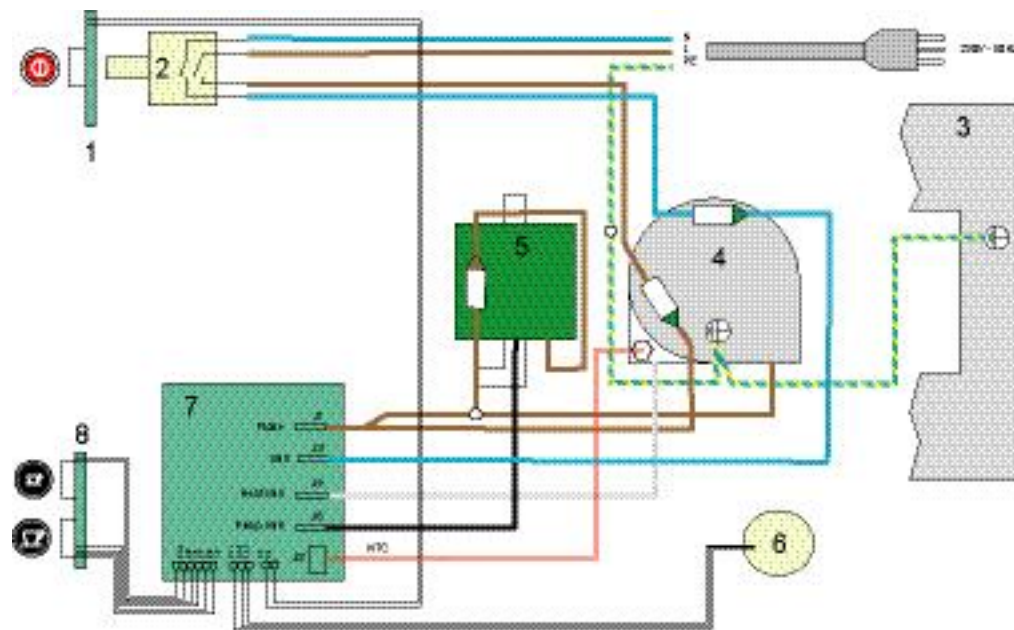


5.9 Wiring diagrams

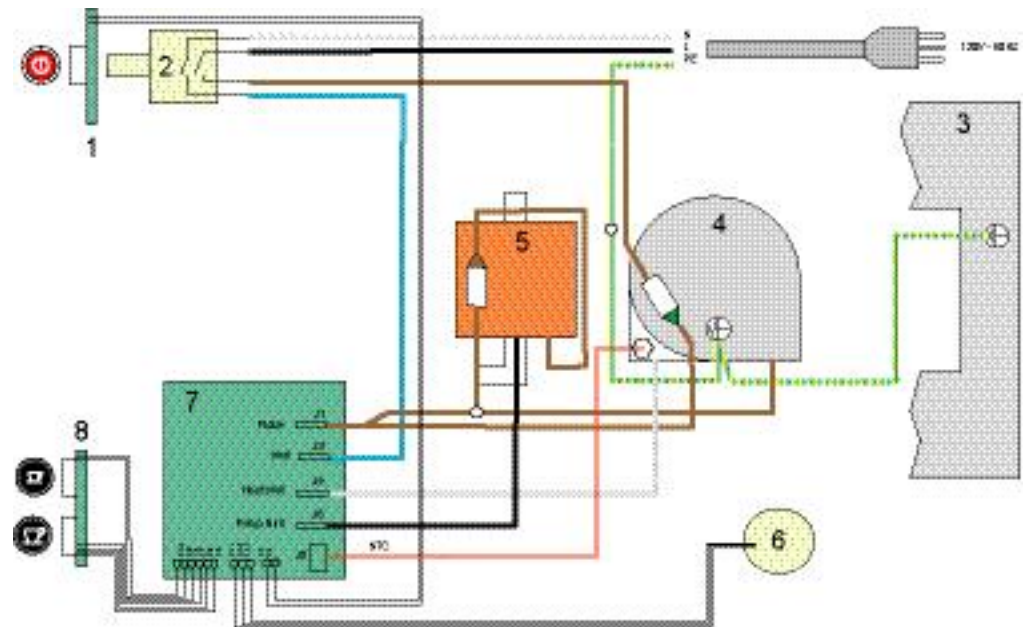
Diagrams for 230 V - EU (first series)



Diagrams for 230 V - EU (valid as of 01.01.2007)



