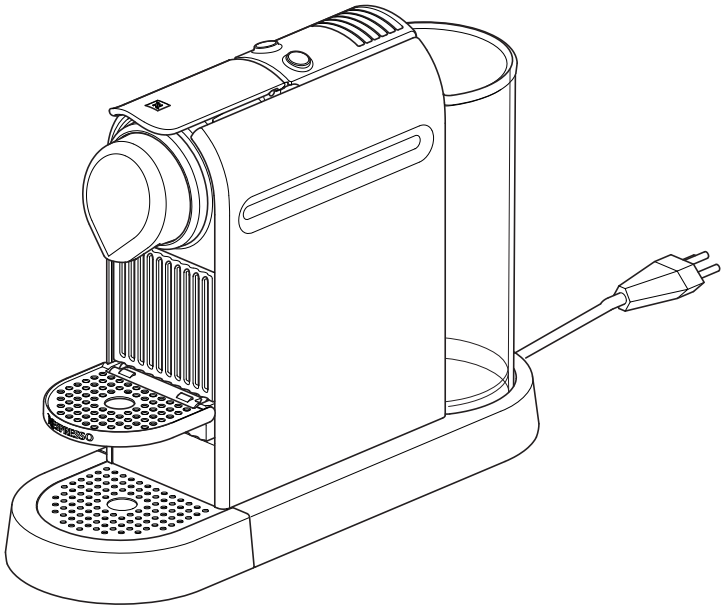
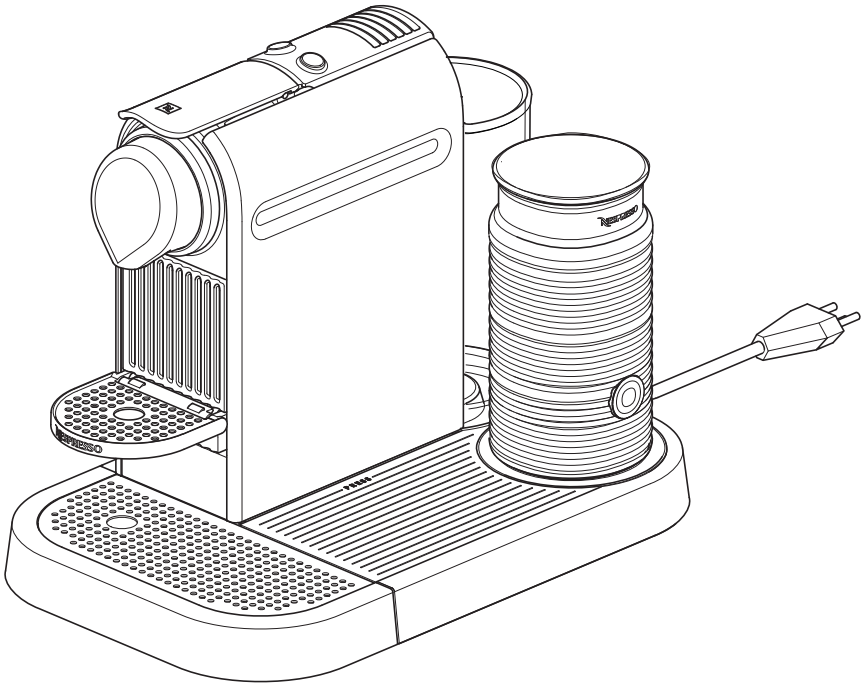
SERVICE MANUAL
CITIZ REFRESH COFFEE MACHINES

Citiz — **EF 451 C 111**, **EF 452 D 111**

Citiz & milk — **EF 467 C 121**, **EF 468 D 121**





Version 1.0 en

CONTENTS

PREFACE

The purpose of this service manual is to provide the service personnel with all necessary information with regards to correct handling, maintenance and repair of the Citiz coffee machine types EF 451 C 111 / EF 452 D 111 and EF 467 C121 / EF 468 D 121.

This manual should be used by the technicians as a valuable aid to guarantee the permanent readiness for use of the machines. In order to take full advantage of all the functions, it is absolutely necessary to follow the instructions in this manual.

For fast access to information directly from the PC or MAC monitor, this service manual is available as PDF file and can be downloaded from the *Nespresso* technical website under https://business.nespresso.com.

The required utility software to read PDF files (Adobe Reader®) for PCs and MAC computers can be downloaded (under http://www.adobe.com) for free - please click the logo:

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

CONTENT UPDATES

i The version number of this service manual is printed on the lower right corner of the front page.

Version 1.0

- First released service manual version in English.

1 GENERAL SAFETY NOTES

Risk of fatal electrical shock and fire!

Mains voltage inside the coffee machine.

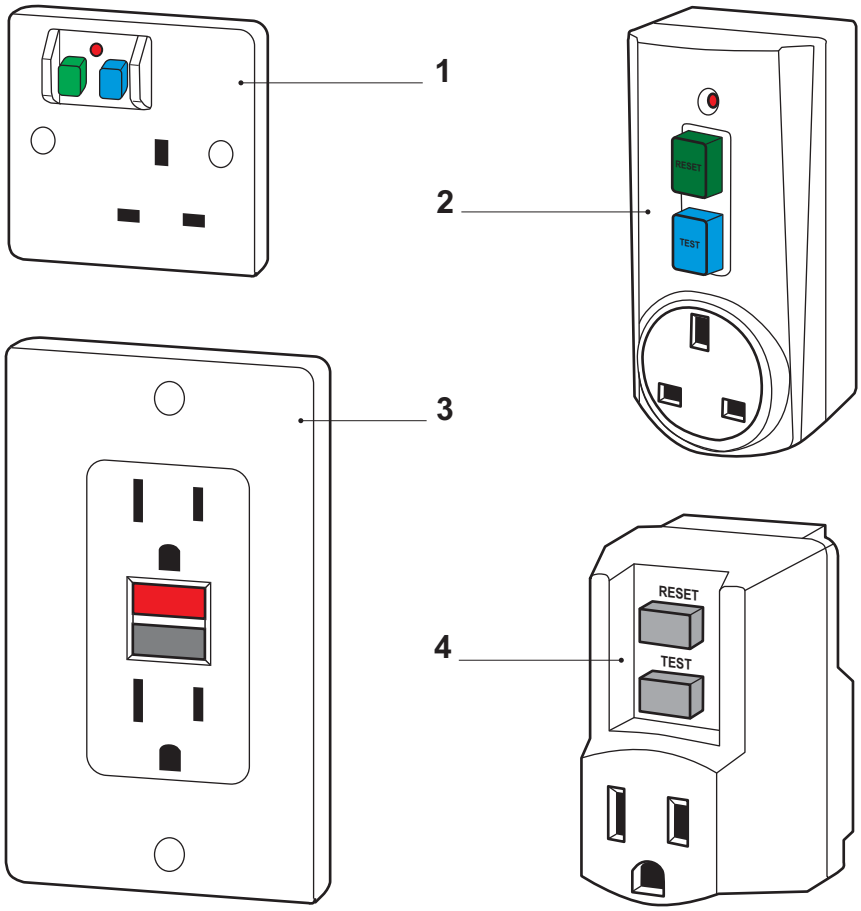
- **Unplug appliance before cleaning.**
- **Never clean wet or immerse plug, cord or appliance in any fluid.**
- **Disconnect the mains plug before disassembly - the appliance must be free of voltage.**

As an additional safety measure, the use of a residual current device (RCD), also called the ground fault circuit interrupter (GFCI), in the repair centre is highly recommended.

This device does not protect against electrical shock due to contact with both circuit conductors.

Example illustrations of typical devices.

Use a GFCI with a trip level of 4 - 6 mA (USA) resp. a RCD with a trip level of 15 - 30 mA (Europe). A trip level above 30 mA provides only very limited protection against harm from an electric shock.



1) RCD protected socket-outlet
2) Plug-in RCD unit
3) GFCI socket
4) Plug-in GFCI

Danger of burns!

Hot parts and water under pressure inside the coffee machine (particularly in the thermoblock).

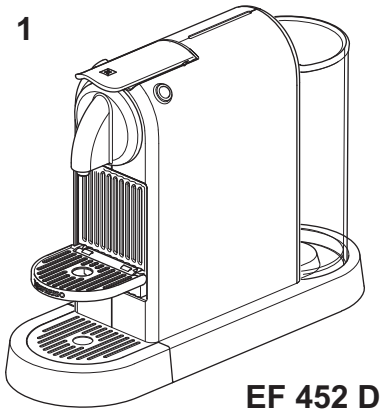
- **Let coffee machine cool down before cleaning or disassembly.**

2 MODEL OVERVIEW

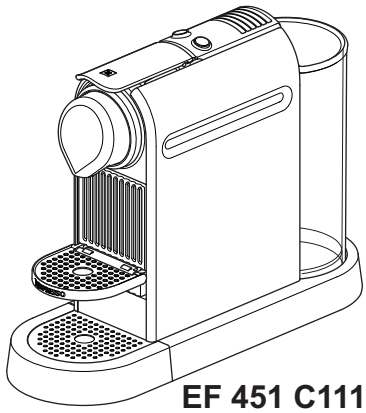
2.1 Model range

With core unit D-range: **With core unit C-range:**

1

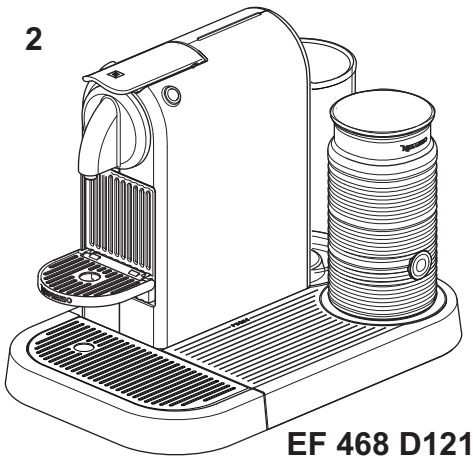


EF 452 D111

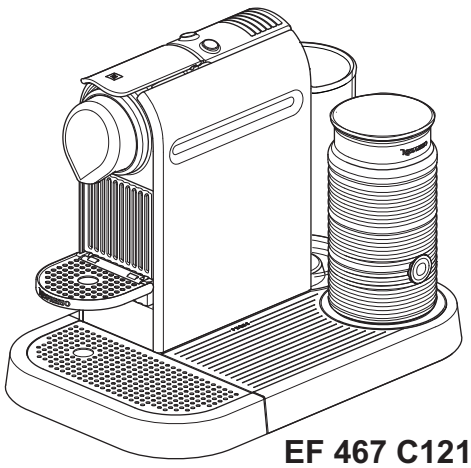


EF 451 C111

2



EF 468 D121



EF 467 C121

1) Citiz
2) Citiz & milk

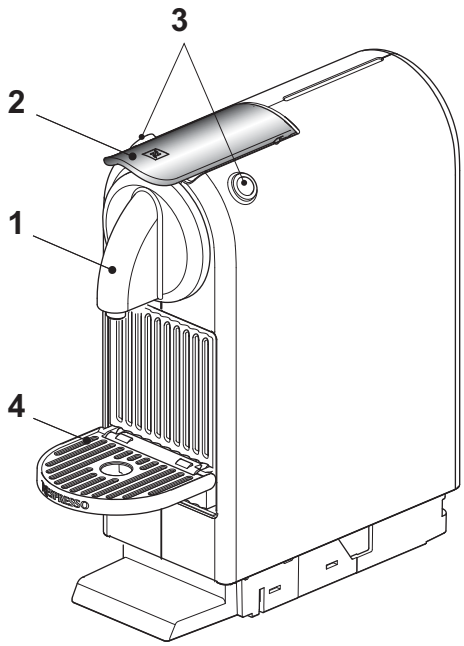
Each model
- has a special platform
- is available in 2 different designs, depending on the core unit version (C- or D-range).

i A core unit is the actual coffee machine, mounted on a platform.

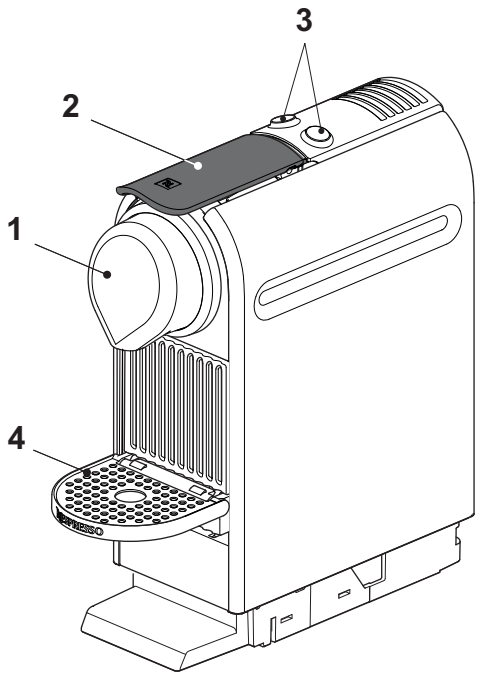
2.2 Core unit versions

This comparison helps to identify the core unit version.

D-range



C-range



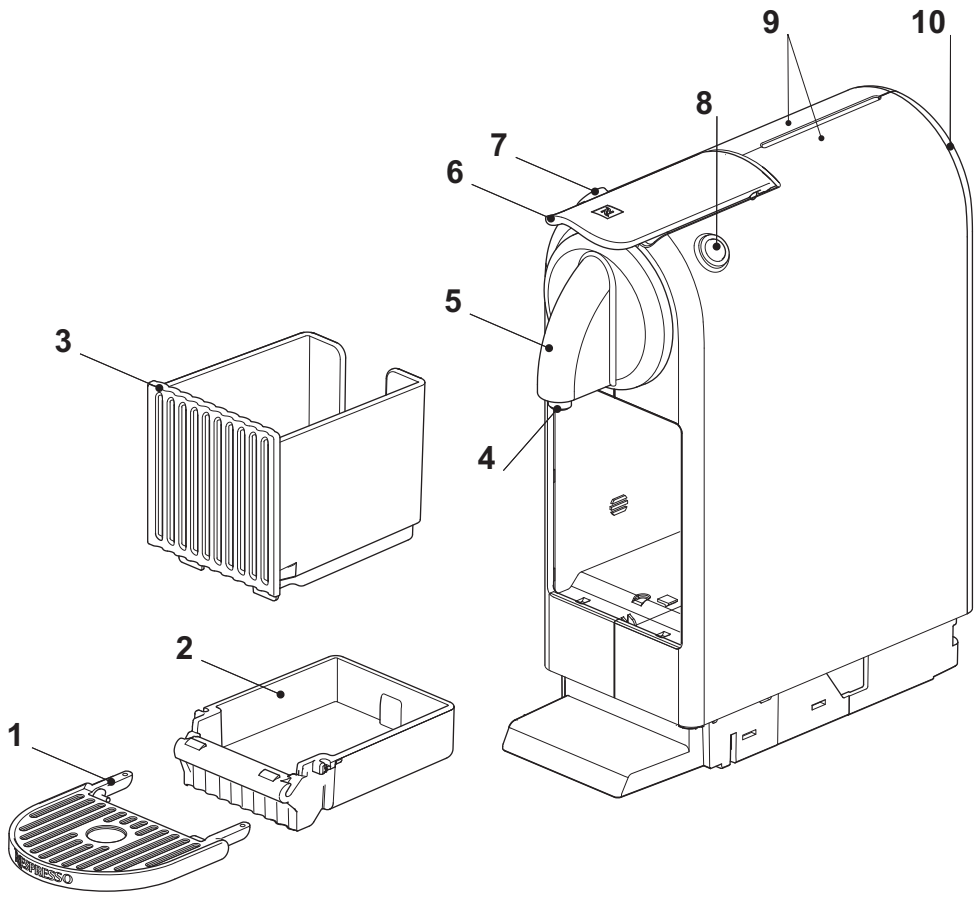
1) Coffee outlet
2) Closing handle
3) Coffee buttons
4) Cup holder

There are additional differences between the 2 versions (covers, wiring etc.) not mentioned in the table.

Different components	D-range	C-range
Coffee outlet (1)	contured coffee outlet	"flat" coffee outlet
Closing handle (2)	chromium-plated closing handle	black closing handle
Coffee buttons (3)	arranged on both sides of the closing handle	arranged behind the closing handle
Cup holder (4)	cup holder with slotted recesses	cup holder with circular recesses

3 MAIN COMPONENTS

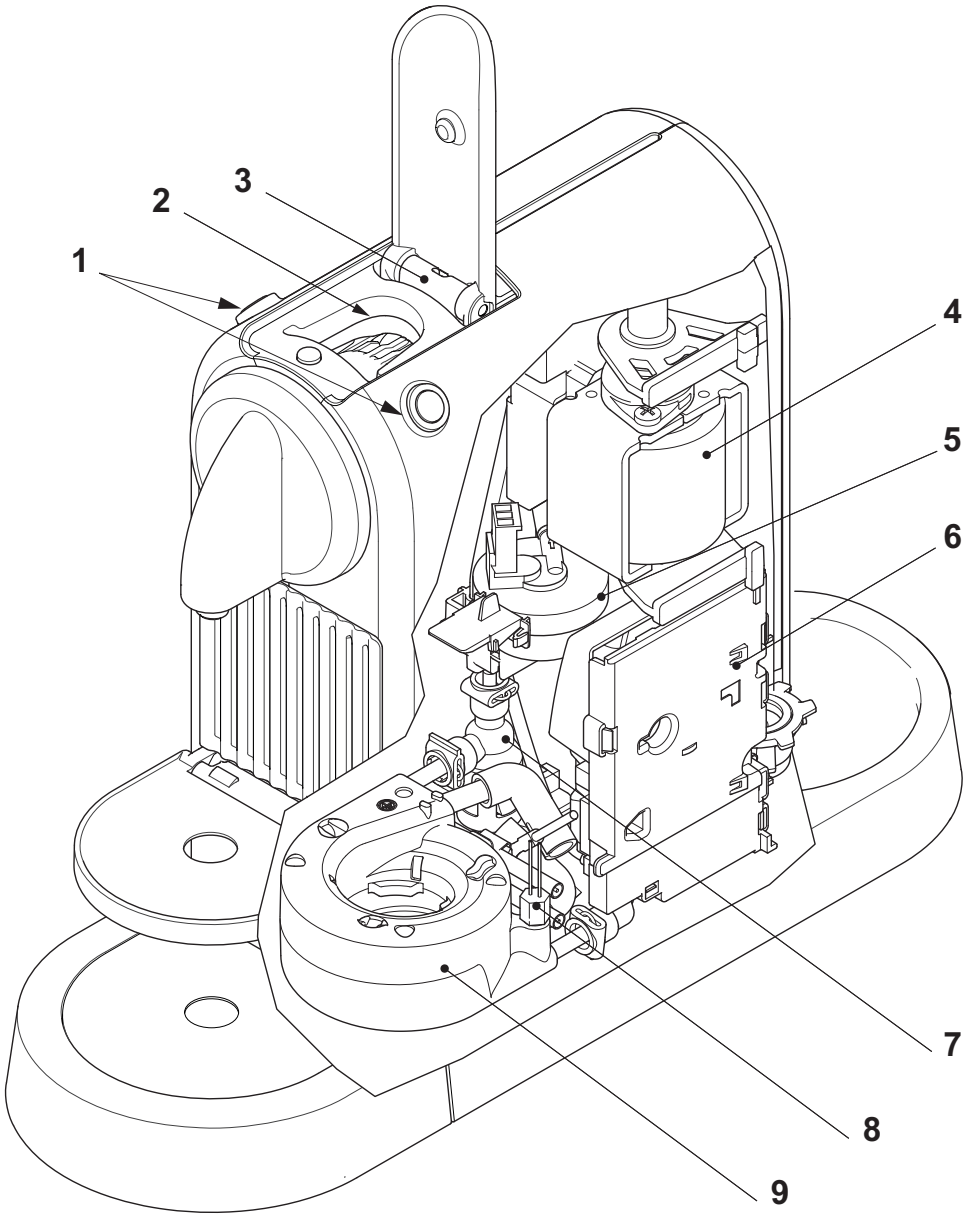
3.1 Overview - core unit, D-range



1) Cup support
2) Waste water container
3) Capsule container (used capsules)
4) Coffee nozzle
5) Steam cover
6) Closing handle
7) Espresso button
8) Lungo button
9) Side panels left/right
10) Rear cover

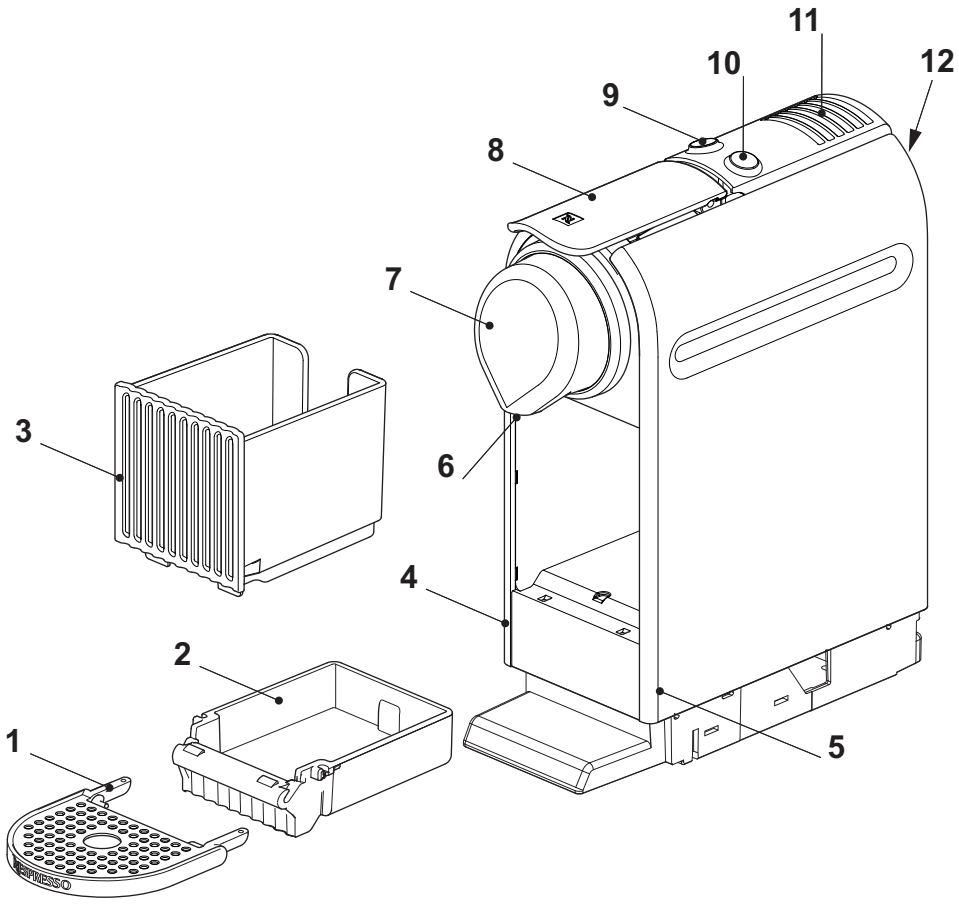
i For platform components refer to model overview.

3.1.1 Interior view - core unit, D-range



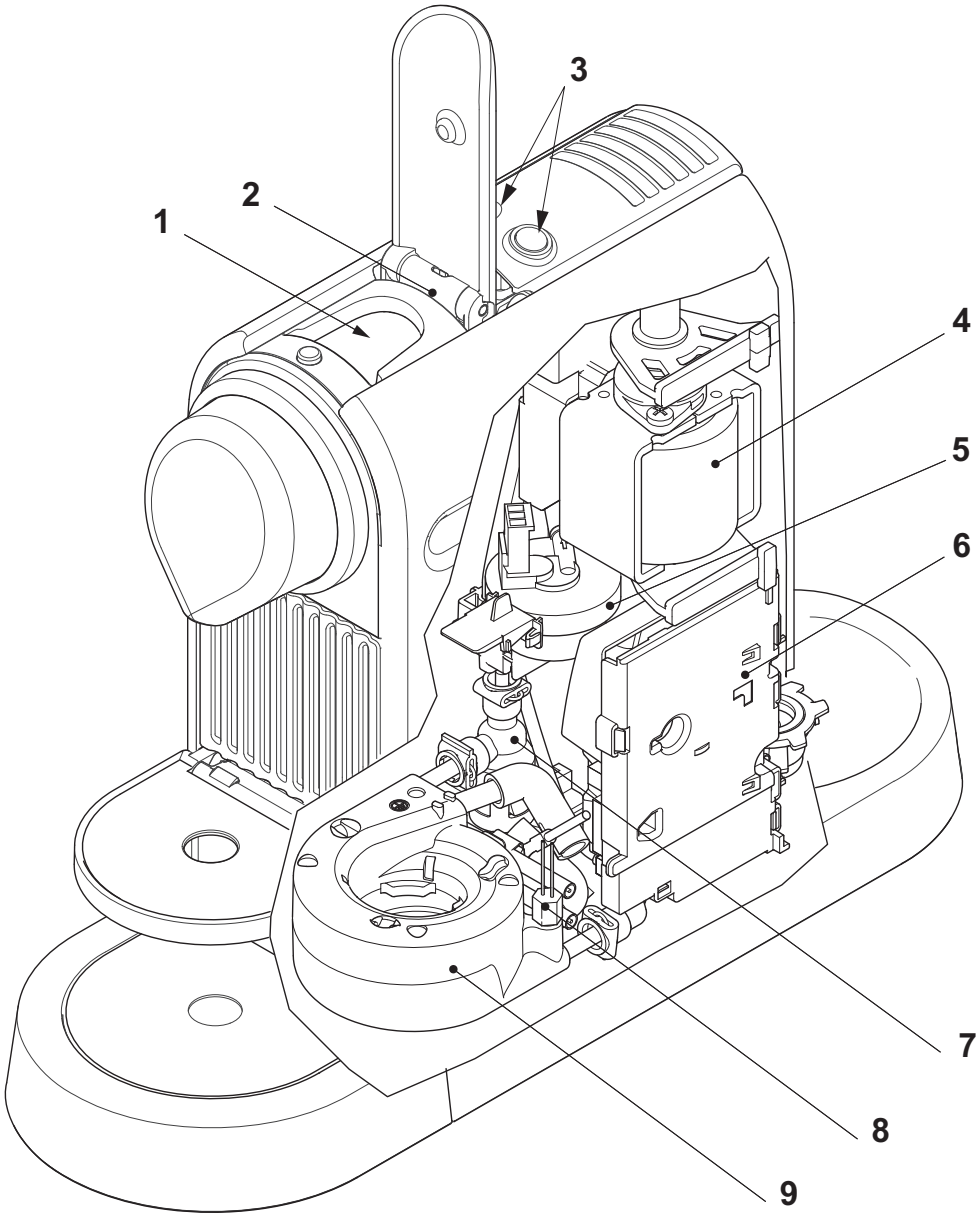
1) Button prints
2) Capsule bay
3) Brewing unit (TMBU, Tolkien Mini Brewing Unit)
4) Pump (Sysko)
5) Flowmeter (FHKSC12)
6) Electronic control board (with protective covers)
7) Self priming device (APD)
8) NTC temperature sensor
9) Thermoblock (EF 2003)

3.2 Overview - core unit, C-range



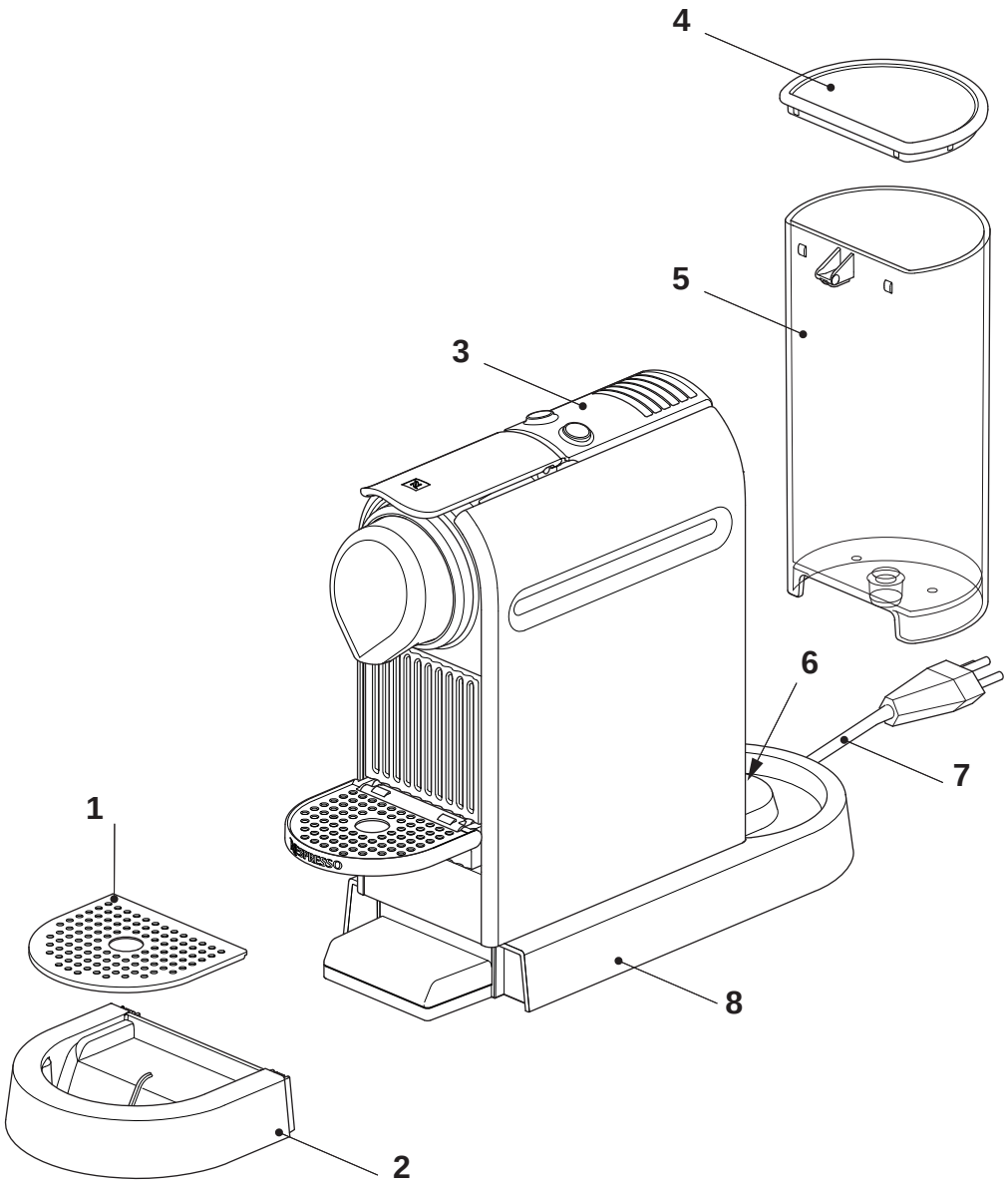
1) Cup support
2) Waste water container
3) Capsule container (used capsules)
4) Side panel, left
5) Side panel, right
6) Coffee nozzle
7) Steam cover
8) Closing handle
9) Espresso button
10) Lungo button
11) Top cover
12) Rear cover

3.2.1 Interior view - core unit, C-range



1) Capsule bay
2) Brewing unit (TMBU, Tolkien Mini Brewing Unit)
3) Button prints (under top cover)
4) Pump (Sysko)
5) Flowmeter (FHKSC12)
6) Electronic control board (with protective covers)
7) Self priming device (APD)
8) NTC temperature sensor
9) Thermoblock (EF 2003)

3.3 Overview - model Citiz



1) Drip grid
2) Drip tray
3) Core unit (e.g. C-range)
4) Water tank cover
5) Water tank
6) Water tank connector
7) Power cord
8) Platform

This is the basic model with the smallest platform (8).

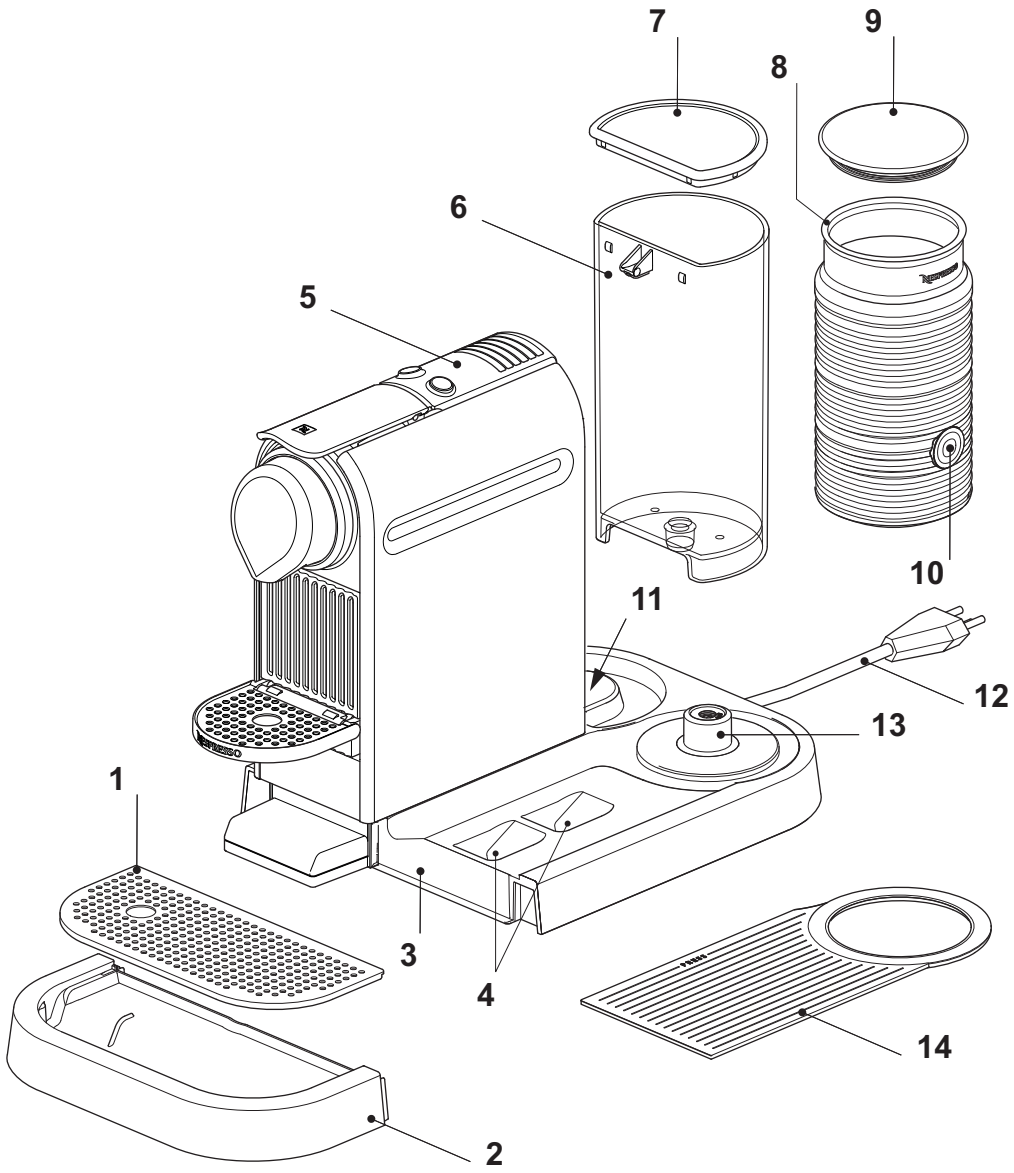
The drip grid (1)
- exists in 2 versions,
- matches with the cup holder of the core unit version (e.g. circular recesses).

i This model is pictured with a C-range core unit.

i The core units of model Citiz and Citiz & milk are not compatible due to different electronic control boards.

3.4 Overview - model Citiz & milk

This model is pictured with a C-range core unit.



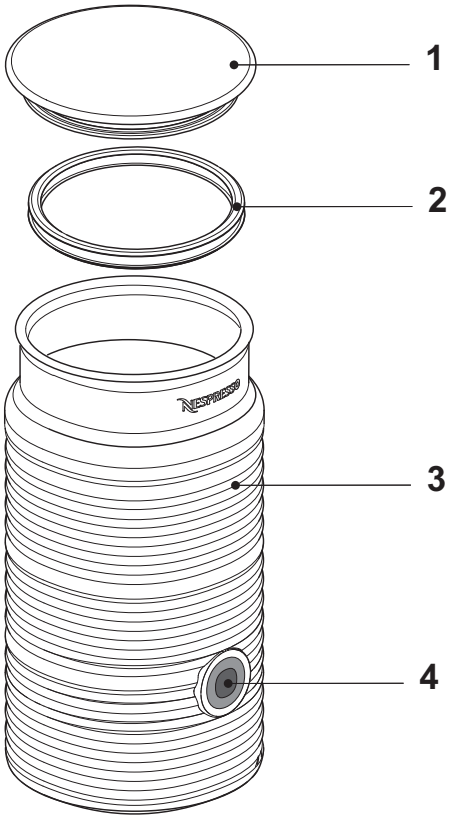
1) Drip grid
2) Drip tray
3) Platform
4) Storage places for whisks
5) Core unit (e.g. C-range)
6) Water tank
7) Water tank cover
8) Milk frother (Aero 3)
9) Lid
10) Milk frother start button
11) Water tank connector
12) Power cord
13) Milk frother connector
14) Cup storage (removable)

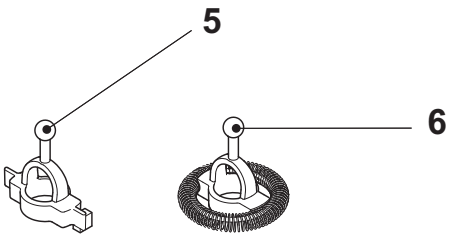
The core units of model Citiz and Citiz & milk are not compatible due to different electronic control boards.

The platform of this model is equipped with a milk frother (8).

The drip grid (1)
- exists in 2 versions,
- matches with the cup holder of the core unit version (e.g. circular recesses).

3.4.1 Overview - milk frother AERO3





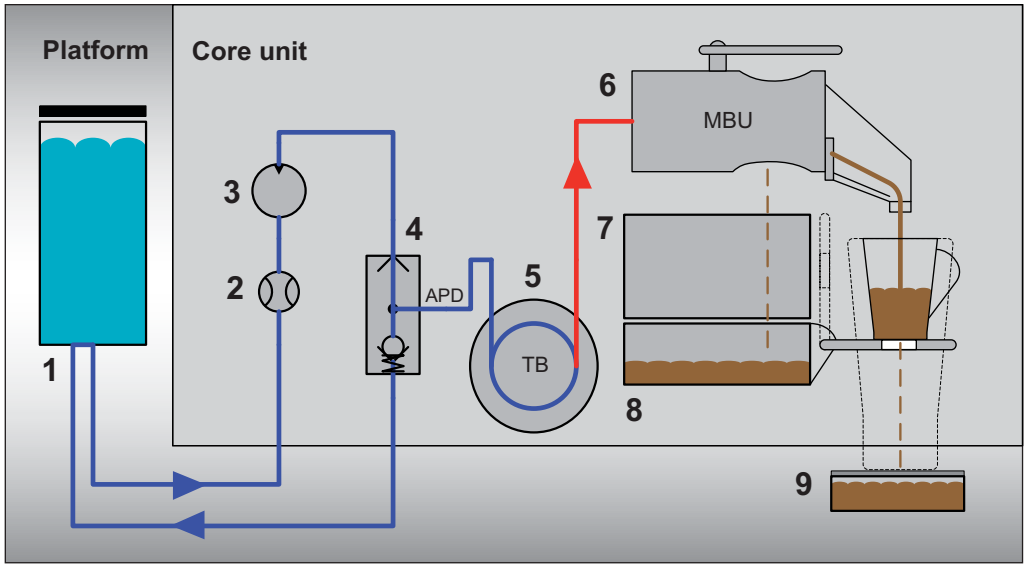
1) Lid
2) Seal
3) Jug
4) Start button (red/blue backlighted)
5) Mixer for hot milk
6) Spring whisk for milk foam

The inside of the jug (3)
- has level marks,
- is surface-coated for easy cleaning.

i The milk frother AERO3 is part of the standard equipment of the model Citiz & milk.