- | | |
|------------------------------|---|
| 1) Print for button "On/off" | 5) Pump 230 V |
| 2) On/Off switch | 6) Flow meter |
| 3) Heating plate | 7) Mainboard 230 V |
| 4) Thermoblock 230 V | 8) Print for buttons "Coffee small/large" |

**Diagram for 120 V - UL**

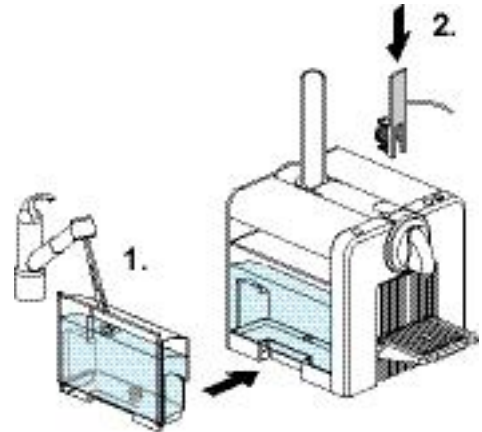
- | | |
|------------------------------|---|
| 1) Print for button "On/off" | 5) Pump 120 V |
| 2) On/Off switch | 6) Flow meter |
| 3) Heating plate | 7) Mainboard 120 V |
| 4) Thermoblock 120 V | 8) Print for buttons "Coffee small/large" |



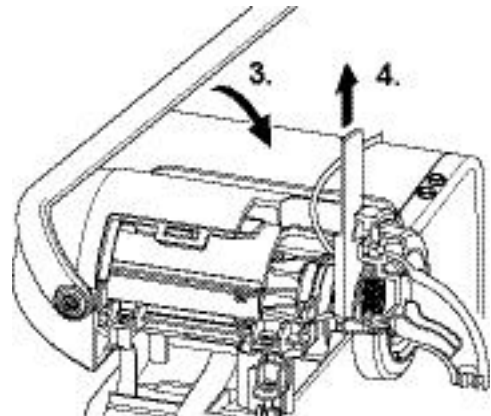
6 FUNCTION TESTS

6.1 Measure flow rate

- 1) Fill the water tank.
- 2) Push the connector adapter into the capsule bay.



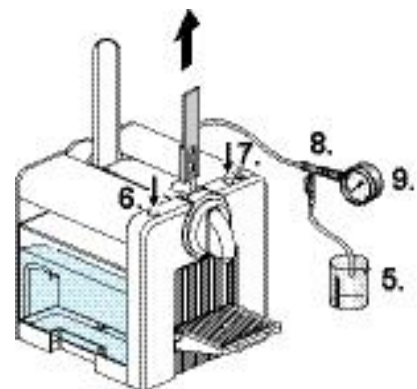
- 3) Carefully close the handle, until the adapter sits firmly in the capsule cage.
- 4) Pull out the mount. The adapter locks with the capsule cage.



- 5) Place a measuring cup under the drain hose of the pressure tester.
- 6) Switch on the coffee machine.
- 7) After heating up, press the "Small cup" button.
- 8) Open the valve until water begins to flow.
- 9) Close the valve until the pressure gauge indicates 12 bar.

 **Constantly monitor the pressure gauge and if required readjust the valve. As the temperature increases, so does the pressure, readjust the pressure to 12 bar when required.**

- 10) Carry out measurement for approx. 30 sec.
- 11) At least 60-120 ml of water must be in the measuring cup.



Notices:

- Should < 60 ml leak out, then the pump is defective or there is a leak in the water system.
- Large deviations in indicated pressure while measuring (± 4 bar) means that the pump is defective.



6.2 Pressure and leakage checks

Check the following parts of the coffee machine for leakages.

- Compact brewing unit
- Hose connections
- Thermoblock
- Pump

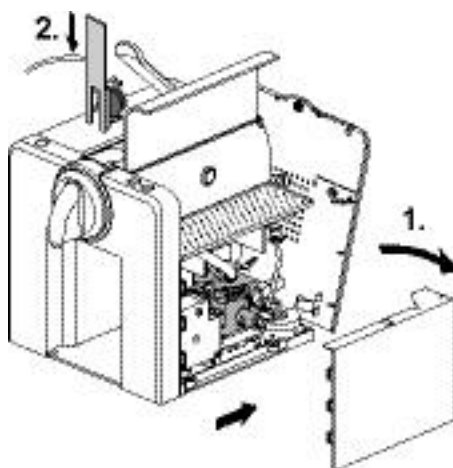


Dangerous mains voltages and hot parts under pressure inside the coffee machine!

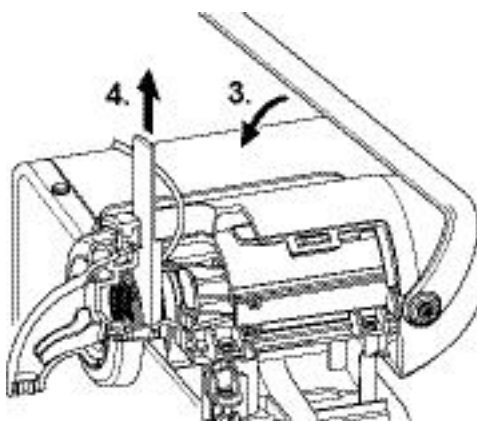
Do not touch any parts under voltage and or hot while checking for leakages! Always wear protective goggles.

Preparations

- 1) Remove rear and side panels (the pump becomes visible, see "General disassembly" on page 16).
- 2) Push the connector adapter into the capsule bay.



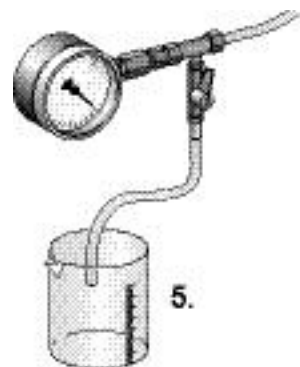
- 3) Carefully close the handle, until the adapter sits firmly in the capsule cage.
- 4) Pull out the mount. The adapter locks with the capsule cage.



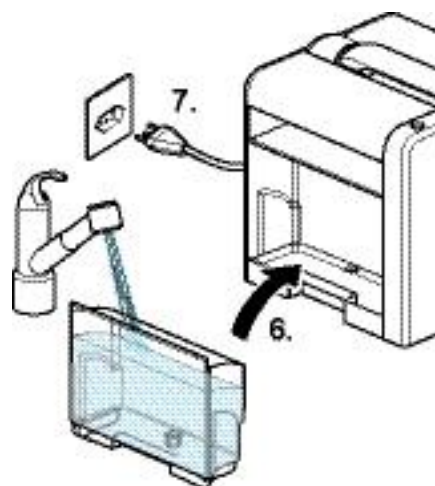


FUNCTION TESTS

- 5) Place the measuring cup under the drain hose of the pressure tester.

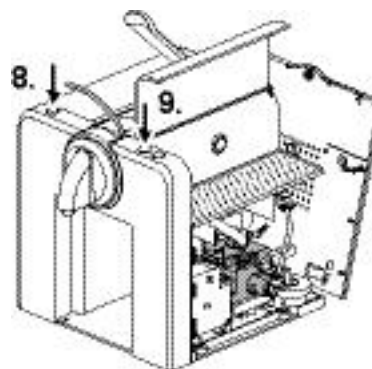


- 6) Fill and insert the water tank.
7) Connect the mains cable.



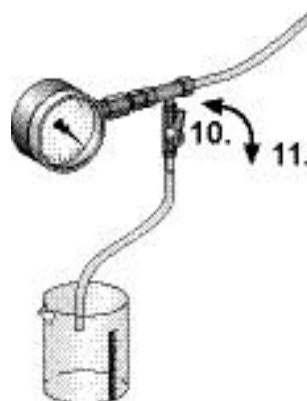
Test run

- 8) Switch on the coffee machine.
9) After heating up, press the "Small cup" button.



- 10) Open the valve and let the water flow for approximately 10 sec. out of the drain hose.
11) Close the valve completely. The pressure stabilizes after increasing briefly between 16 - 19 bar (pressure check).