3.5 Fluid System

3.5.1 Water circuit diagram of core unit (all Citiz versions)



1) Water tank
2) Flow meter
3) Pump
4) Self priming device
5) Thermoblock
6) Mini brewing unit (MBU)
7) Capsule container
8) Waste water container
9) Drip tray

Legend:

Fresh cold water

Fresh hot water

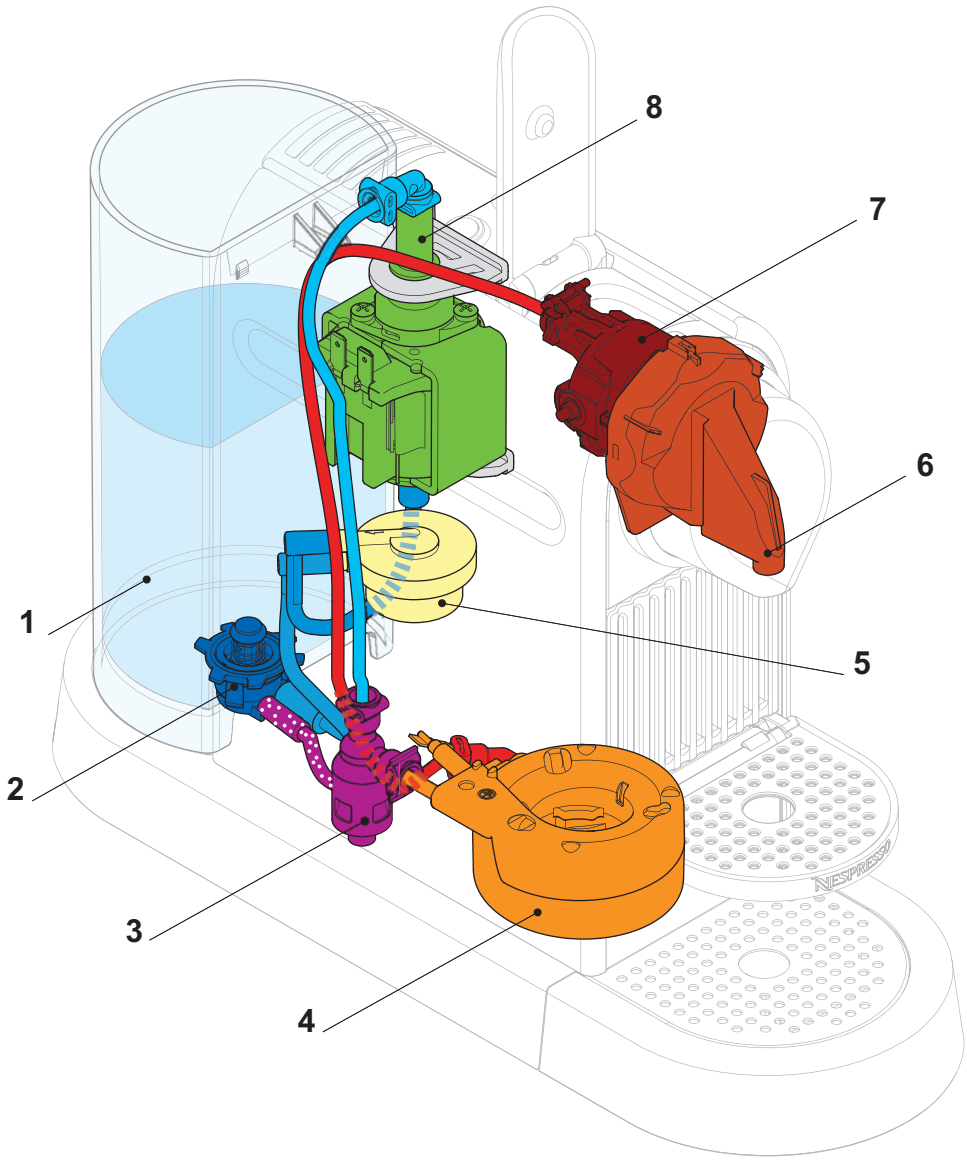
Coffee

Waste/drip water

The self priming device (4)

- allows the pump to suck water when it is filled with air (new machine, empty water tank etc.)
- removes air bubbles from the water circuit
- feeds a water/air mix back into the water tank.

3.5.2 Water circuit of models Citiz/Citiz & milk



1) Water tank
2) Water tank connector
3) APD
4) Thermoblock
5) Flowmeter
6) Outlet
7) Mini brewing unit (MBU)

4 TECHNICAL DATA

1) Water tank
2) Water tank connector
3) Self priming device
4) Thermoblock
5) Flow meter
6) Coffee outlet
7) Brewing unit
8) Pump

4.1 Rating plates

i The type plate can be found at the bottom of the coffee machine's platform.

i This overview shows examples of various brands and is subject to alterations.

4.1.1 Examples of brand specific rating plates

Nespresso, EU-version

EF451 Citiz C111 titan

EF452 Citiz D111 black

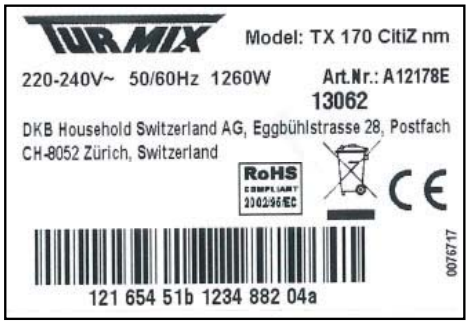
EF467 Citiz & milk C121 titan

EF467 Citiz & milk D121 black

Rating plates Citiz machine partners

C111 **Krups XN720510:**

C111 **Turmix TX170:**



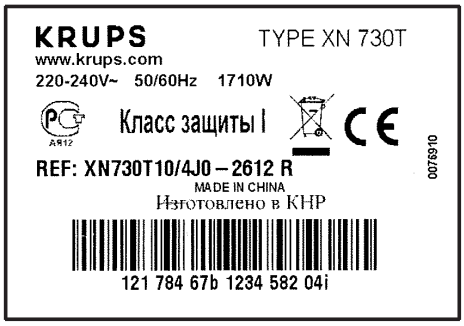
D111 **Magimix M190**:

D111 **DeLonghi EN166**:

D111 **Koenig CitiZ nm**:

Rating plates Citiz & milk machine partners

C121 **Krups XN730T10:**



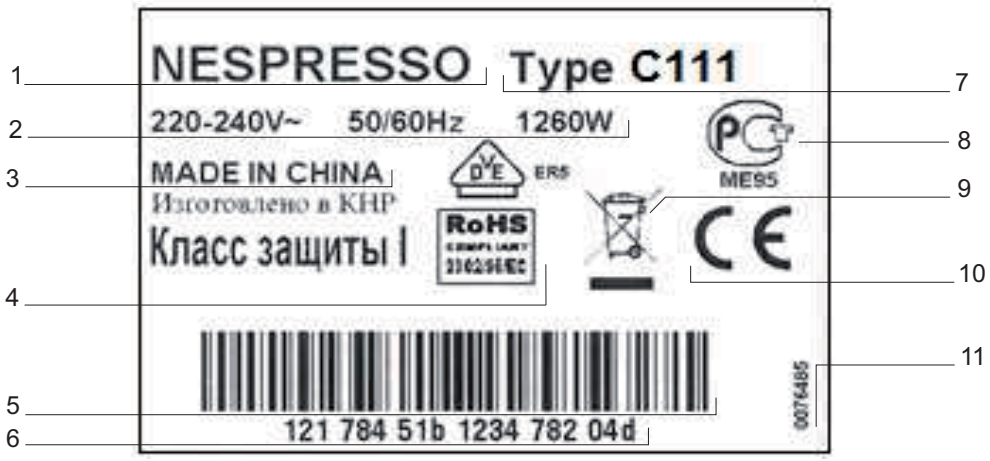
C121 **Turmix TX270:**

D121 **Magimix M190 Milk**:

D121 **DeLonghi EN266**:

D121 **Koenig CitiZ & Milk nm**:

4.1.2 Rating plate details



1) Brand name
2) Voltage and power rating
3) Place of manufacture
4) National approval sign of Germany (VDE), conform with RoHS guidelines (lead free solder, etc.)
5) Barcode
6) Serial number
7) Machine type
8) National approval sign of Russia (GOST R)
9) Special disposal icon (do not dispose with ordinary waste)(
10) Sign of conformity (CE)
11) Article number of the rating plate

Decoding the alphanumeric serial number

Example:

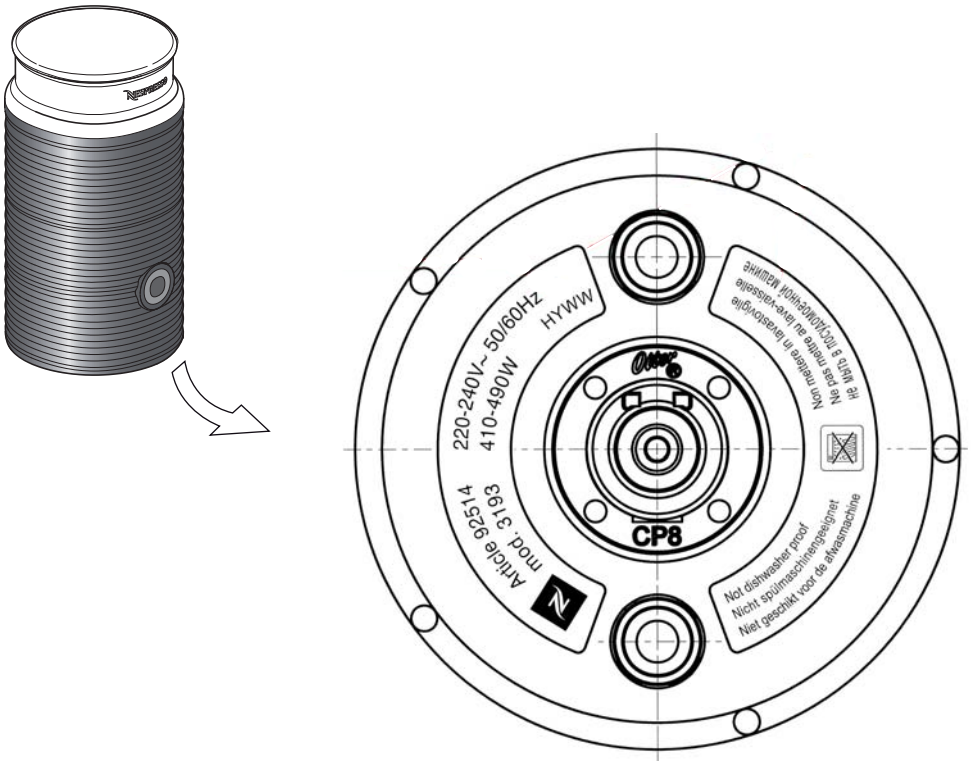
121 784 51b 1234 782 04 d

- Checksum (if available)
- Colour version
- Type of mains plug
- Mains voltage
- Distributing partner
- Incremental number per production day
- Manufacturing plant
- Manufacturer designation of the machine type (EF 451)
- 12178 ... Date of production (12 = year 2012, 178 = 178th day of the year)

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

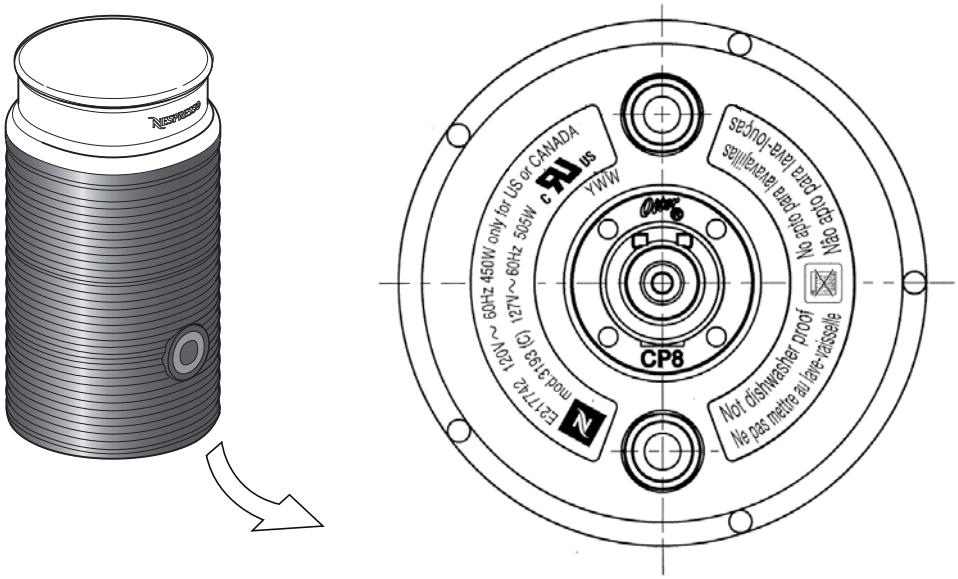
4.1.3 Rating plate of milk frother (EUR-Version model Citiz & milk)

Note he mains voltage ranges of the different models.



4.1.4 Rating plate of milk frother (USA-Version model Citiz & milk)

Note he mains voltage ranges of the different models.



4.2 Summary of technical data

4.2.1 Technical data of coffee machines

Mains voltage ranges

EU, RU, AU ..... 220-240 V / 50-60 Hz
US, CA ..... 120-127 V / 50-60 Hz

Approvals ..... CE, Gost R, Ctick, UL

Power ratings of coffee machine main components
(for all voltages and frequencies)

Thermoblock ..... 1200 W
Pump ..... 55/65 W

Ratings

Energy efficiency class level for Citiz, Citiz & milk ..... A - 40%
Daily energy consumption Citiz ..... 73.7 Wh
Daily energy consumption Citiz & milk ..... 75.6 Wh
Annual energy consumption Citiz ..... 26.9 kWh
Annual energy consumption Citiz & milk ..... 27.6 kWh

Pump

Pump pressure
- Max. permissible ..... 17.5 bar ± 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
- Citiz ..... 1.0 l
- Citiz & milk ..... 1.0 l

Drip tray
- Citiz ..... 100 ml
- Citiz & milk ..... 180 ml

Capsule container
- Citiz, Citiz & milk ..... 9-11 capsules

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i Technical data are valid for all Citiz models unless explicitly stated otherwise.

i Advised water tank capacities to avoid spilling.

Temperatures

Operating temperature ..... + 5 °C up to + 45 °C
Storage temperature..... - 25 °C up to + 60 °C
Safety temperature (thermal cut-off) ..... 167 °C
Coffee temperature at outlet..... 86 °C ± 3 °C

Various data

Preheating time .....approx. 25 sec
Cable length ..... approx. 1.0m

4.2.2 Technical data of milk frother (model Citiz & milk)

Mains voltage

EU ..... 220-240 V / 50-60 Hz
US/CA ..... 120-127 V / 50-60 Hz

i If replacing a defect milk frother, check mains voltage range.

The milk frother
- is available in 2 different models, depending on above mains voltage ranges,
- has to match the mains voltage range of the associated coffee machine.

Capacity

Hot milk ..... max. 240 ml
Hot/cold milk for milk froth .....max. 130 ml

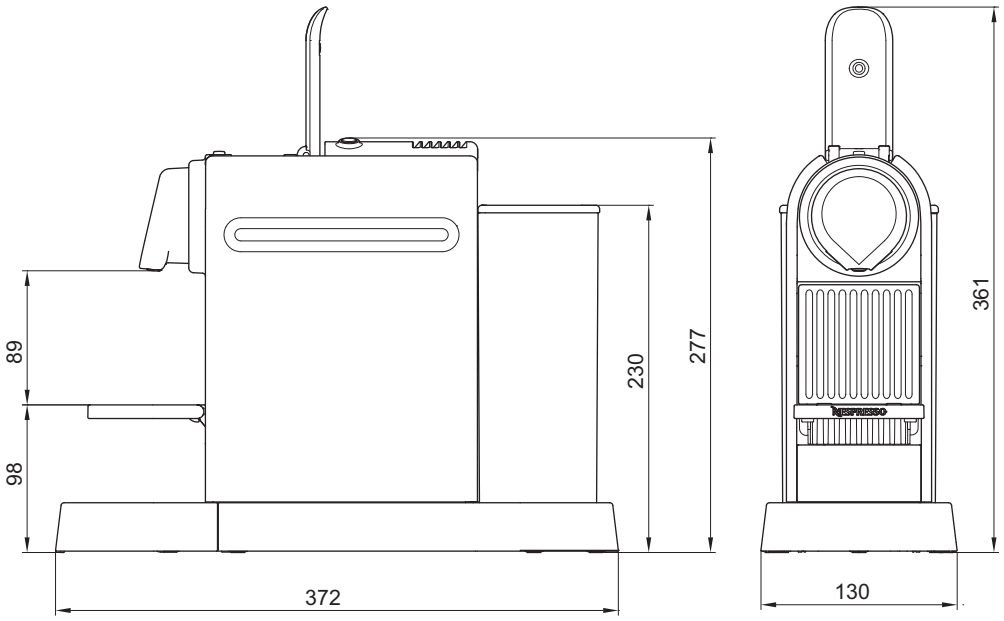
Performance data

Preparation times
(with full, semi-skimmed or skimmed milk at 8 °-10 °C fridge temperature)
Hot milk froth (120 ml) .....50-80 sec
Cold milk froth (120 ml) .....60-80 sec
Hot milk (240 ml) .....120-180 sec

Temperature

Hot milk ..... + 60 °C to + 70 °C
Foam milk..... + 60 °C to + 70 °C

4.2.3 Dimensions and weight - model Citiz



Dimensions (width x height x length) ..... 130 x 277 x 372 mm
Cup support down.....85-90 mm, for espresso and lungo cups/glasses
Cup support up ..... 150-155 mm, for macchiato glasses
Weight (without water) .....approx. 3.4 kg

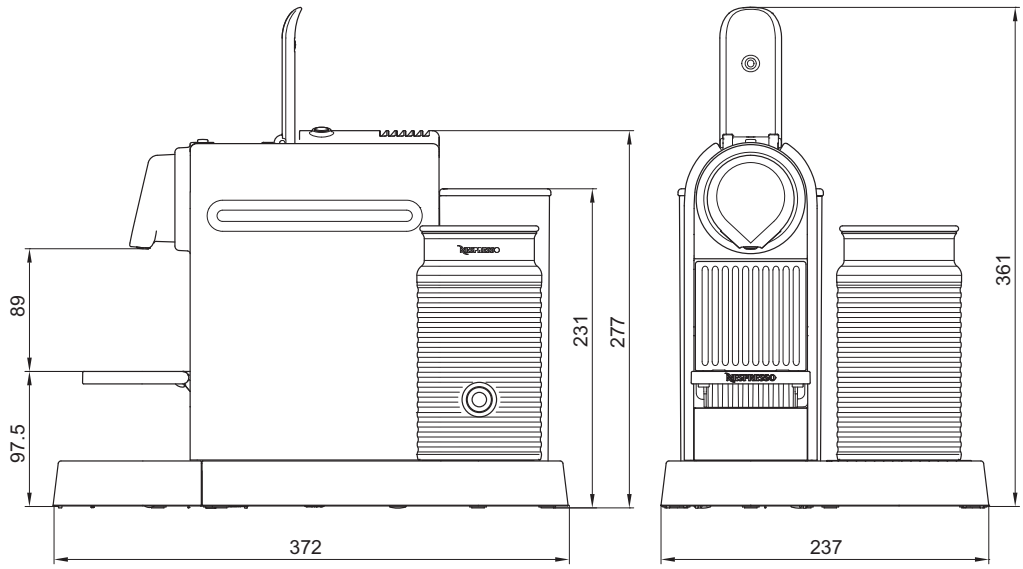
The overall dimensions are the same for both core unit versions (C- and D-range).

Dimensions in mm

4.2.4 Dimensions and weight - model Citiz & milk

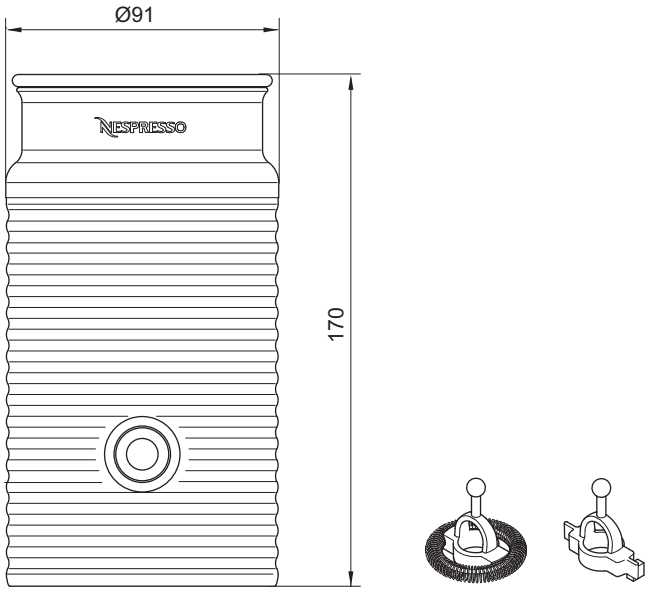
i The overall dimensions are the same for both core unit versions (C- and D-range).

Dimensions in mm



Dimensions (width x height x length)..... 237 x 277 x 372 mm
Weight (without water, milk frother included).....approx. 4.6 kg

4.2.5 Dimensions and weight - milk frother



Dimensions of jug cpl. (diameter x height) ..... 91 x 170 mm
Whisk for foam (diameter x height) .....33 x 32 mm
Mixer for hot milk .....15 x 34 x 32 mm
Weight (with whisk and mixer).....0.7 kg

5 OPERATION

5.1 General information

For an overview of operational controls see “Main Components” on page 9.

For basic operation of the machine such as preparing a coffee and other related information, refer to the user manual.

To simplify matters, the model Citiz with core unit C-range is used to exemplify throughout this chapter.

5.2 Status indication

5.2.1 Status indication of coffee machine

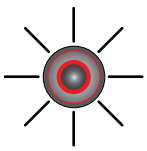
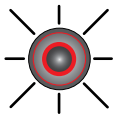
The two coffee buttons with green LED backlight show the status of the coffee machine according to the following table:

Operating mode	Small cup	Led signal	Big cup	LED signal
Off	Off		Off	
Ready	On		On	
Error	Blinking fast 3 times every 2 sec.		Blinking fast 3 times every 2 sec	
Heat up	Blinking slow 1 Hz, 0.25sec on / 0.5sec off		Blinking slow 1 Hz, 0.25sec on / 0.5sec off	
Brewing small cup	Blinking slow 1 Hz, 0.25sec on / 0.5sec off		On	
Brewing big cup	On		Blinking slow 1 Hz, 0.25sec on / 0.5sec off	
Rinse small cup	Blinking slow 1 Hz, 0.25sec on / 0.5sec off		On	
Rinse big cup	On		Blinking slow 1 Hz, 0.25sec on / 0.5sec off	

Operating mode	Small cup	Led signal	Big cup	LED signal
Power off Program	Blinking small cup 2 Hz in 2sec frame - 1x for 9 min. (factory setting) - 2 x for 30 min. - 3 x for deactivated		Off	
Emptying	Blinking fast 2 Hz, 0.25sec on / 0.5sec off Off	 	Off Blinking fast 2 Hz, 0.25sec on / 0.5sec off	 
Descaling ready D. pump on (descal.) D. pump off (descal.)	Blinking fast 2 Hz, 0.25sec on / 0.5sec of		Blinking fast 2 Hz, 0.25sec on / 0.5sec of	
Overheat	Blinking slow 1 Hz, 0.25sec on / 0.5sec off		Blinking slow 1 Hz, 0.25sec on / 0.5sec off	
Order small cup (during heat) Order big cup (during heat)	Blinking slow 1 Hz, 0.25sec on / 0.5sec off off	 	Off Blinking slow 1 Hz, 0.25sec on / 0.5sec off	 
No more stand by No more power save	-		-	
Resetting to factory	Blinking 3 Hz		Blinking 3 Hz	

5.2.2 Status indication of milk frother AERO3

The operating button with red/blue backlight shows the status of the milk frother according to the following table:

Machine status etc.	Operating button	Light signal
Off		Backlight off
On - hot milk preparation		Red backlight on
On - cold milk froth preparation		Blue backlight on
Failure/malfunction (e.g. overheating because of burnt milk, too less or no milk)		Blinking red backlight (1 Hz, 0.5sec on, 0.5sec off)
Failure: milk frother has wrong mains voltage range		Fast blinking red backlight (2 Hz, 0.25sec on, 0.25sec off

i To reset a red blinking backlight:
1. Remove milk frother from platform.
2. Remove cause of failure if possible.

5.3 Machine modes

5.3.1 Machine modes of Citiz coffee machines

This table helps to understand the operating modes of a Citiz coffee machine:

Machine mode	Enter mode	Actions	Exit mode
1 Heat up mode	Every time after start the machine	Heats up thermoblock to ready temperature 90 °C within 60 s without overshooting target temperature	
2 Self test mode	Every time after start the machine	Tests: • NTC short circuit • NTC connected • Thermoblock heating curve Error handling: Tracking of the last 5 errors by a ring buffer	
3 Ready mode	• After heat up and self test mode was ok • After brewing or volume brewing coffee • After reset mode • After leaving descaling mode	Keeps thermoblock temperature at 90 °C	
4a Brewing mode 4b Volume brewing mode (programming cup size)	• Press and release lungo or espresso button (brewing mode) • Press and hold lungo or espresso button for more than 3 sec (programming mode)		• Press and release lungo or espresso button when machine was in brewing mode or automatic exit given by the flow meter • Release lungo or espresso button when machine was in programming mode
5 Descaling mode	• Start machine, wait until ready • Press and hold both coffee buttons for at least 3 s	• Regulate temperature to 65 °C (after pump was started) • Stop and start pump with any coffee button, no volume brewing in descaling mode	• Press and hold both coffee buttons for at least 3 s Note: When machine is switched off during any descaling mode, then it goes to descaling mode ready state after next start.

Machine mode	Enter mode	Actions	Exit mode
6 Emptying mode (evaporating)	1) Machine off and lever closed 2) Press both the espresso and lungo buttons for 3 sec 3) Buttons flash alternatively	1) Start pump 2) Stop pump after 10 sec 3) Heat up thermoblock to 105 °C (100% power) 4) Switch off thermoblock 5) Machine switch off	
7 Resetting mode	1) Machine off 2) Press and hold down the lungo button for 5 sec 3) Buttons flash fast 3 times and machine heats up	• Reset the programmed lungo and espresso volumes to factory setting • Indicate the resetting mode for 3 sec Factory settings: • small cup .... 40 ml • large cup ... 110 ml	Proceeds with self test mode automatically
8 Energy saving mode	To modify the energy saving mode: 1) Machine in off mode 2) Press and hold espresso button for 3sec 3) Espresso button blinks to indicate the current setting: 1x = 9min, 2x = 30min, 3x = deactivated 4) To change the setting, press the espresso button until it blinks according to the desired setting	• Reduce thermoblock temperature • Auto switch off after 9 or 30 min or deactivated	Press the lungo button for 3 sec to exit the energy saving mode"
9 Failure mode	Automatically by following failures: a) NTC short circuit b) NTC not connected c) Heat up too slow	Machine indicates failure with coffee button LED‘s as long as the failure is present	When failure is fixed

5.3.2 Machine modes of milk frother AERO3

Machine mode	Enter mode	Actions	Exit mode
1 Hot milk / milk froth preparation	Press start button briefly	Start button lights up red. Milk is heated and mixed.	Automatic switch-off after preparation
2 Cold milk froth preparation	Keep start button pressed for approx. 2 sec	Start button lights up blue. Milk is mixed only.	Automatic switch-off after preparation

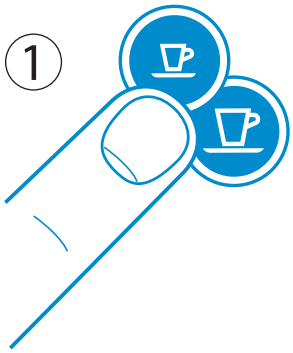
5.4 Program/reset fill up level

Each coffee button can be programmed with a coffee volume for an individual cup size. The procedure for programming/resetting is the same for both coffee buttons.

5.4.1 Programming the fill up level

Programmable volume range ..... 10 - 750 ml

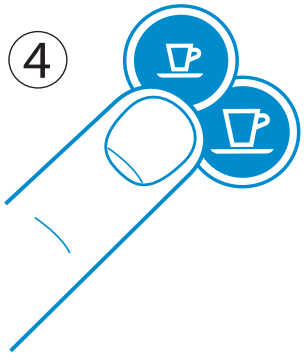
i Each new programming cycle starts with the min. volume (10 ml after 3 sec), regardless of a preprogrammed coffee volume.



1) Turn the machine on and wait for it to be in ready mode (steady lights).

2) Fill the water tank with potable water and insert a *Nespresso* capsule.

3) Place a cup under the coffee outlet.



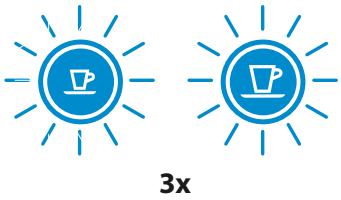
4) Press and hold the espresso or lungo button.
5) Release button once the desired volume is served.
6) Water volume level is now stored.

5.4.2 Resetting the fill up level

With the following procedure all programmed fill up levels will be set back to this factory settings:

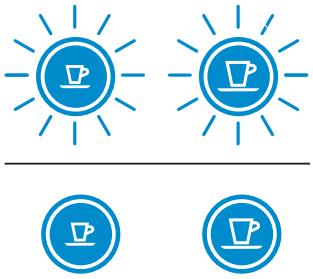
Coffee button "Espresso" ..... 40 ml

Coffee button "Lungo" ..... 110 ml



1) With machine being turned off, press and hold down the lungo button for 5 seconds.

2) LEDs will blink fast 3 times to confirm machine has been reset to factory settings.



3) LEDs will then continue to blink normally, as heating up, until ready. Steady lights: machine ready

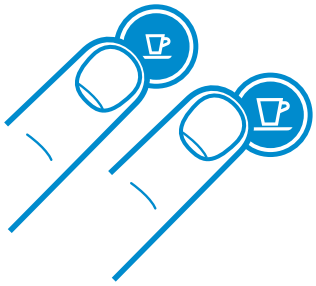
Factory settings:

Espresso cup ..... 40 ml
Lungo cup ..... 110 ml
Power Off mode ..... 9 min

5.5 Empty water system

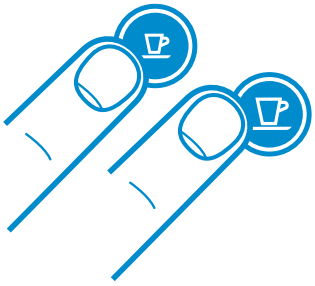
After every operation, some water remains in the coffee machine. Therefore the water system must be emptied

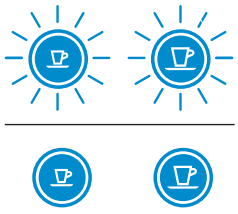
- if the coffee machine will not be used for a long time
- as antifreeze measure
- for repairs and shipment.



1) To enter the emptying mode, press both the espresso and lungo button to turn the machine off.

2) Remove the water tank and open the lever.





3) Press both the espresso and lungo button for 3 seconds.
Both LEDs blink alternatively.

4) Close the lever.
5) Machine switches off automatically.
6) Empty and clean the used capsule container and drip tray.

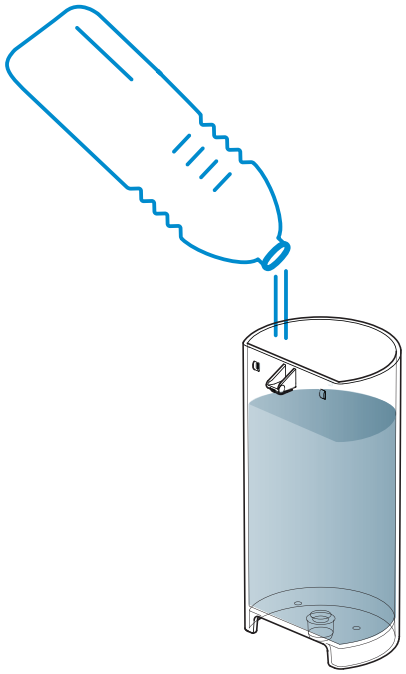
i After this procedure, the coffee machine will not be ready for approx. 10 min (until the thermoblock cools to below 100 °C).

6 MAINTENANCE

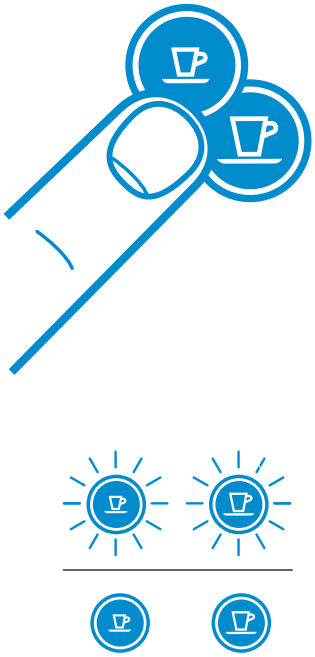
6.1 Daily maintenance and cleaning

6.1.1 Before first coffee or at the start of day

i The Citiz model is shown as example. Maintain and clean other models accordingly.



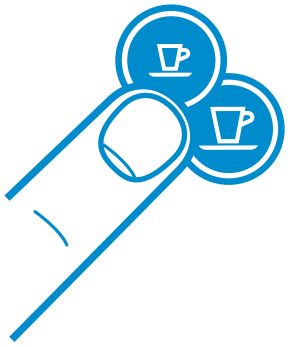
1) Rinse then fill the water tank with potable water.



2) Press the espresso or lungo button to activate the machine.
Blinking Lights: heating up (25 sec)
Steady Lights: ready

3) Lift the lever completely and insert a *Nespresso* capsule.

4) Close the lever and place a cup under the coffee outlet.



5) Press the espresso (40 ml) or the lungo (110 ml) button to start. Preparation will stop automatically. To stop the coffee flow or top up your coffee, press again.

6) Remove the cup. Lift and close the lever to eject the capsule into the used capsule container.

6.1.2 Milk preparation

1) Place milk frother on connector.

2) Attach whisk or mixer; see recipes section.

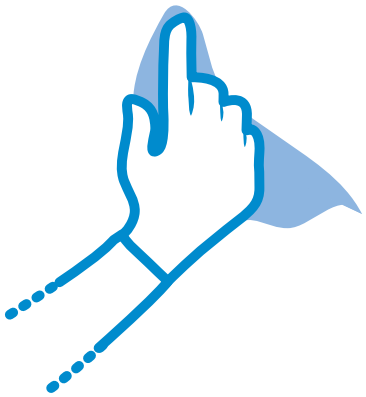
⚠ **Keep connectors dry (on platform and at underside of milk frother).**

3) Fill milk frother with desired amount of milk

4) Press button to start. Lamp lights up. Milk frother stops automatically.

6.1.3 At the end of repair

Risk of fatal electrical shock and fire!
Never clean wet or immerse plug, cord or appliance in any fluid.
Unplug appliance and let it cool down to avoid burns.



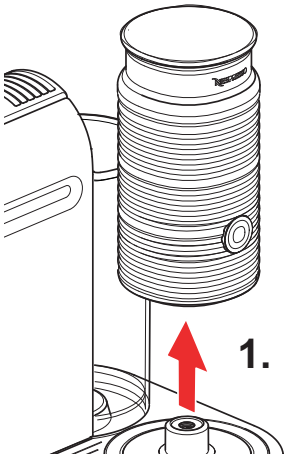
1) Clean the coffee outlet and the separate pieces with a soft damp cloth.

Platform and drip tray surfaces are not abrasion-proof.
Never use brushes and/or cleaning agents that contain aggressive or chemical components resp. solvents.
Do not put any part in a dishwasher.
Use only a damp cloth or sponge and a mild cleaning agent if necessary.

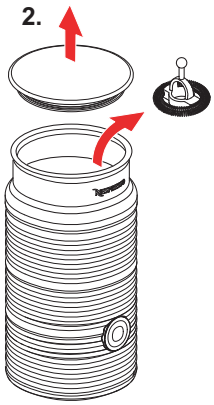
Do not use a brush - the water tank can be scratched.

6.1.4 Milk frother of model Citiz & milk

Risk of damage!
The inside of the jug is coated for easy cleaning.
Never use brushes and/or cleaning agents that contain abrasive or aggressive, chemical components resp. solvents.
Do not put any part in a dishwasher.
Use only a damp cloth and a mild cleaning agent if necessary.

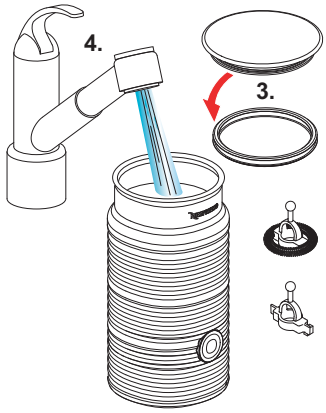


1) Remove milk frother from platform.

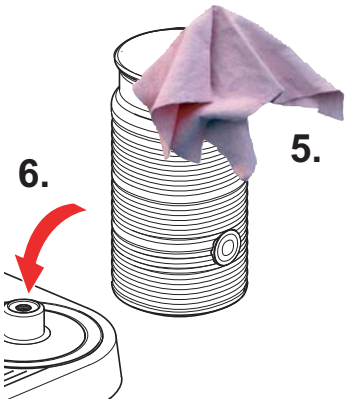


2) Remove lid and dismantle whisk.

Keep connectors dry (on platform and at underside of milk frother).



3) Remove seal from lid.
4) Rinse and clean milk frother together with whisk or mixer, lid and seal.



5) Clean outside of milk frother with a damp cloth if necessary.
6) Reassemble milk frother.

6.2 Descaling

Only use *Nespresso* descaler or descaling kit - never use vinegar!
Descaler can damage casing and contact surfaces.
Immediately clean drops of descaling solution.

Water hardness:			Descale after:
fH	dH	$CaCO_3$	
36	20	360 mg/l	300
18	10	180 mg/l	600
0	0	0 mg/l	1200

i The descaling chart is based on a cup size of 40 ml.
fH ... French grade
dH ... German grade
$CaCO_3$ ... Calcium carbonate

Use this chart to inform a customer when to descale the coffee machine depending on local water hardness and average coffee consumption.

This machine is equipped with a descaling alarm. When both LEDs blink during ready mode, your machine needs descaling.

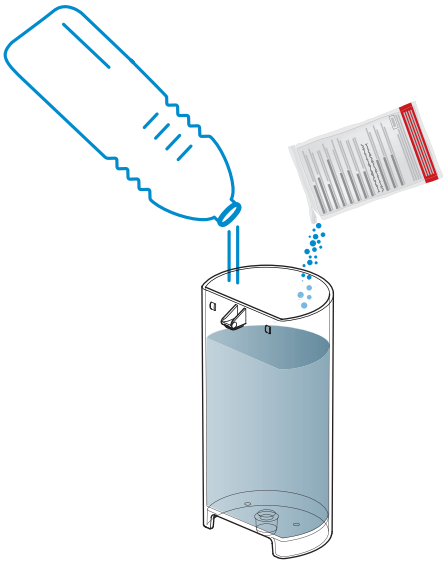
6.2.1 Descaling procedure for models Citiz and Citiz & milk

i The Citiz model is shown as example.

1) Remove the capsule and close the lever.

2) Empty the drip tray and used capsule container.

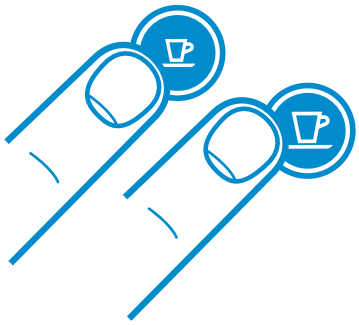
Observe the safety instructions on the descaler package.

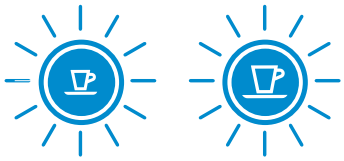


3) Fill the water tank with 0.5 L of potable water and add 1 *Nespresso* descaling liquid.

4) Place a container (min. volume 1 L) under the coffee outlet.

Use a container with a capacity of 1 l min.

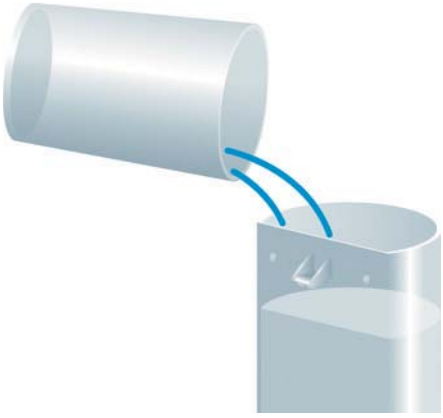


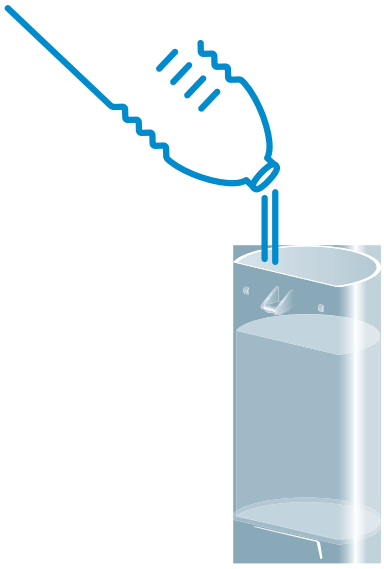


5) To enter the descaling mode, while the machine is turned on, press both the espresso and lungo button for 3 seconds.
Both LEDs blink.

6) Press the lungo button and wait until the water tank is empty.

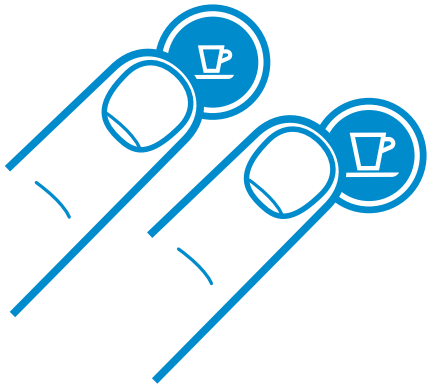
Danger!
Hot splashes of descaling solution.
Do not open handle during descaling process.





7) Refill the water tank with the used descaling solution collected in the container and repeat step 4 and 6.

8) Empty and rinse the water tank. Fill with potable water.
9) When ready, repeat step 4 and 6 to now rinse the machine.



10) To exit the descaling mode, press both the espresso and lungo button for 3 seconds.
11) The machine is now ready for use.

Danger of injury!
Residual descaler may be harmful.
Rinse thoroughly to remove any residue.