 **The pressure increases slowly with increasing temperature. Should the pressure exceed 23 bar, switch off the coffee machine and release the pressure by opening the valve.**

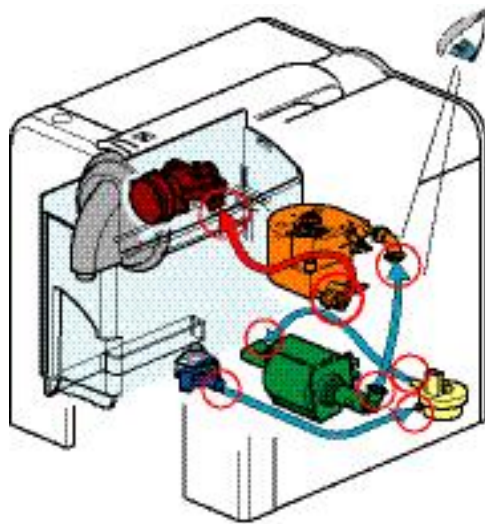




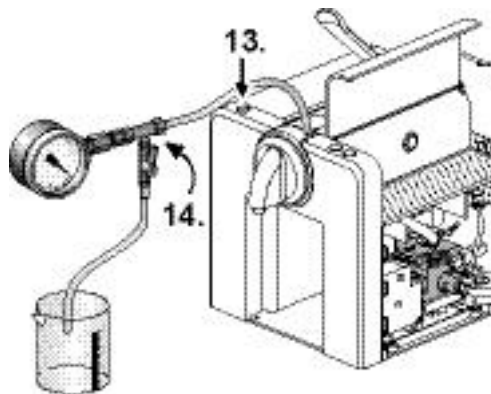
- 12) Check all connections under pressure for audible and visible leaks.



Do not run the pump for more than 50 sec. with the valve closed.



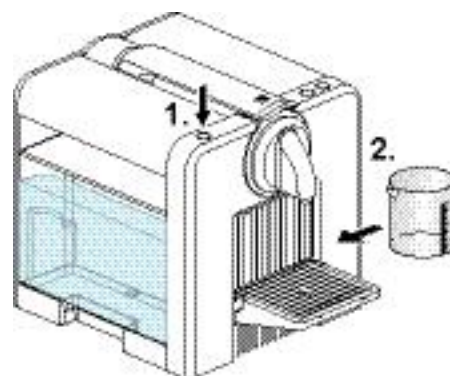
- 13) Switch off the coffee machine.
14) Open the valve and let water flow out of the pressure tester.



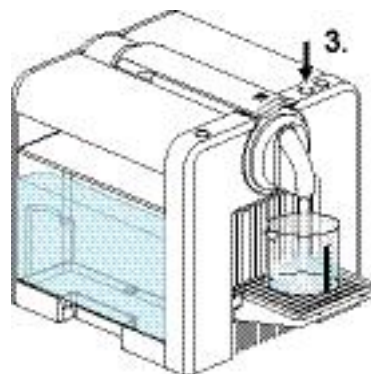


6.3 Measuring the coffee temperature

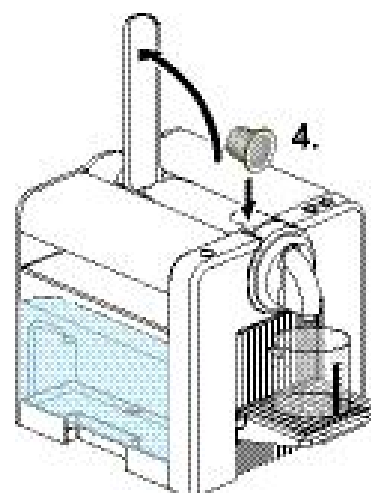
- 1) Press the on-off button.
- 2) Place a measuring cup under the coffee outlet.



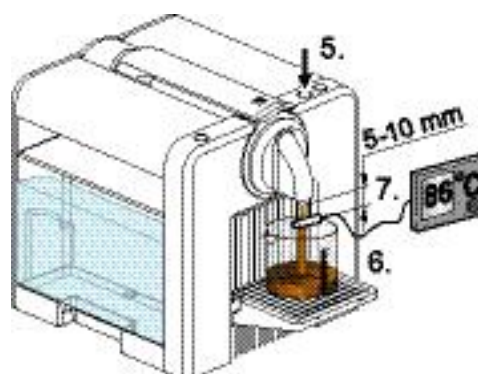
- 3) After the heating up period, press the "Small cup" button and preheat the coffee outlet for approximately 10 sec. with hot water.



- 4) Insert capsule (Cosi is best suited).



- 5) Press the "Small cup" button.
- 6) Wait until the measuring cup contains 20 ml of coffee.
- 7) Then measure the coffee temperature approx. 5-10 mm under the coffee outlet.



☞ The coffee temperature should be $86^{\circ}\text{C} \pm 3^{\circ}\text{C}$ ($187^{\circ}\text{F} \pm 5.4^{\circ}\text{F}$).

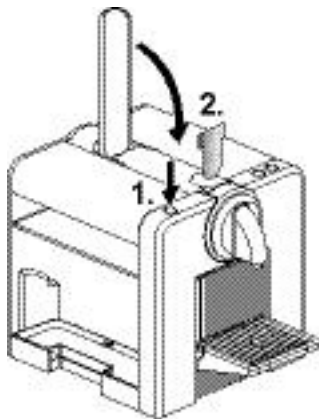


7 MAINTENANCE

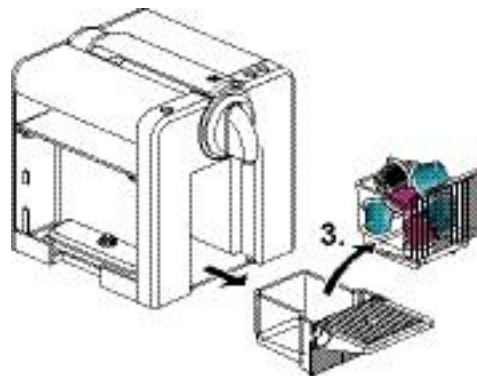
7.1 Descaling



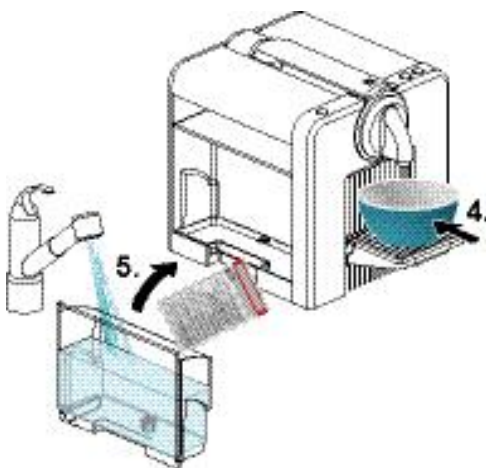
Only use Nespresso decalcifiers - never use vinegar!
Decalcifiers are aggressive to surfaces.



- 1) Switch off the coffee machine.
- 2) Eject capsule. Insert the filter from the descaling set into the capsule bay and close the handle.



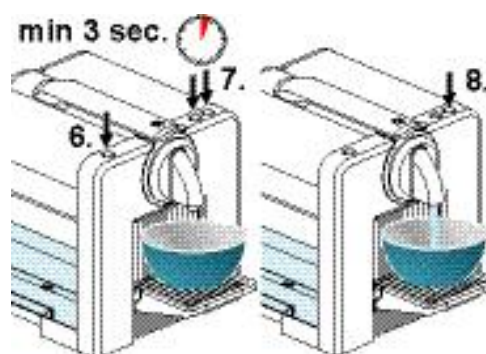
- 3) Remove the drip tray and capsule container and empty them.



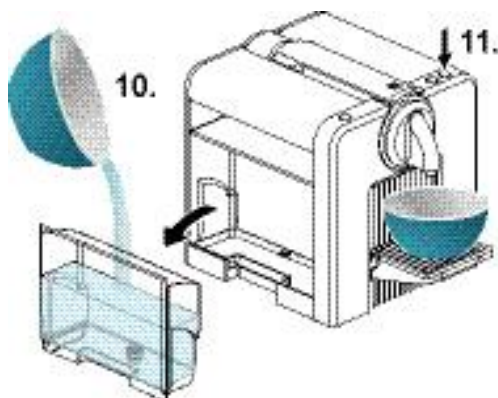
- 4) Reinsert the drip tray and place a beaker on the cup support.

Observe the safety instructions on the package of the decalcifier.

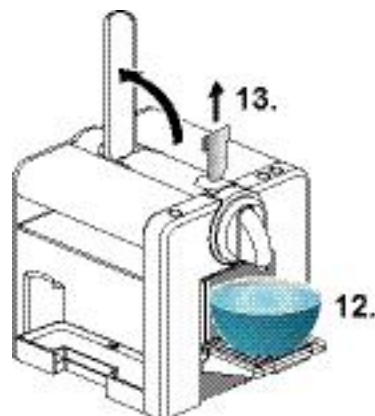
- 5) Fill the water tank with 0,1 l decalcifier and 0,5 l water and insert it into the coffee machine.