7 TROUBLESHOOTING

7.1 Check list for coffee machine (all models)

i After an initial inspection in accordance with this check list, 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 through 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	
	1.2 Power cord damaged	YES - replace power cord NO - connect power cord of machine to the mains and continue	
2 Check mechanical components	2.1 Cup support does not remain in vertical position	YES - check if the capsule and waste water container are correctly inserted and mounted NO - continue	YES - replace damaged or deformed capsule container and/or waste water container.
	2.2 Cup support rattles when folded down	YES - check if 2 rubber stoppers are mounted on waste water container NO - continue	NO - replace stoppers
	2.3 Closing handle malfunction	YES - it is very difficult or almost impossible to close the handle and to press it all the way down NO - continue	YES - replace the compact brewing unit
	2.4 Closing handle - unusual noise during actuation	YES - check if damper is mounted underneath closing handle NO - continue	NO - replace damper
	2.5 Capsule is not ejected correctly	YES - replace brewing unit (TMBU) NO - continue	
3 Fill water tank	3.1 Water tank leaks	YES - replace water tank NO - continue	
4 Activate Coffee Machine to perform automatic self test	4.1 Coffee machine is not working (does not function)	a) YES - power cord is okay (loose connection)	YES - continue NO - replace power cord
		b) YES - pump works (press a coffee button)	YES - continue with point f) NO - continue with point c)
		c) YES- both coffee buttons are working	YES - continue NO - replace electronic control board
		d) YES- pump thermostat is working	YES - replace thermostat NO - replace pump
		e) YES- fine wire fuse(s) (167 °C) on thermoblock defective	YES - replace thermoblock and if necessary replace electronic control board NO - continue
		f) YES - wiring is okay NO - continue with point 4.3	YES - replace electronic control board NO - replace defective cables
	4.2 Both coffee buttons are blinking 3x fast	YES - thermoblock is hot NO - self test ok - continue	YES - replace NTC temperature sensor NO - replace thermoblock

Check	Error symptoms	Measure / repair work	Further measures / repair work
5 Measure coffee temperature during preparation (see page 107)	5.1 No coffee	YES - a) water system is empty	YES - replace self priming device (APD) NO - continue
		YES - b) flow meter blocked	YES - clean or replace NO - continue
		YES - c) pyramid plate clocked	YES - replace the compact brewing unit NO - continue
		YES - d) coffee machine is calcified NO - continue	YES - descale coffee machine (see page 39)
	5.2 Temperature is too low (below 83°C)	YES - descale coffee machine (see page 39) NO - continue	
	5.3 Temperature too high (over 89 °C)	YES - replace NTC temperature sensor NO - continue	
6 Check for leakage (see page 104) and measure flow rate (see page 103)	6.1 Compact brewing unit leaks	YES - replace compact brewing unit NO - continue	
	6.2 Hose connections leak	YES - replace defective hoses and seals NO - continue	
	6.3 Rate of flow not in the standard range	YES - coffee machine is calcified NO - continue with point 9	YES - descale coffee machine (see page 39) NO - replace pump
7 Descale coffee machine (if necessary)	7.1 Coffee machine is calcified	YES - descale coffee machine (see page 39) NO - continue with point 9	
8 Final cleaning (see page 35)		No errors found according to check list?	YES - for more information please contact *Nespresso* Service Division
End of check list			

7.2 Check list for milk frother

The milk frother is part of the Citiz & milk model.

Check	Error symptoms	Measure / repair work	Further measures / repair work
1 Check milk frother and accessory for visible damage	1.1 Lid/seal broken or damaged	YES - replace lid/seal NO - continue	
	1.3 Whisks broken or damaged	YES - replace whisks NO - continue	
4 Place milk frother on platform connector. Attach whisk. Switch on coffee machine. Press start button briefly (hot milk preparation).	4.1 Milk frother is not working (does not function)	YES - a) coffee machine is heating up	YES - continue NO - continue with check list for coffee machine
		YES - b) connector on platform is ok (test it with another milk frother)	YES - replace milk frother NO - replace connector on platform (see page 64)
	4.2 Abnormal noise during preparation	YES - replace milk frother NO - continue	
	4.3 Milk frother does not switch off automatically	YES - replace milk frother NO - continue	
	4.4 Inside of jug stays cold	YES - replace milk frother NO - continue	
5 Press start button for at least 2 sec (cold milk preparation)	5.1 Start button is not backlighted in blue	YES - replace milk frother	
6 Final cleaning (see page 37)		No errors found according to check list?	YES - for more information please contact *Nespresso* Service Division
End of check list			

8 REPAIRS

These repair instructions

- are based on exploded drawings with position numbers combined with repair and mounting tips,
- presuppose basic knowledge in repairing *Nespresso* coffee machines.

☞ **As a rule, identical components (e.g. pumps, thermoblocks etc.) are presented in detail only once.**

8.1 Safety instructions

⚠ **Risk of fatal electrical shock!**
Mains voltage inside the coffee machine.
Disconnect the mains plug before disassembly - the coffee machine must be free of voltage.

⚠ **Danger of burns!**
Hot parts and water under pressure inside the coffee machine (thermoblock in particular).
Let coffee machine cool down before disassembly.

8.2 Repair and mounting tips

These general advices are completed with specific repair tips in this chapter.

Additional information

For components not mentioned in this repair chapter, refer to the chapters "Explosion Drawings" on page 117 and "Explosion Drawings" on page 117.

Snap connections

Parts of the case and components of the coffee machine are connected screwless with latches.

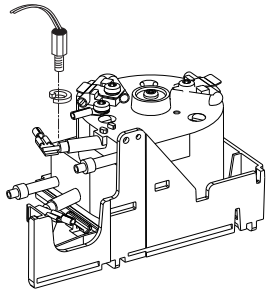
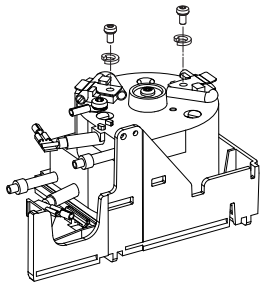
☞ **When loosening these latches, proceed with care and patience to avoid causing any damage.**

The side panels of the core unit have delicate snap connections that can brake easily.

☞ **When removing these side panels, use the special disassembly tool and proceed according to the disassembly instructions.**

Screw connections

Do not overtighten screws. Plastic threads and inserts are delicate.
Observe max. torque for the screw connections according to the following table.

Screw / screw connection	Torque	Position
NTC fixation on thermoblock	80-100 Ncm 0.8-1.0 Nm	
TX 20 screw (2 x) / thermo fuse fixations on thermoblock	150 (+30/-0) Ncm 1.5 (+0.3/-0) Nm	

Designation of spare parts

The components in the following illustrations are indexed with position numbers.
See separate spare parts list for corresponding spare part numbers.

☞ **Distinguish between spare parts of the different models and core unit versions.**

Electrostatic discharge protection

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

Wiring arrangement

Random changes in the wiring arrangement during a repair can cause

- electromagnetic interferences,
- squeezed wires,
- insulation defects due to contact with hot parts,
- insulation problems if low and high voltage wires are not separated.

Protective measures:

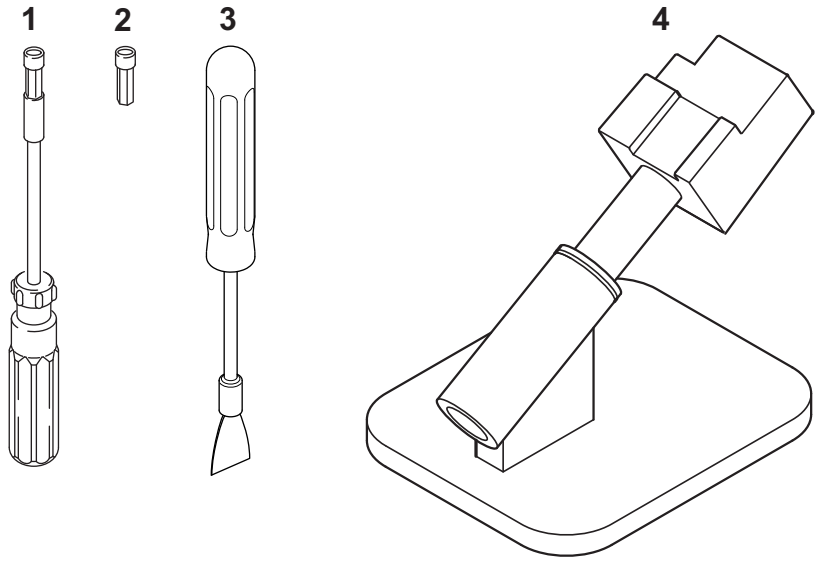
- Do not change the course of internal wiring during repair.
- Make sure that wires are distant from hot parts - use existing cable ducts and clips.

Residual water

- If it is necessary to pull off hoses from components, hold ready a small beaker and a towel to collect and wipe away leaking water.
- A special procedure is necessary to empty the fluid system of the coffee machine for repair or shipment (refer to "Empty water system" on page 34).

8.3 Tools and accessories

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



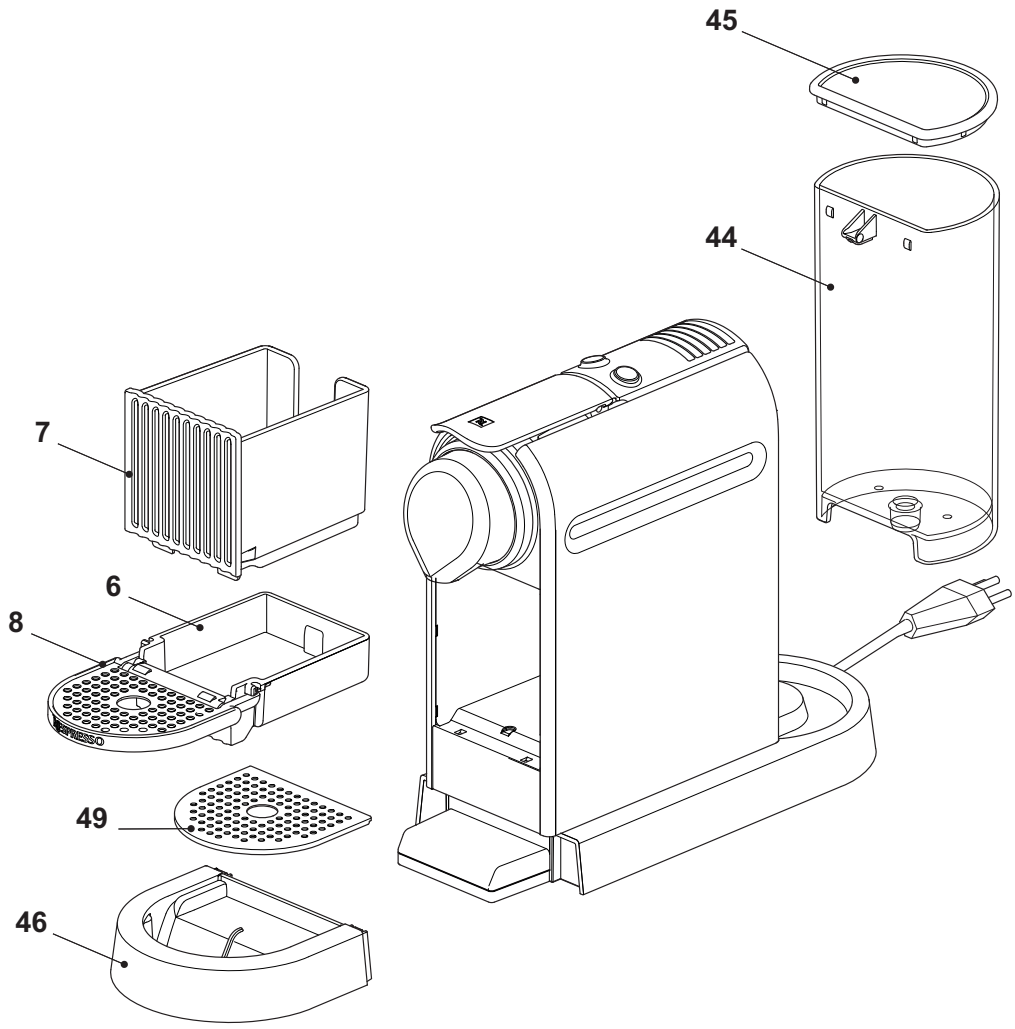
1) Special screwdriver with short oval bit (EFR no. 0004872)
2) Short oval bit only (EFR no. 0004878)
3) Disassembly tool (for side panels etc.) (EFR no. 0060611)
4) Repairing/service holder device for models Citiz and Citiz & milk (available from *Nespresso*)
5) TORX screwdriver (TX10, TX15)
6) Screwdriver with approx. 4 mm tool tip
7) Hexagonal wrench SW 4
8) Flat wrench SW 14, 10 mm AF
9) Torque wrench
10) Long-nosed pliers
11) Flat pliers
12) Beaker and towel to catch and wipe away leaking water

A dynamometric screwdriver with suitable bits is recommended.

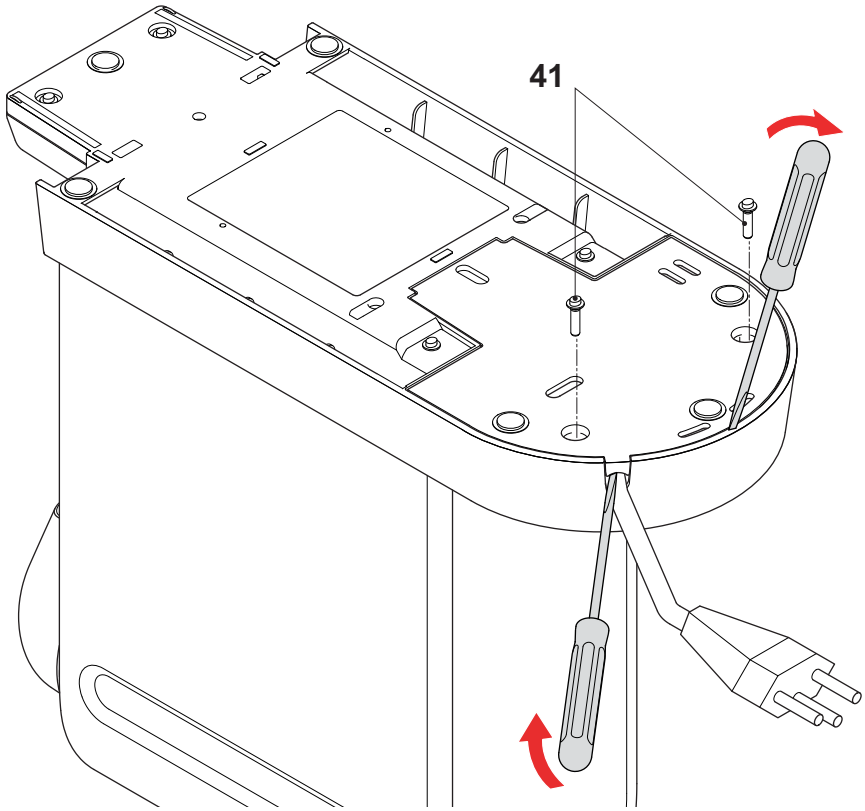
8.4 Platform disassembly - model Citiz

8.4.1 General disassembly

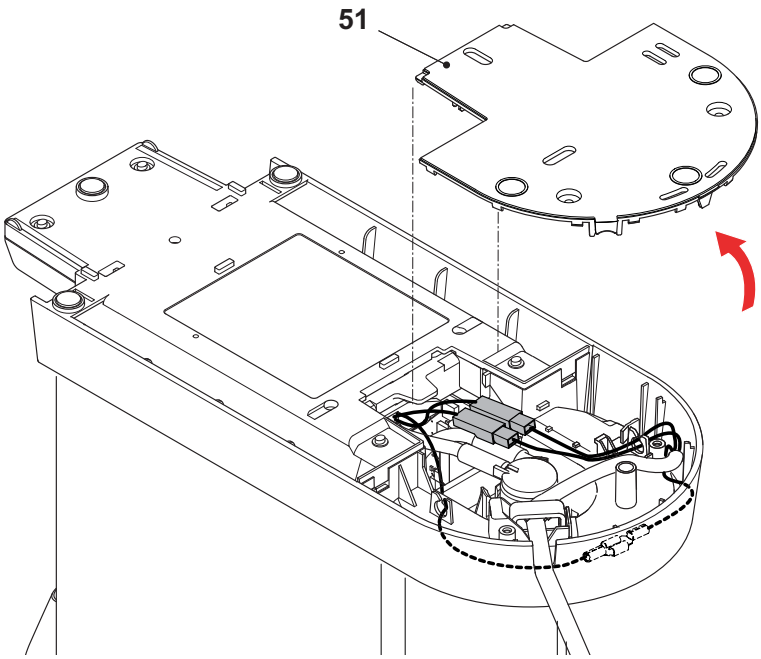
This general disassembly
- is necessary before the removal/disassembly of a core unit is possible,
- gives access to the components and wiring of the platform.



- Take away all removable parts from platform and core unit
  - cup support (8) with waste water container (6)
  - capsule container (7)
  - drip tray (46) with drip grid (49)
  - water tank (44) with cover (45).



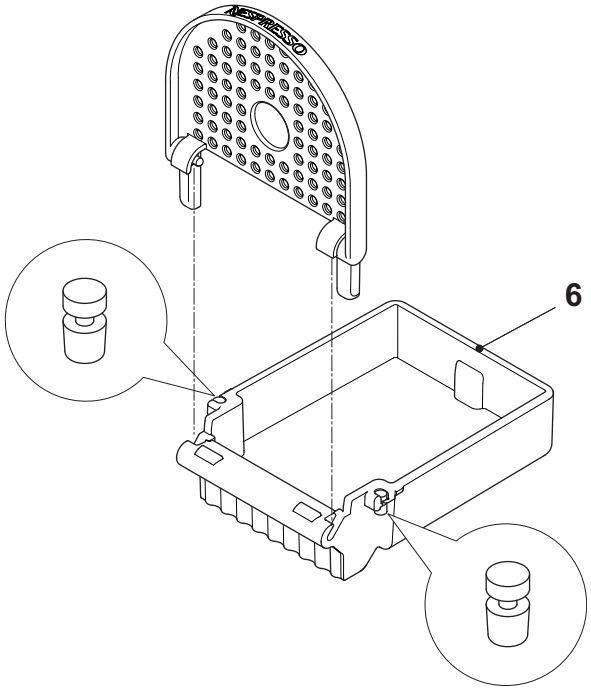
- Loosen 2 screws (41, oval shaped head) at the bottom side of platform.
- Use screwdriver to release latches. Start by inserting the screwdriver in the opening for the power cord.



- Remove bottom cover (51) by swinging it up like shown.

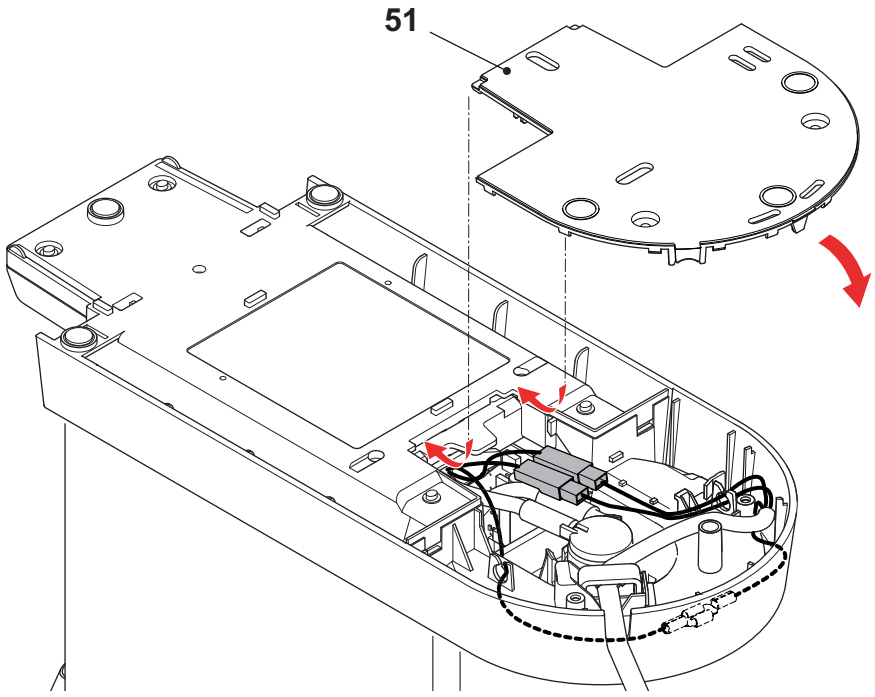
The bottom cover (51) is inserted into the platform with both edges of its small end. Only remove bottom cover by swinging up the round end.

Assembly checkpoints



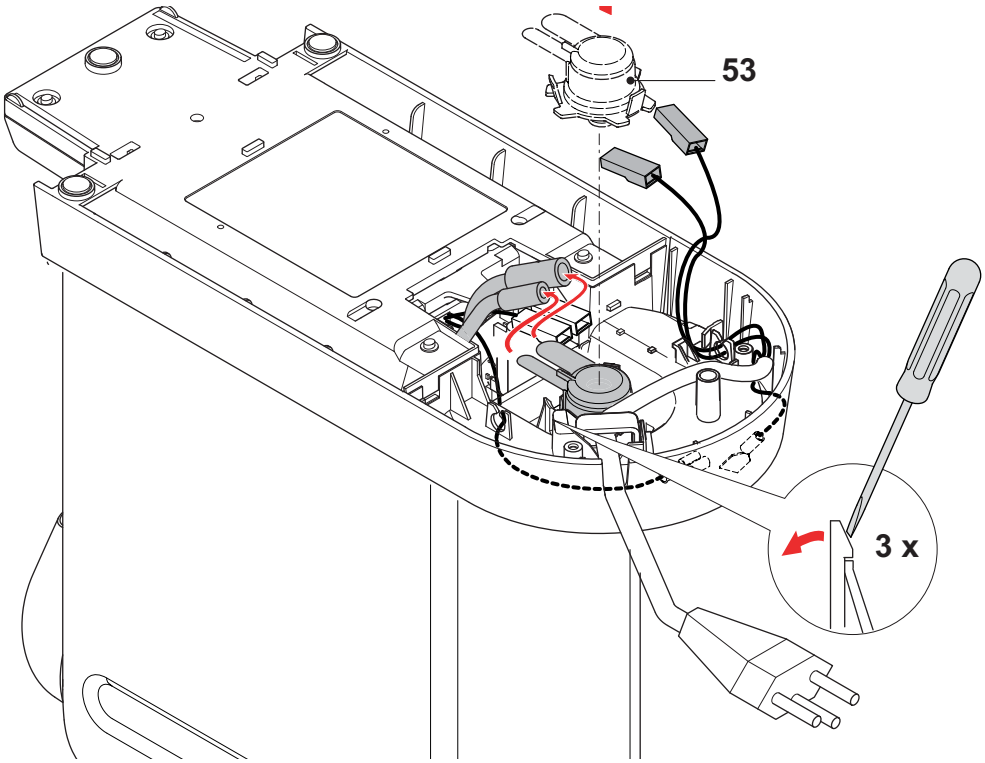
- Check if 2 rubber stoppers are mounted on waste water container (6).

Take care not to jam any wires at the screw connections.

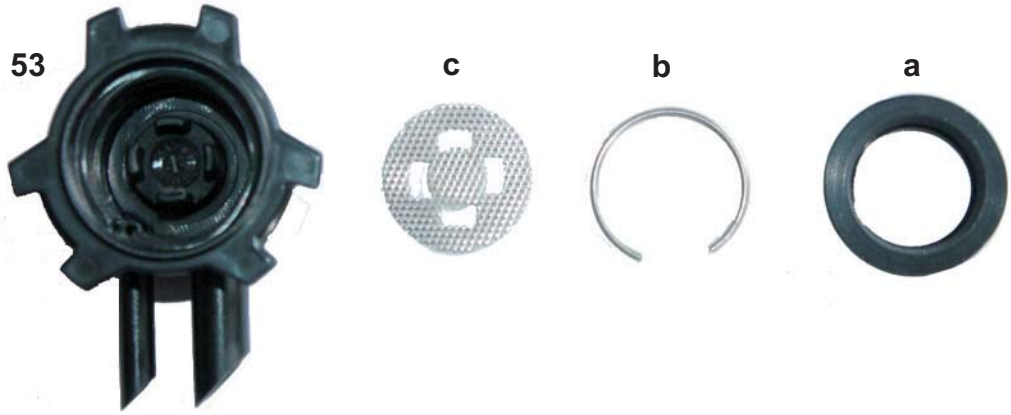


- Insert bottom cover (51) with small end into platform at first. Then fold it down and close latches.

8.4.2 Replacing water tank connector



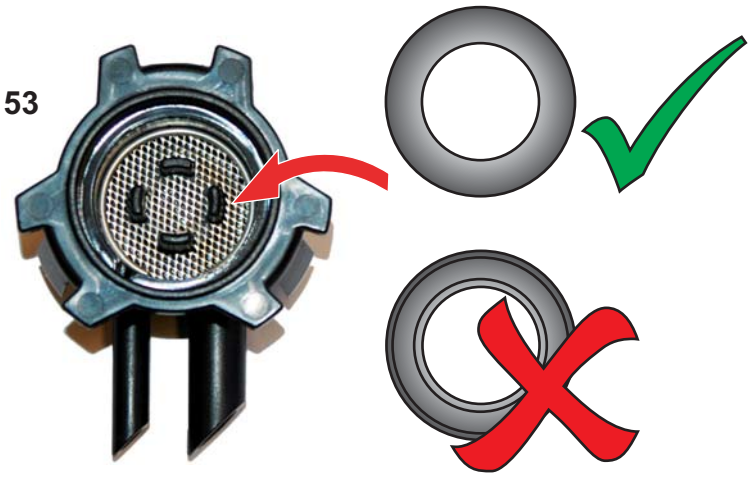
- Pull off both hoses from water tank connector (53).
- Release the 3 latches around the water tank connector one after the other by pressing the top of their hooks outwards with a screwdriver (see detail) and lifting the water tank connector at the same time.



- Remove gasket (a) from water tank connector (53).
- With the help of a pair of tweezers, remove clamping ring (b) and metal sieve (c).
- Clean or replace parts.

The water tank connector (53) is replaced together with gasket, clamping ring and metal sieve.

Assembly checkpoints

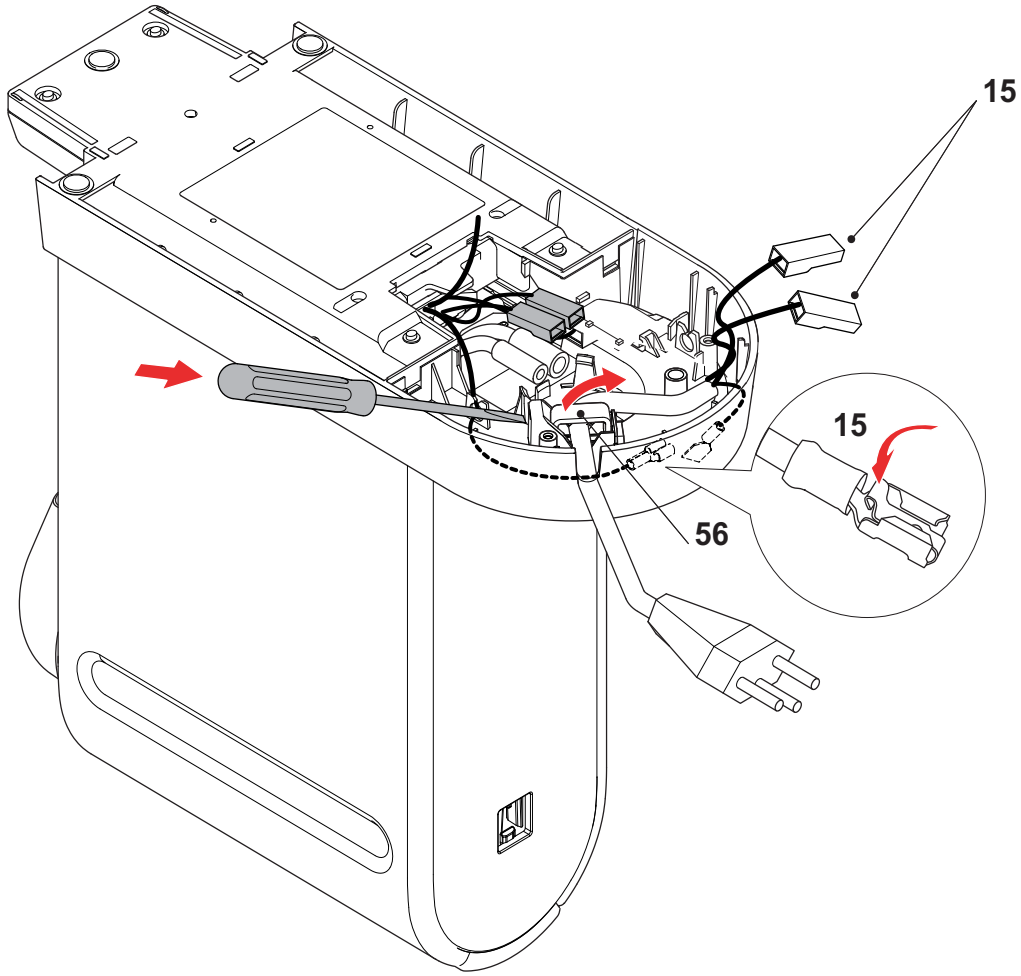


- Check that gasket is inserted in water tank connector (53) correctly.
- During assembly of the water tank connector on the platform, each of its 3 latches has to engage with an audible click.
- Mind the different diameters of hoses for the water tank connector.
- Remove water tank connector from platform first (see page 51).

The hoses can remain on the water tank connector.

Use a pair of flat pliers to pull off insulating sleeve with receptacle.

8.4.3 Replacing power cord



- Disconnect adapter plug of neutral wire (15).

The hoses can remain on the water tank connector.

Use a pair of flat pliers to pull off insulating sleeve with receptacle.

- If present, disconnect ground wire (15, see detail).

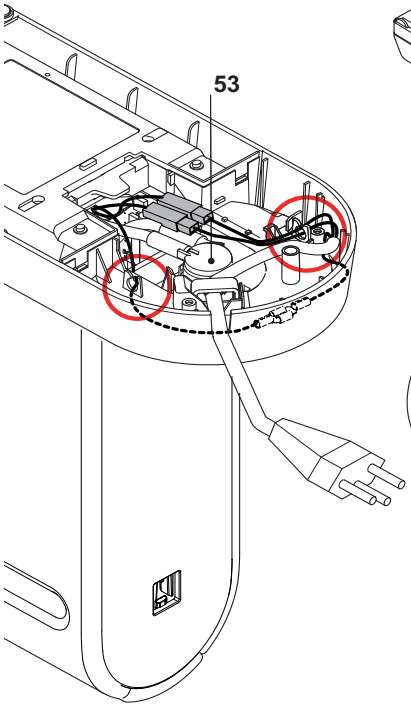
The flat receptacle on the ground wire has a special connector latching (see detail). Press down lever at first, then pull off receptacle.

- Unlatch cable bracket (56) with screwdriver.

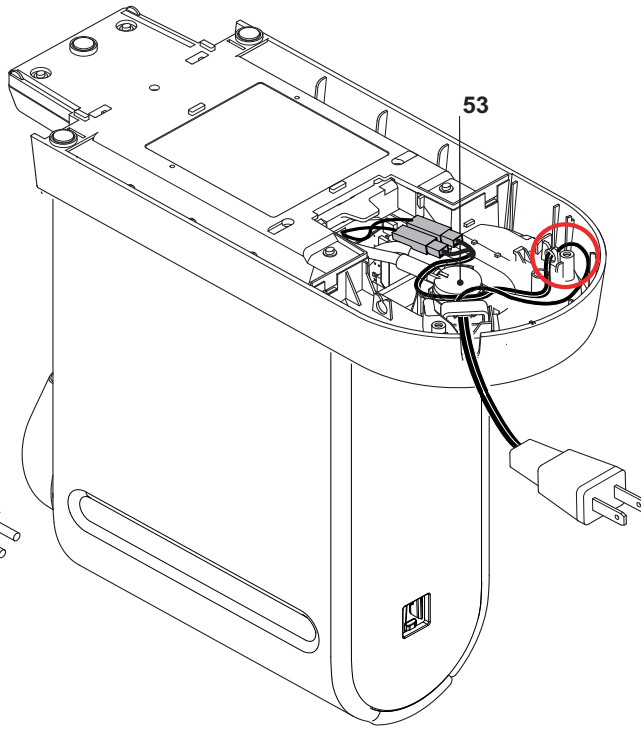
The cable bracket is under tension. Therefore, hold the cable bracket with your finger when unlatching it.

Assembly checkpoints

Wiring with three-core power cord:



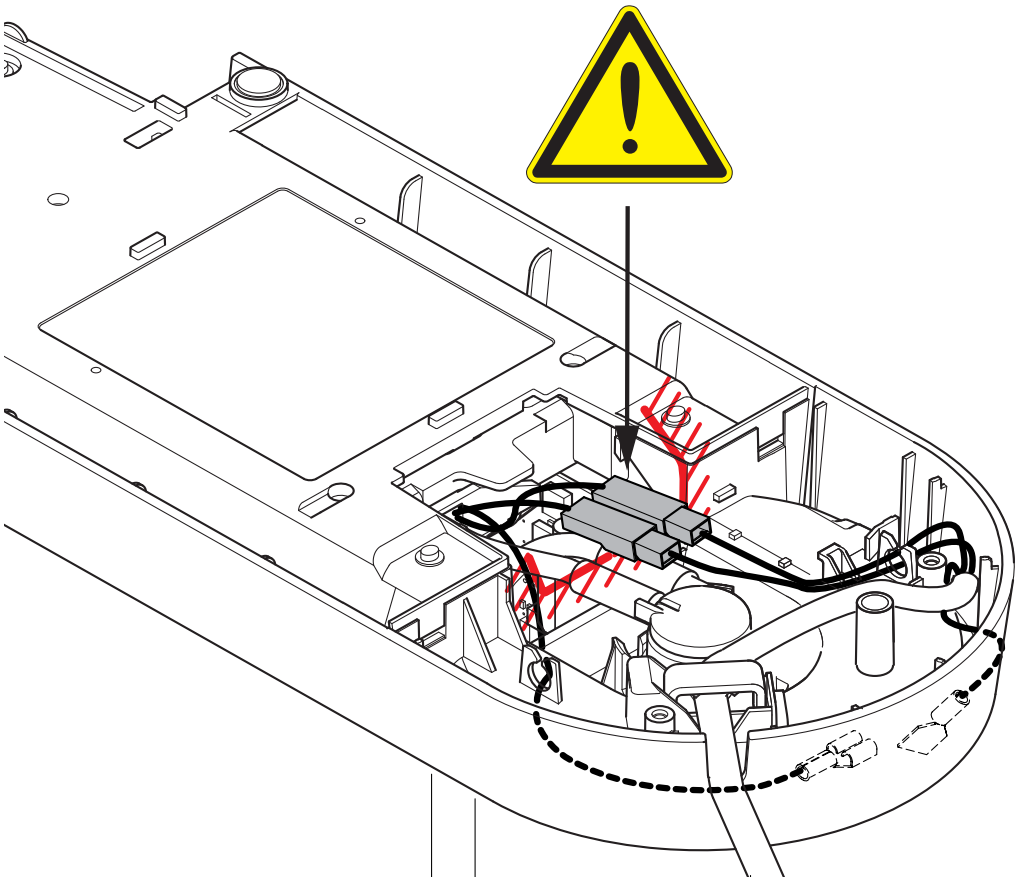
Wiring with two-core power cord:



- Use marked cable guides to lay wires.
- Check wiring (see "Wiring diagrams - model Citiz" on page 97 and following).
- During assembly of the water tank connector (53) on the platform, each of its 3 latches has to engage with an audible click.

8.4.4 Removing core unit

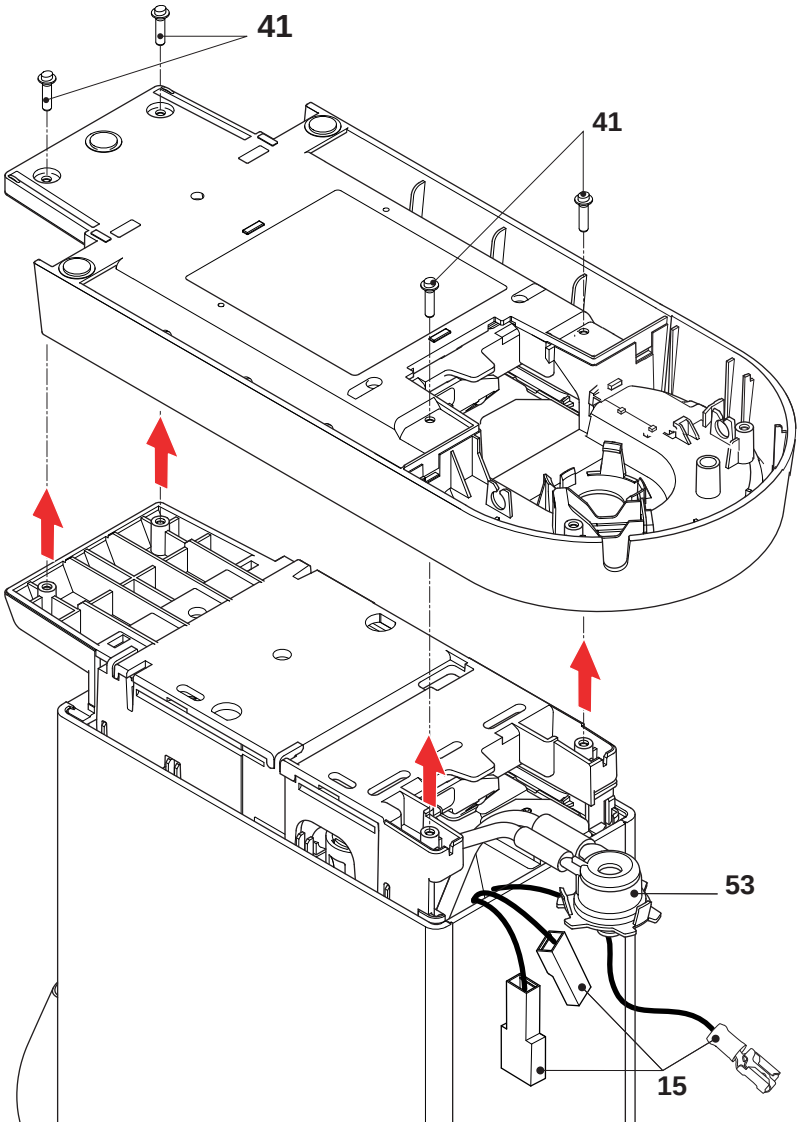
Pay attention to the following safety advice before removing the core unit.



Danger of insulation damages (cuts) on wires between core unit and platform (phase and neutral wire, ground wire if existing).

The sharp casing edges of the platform (marked red in above illustration) can damage the insulation of wires.

Do not stretch and reciprocate wires over sharp edges while removing the core unit.



- Loosen 4 screws (41, oval shaped head) at the bottom side of platform.

i After this repair step the core unit can be pulled out of the platform slightly (with still connected hoses and wires). Now the covers of the core unit can be removed.

For complete removal of the core unit proceed as follows:

- Remove water tank connector (53) from platform (see page 51).

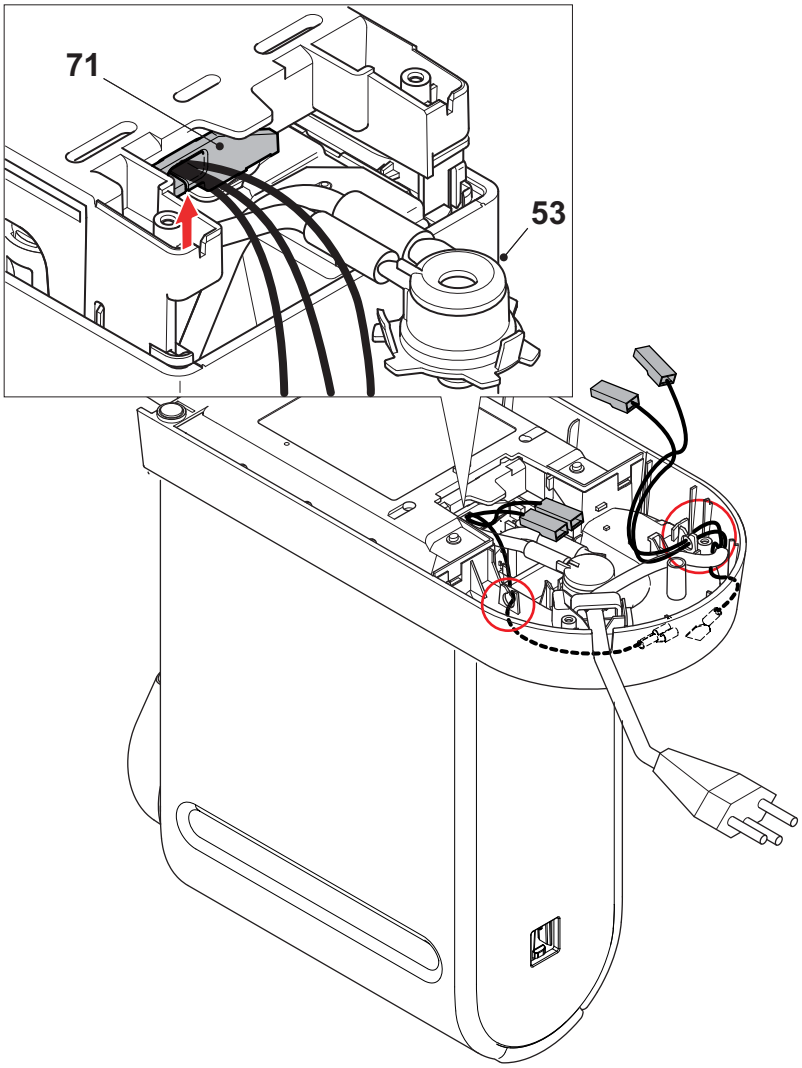
The hoses can remain on the water tank connector.

- Disconnect adapter plug (15) of phase and neutral wires.

Use a pair of flat pliers to pull off insulating sleeve with receptacle.

- If present, disconnect ground wire (15, part of thermoblock assembly).

Assembly checkpoints

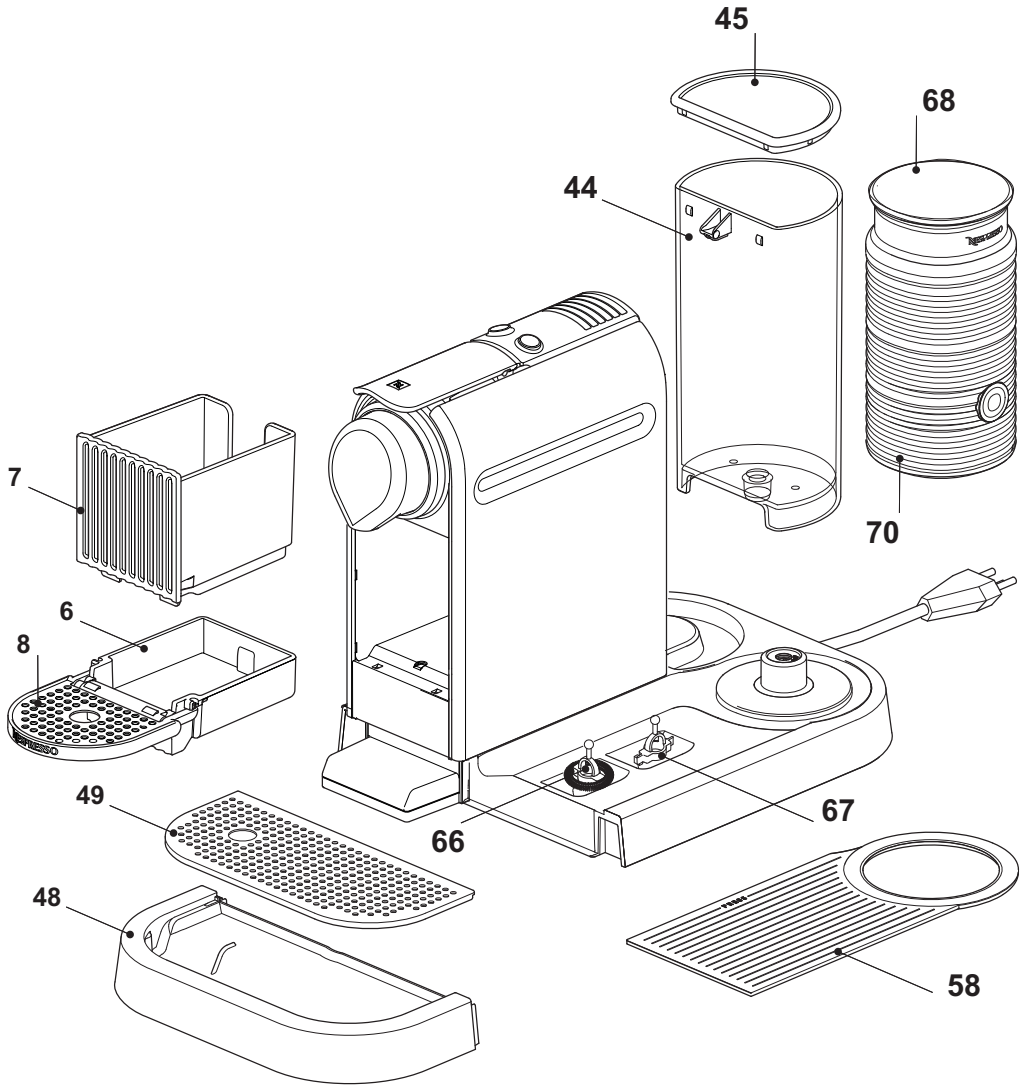


- All covers are assembled on the core unit.
- Check that wiring between core unit and platform is led through cable fixation (71).
- Use marked cable guides to lay wires in platform (refer to "Replacing power cord" on page 53 and following).
- Check wiring (see "Wiring diagrams - model Citiz" on page 97 and following).
- During assembly of the water tank connector (53) on the platform, each of its 3 latches has to engage with an audible click.

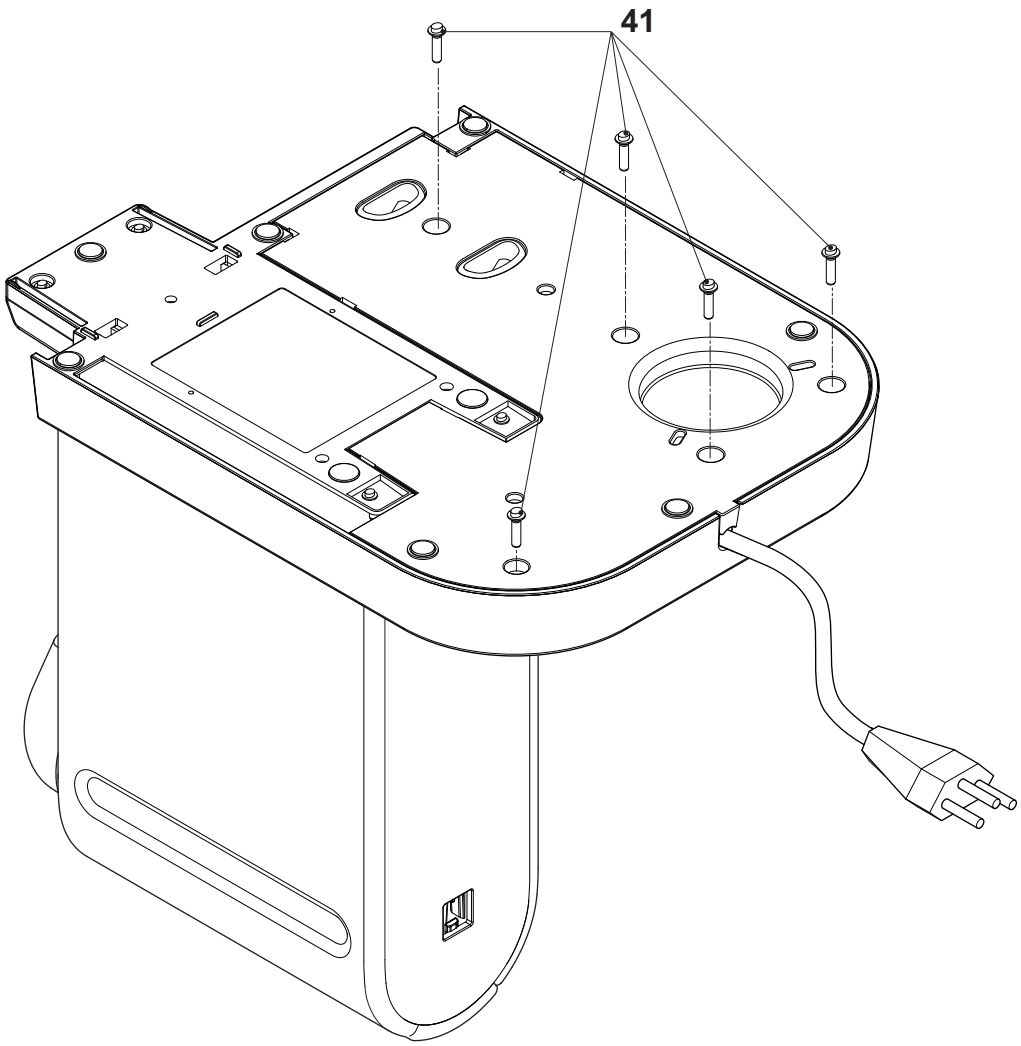
8.5 Platform disassembly - model Citiz & milk

8.5.1 General disassembly

This general disassembly
- is necessary before the removal/disassembly of a core unit is possible,
- gives access to the components and wiring of the platform.

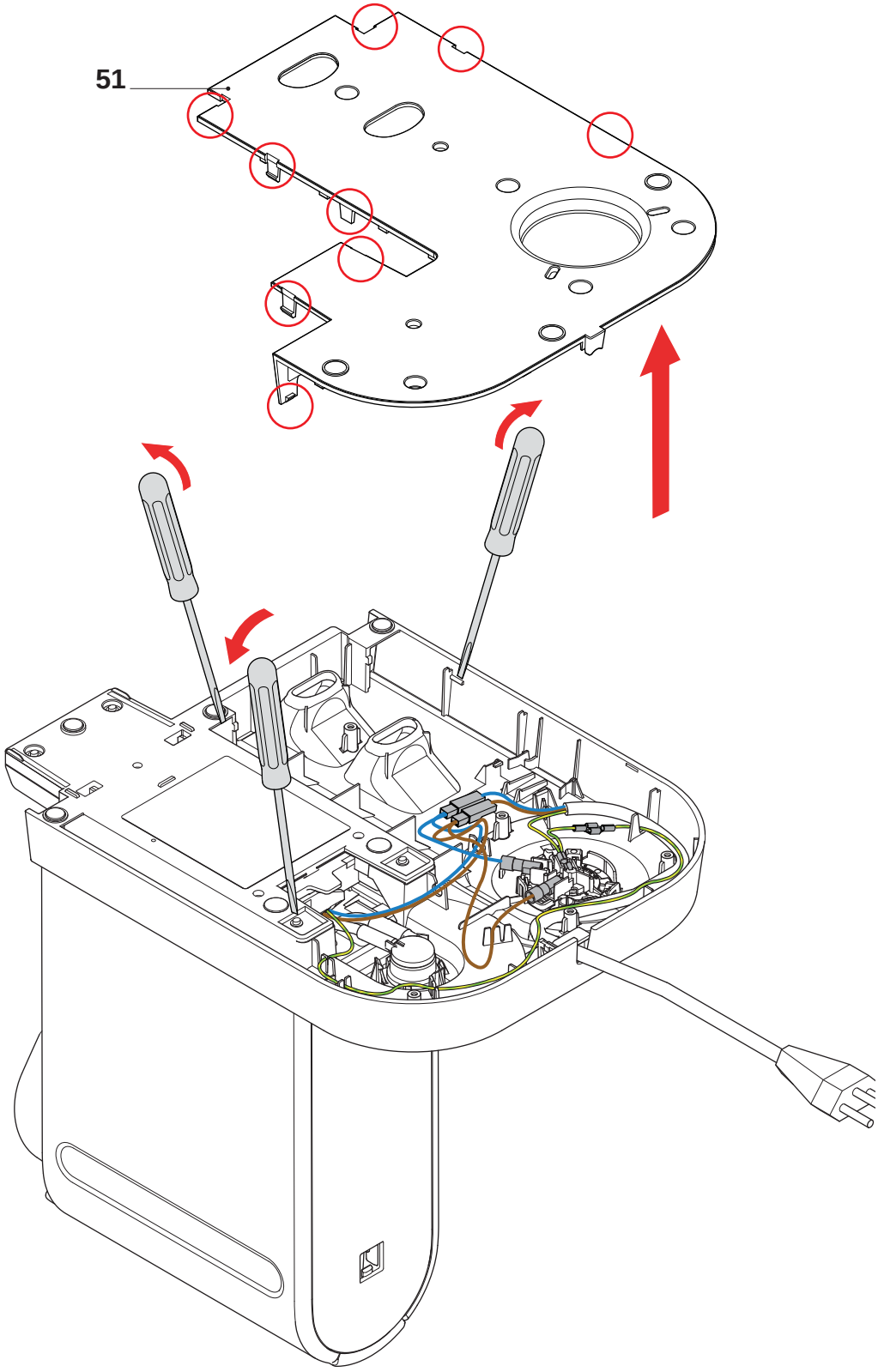


- Take away all removable parts from platform and core unit
  - cup support (8) with waste water container (6)
  - capsule container (7)
  - drip tray (48) with drip grid (49)
  - water tank (44) with cover (45)
  - milk frother (70) with lid and seal (68)
  - cup storage (58)
  - whisk for hot milk (67)
  - spring whisk for milk foam (66).



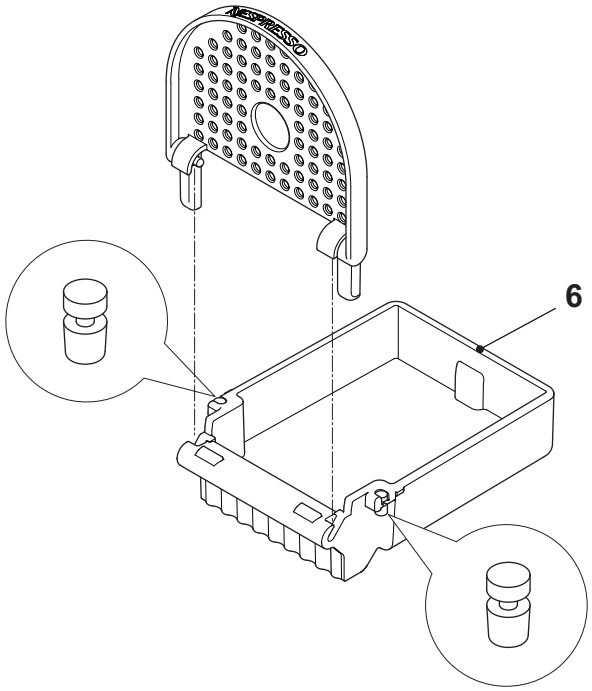
- At the bottom side of platform loosen 5 screws (41, oval shaped head).

Latches on the bottom cover (51) are red circled for easy identification.



- Insert screwdriver into recesses and swivel screwdriver to remove bottom cover (51).

Assembly checkpoints

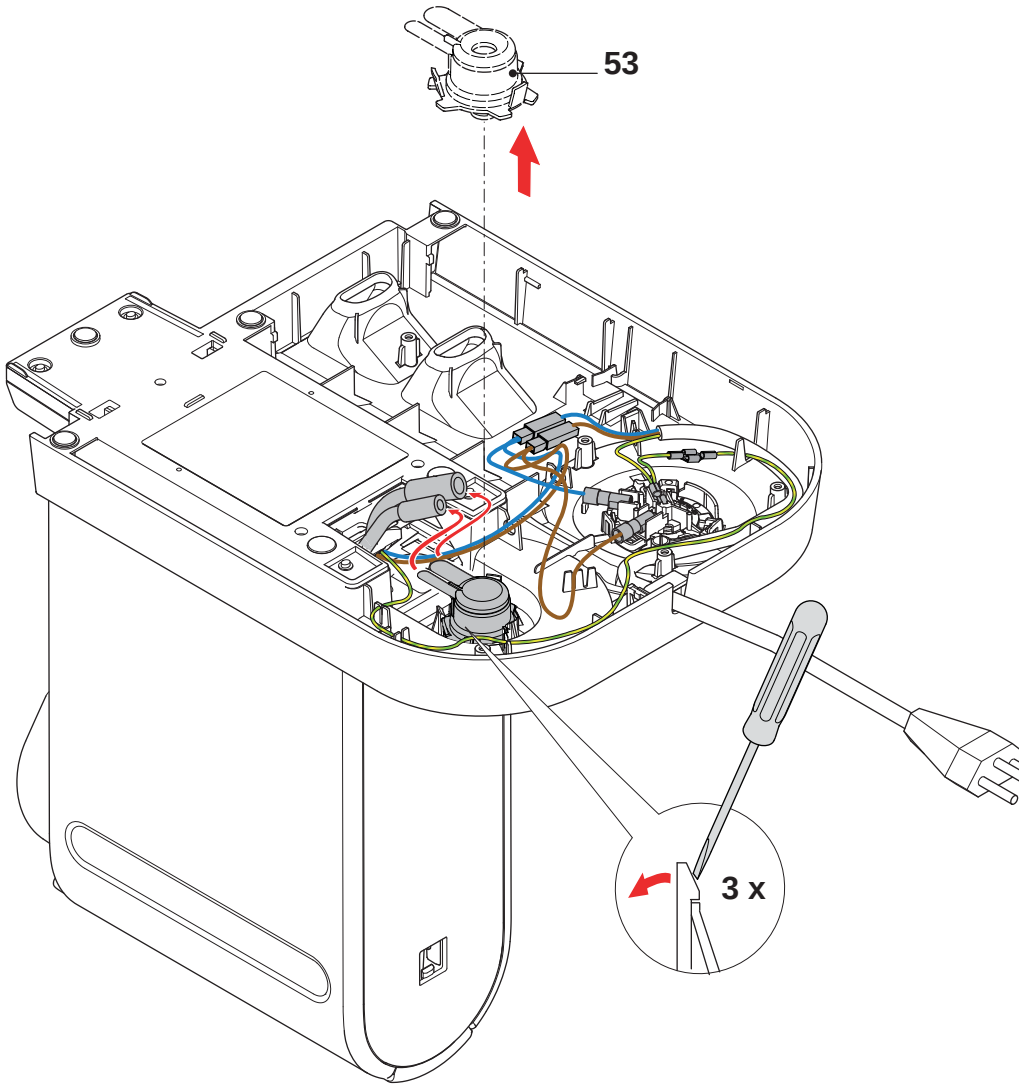


- Check if 2 rubber stoppers are mounted on waste water container (6).

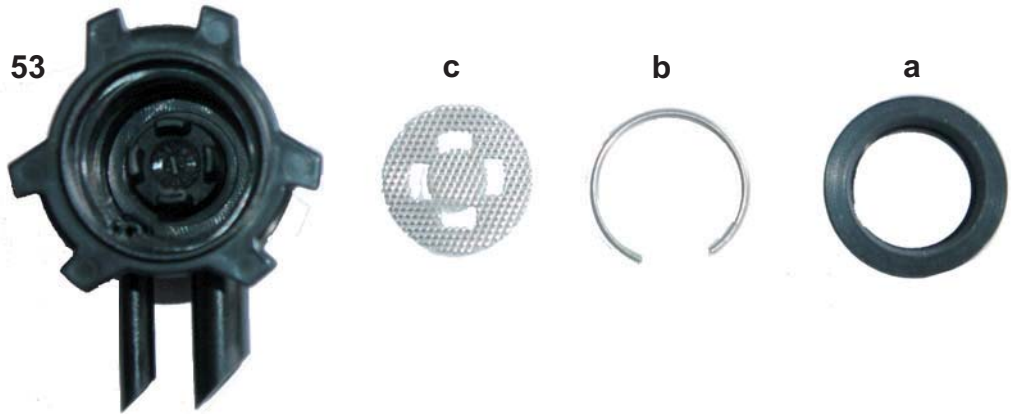
Risk of damage!
While assembling the protective cover at the platform, take care not to jam any wires at the screw connections.

8.5.2 Replacing water tank connector

The water tank connector (53) is replaced together with gasket, clamping ring and metal sieve.

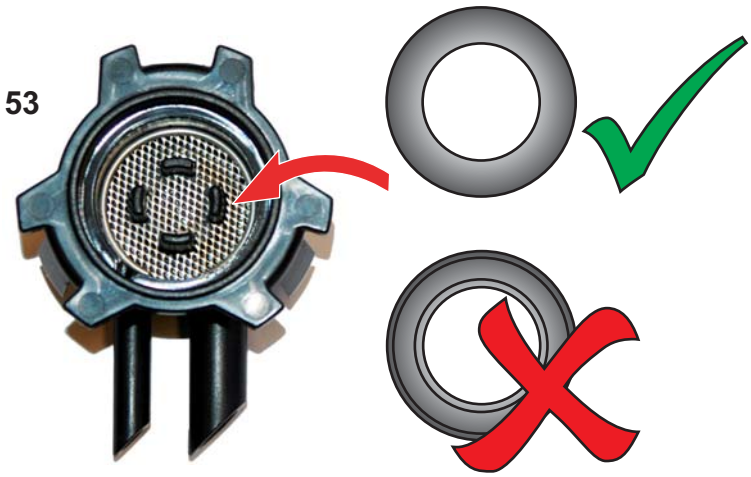


- Pull off both hoses from water tank connector (53).
- Release the 3 latches around the water tank connector one after the other by pressing the top of their hooks outwards with a screwdriver (see detail) and lifting the water tank connector at the same time.



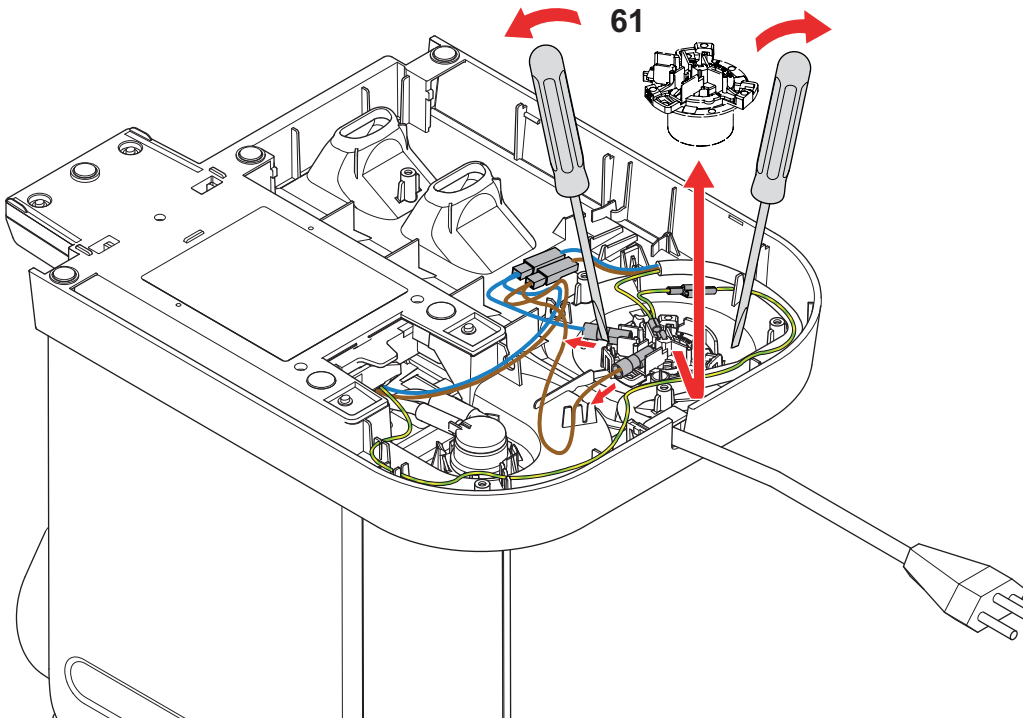
1. Remove gasket (a) from water tank connector (53).
2. With the help of a pair of tweezers, remove clamping ring (b) and metal sieve (c).
3. Clean or replace parts.

Assembly checkpoints



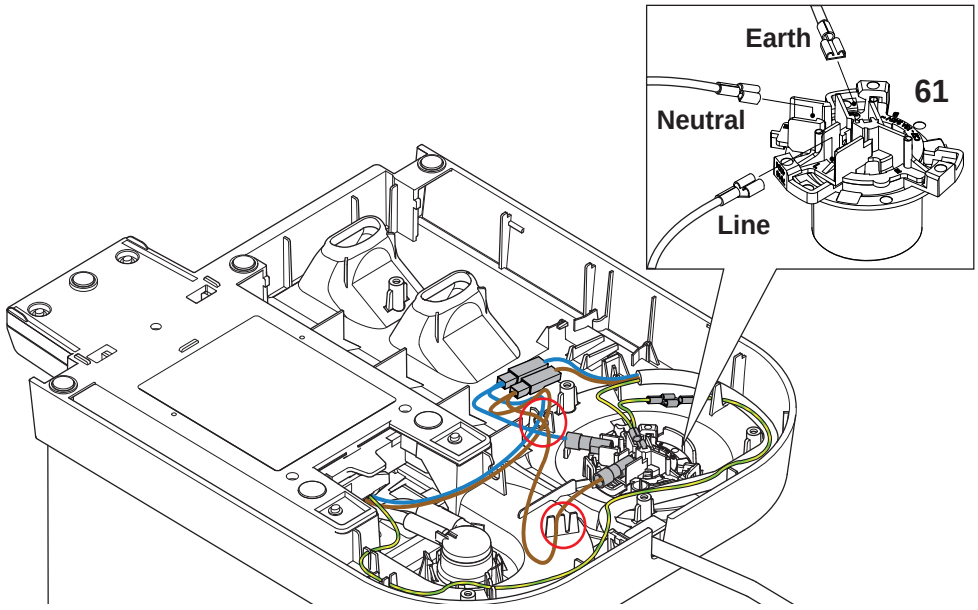
- Check that gasket is inserted in water tank connector (53) correctly.
- During assembly of the water tank connector on the platform, each of its 3 latches has to engage with an audible click.
- Mind the different diameters of hoses for the water tank connector.

8.5.3 Replacing milk frother connector



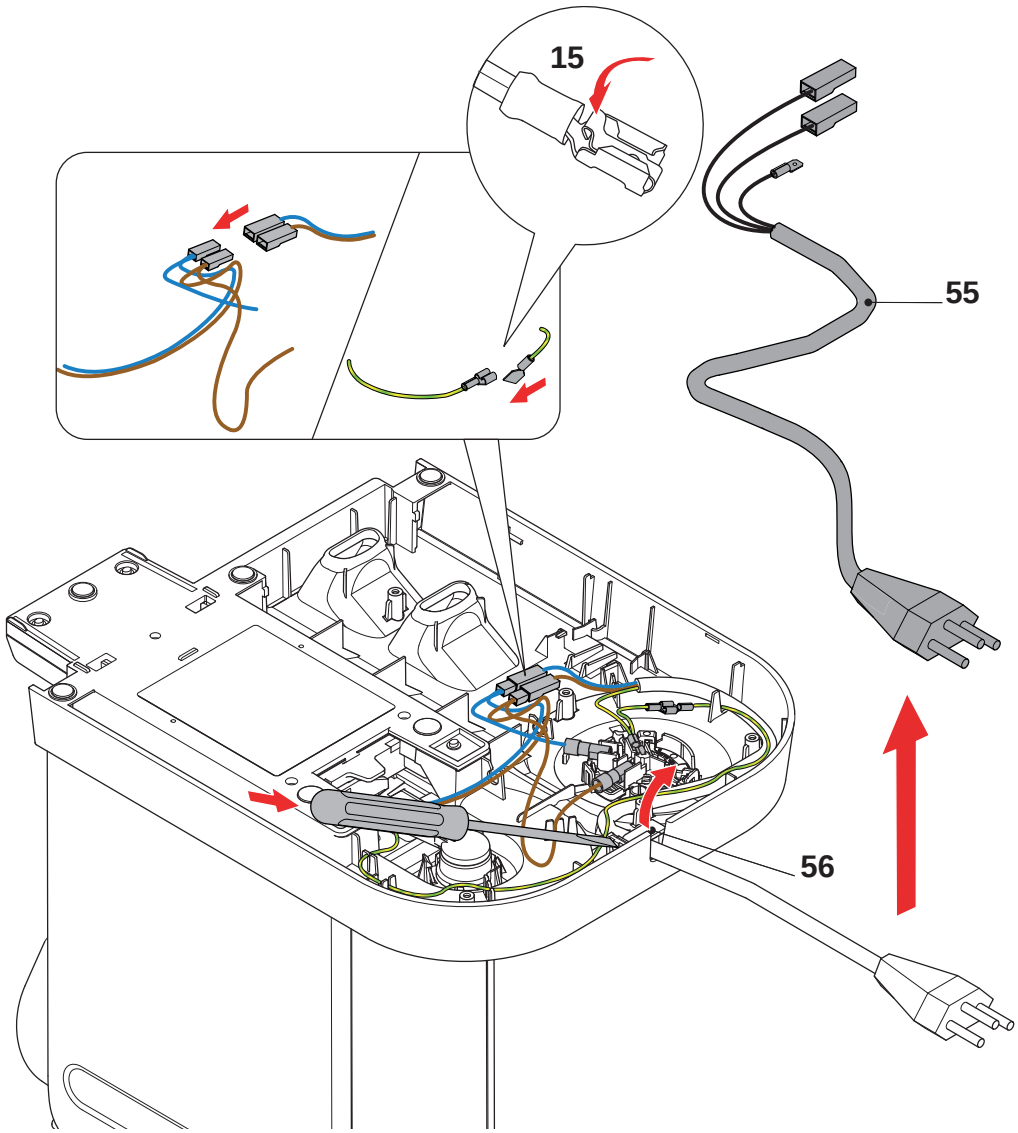
- Remove 3 small faston receptacles from milk frother connector (61).
- Remove milk frother connector (61) by releasing 2 latches and swivel connector out from under the hook.

Assembly checkpoints



- Use marked cable guides to lay wires.
- Check wiring of milk frother connector (61), see detail.

8.5.4 Replacing power cord



- Disconnect 2 insulated faston receptacles (55).

Use a pair of flat pliers to pull off insulating sleeve with receptacle.

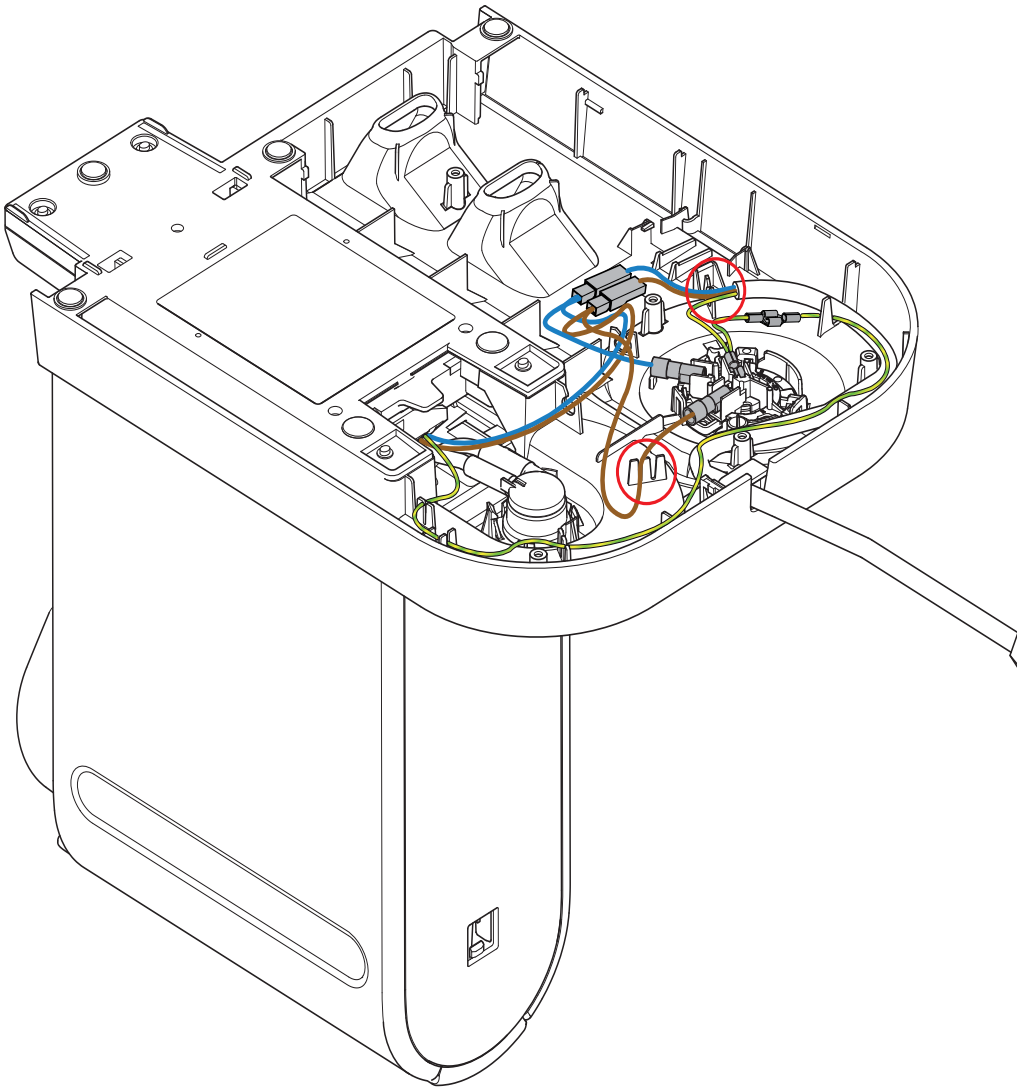
- If present, disconnect ground wire (15, part of thermoblock assembly).

The counterpart, a flat receptacle, has a special connector latching (see detail). Press down lever at first, then pull off receptacle.

- Unlatch cable bracket (56) with screwdriver.

The cable bracket is under tension. Therefore, hold the cable bracket with your finger when unlatching it.

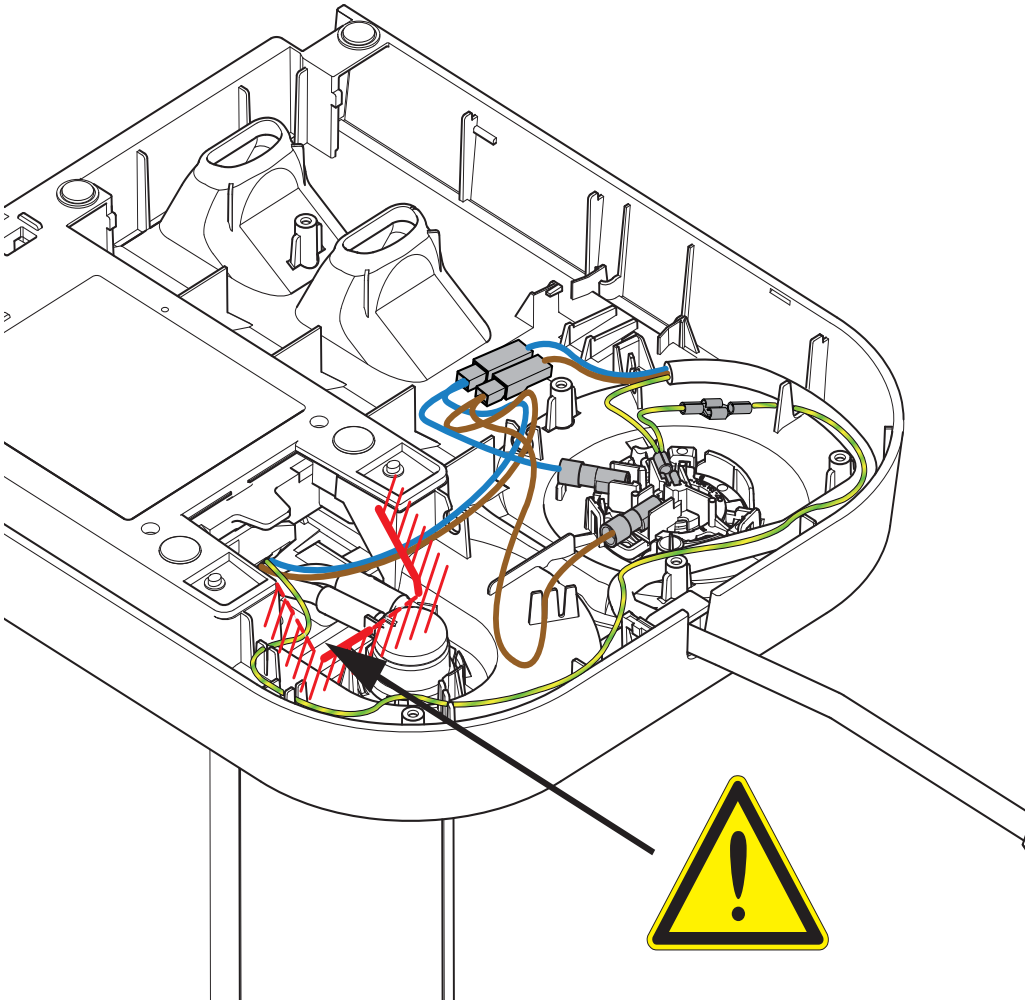
Assembly checkpoints



- Use marked cable guides to lay wires.
- Check wiring of power cord (see "Wiring diagrams - model Citiz" on page 97 and following).

8.5.5 Removing core unit

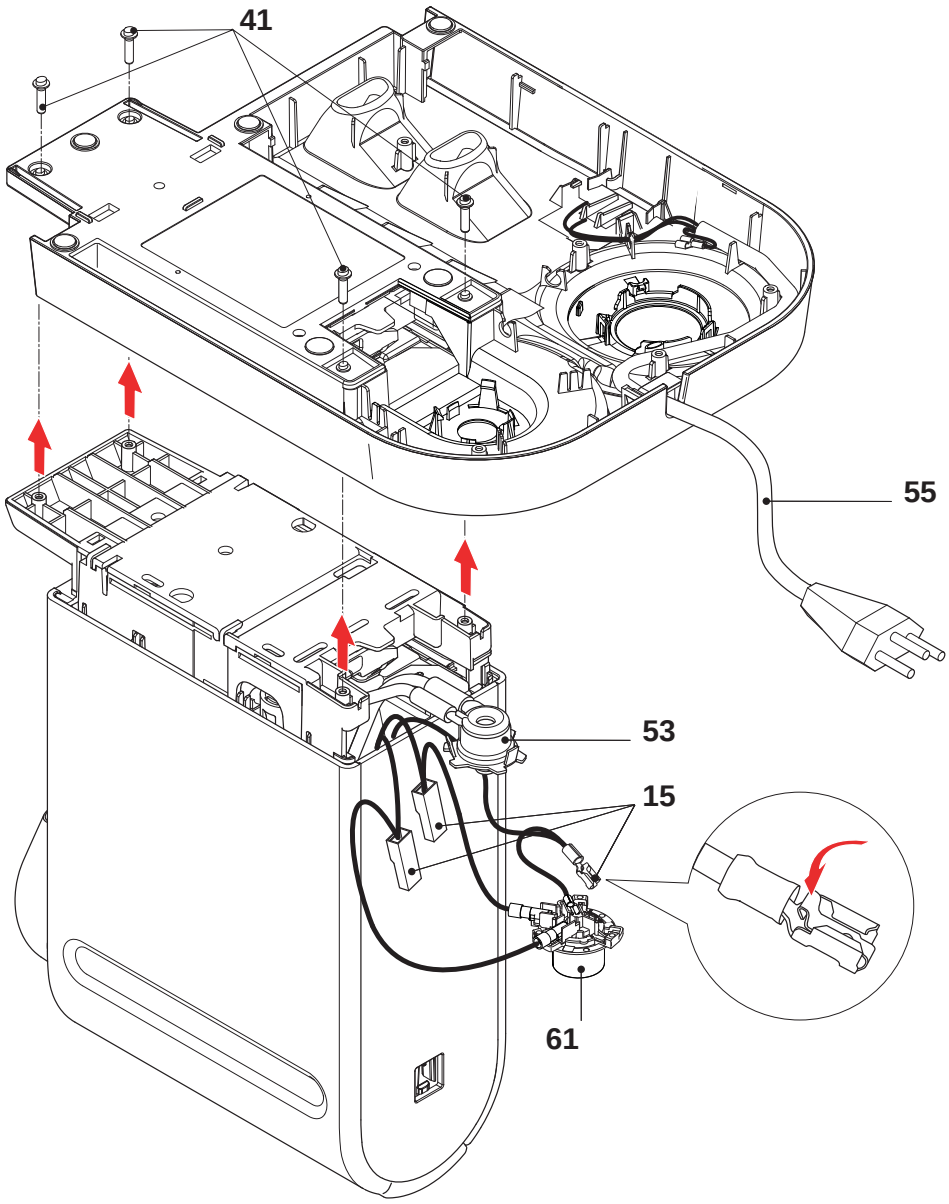
Pay attention to the following safety advice before removing the core unit.



Danger of insulation damages (cuts) on wires between core unit and platform (phase and neutral wire, ground wire if existing).

The sharp casing edges of the platform (marked red in above illustration) can damage the insulation of wires.

Do not stretch and reciprocate wires over sharp edges while removing the core unit.



- Loosen 4 screws (41, oval shaped head) at the bottom side of platform.

For complete removal of the core unit proceed as follows:

- Remove bottom cover (refer to page 48).
- Disconnect both insulated faston receptacles (15).