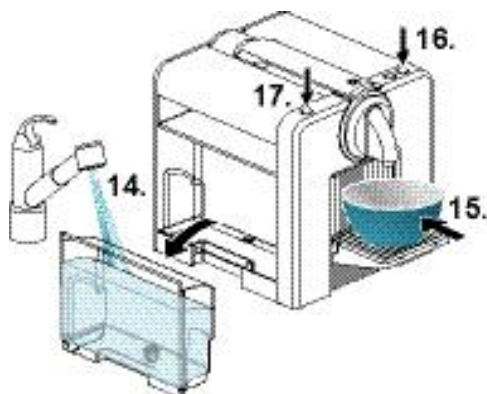
- 6) Switch on the coffee machine.
- 7) Press the "Small cup" and "Large cup" buttons simultaneously for at least 3 sec. The descaling mode is started (the buttons blink fast).
- 8) Press the "Large cup" button, the pump starts.
- 9) Let the entire descaling solution run through the system.



- 10) Pour the descaling solution back into the water tank.
- 11) Descal again: press the "Large cup" button and let the descaling solution run through the system again.



- 12) Empty the beaker.
- 13) Remove the filter from the capsule bay.



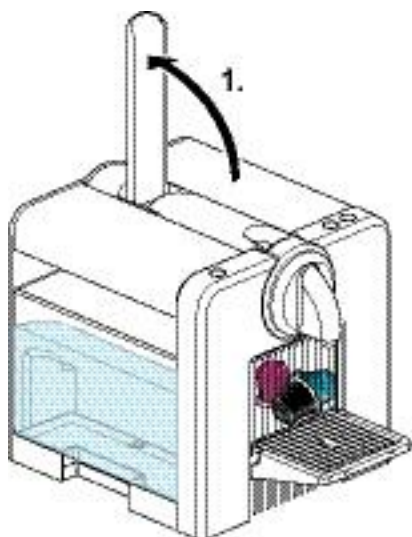
- 14) Thoroughly rinse the water tank and fill it with fresh water.
- 15) Place the beaker on the cup support.
- 16) Press the "Large cup" button - the pump starts.
Let the entire solution in the tank run through the system.
- 17) Switch off the coffee machine.
Descaling is completed.



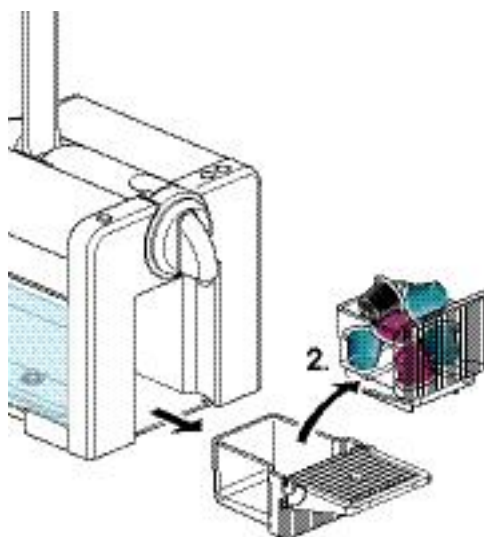
- 18) Clean the coffee machine.



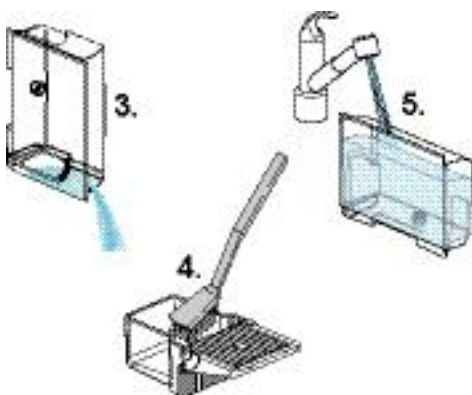
7.2 Daily maintenance, cleaning



1) Eject capsule.



2) Empty the capsule container.

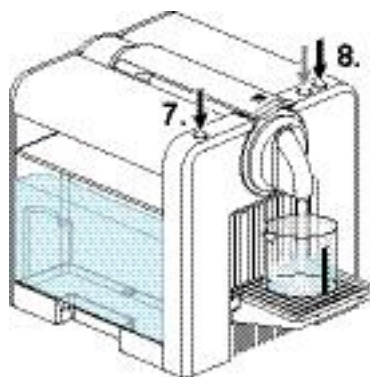


3) Empty the water tank and the drip tray

4) Clean the water tank and the drip tray.

5) Fill the tank with fresh water.