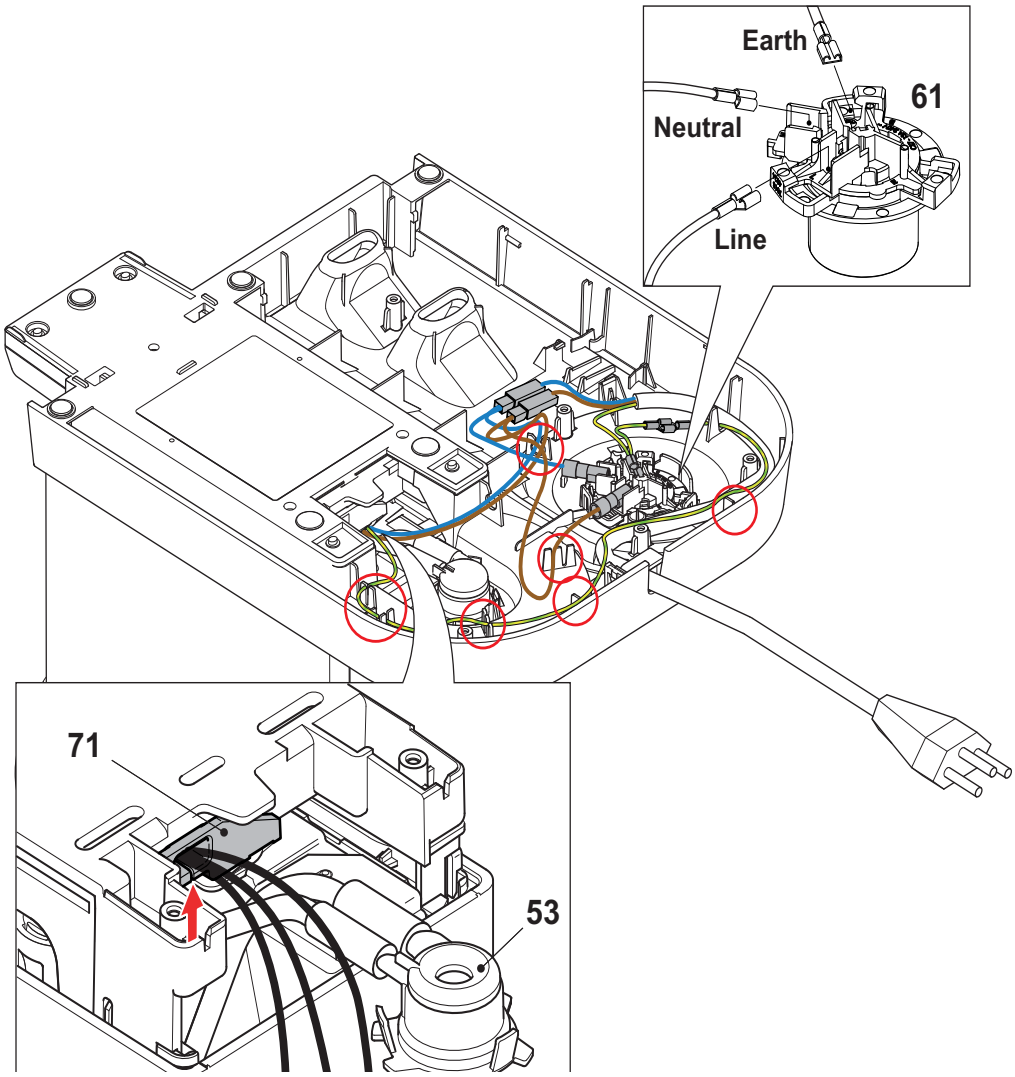
- If present, disconnect ground wire (15, part of thermoblock assembly).
- If the thermoblock or core unit has to be replaced, disconnect milk frother connector (61). Otherwise the core unit can be removed together with this connector (see page 64).
- Remove water tank connector (53, see page 62).

After this repair step the core unit can be pulled out of the platform slightly (with still connected hoses and wires). Now the covers of the core unit can be removed.

Use a pair of flat pliers to pull off insulating sleeve with receptacle.

The flat receptacle on the ground wire has a special connector latching (see detail). Press down lever at first, then pull off receptacle.

Assembly checkpoints



- All covers are assembled on the core unit.
- Check that wiring between core unit and platform is led through cable fixation (71).
- Use marked cable guides to lay wires.
- Check wiring of milk frother connector (61), see detail.
- During assembly of the water tank connector (53) on the platform, each of its 3 latches has to engage with an audible click.

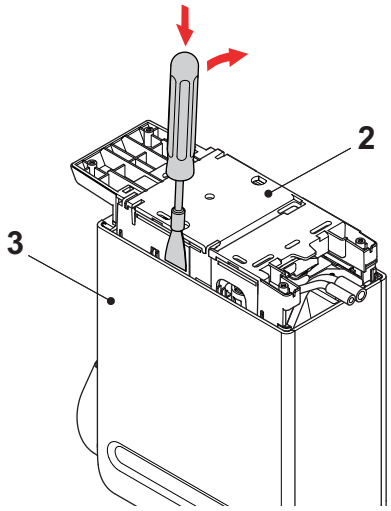
8.6 Disassembly of core unit, C-range

8.6.1 General disassembly

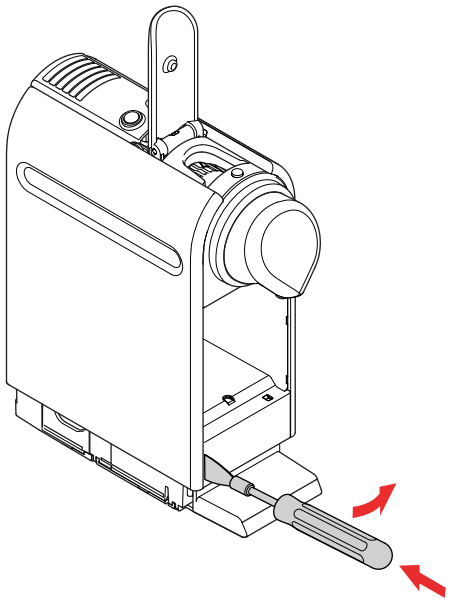
After general disassembly of the core unit a repairing / service holder device is helpful for further repair work.

The core unit has to be removed from the platform at first (see according chapter "platform disassembly"). It is possible to perform a general disassembly of the core unit with intact hose and wire connections to the platform (e.g. for repair, leakage check).

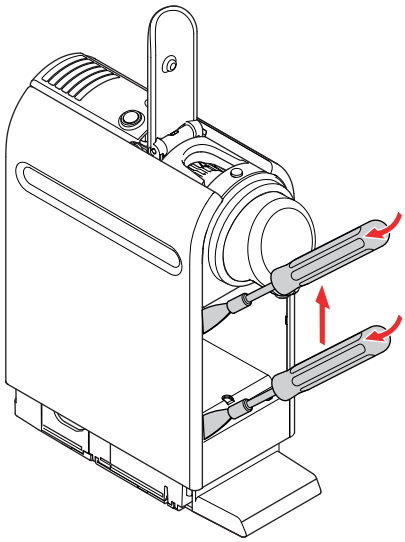
Remove left side panel



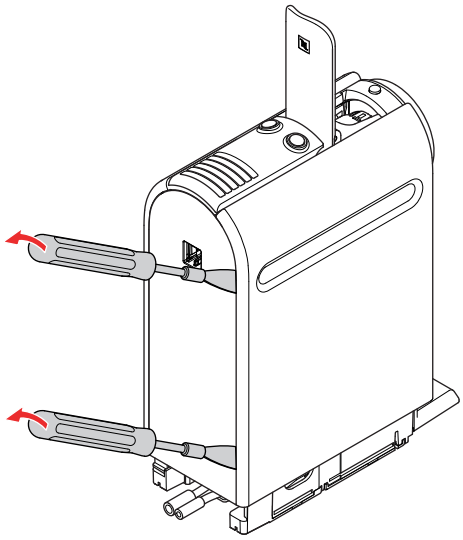
1. Insert disassembly tool between bottom of left side panel (3) and chassis (2).
2. Swivel disassembly tool till latch opens at the bottom.



3. Insert disassembly tool into lower gap at the front.
4. Carefully turn disassembly tool slightly to the right to open the latch.

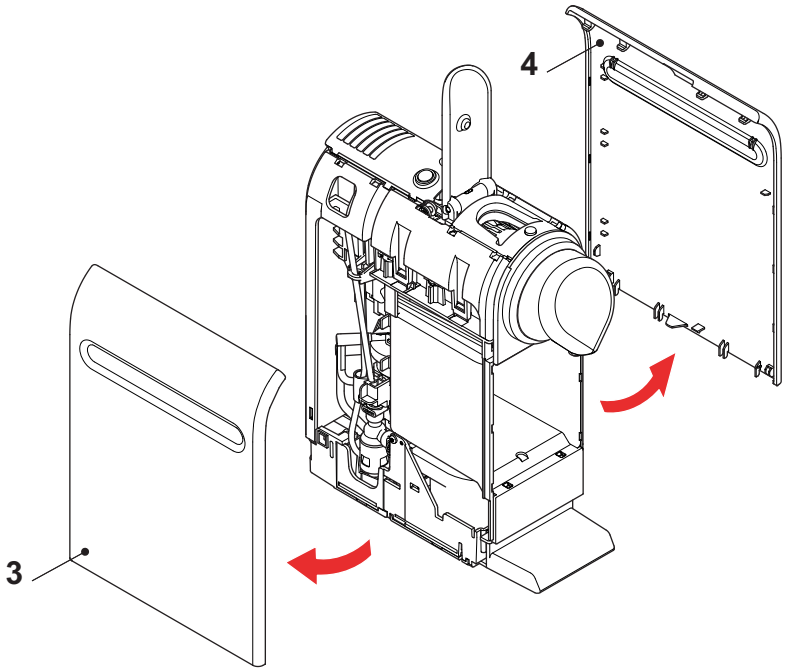


5. Insert disassembly tool laterally into the gap above.
6. Carefully turn disassembly tool slightly forward to open the next latch.
7. Move disassembly tool upwards and open remaining latch the same way.



8. At the back insert disassembly tool into shadow gap of left side panel.
9. Swivel disassembly tool carefully to open first latch.
10. Move disassembly tool upwards and open the other two latches the same way.

Insert disassembly tool at right angles only. Otherwise the shadow gap can be damaged.

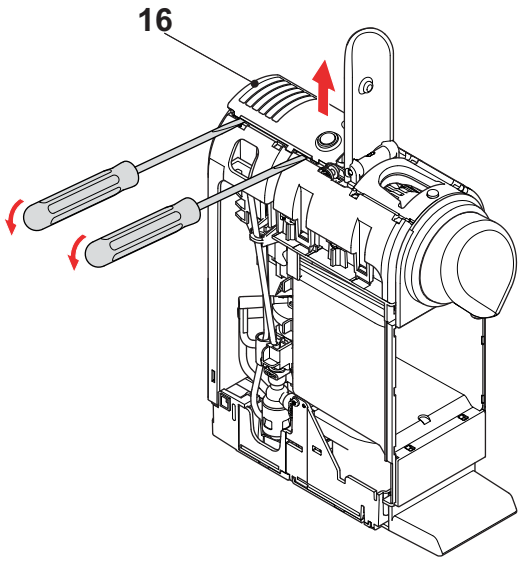


11. Swing up and remove left side panel.

Remove right side panel

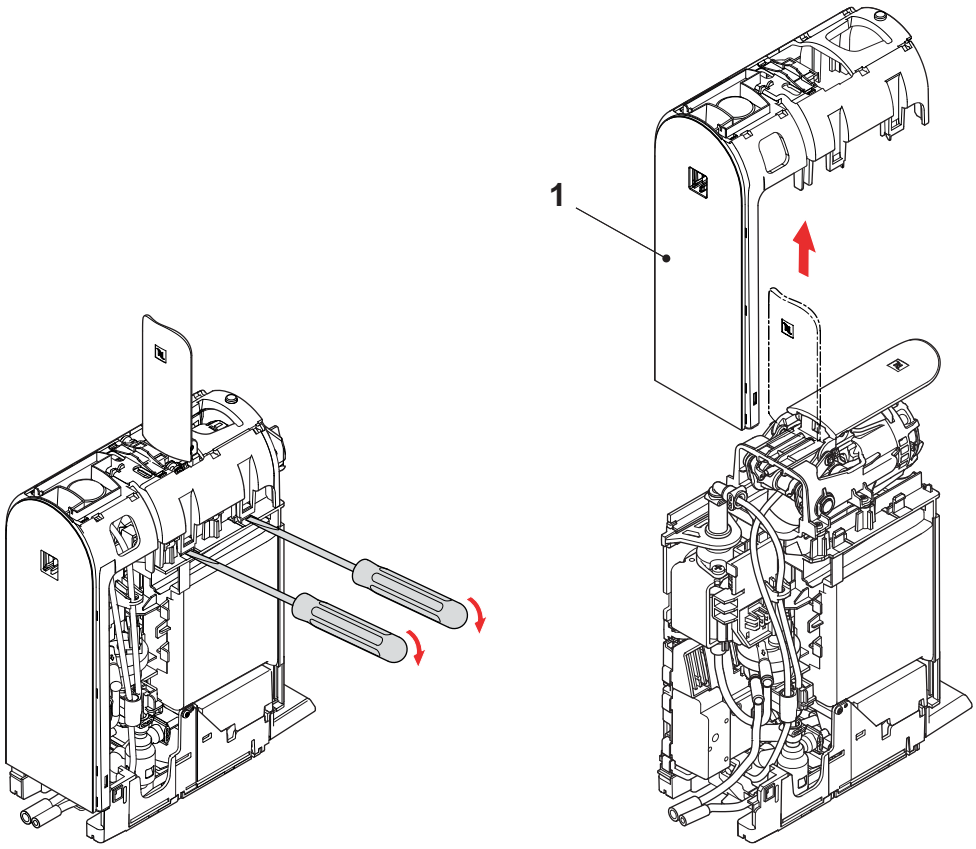
Remove the right side panel (4) in the same sequence as for the left side panel (3).

Remove blind



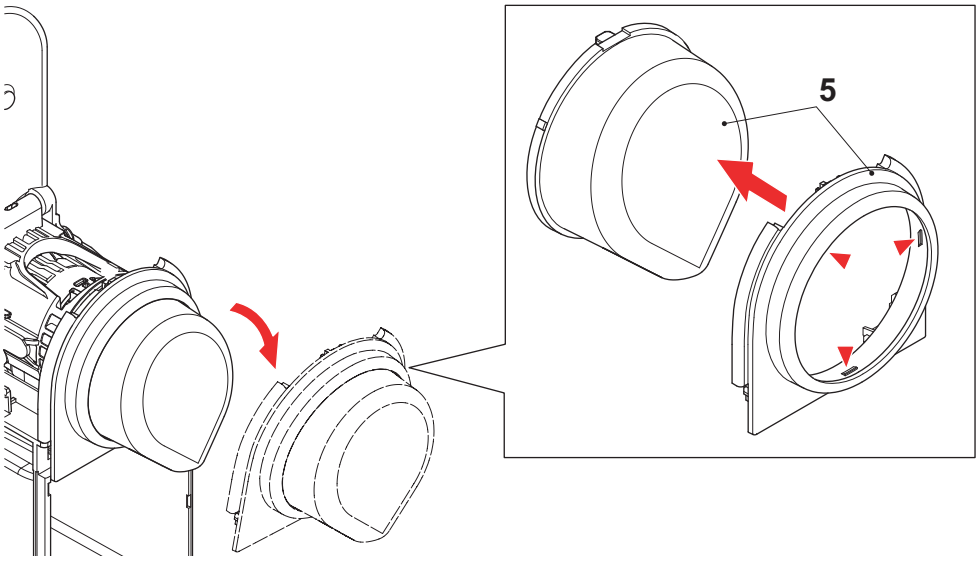
1. Open 2 latches on each side of blind (16) with screwdriver.
2. Remove blind together with coffee buttons and wiring.

Remove cover



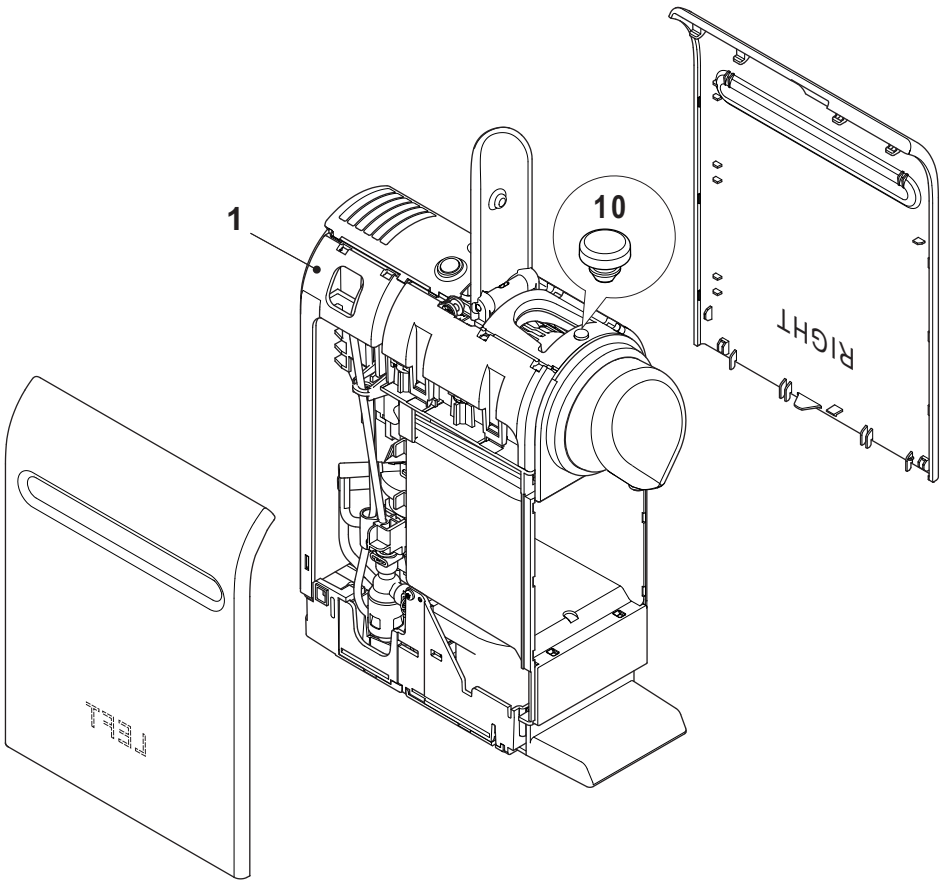
1. Use a screwdriver to release 2 latches on each side.
2. Lift and remove cover (1).

Remove front cover with outlet



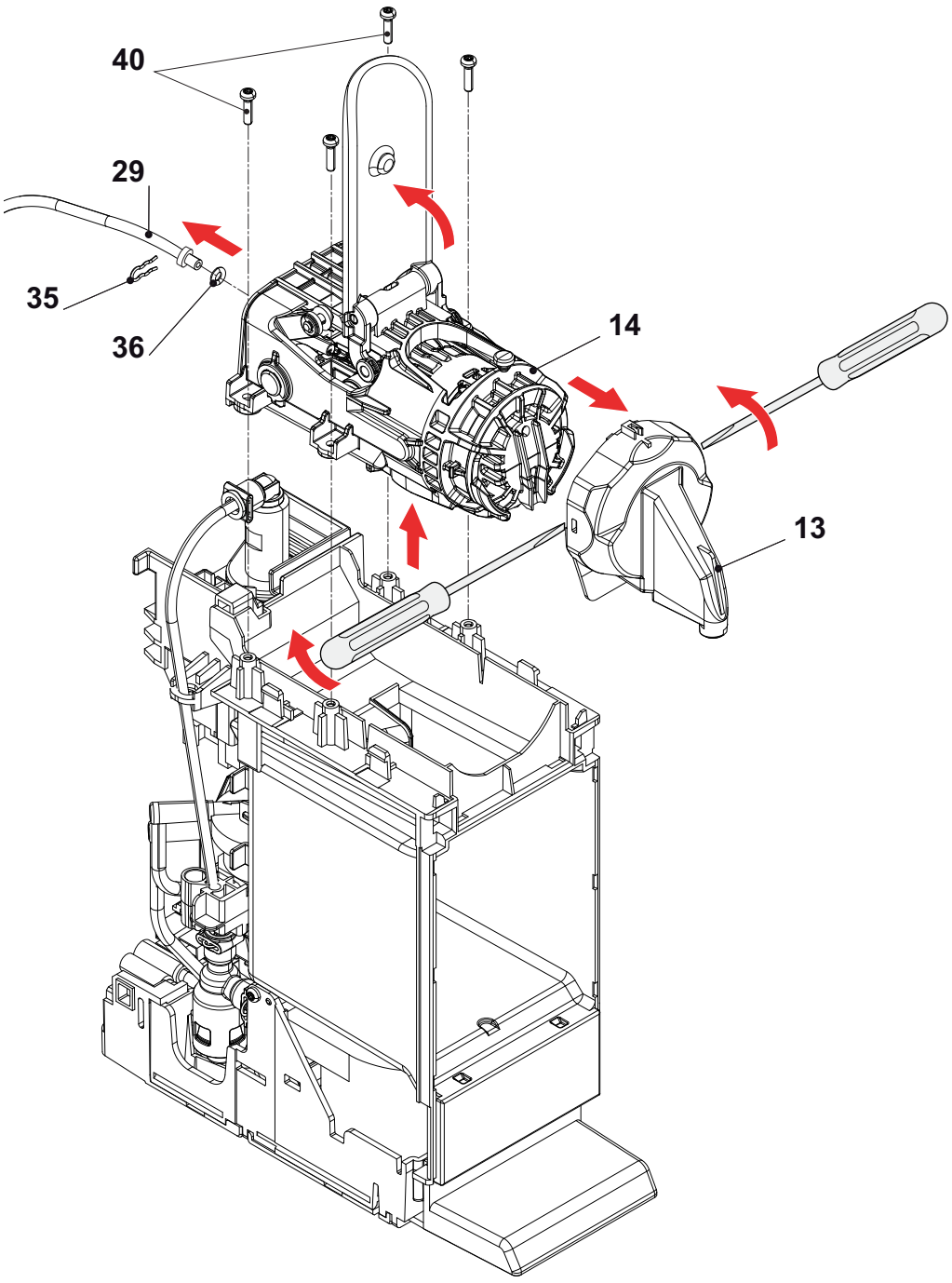
1. Release 3 latches on front cover by hand and press out outlet (5, see detail).

Assembly checkpoints



- For easy identification, the side panels are marked with "RIGHT" or "LEFT" on the inside.
- Check if damper (10) for closing handle is installed on cover (1).
- Check that all connection wires to the platform are led through cable fixation (71).

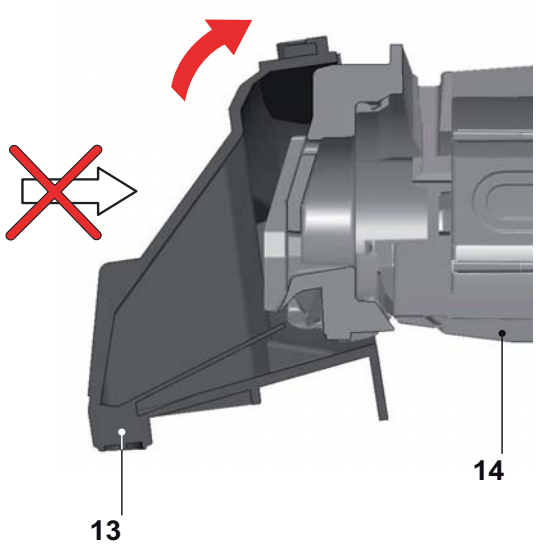
8.6.2 Replacing compact brewing unit



- Use a pair of pointed pliers to remove connector clip (35) and hose (29) with O-ring (36).
- Use Torx screwdriver TX10 to loosen 4 screws (40).
- After removal of compact brewing unit (14), release 2 latches with screwdriver and remove steam cover (13).

Open closing handle to get access to hose connection.

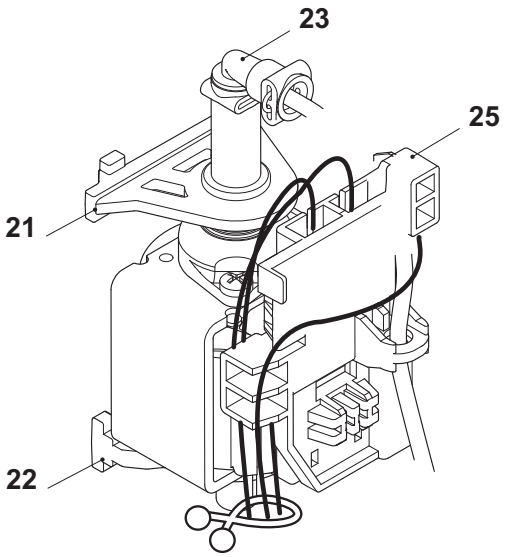
Assembly checkpoints



- At first assemble steam cover (13) on new compact brewing unit (14) as shown.
- Replace O-ring (36) of hose connection on compact brewing unit.

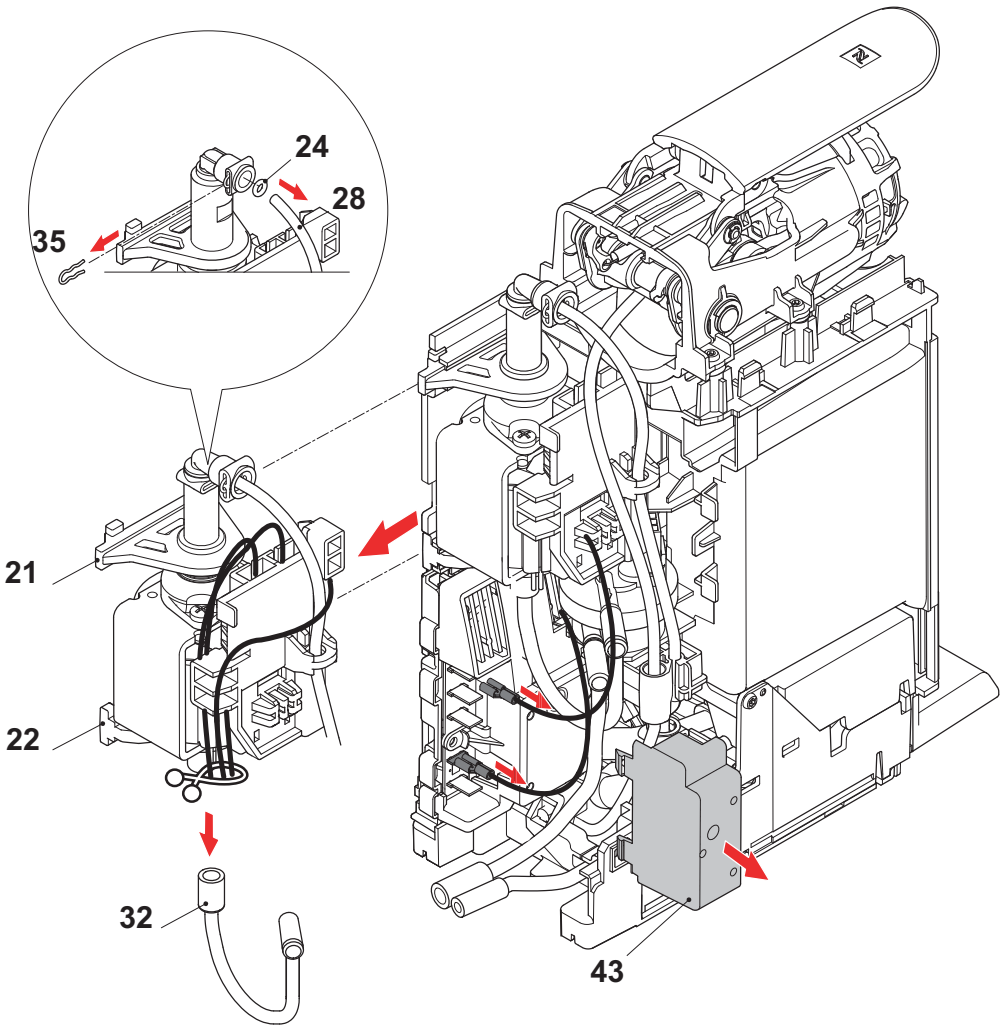
8.6.3 Replacing pump

General



The pump is available only completly equipped (20) with:
- pump prewired with thermal cut off
- 2 pump supports (21, 22)
- pump cover (25)
- connect elbow (23) with o-ring and clip

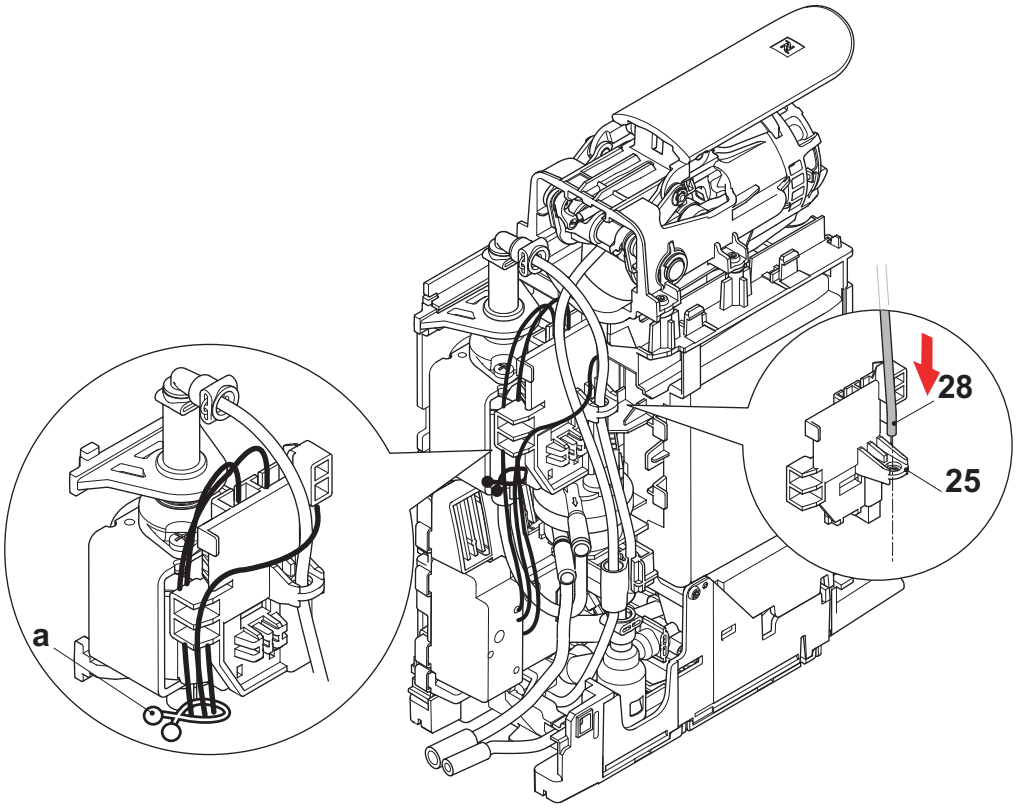
Replacing pump assembly



- Remove both hoses (28) from pump. Use a pair of pointed pliers to remove connector clip (35) with O-ring (24).
- Remove cover (43) from electronic control board and disconnect 2 faston receptacles of pump wires.
- Pull out supports (21, 22) together with complete pump assembly.

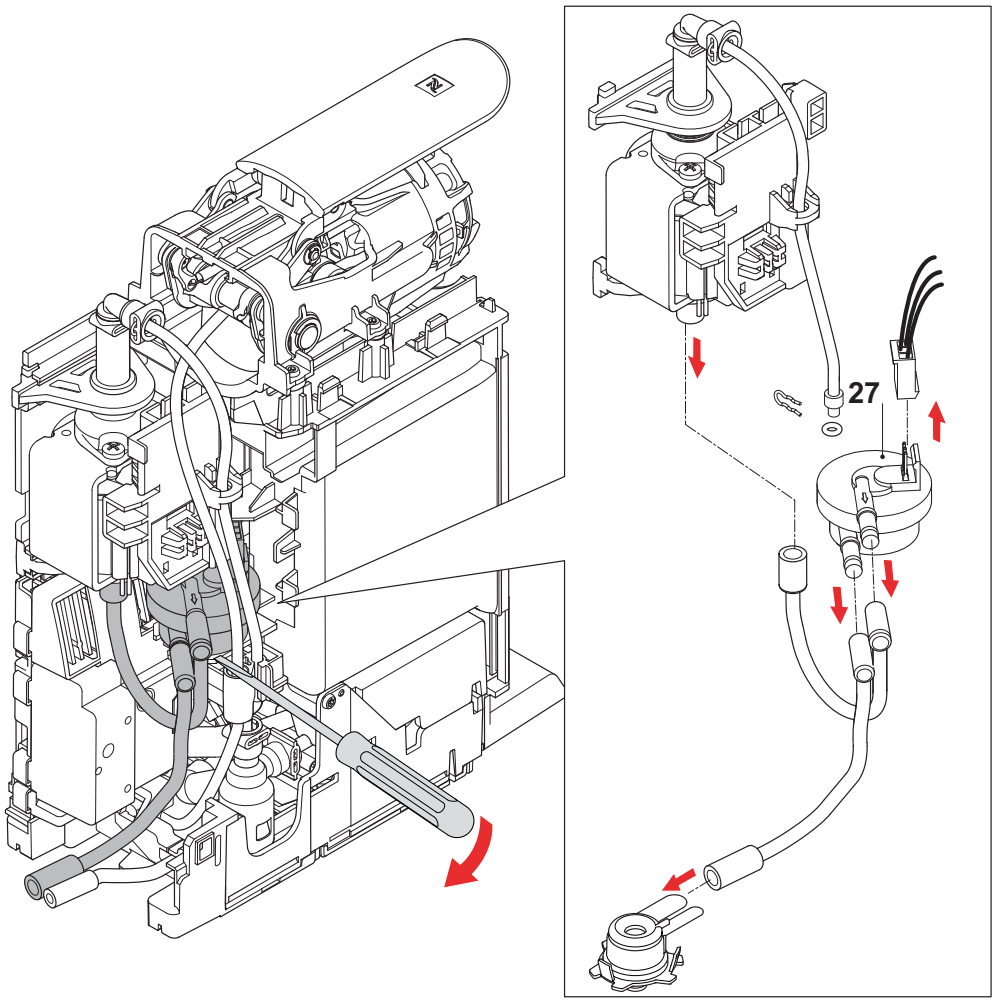
Assembly checkpoints

- Check condition of supports (21, 22). Replace brittle supports.

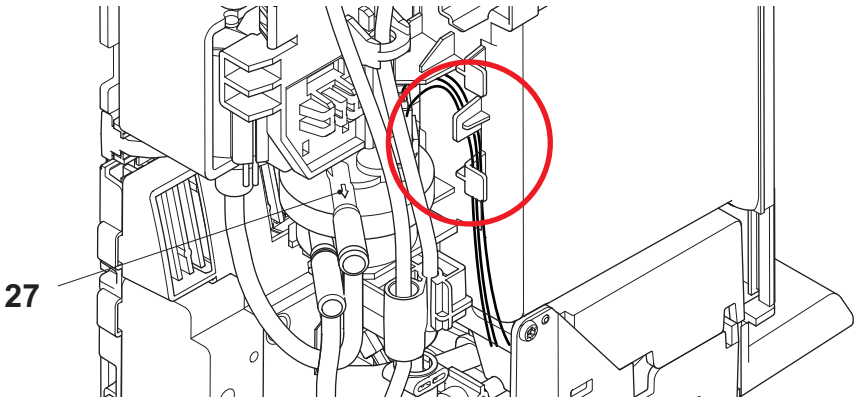


- Pass hose (28) from pump to self priming device through lug on pump cover (25).
- Use a cable clamp (a) to fix pump wires.

8.6.4 Replacing flow meter

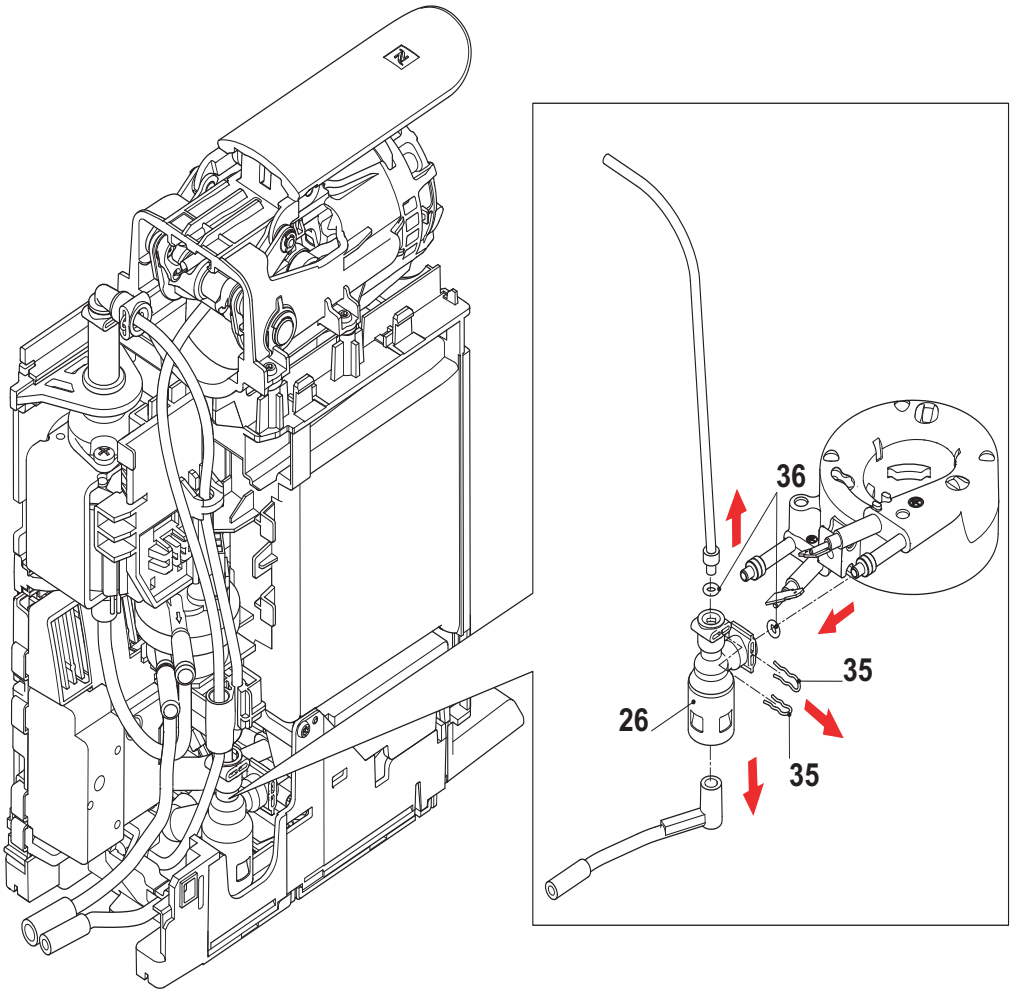


Assembly checkpoint



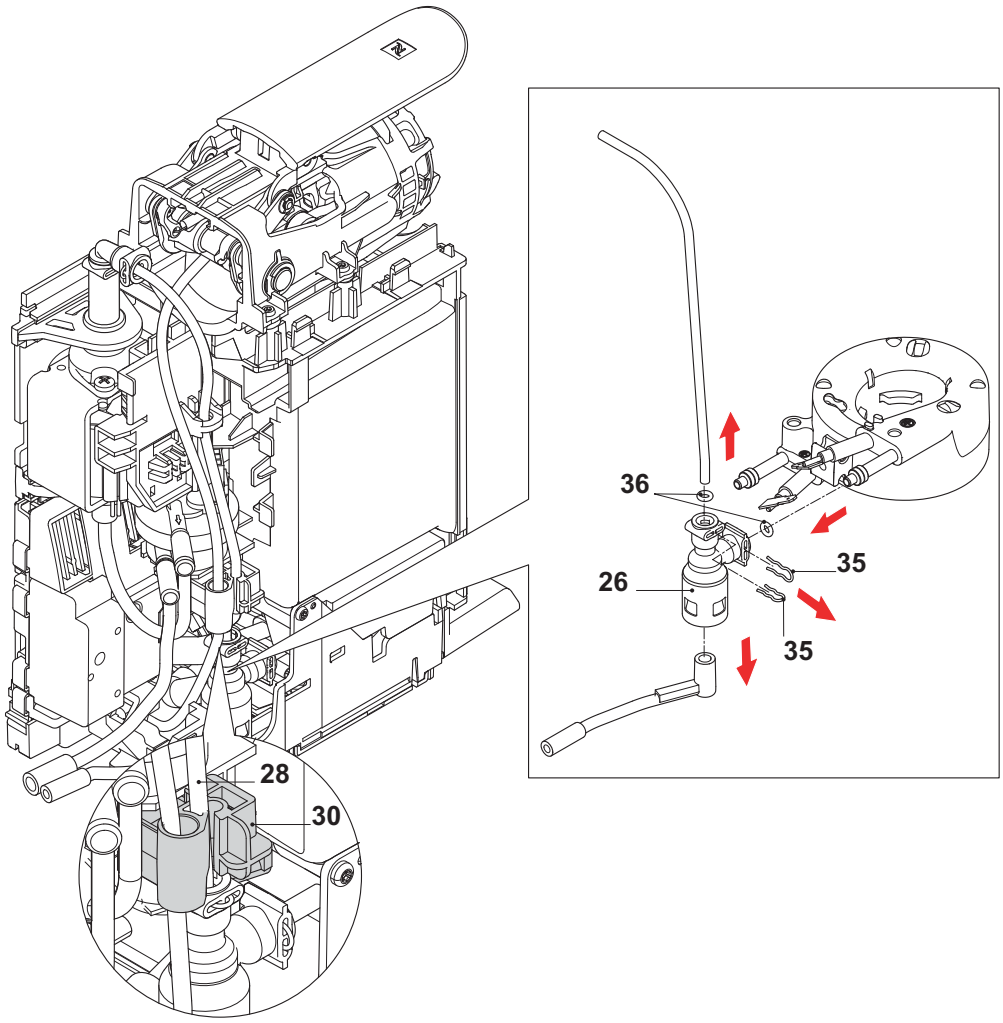
- Lay connection cable to flow meter (27) in bracket.
- Mind the hose positions on the flow meter.

8.6.5 Replacing automatic priming device (APD)



- Use a pair of pointed pliers to remove connector clips (35) from automatic priming device (26).

Assembly checkpoints



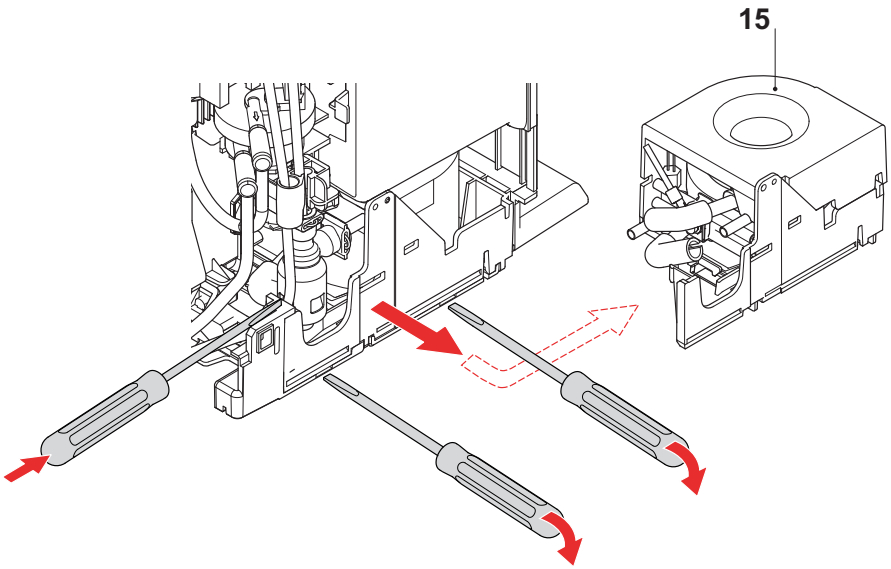
- Replace both O-rings (36) together with automatic priming device (26).
- Insert hose (28) in tube guiding (30).

8.6.6 Replacing thermoblock with NTC sensor and fine wire fuse(s)

A defect thermoblock can only be replaced with an assembly consisting of

- thermoblock, prewired with NTC temperature sensor, fine wire fuse(s) and ground wire (only if required),
- thermoblock support.

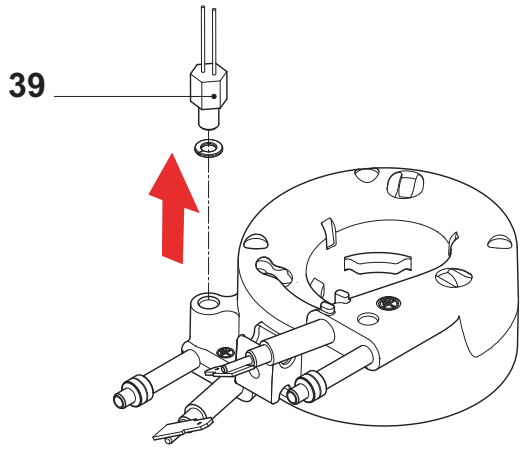
Depending on national regulations, one or two fine wire fuses are mounted on the thermoblock (see “Wiring diagrams” on page 97 and following).



- Release 3 latches and pull out support with thermoblock assembly (15).

Do not stress NTC cable when removing support.

Replacing NTC temperature sensor

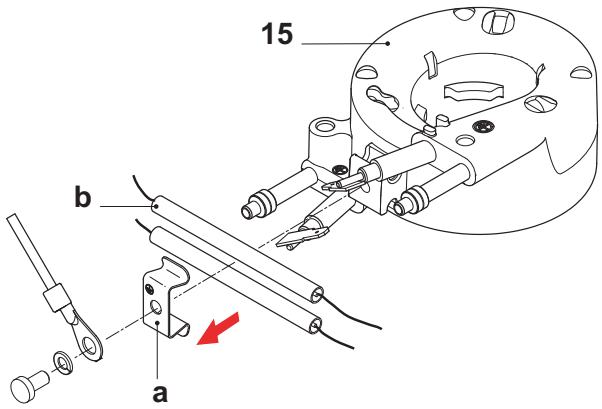


- Unplug NTC sensor cable from electric control board (42) first.
- Test NTC temperature sensor (39), see “Replacing thermoblock with NTC sensor and fine wire fuse(s)” on page 83.

Assembly checkpoint - NTC temperature sensor

- Tighten the new NTC temperature sensor (39) and spring ring with a torque wrench (80 - 100 Ncm).

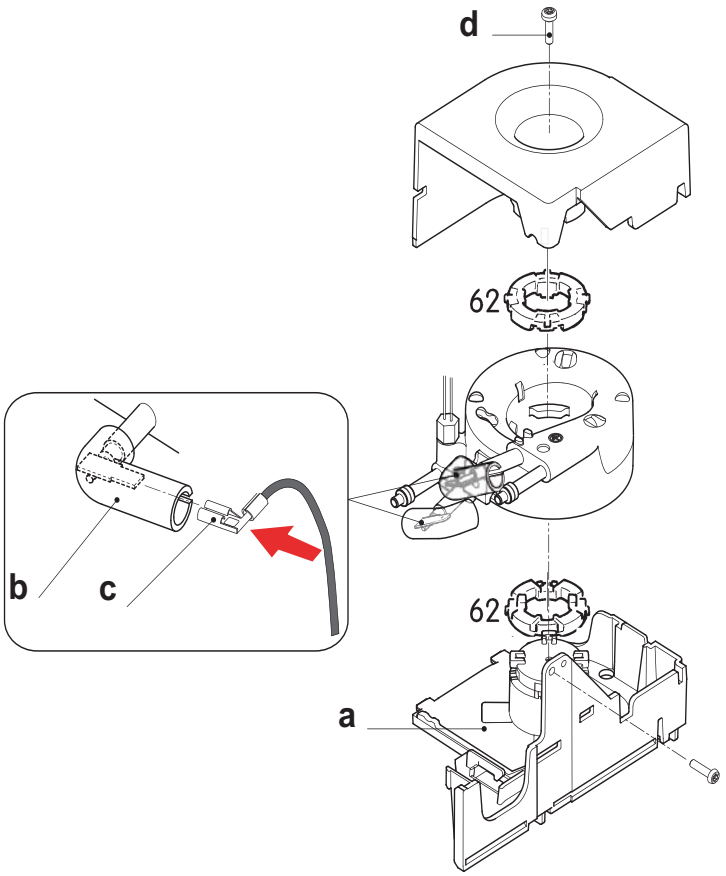
Replacing fine wire fuse(s) (not available separately)



Assembly checkpoints - fine wire fuse(s)

- When mounting a safety clip (a) on the thermoblock (15), make sure that the housing of the fine wire fuse (b) is positioned exactly below the safety clip.
- Tighten fastening screw and spring ring with a torque wrench (150 (+30/-0) Ncm).

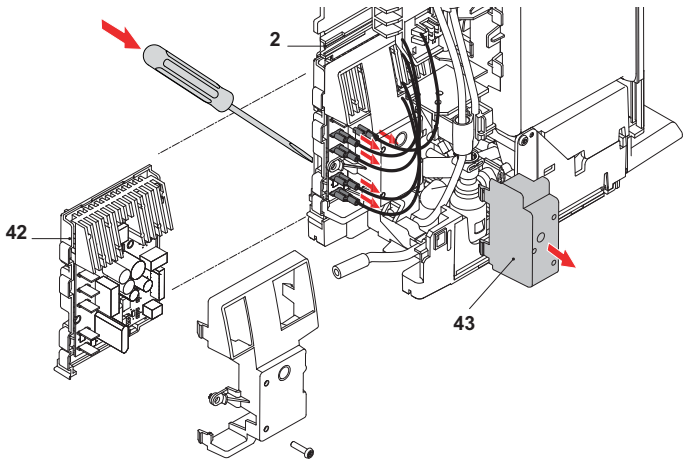
Assembly checkpoints - thermoblock



- All wires from thermoblock to platform must be led through the bracket (a) at the bottom of the support.
- The black grommets (b) on the electrical thermoblock connections are slitted at the end. If an angled Faston receptacle (c) is used, make sure that its wire runs through this slit.
- Damping elements (62) correctly positioned and mount.
- Tighten central fastening screw (d) with a torque wrench (150 (+30/-0) Ncm).

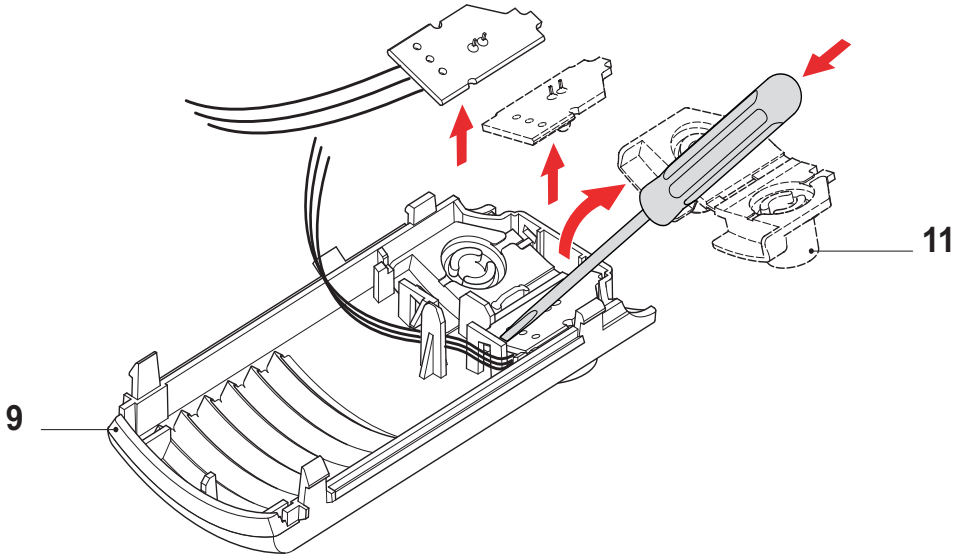
8.6.7 Replacing electronic control board with button prints

The replacement board is equipped with protective housing and cover.

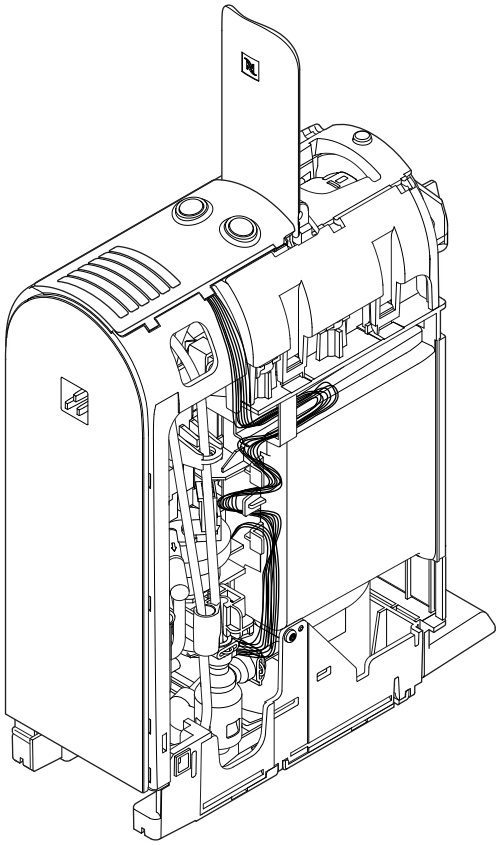


- Remove at first
  - NTC connector from electronic control board,
  - connector cable from flow meter,
  - electronic lid (43),
  - faston receptacles from electronic control board.
- Insert tip of screwdriver between chassis (2) and protective case of electronic control board (42) to release latches. Then pull out assembly.

Replacing button prints / coffee buttons



Assembly checkpoints



- After assembly check the plug arrangement of the electronic control board (see “Wiring diagrams” on page 97 and following.
- Lay connection wires to button prints in brackets and cable guide like shown.

⚠ **For installing and connecting a new electronic control board, the service technician must be earthed with a grounding band.**

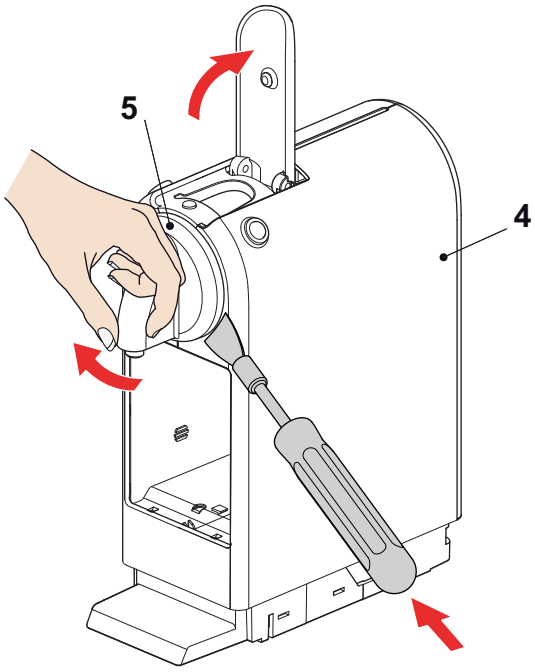
8.7 Disassembly of core unit, D-range

8.7.1 General disassembly

After general disassembly of the core unit a repairing/service holder device is helpful for further repair work.

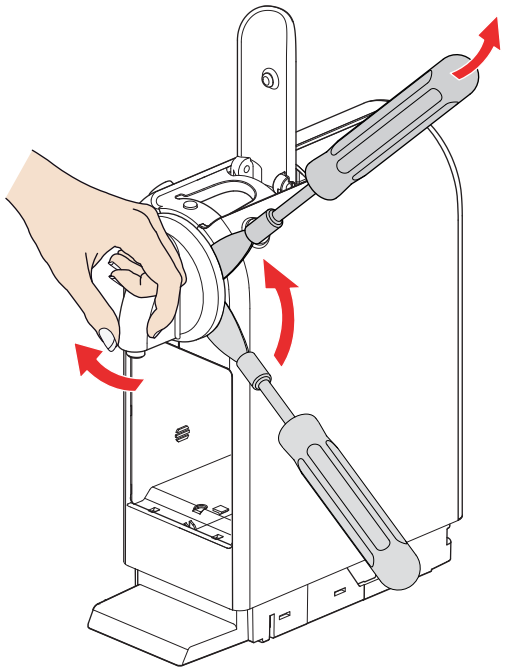
The core unit has to be removed from the platform at first (see according chapter "platform disassembly"). It is possible to perform a general disassembly of the core unit with intact hose and wire connections to the platform (for repair, leakage check etc.).

Remove outlet



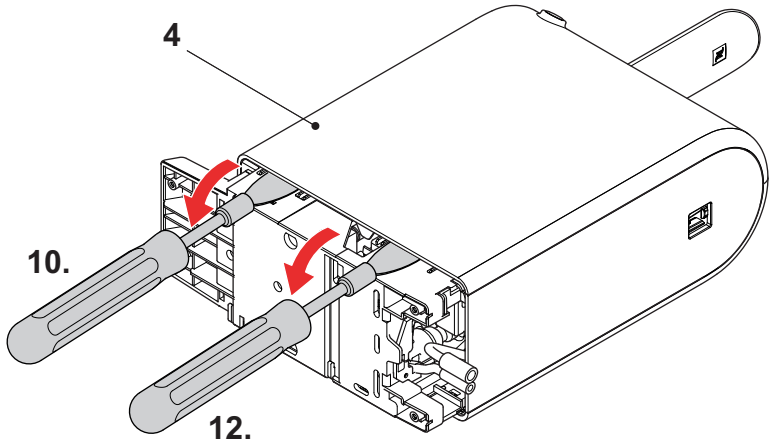
The disassembly tool is necessary for removing outlet and side panels undamaged.

1. Open closing handle.
2. Press outlet (5) sidewards by hand carefully.
3. Insert disassembly tool into gap between outlet and right side panel (4).

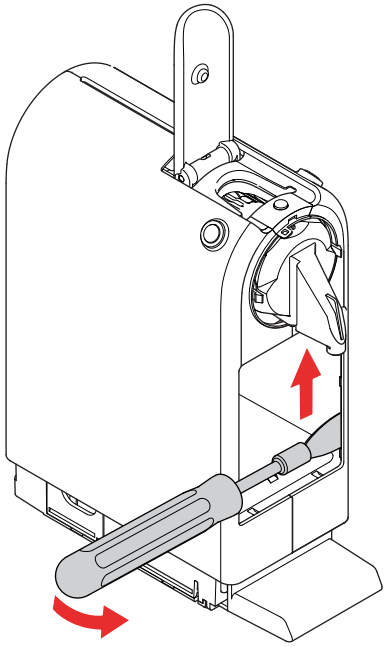


4. Hold and pull outlet.
5. At the same time move disassembly tool upwards.
6. Carefully turn disassembly tool slightly backward to open the latch.
7. Insert disassembly tool into gap on the other side of the outlet.
8. Move disassembly tool upwards and carefully turn it slightly backward to open the latch.
9. Remove outlet.

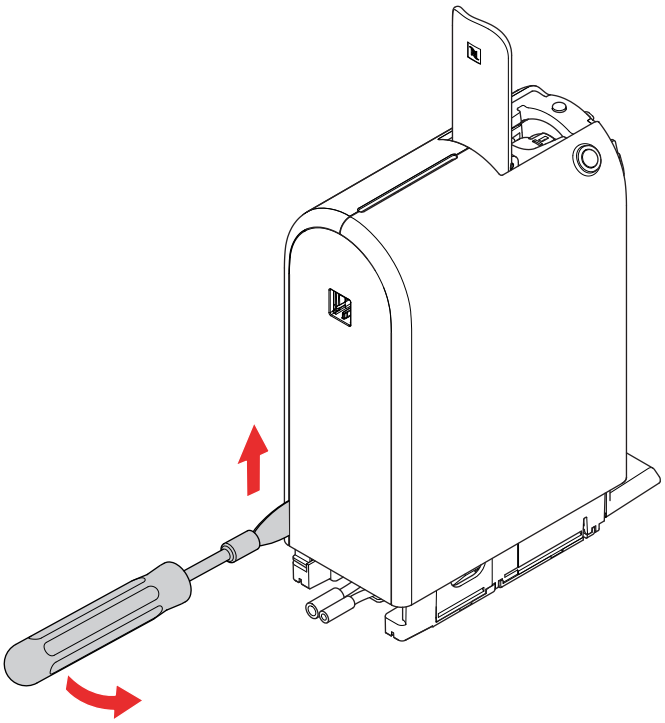
Remove right side panel



10. Insert disassembly tool between bottom of right side panel (4) and chassis.
11. Swivel disassembly tool till snap connection at the front opens.
12. Relocate disassembly tool and repeat procedure to open latch at the bottom of the side panel.

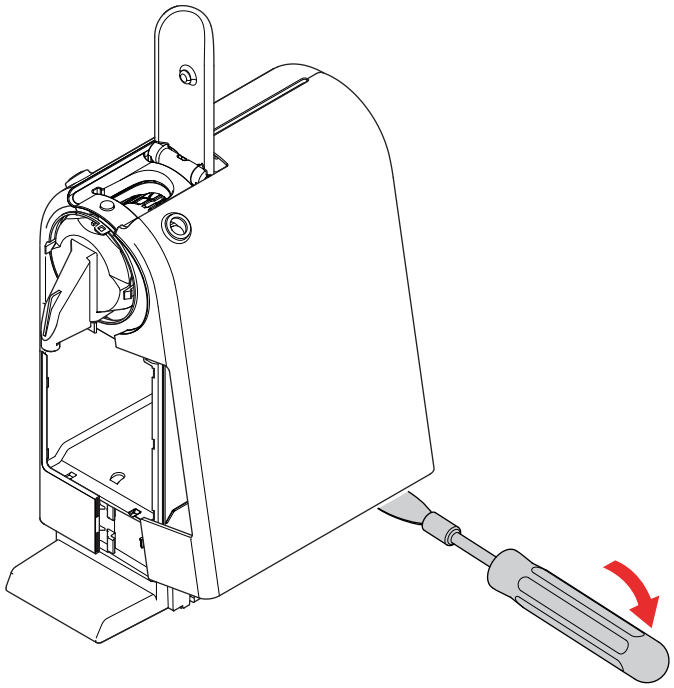


13. Insert disassembly tool laterally into gap at the front.
14. Carefully turn disassembly tool slightly forward to open the first latch.
15. Move disassembly tool upwards and open the other two latches the same way.



Insert disassembly tool at right angles only. Otherwise the shadow gap can be damaged.

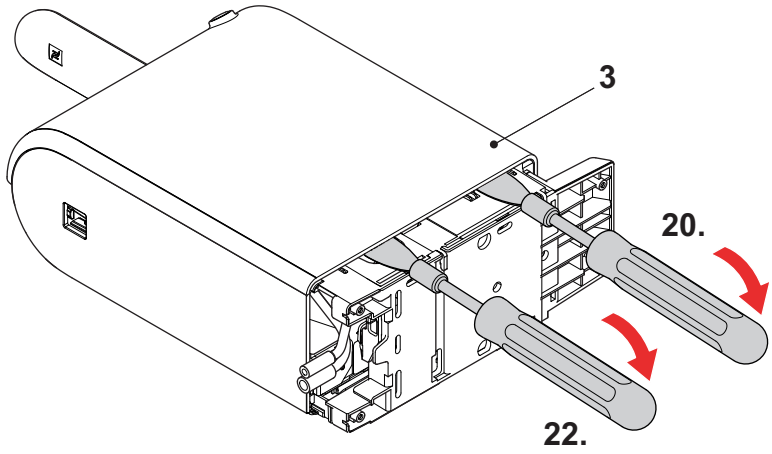
16. At the back insert disassembly tool into shadow gap of right side panel.
17. Swivel disassembly tool carefully to open first latch.
18. Move disassembly tool upwards and repeat procedure for the other 2 latches.



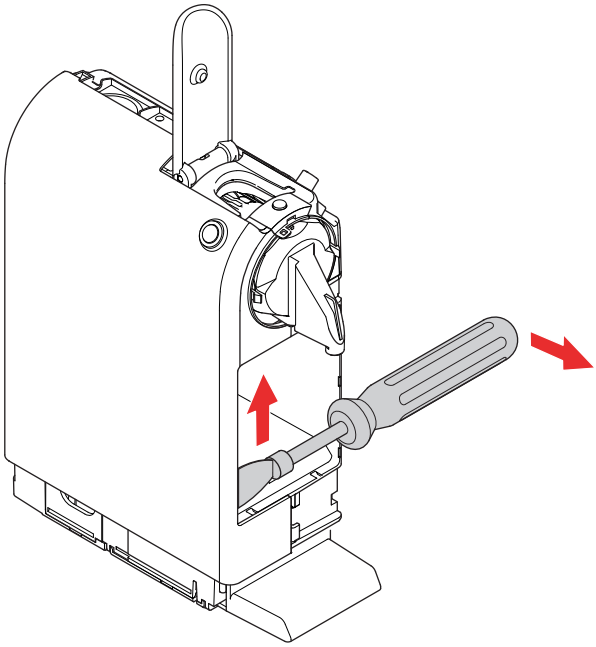
19. Swing up and remove right side panel.

Closing handle must be opened.

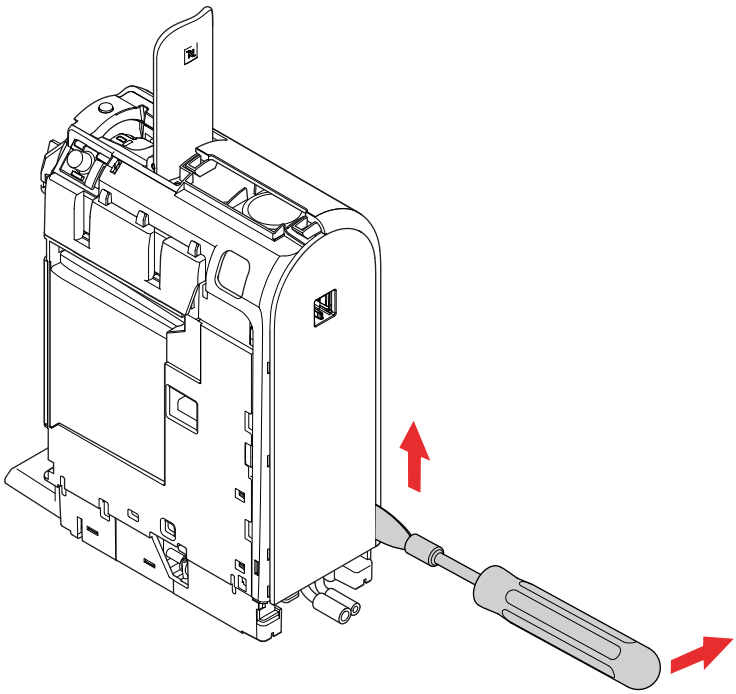
Remove left side panel



20. Insert disassembly tool between bottom of left side panel (3) and chassis.
21. Swivel disassembly tool till latch at the front opens.
22. Relocate disassembly tool and repeat procedure to open latch at the bottom of the side panel.

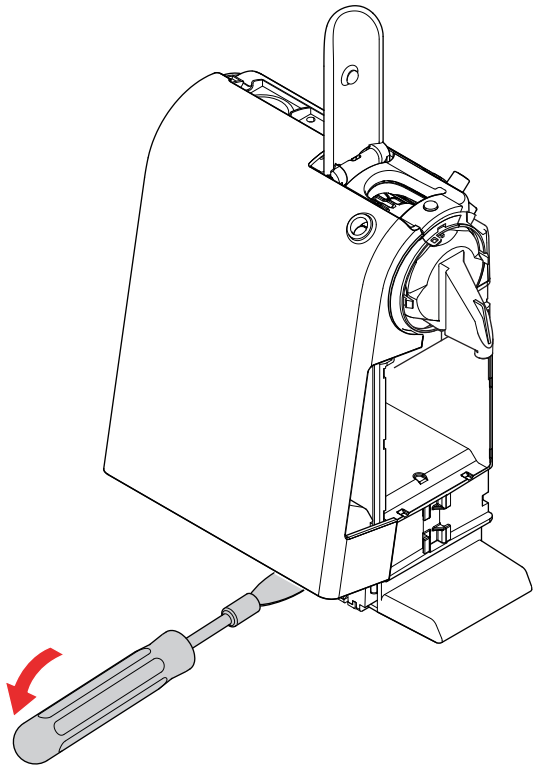


23. Insert disassembly tool laterally into gap at the front.
24. Carefully turn disassembly tool slightly forward to open the first latch.
25. Move disassembly tool upwards and open the other two latches the same way.



Insert disassembly tool at right angles only. Otherwise the shadow gap can be damaged.

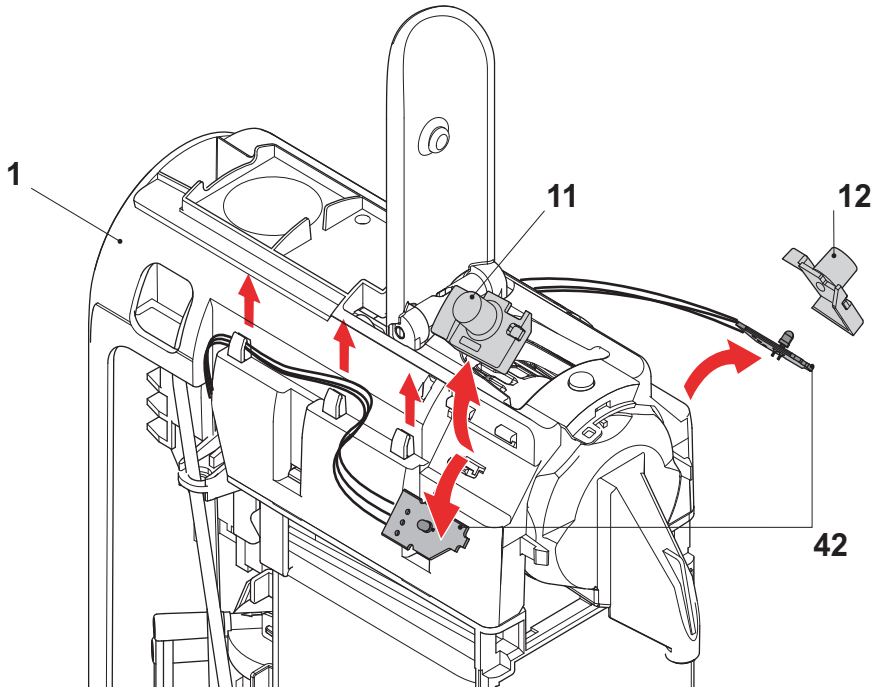
26. At the back insert disassembly tool into shadow gap of left side panel.
27. Swivel disassembly tool carefully to open first latch.
28. Move disassembly tool upwards and repeat procedure for the other 2 latches.



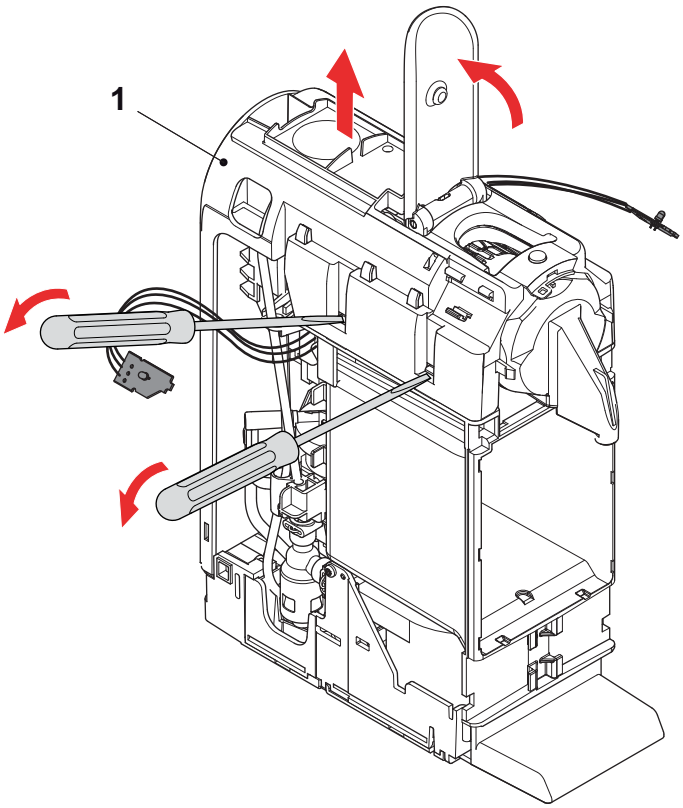
29. Swing up and remove left side panel.

Closing handle should be opened.

Remove cover (2)

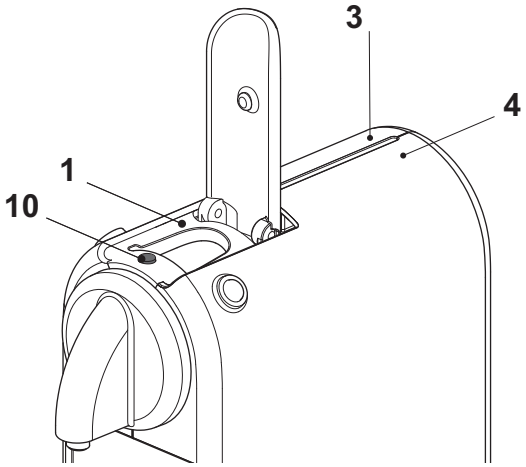


1. Remove both coffee buttons (11, 12) and prints (42) out of holder.
2. Remove wiring of coffee button prints from cable guides.



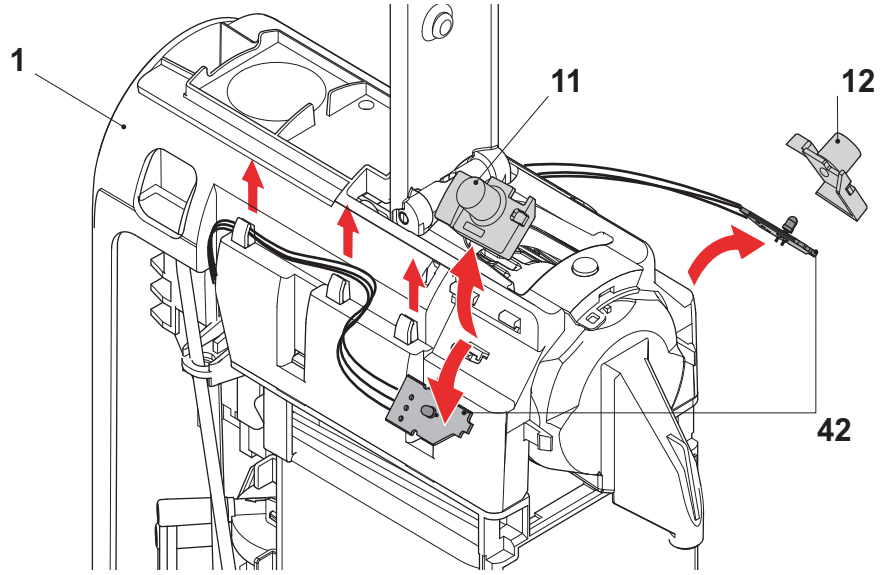
3. Use a screwdriver to release 4 latches.
4. Open closing handle.
5. Lift and remove cover (1).

Assembly checkpoints



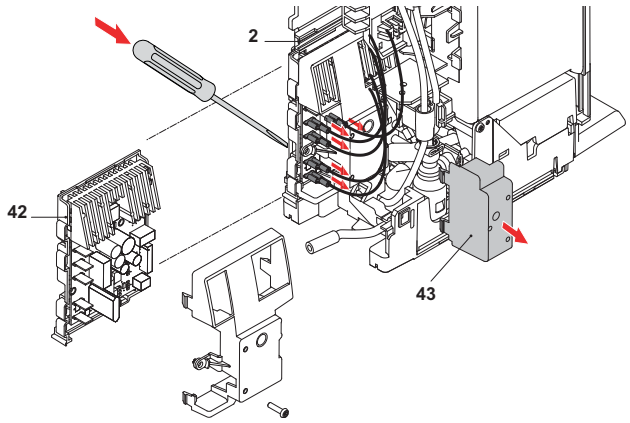
- Check if damper (10) for closing handle is installed on cover (1).
- For correct layout of the wires to the coffee button prints, see “Replacing electronic control board with button prints” on page 95.
- Assemble left side panel (3) first.
- Insert right side panel (4) into hinges at the top of the left side panel. Then fold down right side panel and click latches.
- Check that all latches are engaged.

8.7.2 Replacing electronic control board with button prints



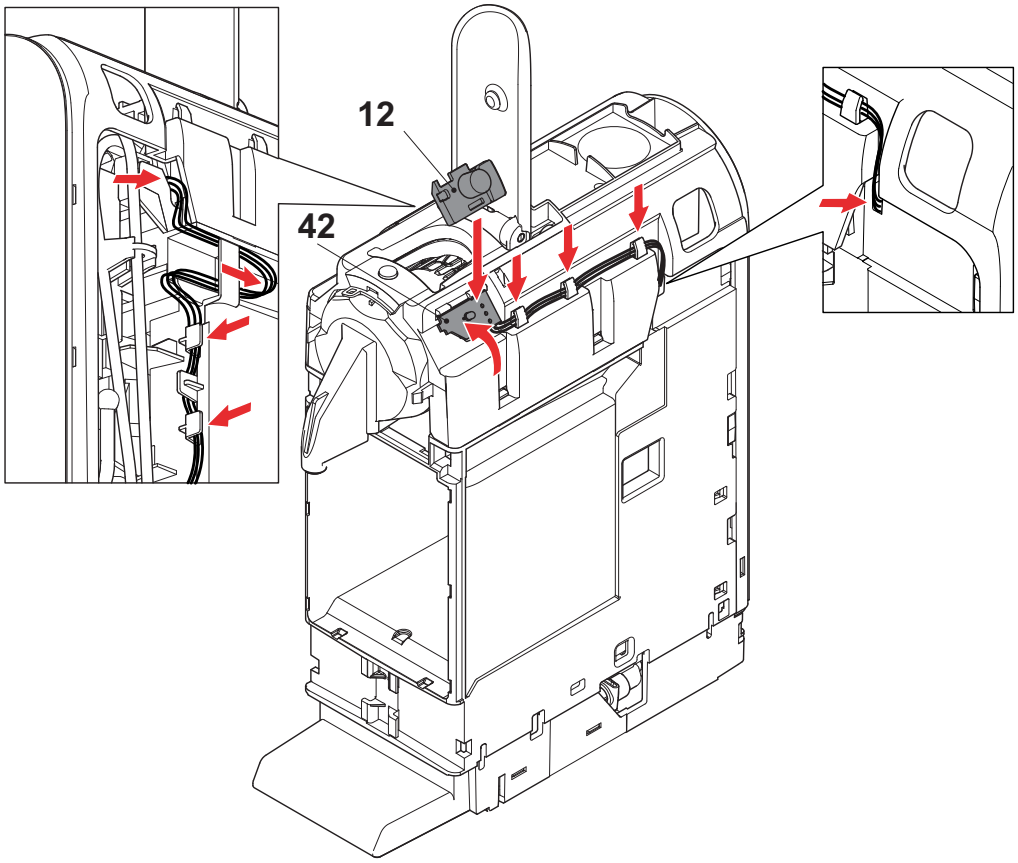
- Refer to page 93 for removing cover (2).

i The replacement board (42) is equipped with protective housing and cover.



- Remove first
  - NTC connector from electronic control board,
  - connector cable from flow meter,
  - electronic lid (43),
  - faston receptacles from electronic control board.
- Insert tip of screwdriver between chassis (1) and protective case of electronic control board (42) to release latches. Then pull out assembly.

Assembly checkpoints



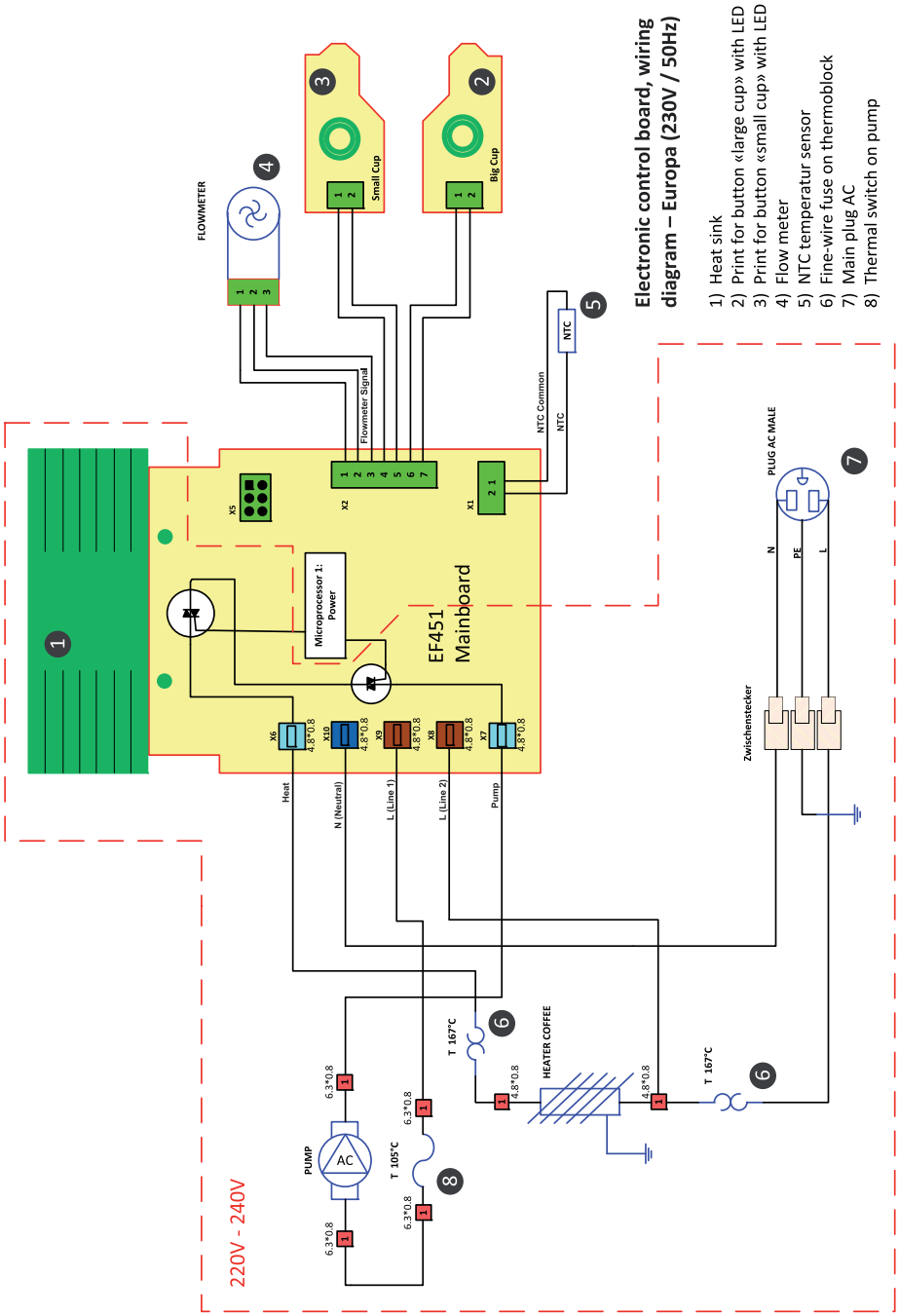
For installing and connecting a new electronic control board, the service technician must be earthed with a grounding band.

- The left and right button prints (42) are marked with "L" or "R" for easy identification.
- After assembly check the plug arrangement of the mainboard (see “Wiring diagrams” on page 97 and following).
- Lay connection wires to button prints in brackets and cable guides like shown.