6) Reassemble the coffee machine.



7) Press the "On/Off" button.

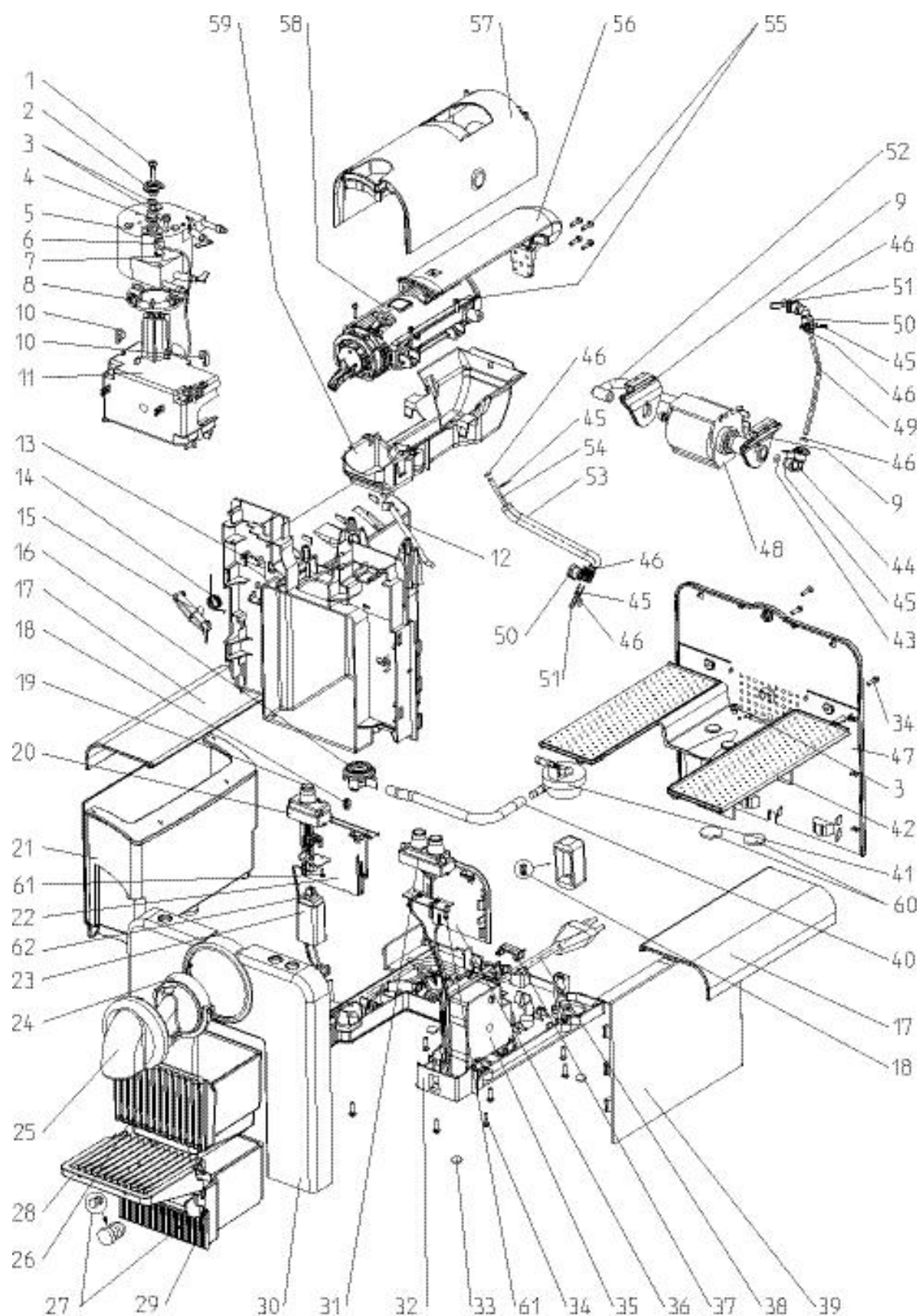
8) Press the "Large cup" button and rinse the coffee outlet for 10 sec.



9) Clean the coffee machine.