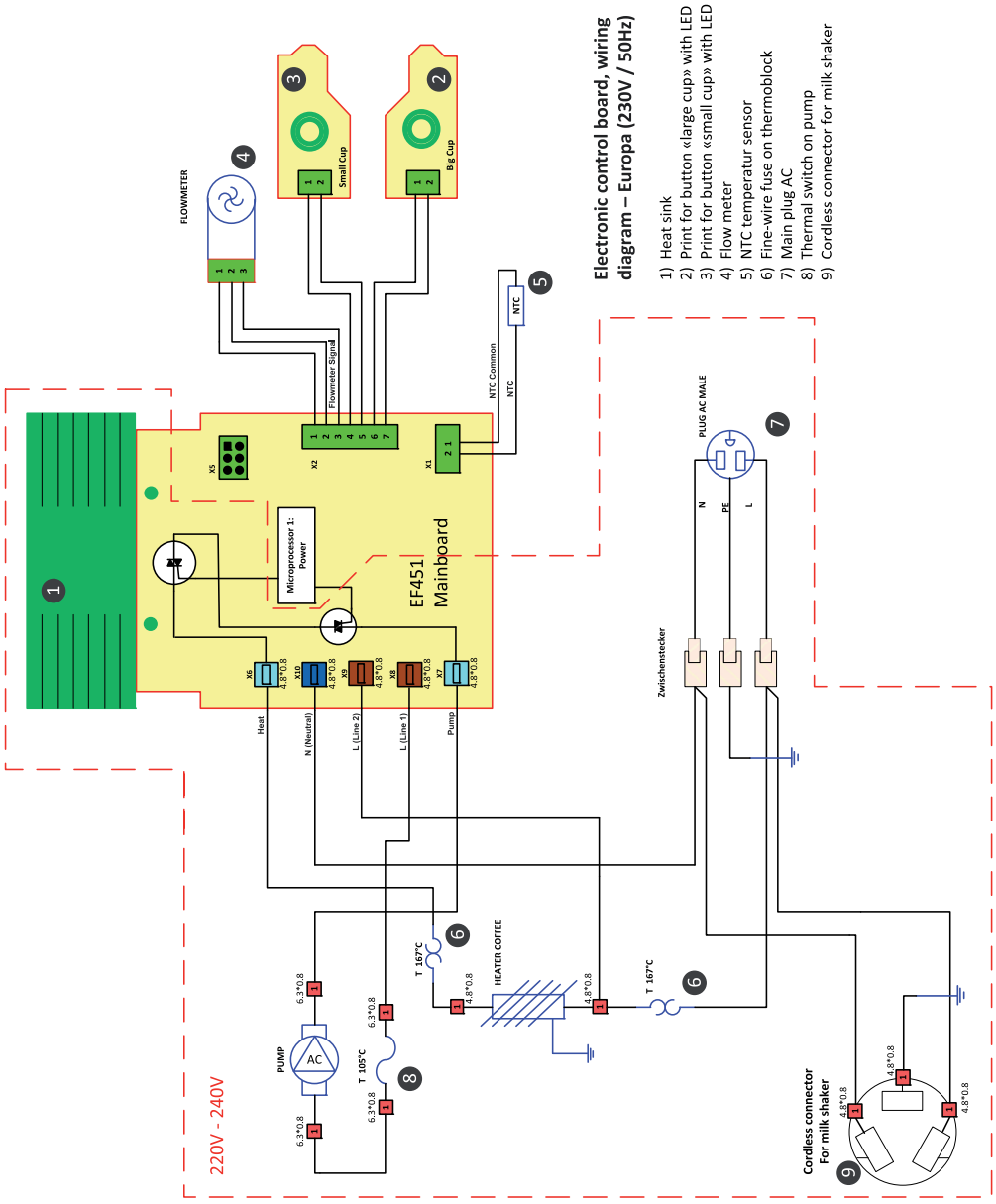
8.8 Wiring diagrams

8.8.1 Wiring diagrams - model Citiz

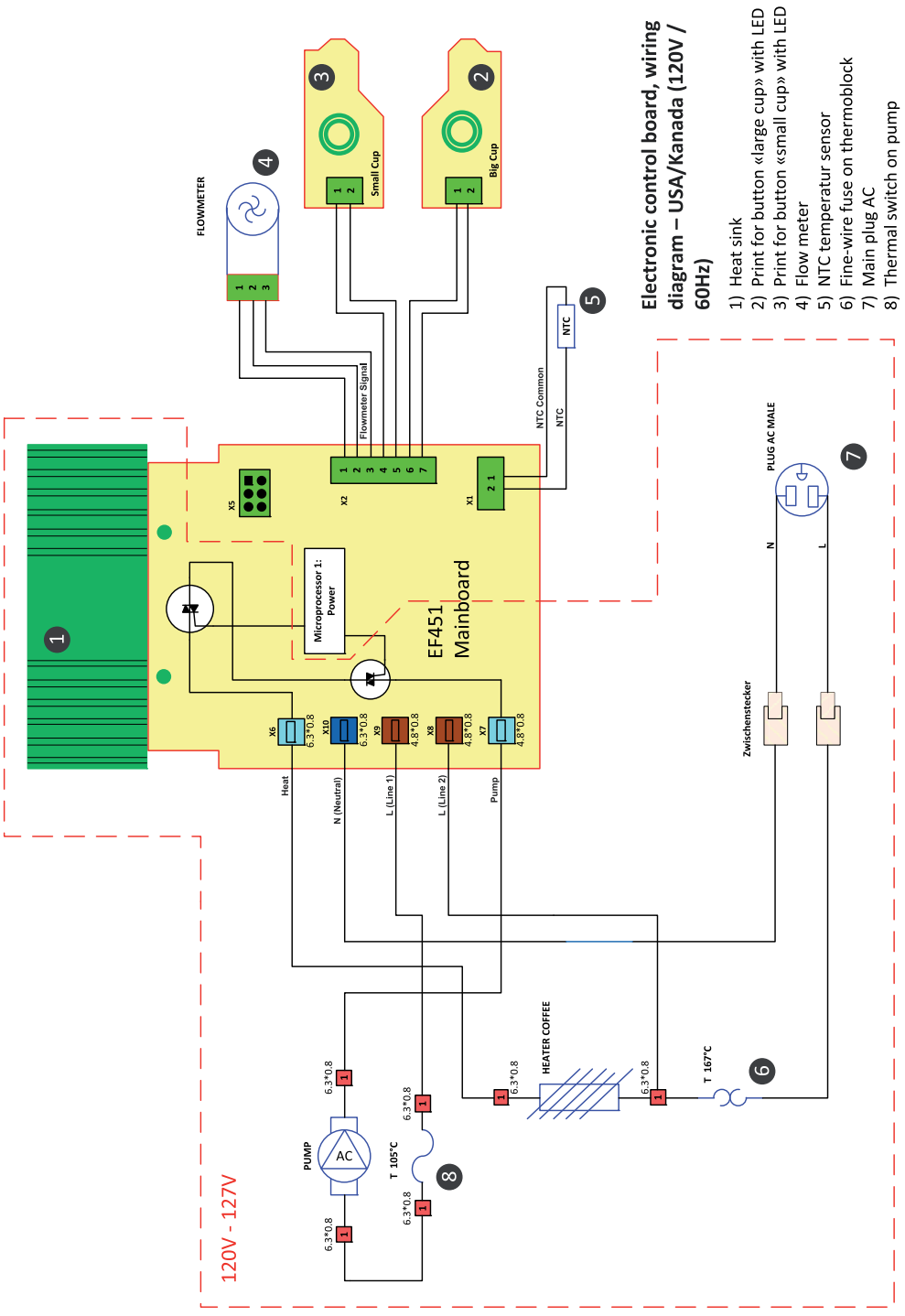
Wiring diagram 220 V - 240 V IEC - model Citiz, EF 451/452



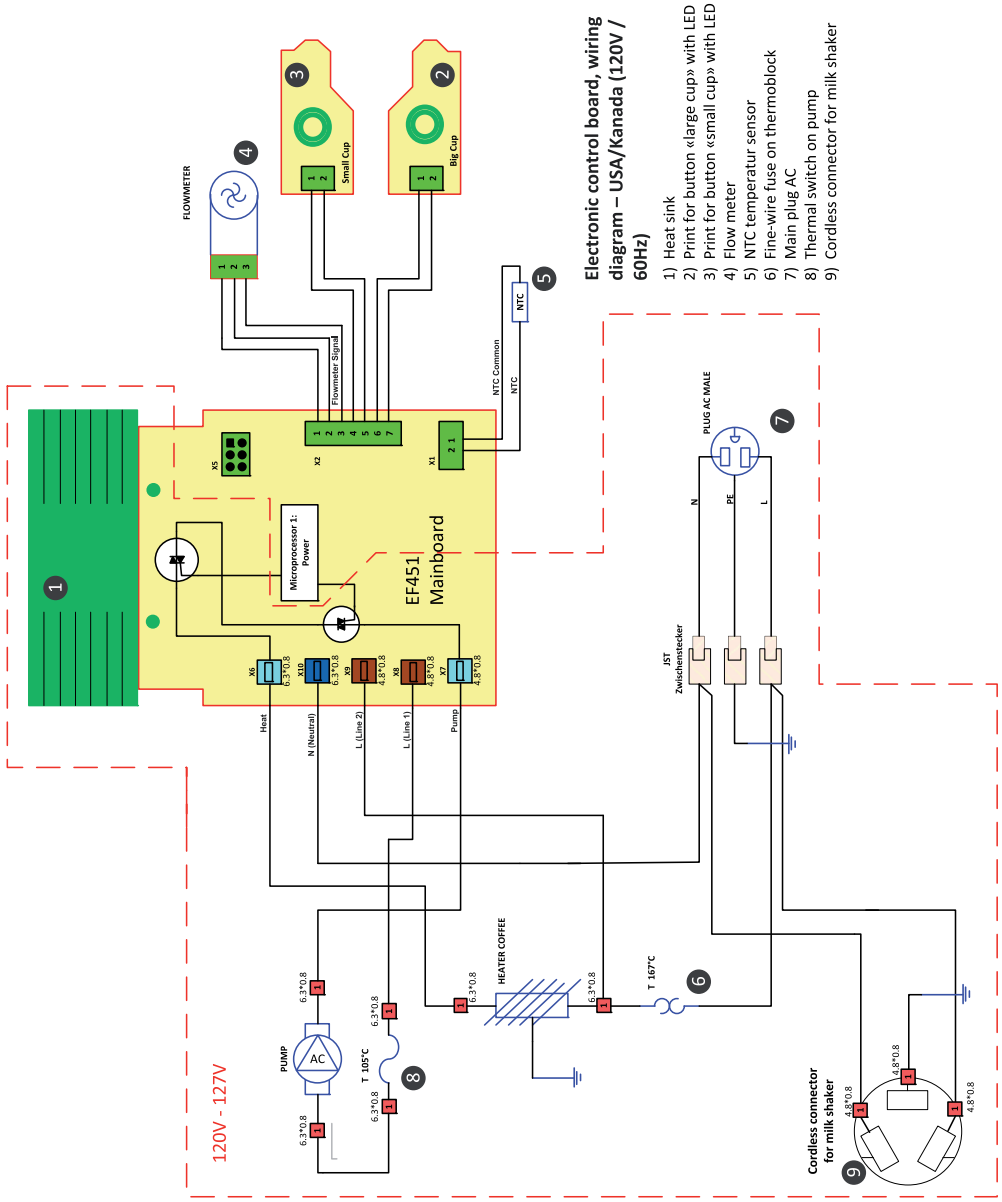
Wiring diagram 220 V - 240 V IEC - model Citiz &milk, EF 467/468



Wiring diagram 120 V - 127 V IEC (Mexico) - model Citiz, EF 451/452



Wiring diagram 120 V - 127 V IEC - model Citiz & milk, EF 467/468



9 FUNCTION TESTS

9.1 Safety instructions

Some function tests are performed with an energized, partly opened coffee machine.

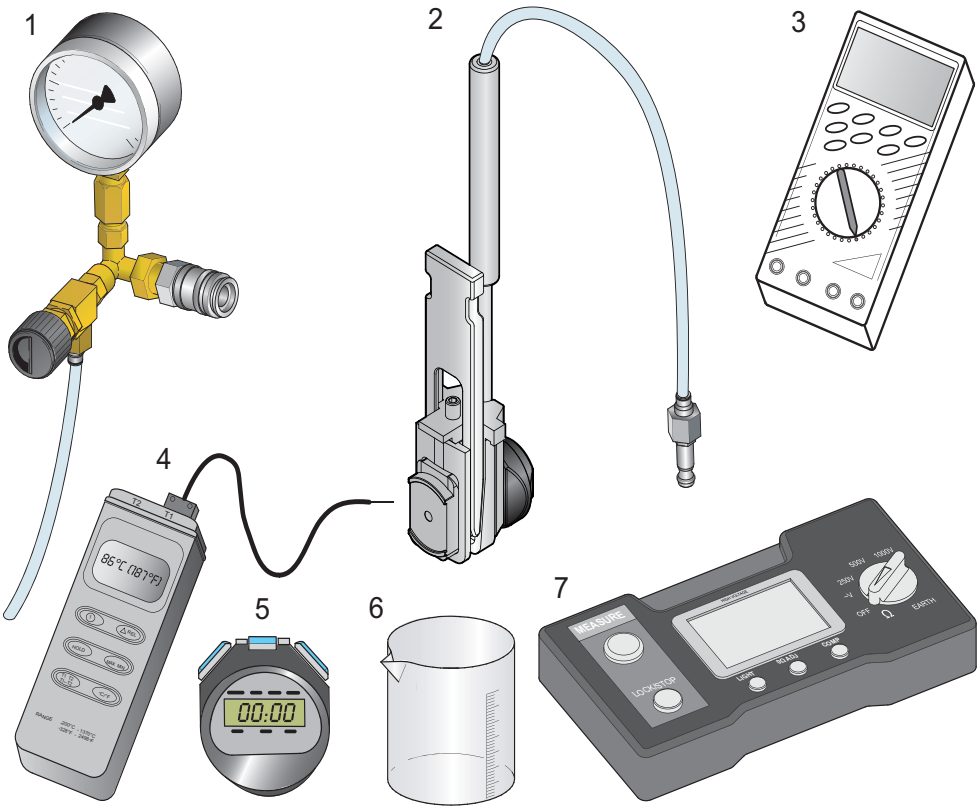
Danger of electrocution!
Mains voltage inside the coffee machine.
Do not touch any live part while performing tests.

Danger of burns!
Hot parts and water under pressure inside the coffee machine.
Do not touch any hot parts while checking for leakages!
Always wear protective goggles.

i To simplify matters, the model Citiz with core unit "C-range" is used to exemplify throughout this chapter.

9.2 Required equipment

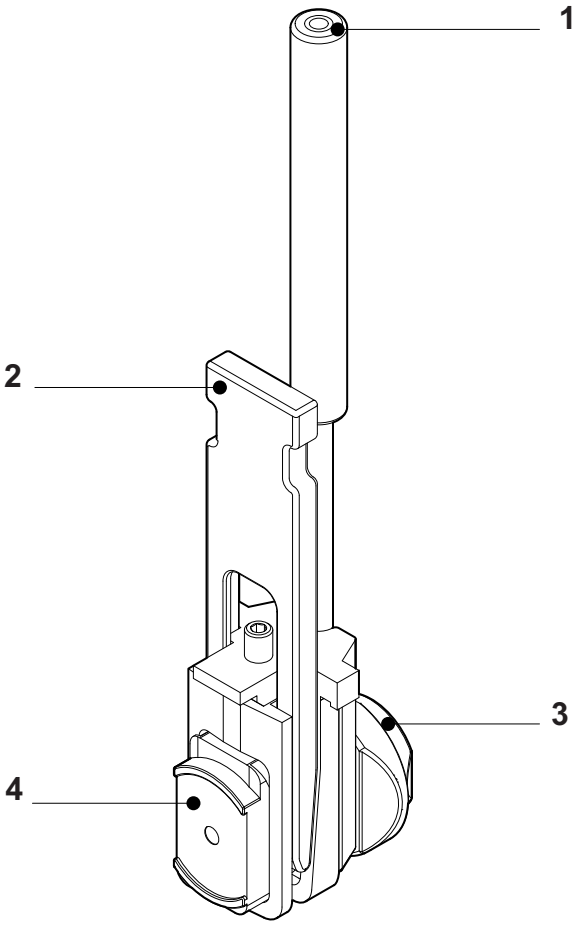
9.2.1 Overview



i Symbolic illustration of function test equipment.

1) Pressure gauge (EFR no. 16195)
2) Citiz pressure gauge adapter
3) Digital multimeter (for NTC temperature sensor test)
4) Electronic thermometer (or digital multimeter suitable for temperature measurement)
5) Timer
6) Measuring beaker
7) Test equipment for protective earth continuity test and protective insulation test

9.2.2 Citiz pressure gauge adapter



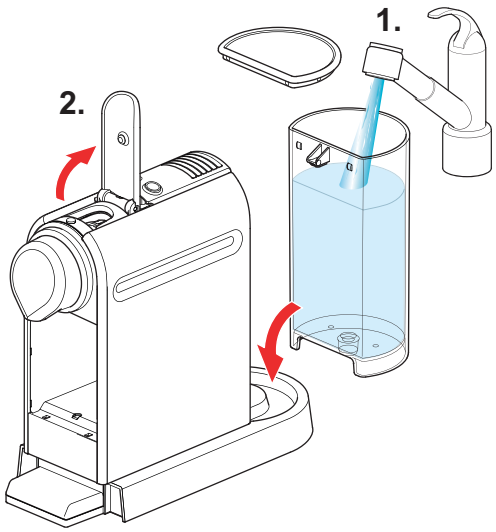
1) Quick action coupling for pressure hose
2) Operating lever
3) Connecting unit
4) Fixation unit

This pressure gauge adapter is designed for the Citiz coffee machines.

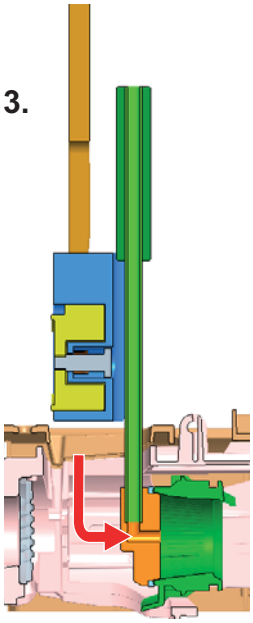
The pressure gauge adapter has 2 parts:

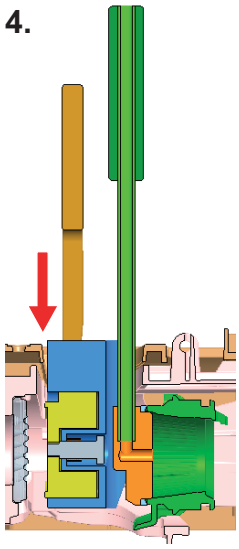
- A connecting unit (3) with a sealing cone that is inserted in the capsule cage of the brewing unit.
- A hand actuated fixation unit (4) to lock and seal the complete pressure gauge adapter in the brewing unit.

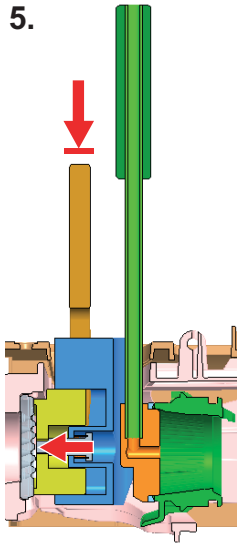
9.3 Measure flow rate



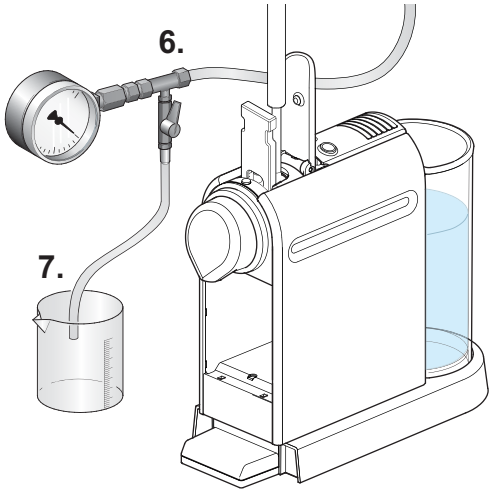
1) Fill and insert water tank.
2) Open closing handle.







3) Insert connecting unit of pressure adapter into capsule bay. Push back sealing cone into capsule cage.
4) Insert fixation unit of pressure adapter into capsule bay.
5) Press down operating lever.
6) Connect pressure hose to pressure tester.
7) Place a measuring cup under the drain hose of the pressure tester.

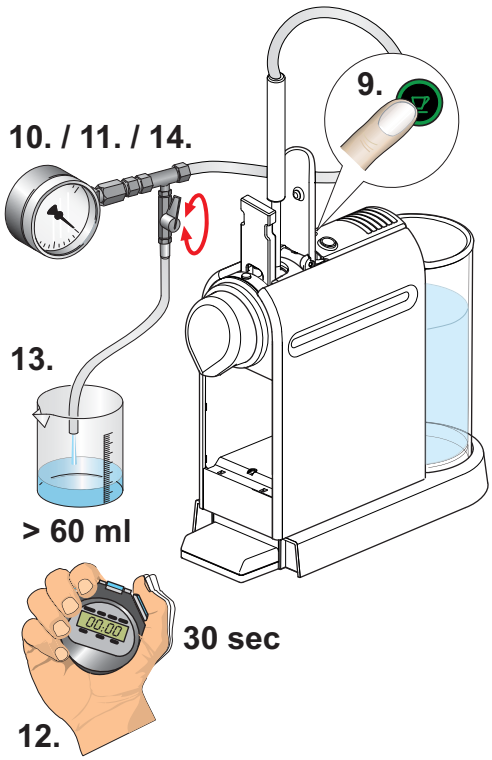


The pressure adapter must sit firmly in the capsule bay.

8) Start coffee machine.
9) After heating up, press the espresso button.
10) Open the valve until water begins to flow.
11) 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.**

12) Carry out measurement for approx. 30 sec.
13) Control measuring cup: at least 60-120 ml of water must be in the measuring cup.
14) Open the valve and let water flow out of the pressure tester.



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.

9.4 Pressure and leakage checks

Check the following parts of the coffee machine for leakages:

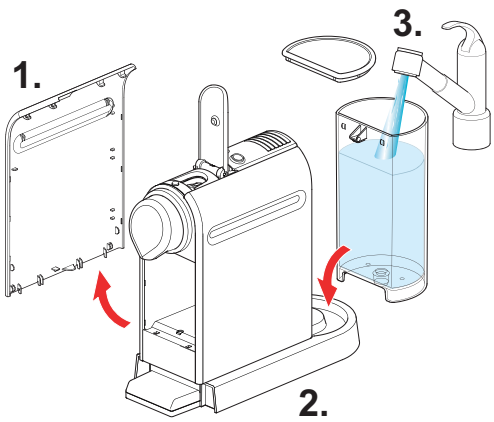
- Compact brewing unit
- Hose connections
- Thermoblock
- Pump
- Self priming device

Dangerous mains voltage inside the coffee machine!
Do not touch any parts under voltage while checking for leakages!

Dangerous hot parts under pressure inside the coffee machine!
Do not touch any hot/pressurized parts while checking for leakages!
Always wear protective goggles.

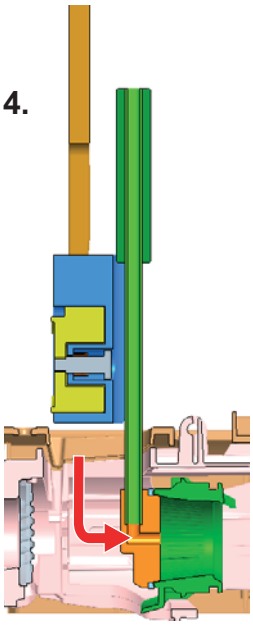
9.4.1 Preparations

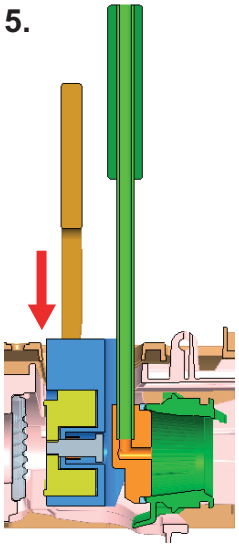
1) Remove left side panel of core unit.
2) Insert core unit back into platform.
3) Fill and insert water tank.

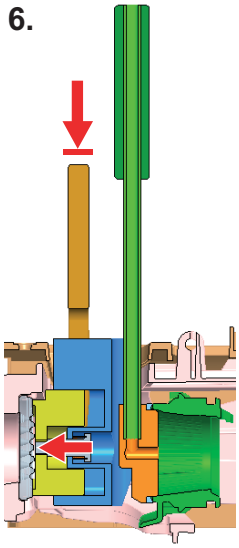


i Depending on core unit range, refer to "Disassembly of core unit, C-range" on page 91 or "Disassembly of core unit, D-range" on page 109.

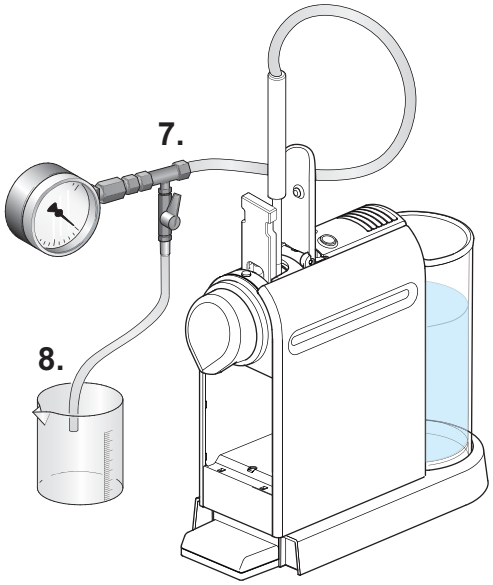
i The pressure adapter must sit firmly in the capsule bay.



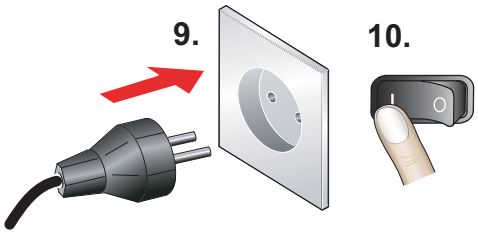




4) Insert connecting unit of pressure adapter into capsule bay. Push back sealing cone into capsule cage.
5) Insert fixation unit of pressure adapter into capsule bay.
6) Press down operating lever.
7) Connect pressure hose to pressure tester.
8) Place a measuring cup under the drain hose of the pressure tester.



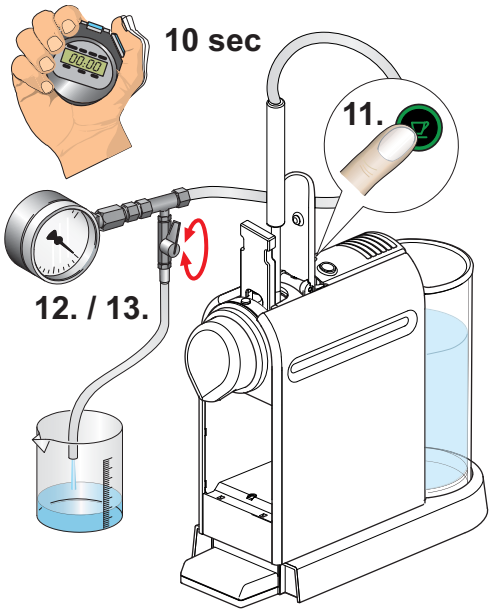
9) Connect mains cable.
10) Start coffee machine.



9.4.2 Test run

11) After heating up, press the espresso button.
12) Open the valve and let the water flow for approximately 10 sec out of the drain hose.
13) Close the valve completely. The pressure stabilizes after increasing briefly between 16-19 bar (pressure check).

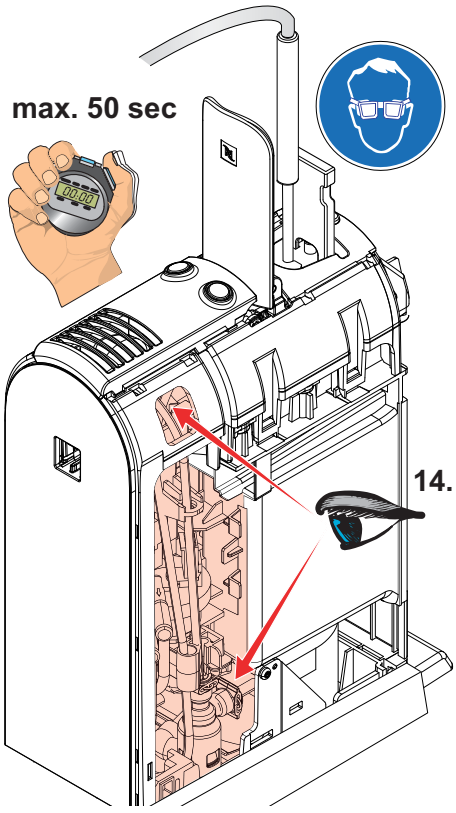
☞ **The pressure increases slowly with increasing temperature. Should the pressure exceed 23 bar, switch off the coffee machine and release the pressure by opening the valve.**



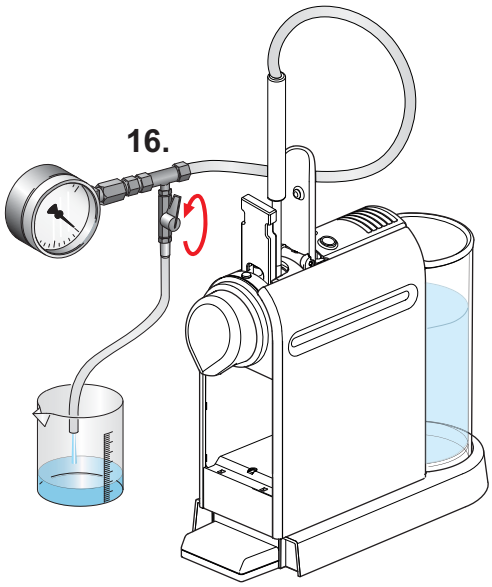
i For better visibility use a flashlight.

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

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

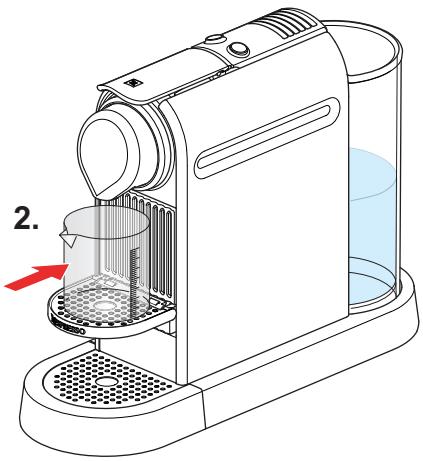


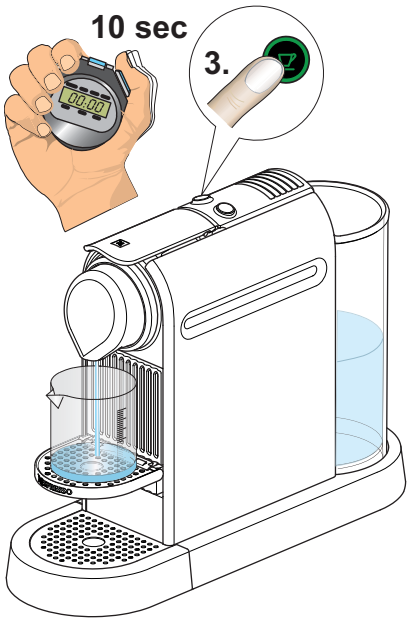
15) Unplug the coffee machine.
16) Open the valve and let water flow out of the pressure tester.



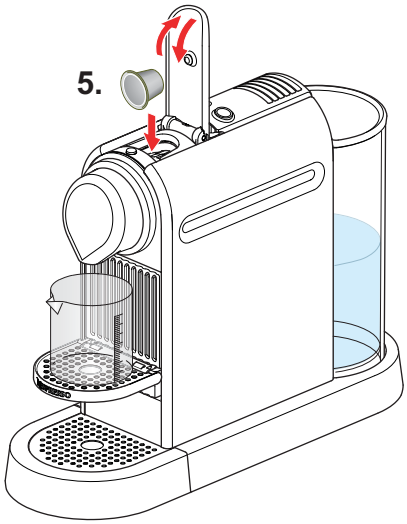
9.5 Measure coffee temperature

1) Start coffee machine.
2) Place a measuring cup on cup support.

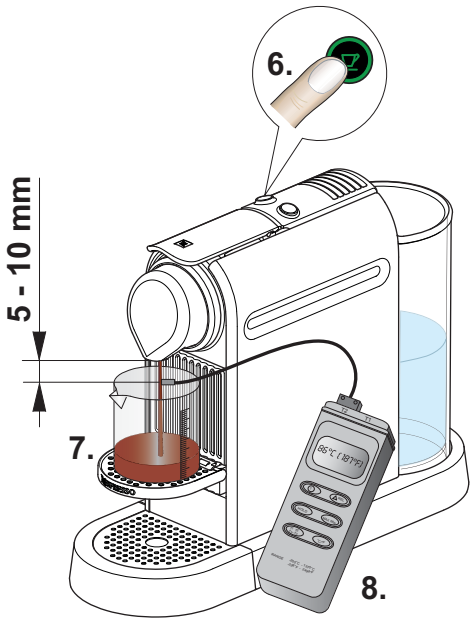




3) After heating up, press the espresso button for approximately 10 sec to pre-heat the coffee outlet with hot water.
4) Empty measuring cup and place it back on cup support.



5) Insert capsule (Cosi is best suited).



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

☞ **The coffee temperature should be 86 °C ± 3 °C (187 °F ± 5.4 °F).**

9.6 Milk frother tests

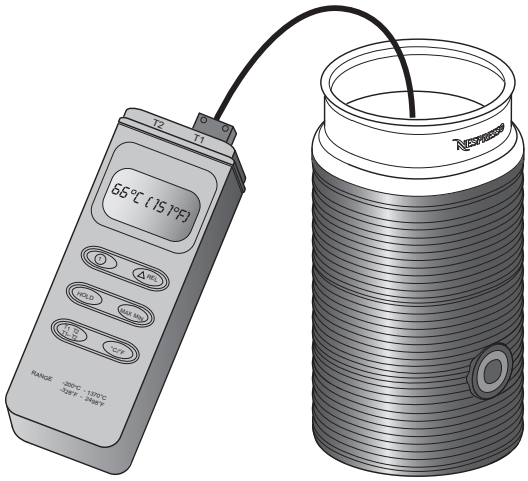
Prerequisite

Use newly opened UHT, full fat or semi-skimmed milk at fridge temperature (+ 8 °C till + 10 °C) for the following tests only.

i The disregard of this specification can affect the measuring results.

⚠ **Spattered milk may cause burns. Only use milk frother with lid.**

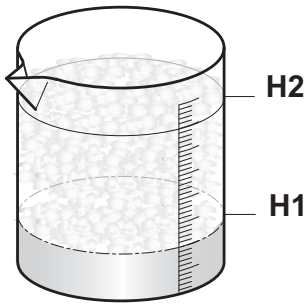
9.6.1 Measure hot milk temperature



- Prepare 240 ml hot milk in milk frother (use mixer without spring).
- Measure temperature immediately after preparation in jug.

☞ **The milk temperature should be between + 60 °C and + 70 °C (140 °F till 158 °F).**

9.6.2 Measure milk froth ratio



- Prepare cold milk froth out of 120 ml milk in milk frother (use whisk with spring).
- Empty content of milk frother into measuring beaker.
- Determine the ratio x [%] of milk froth to liquid milk with following formula:

$$x = \frac{H2 - H1}{H1} \times 100$$

Approximate values:

direct after preparation ..... x = 250

60 sec after preparation ..... x = 190

9.7 Protective earth (PE) continuity test

9.7.1 What coffee machine has to be tested and when?

This test is only necessary
- for class 1 equipment (three-wire power cord with protective earth)
- after a repair whenever a general disassembly of the platform and/or core unit was performed.

Therefore all Citiz models have to be tested after general disassembly, except country-specific models (USA, Canada, Mexico) without a protective earth connection (refer to "Wiring diagrams" on page 97 and following).

9.7.2 General

Legal regulation

In case of a repair/modification of the coffee machine, the repair centre is bound by law to protect the user/consumer by
- restoring the regular condition of the appliance and
- performing the respective tests according to EN/IEC 60335-1 “Safety of household and similar electrical appliances” and national regulations (e.g. DIN VDE 0701).

Description

Protective earth continuity measurements are made between the protective earth terminal of the power plug and
- the thermoblock,
- all conductive, touchable parts of the coffee machine where dangerous voltage could occur if the basic insulation was to fail.

This test assures that
- the ground (earth) connection does not have an interruption between the power plug and the thermoblock(s) as well as touchable, conductive housing parts
- the permissible ground resistance of those conductive parts is less than 0.3 Ohms (with a test current of 200 mA DC).

Test equipment

i Ask *Nespresso* for recommendations about test equipment.

Special test equipment is needed that complies with the regulations to perform protective earth continuity measurements. Detailed requirements and tolerances must be verified by your local authorities or measurement supplier in any case.

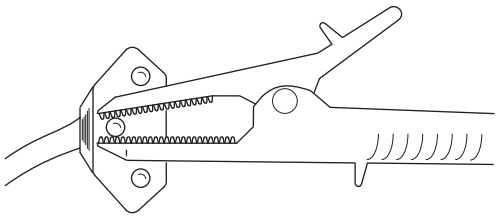
Test report

For legal reasons a repair or test report should be prepared and filed with following information
- customer (name, address)
- type and serial number of coffee machine
- date of repair/test(s)
- performed test(s)/measuring value(s)
- used test equipment
- signature

9.7.3 Test sequence

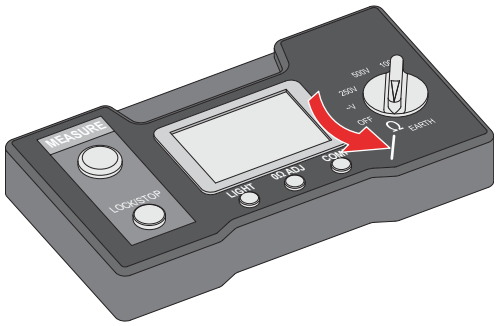
Danger of electrocution!
Do not plug in the coffee machine during the protective earth continuity test.
Read and observe safety instructions in user manual of test equipment.

1) Connect black measuring cable to ground pin of power plug with an alligator clip (example shown: Swiss power plug).

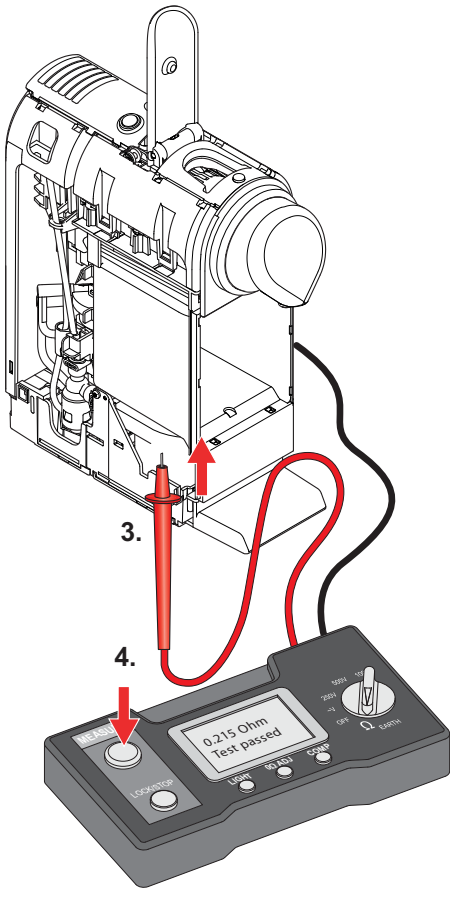


i This test sequence is not applicable for coffee machines with two-wire power cords (without ground pin).

2) Switch on test equipment and select protective earth continuity test.



i Symbolic illustration of test equipment.



i The coffee machine Citiz & Co has 2 test holes to check both thermoblocks.

3) Touch thermobloc with red test probe.
4) Press "measure" button and read off displayed resistance.

☞**The resistance must be lower than 0.3 Ohm.**

5) Fill in measured value(s) in a test report.

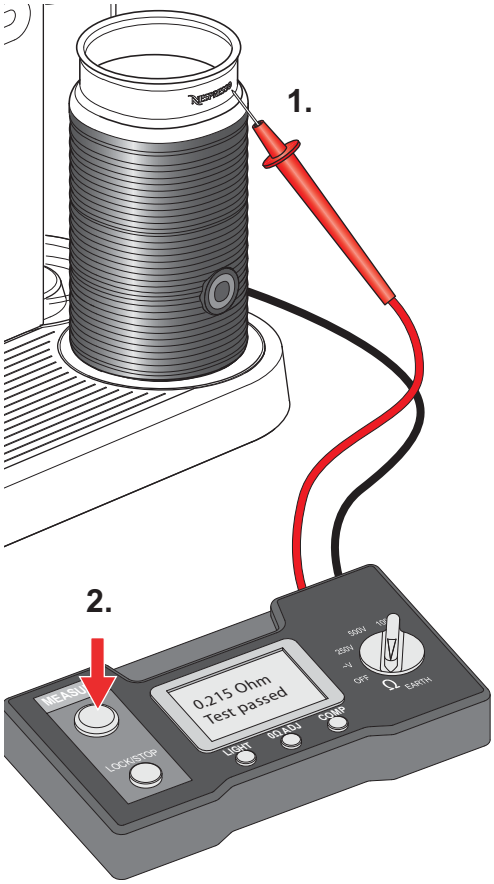
⚠ **Do not damage inside coating of milk frother jug with the probe tip.**

Additional test for coffee machine Citiz & milk:

1) Touch upper metallic part of milk frother with red test probe.
2) Press "measure" button and read off displayed resistance.
3) Repeat measurement on another metallic spot of milk frother for verification.