8 SPARE PARTS





Pos.	EFR no.	Designation
1	44291	Raised head screw, KST/PT 4x20, Torx-20
2	43227	Thermoblock-bracket
3	19799	Raised head screw, 4x8, hexagon socket including spring ring.
4	21542	Safety-clip 5x10x21 mm
5	37341	Thermoblock TB2003/L 230V/1200W
6	44718	NTC-temperature sensor complete.
7	5245	Spring ring M5
8	43229	Damping element for thermoblock
9	43232	Pump holder, black
10	43230	Holding clip to position the pump
11	43231	Fluid-system support 472
12	43299	Light guide to the capsule container
13	43258	Support for the compact brewing unit (CBU)
14	43298	Torsion spring for the stop lever.
15	43303	Stop lever
16	43234	Connector complete
17	42427	Cup cover natural, high-gloss
	43284	Cup cover black, structured
	45429	Cup cover natural, transparent structured
18	43296	Elastic buffers for cup cover
19	43771	"On/Off" button
20	43308	Button illumination "On/Off"
21	43261	Water tank incl. valve
22	43286	Left cover
23	43287	Switch housing
24	43246	Coffee tap
25	44850	Coffee outlet
26	43254	Capsule container
27	43297	Elastic buffers for cup support
28	43302	Cup support 472 alu chromed, highgloss
	44856	Cup support 472 alu, coated gray
29	43259	Drip tray
30	45427	Front cover 472 carbon Alinghi
	47503	Front cover 472 carbon, America Cup
	46847	Front cover 472 weiss, print Nespresso
	46840	Front cover 472 rot, print Nespresso
	46866	Front cover 472 alu titan, print Nespresso
	46865	Front cover 472 white, print Krups

Pos.	EFR no.	Designation
30	46845	Front cover 472 alu titan, print Krups
	46849	Front cover 472 weiss, print Turmix
	46867	Front cover 472 alu titan, print Turmix
	46863	Front cover 472 alu natural,, print Magimix
	46835	Front cover 472 rot, print Magimix
	46861	Front cover alu natural, print DeLonghi
	46830	Front cover red, print DeLonghi
	46862	Front cover alu natural,, print Koenig
	46834	Front cover red, print Koenig
31	43307	Button illumination "Small/ large cup"
32	43247	Floor black
33	395	Elastic buffers, white, 10x1.6 mm
34	24863	Safety screw, oval, KST/PT 3x12
35	47820	Electronics complete 100 V Japan
	47822	Electronics compl. 230V (incl complete housing)
	47823	Electronics complete 120 V
36	43285	Right cover
37	7742	Cable strain relief, clickable
38	44262	Mains cable black UL
	44297	Mains cable black CEBEC
	44298	Mains cable black SEV
	47831	Mains cable black Japan
	48102	Mains cable black GB
39	43255	Side panel black
	46825	Side panel black, Alinghi
	46829	Side panel black, America Cup
40	13920	Hose, silicone white, ø5/2x180 mm (flow meter)
41	43065	Flow meter FHKSC12, 270 degrees, 4.5-24V DC, 5-13 mA
42	43300	Cup tray gray
	43301	Cup tray alu, powder coated, M4 earthing
	47502	Cup tray, coated, M4 earthing
43	1565	O-ring, ø5.28x1.78 mm, EPDM, black
44	42570	90°-Pump connecting bracket
45	5470	Holder clip ø4x12 mm
46	24374	O-ring, ø3.4x1.9 mm, silicone /2-K (FEP)
47	43256	Rear panel, black
48	18526	Pump CP.04.098.0/ST/S/P 230V/50Hz/70W



SPARE PARTS

Pos.	EFR no.	Designation
49	15821	Hose FEP, ø4/2,5x90 mm, pump / thermoblock
50	42572	Hose connection, V-shaped 55°
51	37384	Holder clip, ø5 mm
52	43304	Angled those, silicone, flow meter / pump
53	24971	Hose cover, silicone, ø8x1.75x125 mm, thermoblock / compact brewing unit
54	29994	House PFA, ø4/2.5x170 mm, Thermoblock / compact brewing unit
55	16052	Raised head screw, KST/PT 3x12, Torx-10
56	43257	Closing handle, high-gloss chrome plated
57	43253	Upper cover
58	47185	Compact brewing unit without closing handle (CBU, Birdy)
59	43288	Drip tray
60	45538	Heat sink disk
61	45686	Raised head screw KST/PT 2.2x 5, Torx-6, including spring ring
62	43771	On/Off switch, 16A, 125-250V AC
900	1228	Silicone-wire
900	44714	Silicone-wire
900	43188	Silicone-wire
900	43187	Silicone-wire
982	44081	Styropore EF 472