☞**The resistance must be lower than 0.3 Ohm.**

4) Fill in measured value(s) in a test report.



9.7.4 What to do if the protective earth continuity test fails

- Check/measure ground wire connection in platform (refer to page 65) and on thermoblock (refer to page 84).
- Check/measure ground connection on milk frother connector (refer to page 64 and page 97 for wiring diagram). Replace milk frother connector if necessary.
- Clean ground contact on milk frother. Measure resistance between ground contact and jug of milk frother. Replace milk frother if necessary.

9.8 Protective insulation test

9.8.1 What coffee machines have to be tested and when?

Perform the protective earth (PE) continuity test at first, if it is mandatory.

This test is necessary

- for class 1 and 2 equipment (with/without protective earth)
- after a repair whenever a general disassembly of the platform and/or core unit was performed.

9.8.2 General

Legal regulation

In case of a repair/modification of the coffee machine, the repair centre is bound by law to protect the user/consumer by

- restoring the regular condition of the appliance and
- performing the respective tests according to EN/IEC 60335-1 “Safety of household and similar electrical appliances” and national regulations (e.g. DIN VDE 0701).

Description

The insulation test

- assures that wiring and insulation of the coffee machine fullfill the normative requirements after a repair,
- rates the insulation capability of the coffee machine,
- is a very dangerous test because of a high test voltage (500 V DC).

For the insulation test, phase and neutral wire are shunted at the power plug. Then a test voltage is applied between phase/neutral and selected parts of the coffee machine.

Test equipment

Ask *Nespresso* for recommendations about test equipment.

Special test equipment is needed that complies with the regulations to perform insulation and withstanding voltage tests. Detailed requirements and tolerances must be verified with your local authorities or measurement supplier in any case.

Ideally the test equipment has a national power socket for testing, so that the coffee machine can plugged in directly. Otherwise a special shunt is necessary to connect the phase and neutral pin of the coffee machine’s power plug.

Test report

For legal reasons a repair or test report should be prepared and filed with following information

- customer (name, address)
- type and serial number of coffee machine
- date of repair/test(s)
- performed test(s)/measuring value(s), test points
- used test equipment
- signature

9.8.3 Test sequence

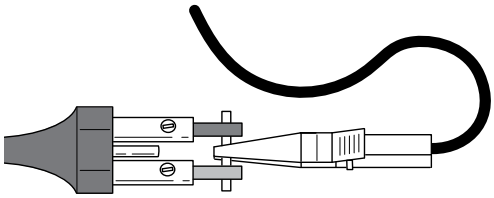
Danger of electrical shock/short circuit!
Do not plug in the coffee machine during insulation test.

Danger of electrical shock!
Do not touch tip of test probes.
Do not touch metallic parts of coffee machine during test.
Read and observe safety instructions in user manual of test equipment.

i A Swiss power plug is shown here as an example.

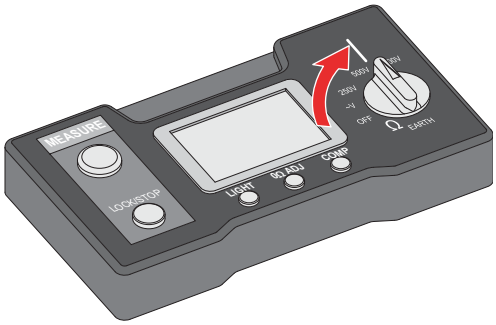
i Use a short circuit plug or special alligator clips etc. as substitute for this test adapter.

1) Connect the phase and neutral pin of the power plug together with a test adapter (procured by the repair centre).
2) Connect the black measuring cable to the test adapter (see image).



i Symbolic illustration of test equipment.

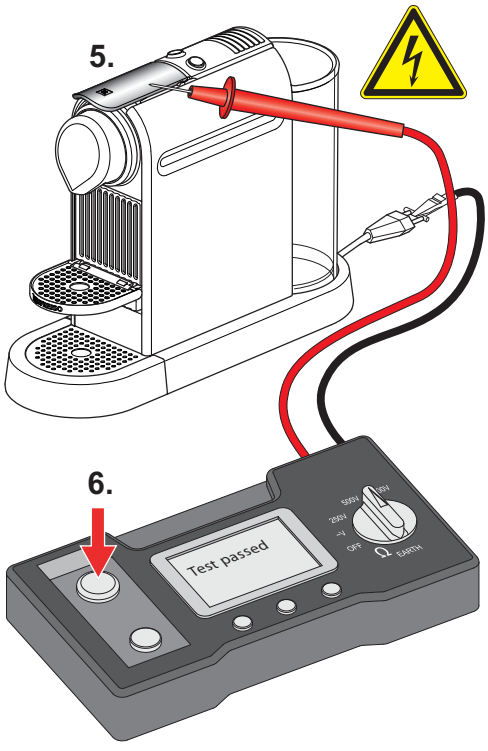
3) Switch on test equipment and select an insulation test voltage of 500 V DC.



i Some test equipment displays test passed or failed instead of the insulation resistance.

4) Touch closing handle with red test probe.
5) Press "measure" button.
6) Read off displayed insulation resistance or test result.

☞**The insulation resistance must be higher than 300 kOhm (300,000 Ohm).**

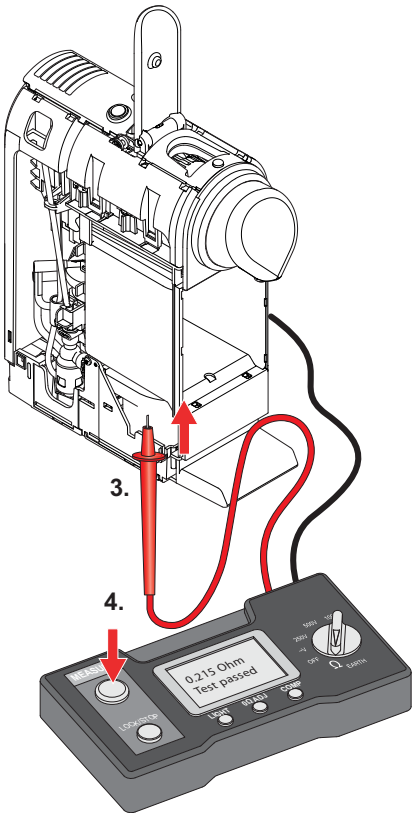


i The coffee machine Citiz & Co has 2 test holes to check both thermoblocks.

7) Touch thermoblock with red test probe.
8) Press "measure" button.
9) Read off displayed insulation resistance or test result.

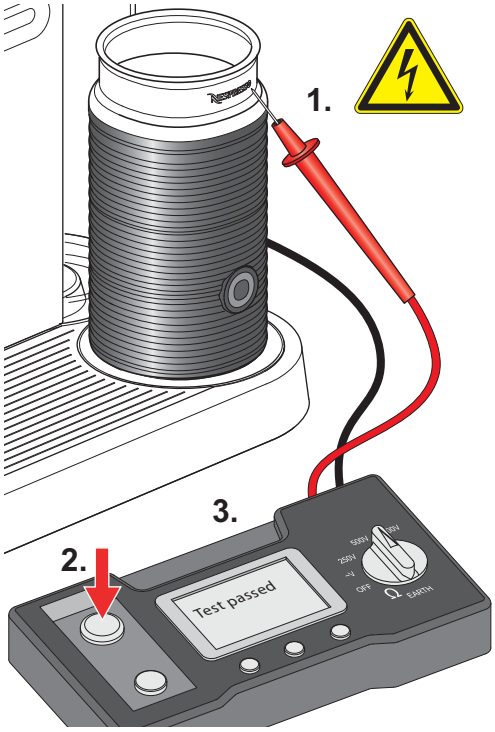
☞**The insulation resistance must be higher than 300 kOhm (300'000 Ohm).**

10) Switch off test equipment.
11) Short red with black test probe to make sure that test voltage is discharged.
12) Fill in results in a test report.

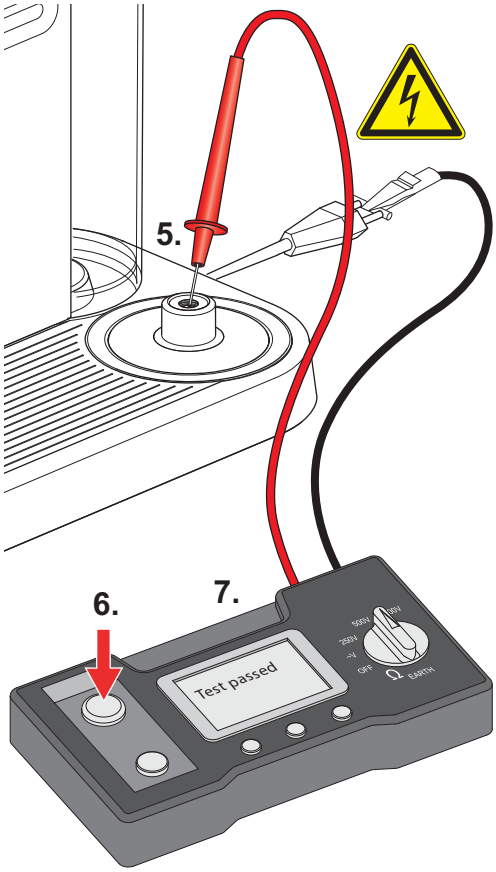


Additional tests for coffee machine Citiz & milk:

1) Touch upper metallic part of milk frother with red test probe.
2) Press "measure" button.
3) Read off displayed insulation resistance or test result.



4) Remove milk frother from platform.
5) Insert red test probe in central opening of milk frother connector (ground connection).
6) Press "measure" button.
7) Read off displayed insulation resistance or test result.
8) Switch off test equipment.
9) Short red with black test probe to make sure that test voltage is discharged.
10) Fill in result in test report.



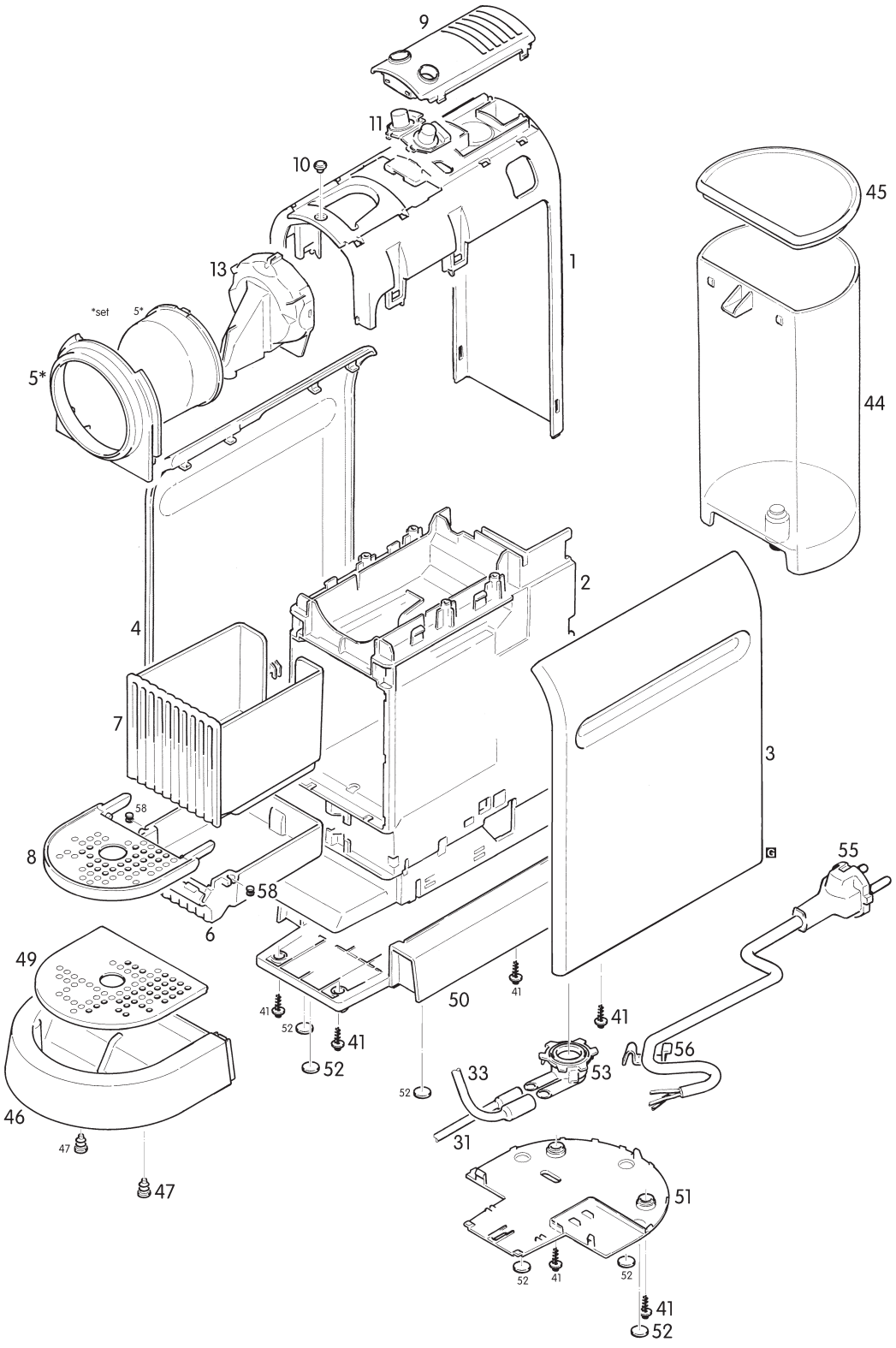
9.8.4 What to do if the insulation test fails

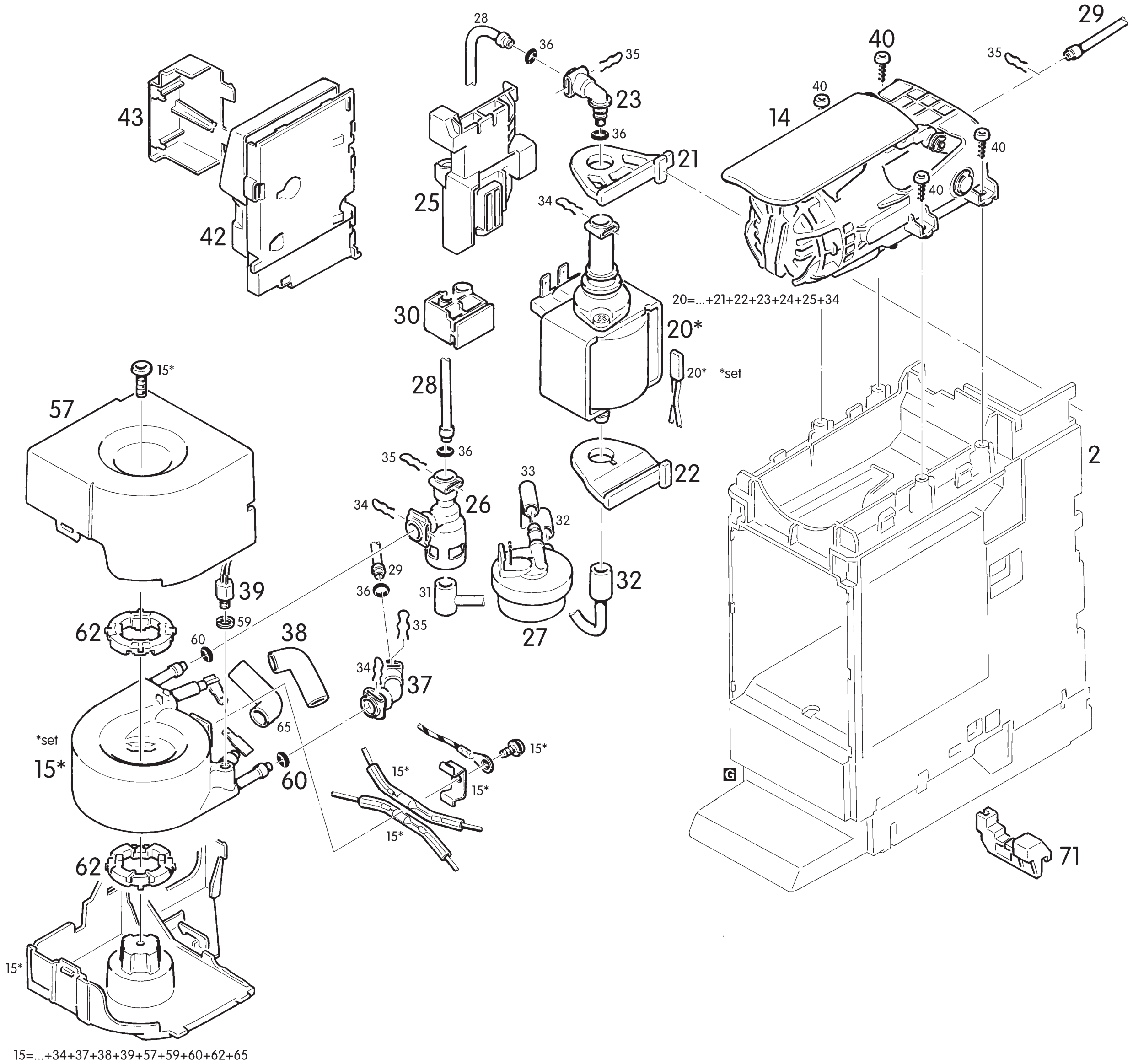
Risk of damage!
A sparkover can damage the electronic control board and sensors etc.

- Assume that the coffee machine is defect after a failed insulation test.
- Check wiring and locate fault. After fault clearance proceed with troubleshooting check list (see page 42).
- In case of doubt an insulation test on the milk frother alone can be carried out on the coffee machine Citiz & milk: touch phase and neutral contacts at the bottom withone test probe successively and the metallic upper part with the other test probe.
  If insulation test fails, replace milk frother.

10 EXPLOSION DRAWINGS

10.1 Model Citiz EF 451 C111

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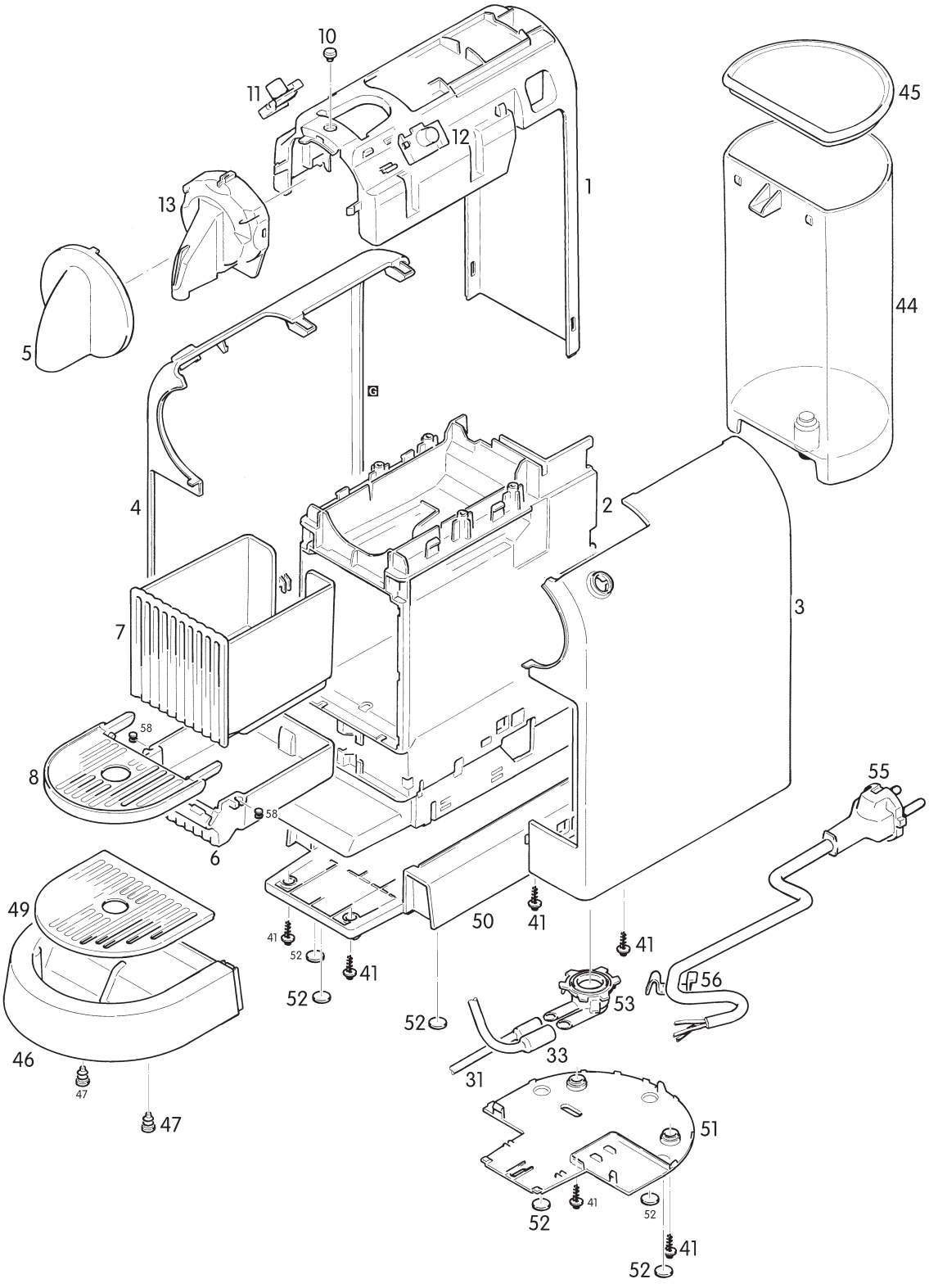
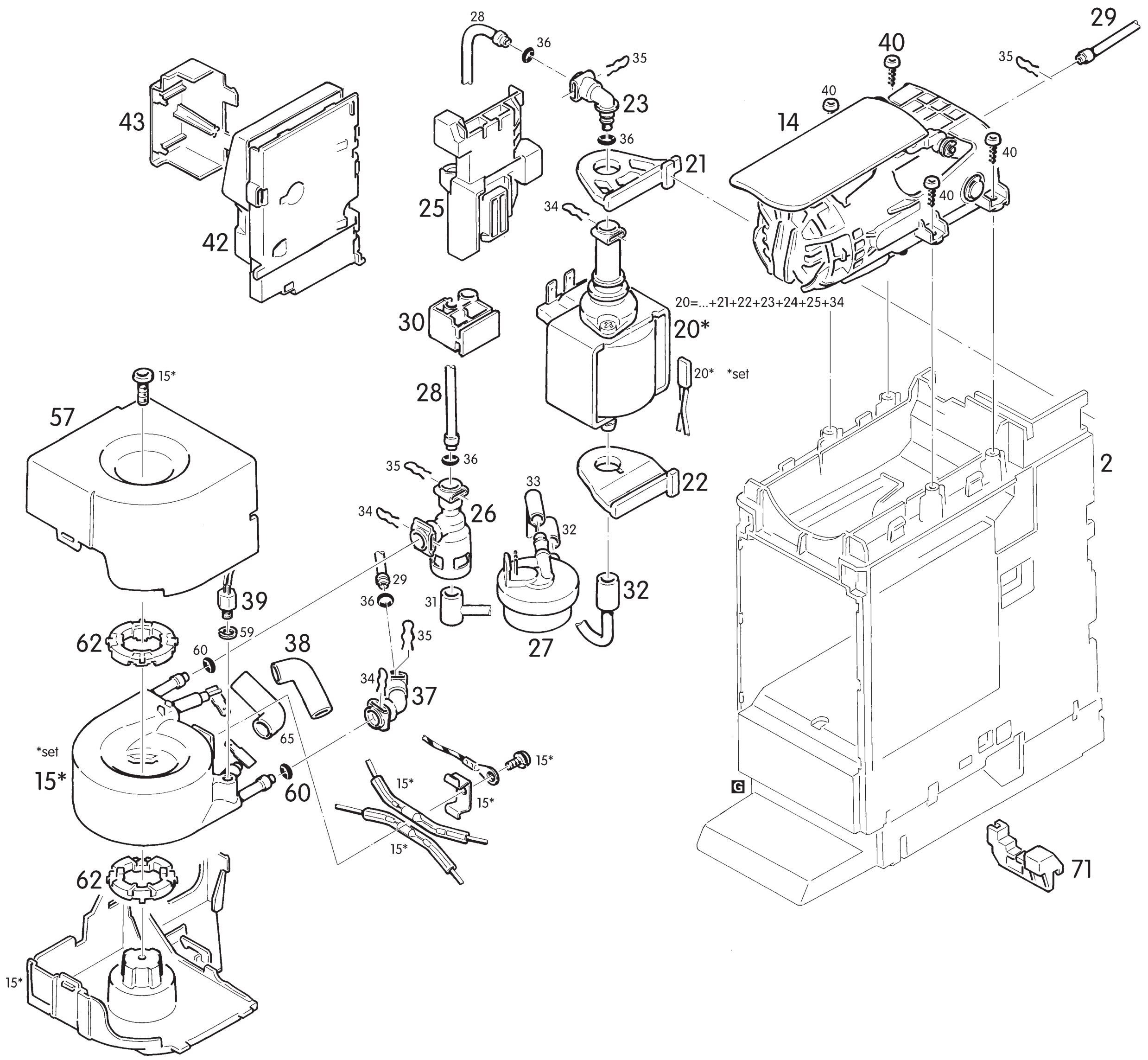
10.2 Parts List EF 451 C111

Pos	Part No.	Component	Remark
001	0077880	Hood 484 black V2	
002	0077859	Holder 451 black V2	
003	0066038	Side wall 484 left V2	red high gl.
004	0079139	Side wall 484 right V3	red high gl.
005	0079697	Cover 451 outlet TMBU cpl	
006	0055335	Remai.water tray 483 transp	
007	0055334	Caps contain 483 transp	
008	0054819	Cup shelf 484 chrom.pltd	high gl.
009	0077878	Cover 484 black V2	
010	0055592	Rubber feet 483 TMBU black	60 Shore
011	0054815	Push-button 484 2x	Espresso/coffee, silic translucent
013	0054741	Outlet	
014	0062039	Extract unit 484 TMBU cpl V2	black lacquer.
015	0075957	Thermobl 2010/L 230V/1200W	EF451 cpl
020	0079710	Pump 451 230V cpl	
021	0055590	Pump holder 483 upper black	60 Shore
022	0063839	Pump holder 483 lower black	50 Shore, Sysko
023	0063089	Fluid connect elbow 90° V2	black,1xF,1xmale,crosspiece
024	0061701	O-Ring 003,40x1,90 EPDM V3	70 Shore black
025	0063837	Cover 483 pump	black, silic 55 shore, Sysko
026	0055341	Air valve 483 APD cpl mount.	
027	0067795	Flow meter FHKSC 12 0°	932-9521/A, double insulated
028	0077572	Hose FEP D4,0/2,50x215mm	2 clamp ring/2 tubul.rivets
029	0062528	Hose FEP D4,0/2,50x330mm	packed
030	0065057	Hose guideway 483 translucent	silic 50 shore V2
031	0055597	Molded tube 483 silic	transp, APD-water tank ventilation
032	0061019	Molded tube 483 silic V2	transp-blue, flow meter-pump
033	0055596	Molded tube 483 silic	transp-green, water tank-flow meter
034	0037384	Clip D=5mm browned	inox
035	0005470	Clip D=4mm L=14mm Inox	
036	0061701	O-Ring 003,40x1,90 EPDM V3	70 Shore black
037	0063049	Fluid connect V shape 55° V3	black, 2xF
038	0043202	Insul.leeve Elbow connect	black, FH6,3 US
039	0064816	Temperature gauge 710 cpl	NTC104M5-S160A2
040	0071635	Screw KST/PT 3,0x12 bl galvan	rd head Torx-10
041	0024863	Screw safety KST/PT 3,0x12	bl galvan oval head (SFS-Remform)
042	0075951	Electronic 451 230V cpl	
043	0075806	Cover 451 strd wires	black

Pos	Part No.	Component Remark	
044	0055340	Water tank 483 cpl	
045	0075809	Cover 451 water tank	black
046	0055202	Drip tray 483 black	
047	0058481	Plug 4,0-5,5mm/M5 Smart plug	black,80 Shore
049	0055347	Drip plate 484 Inox	
050	0079134	Base 483 black V2	
051	0077862	Base plate 483 black V2	
052	0056659	Rubber feet 9,0x 0,8mm	black SJ-5832
053	0055768	Valve lifter 483 cpl mount.	
055	0075964	Line cord EU SF-71	H05VV-F3G0,75/L60/N60/ PE60,assembled
056	0007742	Strain relief clamp EU	neutral, snap-on
057	0075789	Cover 451 thermobl	black
058	0062347	Rubber feet 3,4x 3,8mm	black 60 Shore, cup shelf
059	0044585	Spring ring M 5 bl galvan	
060	0071881	O-Ring 003,40x1,90 silic/2-K	70 Shore red 2-comp silic
062	0080621	Damping element 347 thermobl	black, 60 Shore
065	0079129	Insul.sleeve elbow connect V2	black, FH6,3
071	0065055	Cable holder 483 translucent	silic 50 shore V2
981	0079978	Picture carton 451 Nespr.C111	385x185x357mmV2
982	0055929	Polystyr.483 2-part.	
983	0057795	Covering box 483 2/slotted	391x388x367mm
990	0077038	Instr.man.451 Nespresso	Citiz, 9-lang.NO/SW/DA/FI/GR/arabic/ TR/FR/GB,Zone 2

10.3 Model Citiz EF 452 D111

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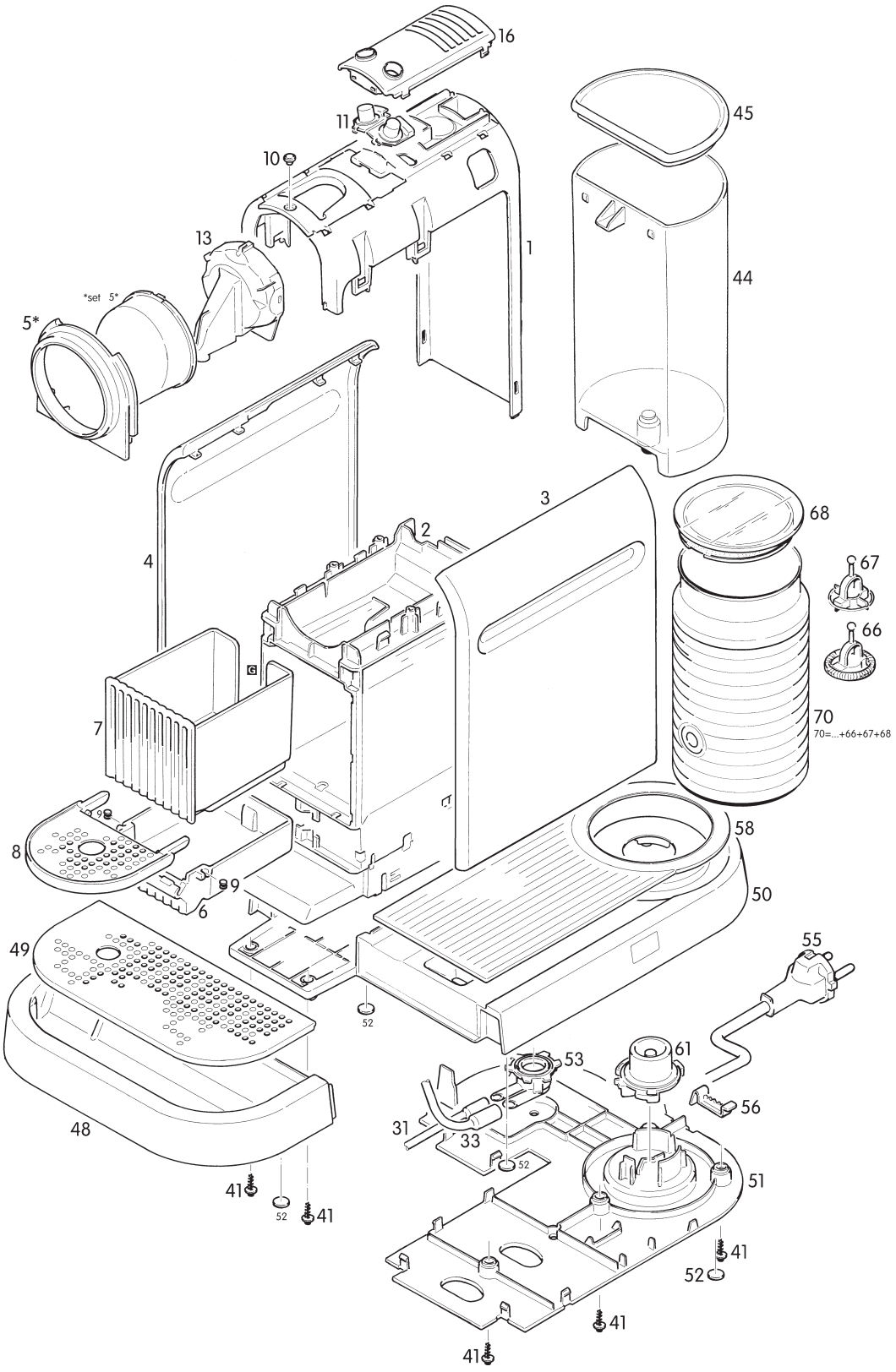
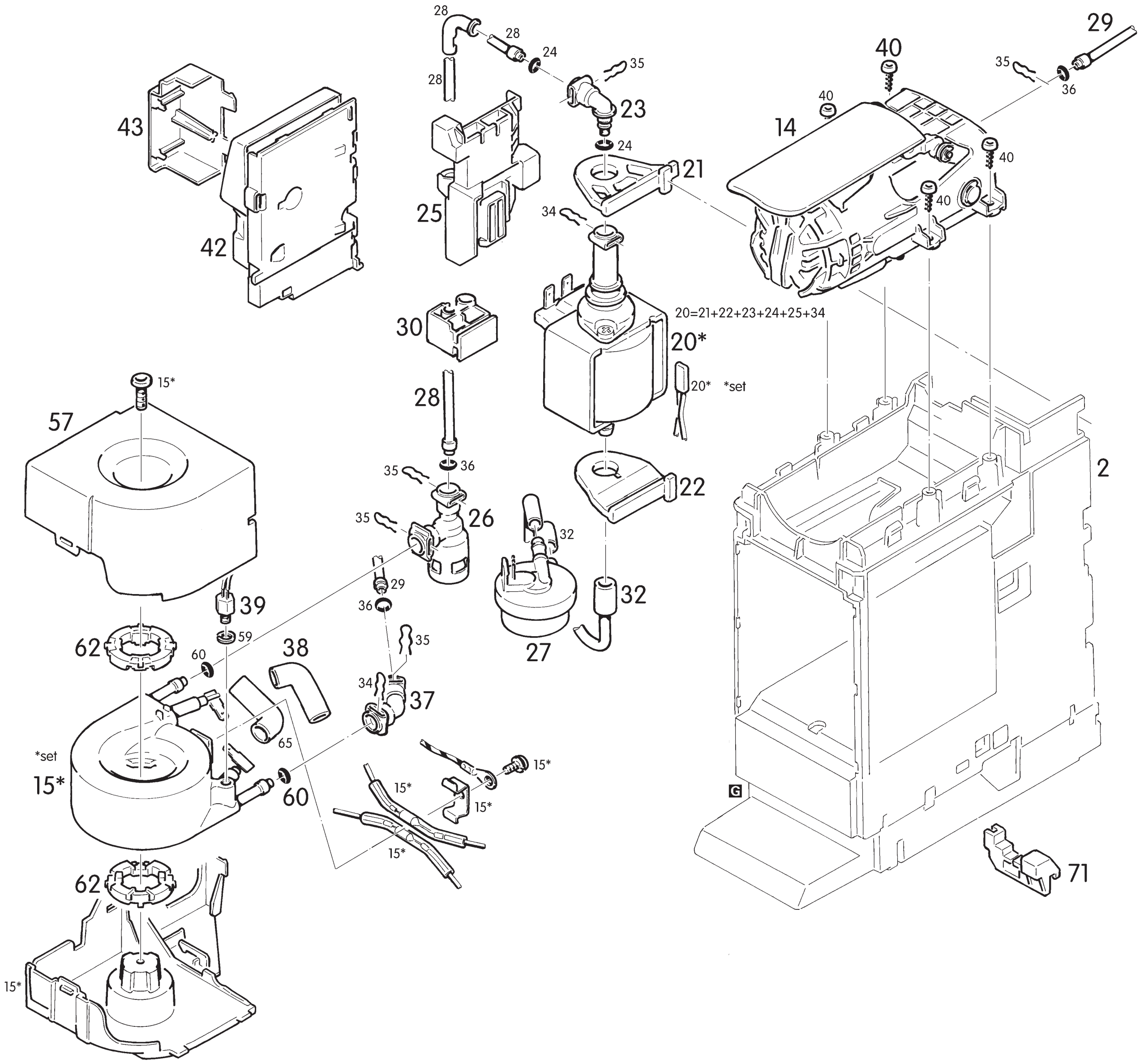
10.4 Parts List EF 452 D111

Pos	Part No.	Component	Remark
001	007880	Hood 484 black V2	
002	77859	Holder 451 black V2	
003	0064114	Side wall 483 left V2	cream high gl.
004	0066038	Side wall 484 right V3	cream high gl.
005	0054742	Cover outlet 483	high gl.chrom.pltd
006	0055335	Remai.water tray 483 transp	
007	0055334	Caps contain 483 transp	
008	0054818	Cup shelf 483 chrom.pltd	high gl.
009	0077878	Cover 484 black V2	
010	0055592	Rubber feet 483 TMBU black	60 Shore
011	0054813	Push-button 483 Espresso	silic translucent
012	0054814	Push-button 483 coffee	silic translucent
013	0054741	Outlet	
014	0062038	Extract unit 483 TMBU cpl V2	high gl.chrom.pltd
015	0075957	Thermobl 2010/L 230V/1200W	EF451 cpl
020	0079710	Pump 451 230V cpl	
021	0055590	Pump holder 483 upper black	60 Shore
022	0063839	Pump holder 483 lower black	50 Shore, Sysko
023	0063089	Fluid connect elbow 90° V2	black,1xF, 1xmale, crosspiece
024	0061701	O-Ring 003,40x1,90 EPDM V3	70 Shore black
025	0063837	Cover 483 pump	black, silic 55 shore, Sysko
026	0055341	Air valve 483 APD cpl mount.	
027	0067795	Flow meter FHKSC 12 0°	932-9521/A, double insulated
028	0077572	Hose FEP D4,0/2,50x215mm	2 clamp ring/2 tubul. rivets
029	0062528	Hose FEP D4,0/2,50x330mm	packed
030	0065057	Hose guideway 483 translucent	silic 50 shore V2
031	0055597	Molded tube 483 silic	transp, APD-water tank ventilation
032	0061019	Molded tube 483 silic V2	transp-blue, flow meter-pump
033	0055596	Molded tube 483 silic	transp-green, water tank-flow meter
034	0037384	Clip D=5mm browned	inox
035	0005470	Clip D=4mm L=14mm Inox	
036	0061701	O-Ring 003,40x1,90 EPDM V3	70 Shore black
037	0063049	Fluid connect V shape 55° V3	black, 2xF
038	0043202	Insul.leeve Elbow connect	black, FH6,3 US
039	0064816	Temperature gauge 710 cpl	NTC104M5-S160A2
040	0071635	Screw KST/PT 3,0x12 bl galvan	rd head Torx-10
041	0024863	Screw safety KST/PT 3,0x12	bl galvan oval head (SFS-Remform)
042	0075951	Electronic 451 230V cpl	

Pos	Part No.	Component Remark	
043	0075806	Cover 451 strd wires	black
044	0055340	Water tank 483 cpl	
045	0075809	Cover 451 water tank	black
046	0055202	Drip tray 483 black	
047	0058481	Plug 4,0-5,5mm/M5 Smart plug	black, 80 Shore
049	0055346	Drip plate 483 Inox	
050	0055012	Base 483 black	
051	0077862	Base plate 483 black V2	
052	0056659	Rubber feet 9,0x 0,8mm	black SJ-5832
053	0055768	Valve lifter 483 cpl mount.	
055	0075964	Line cord EU SF-71	H05VV-F3G0,75/L60/N60/PE60, assembled
056	0007742	Strain relief clamp EU	neutral, snap-on
057	0075789	Cover 451 thermobl	black
058	0062347	Rubber feet 3,4x 3,8mm	black 60 Shore, cup shelf
059	0044585	Spring ring M 5 bl galvan	
060	0024374	O-Ring 003,40x1,90 silic/2-K	70 Shore red 2-comp silic
062	0079126	Damping element 347 thermobl	black, 60 Shore
065	0079129	Insul.sleeve elbow connect V2	black, FH6,3
071	0065055	Cable holder 483 translucent	silic 50 shore V2
981	0079978	Picture carton 451 Nespr.D111	385x185x357mmV2
982	0055929	Polystyr.483 2-part.	
983	0057795	Covering box 483 2/slotted	391x388x367mm
990	0077038	Instr.man.452 Nespresso	Citiz, 9-lang.NO/SW/DA/FI/GR/arabic/ TR/FR/GB,Zone 2

10.5 Model Citiz EF 467 C121

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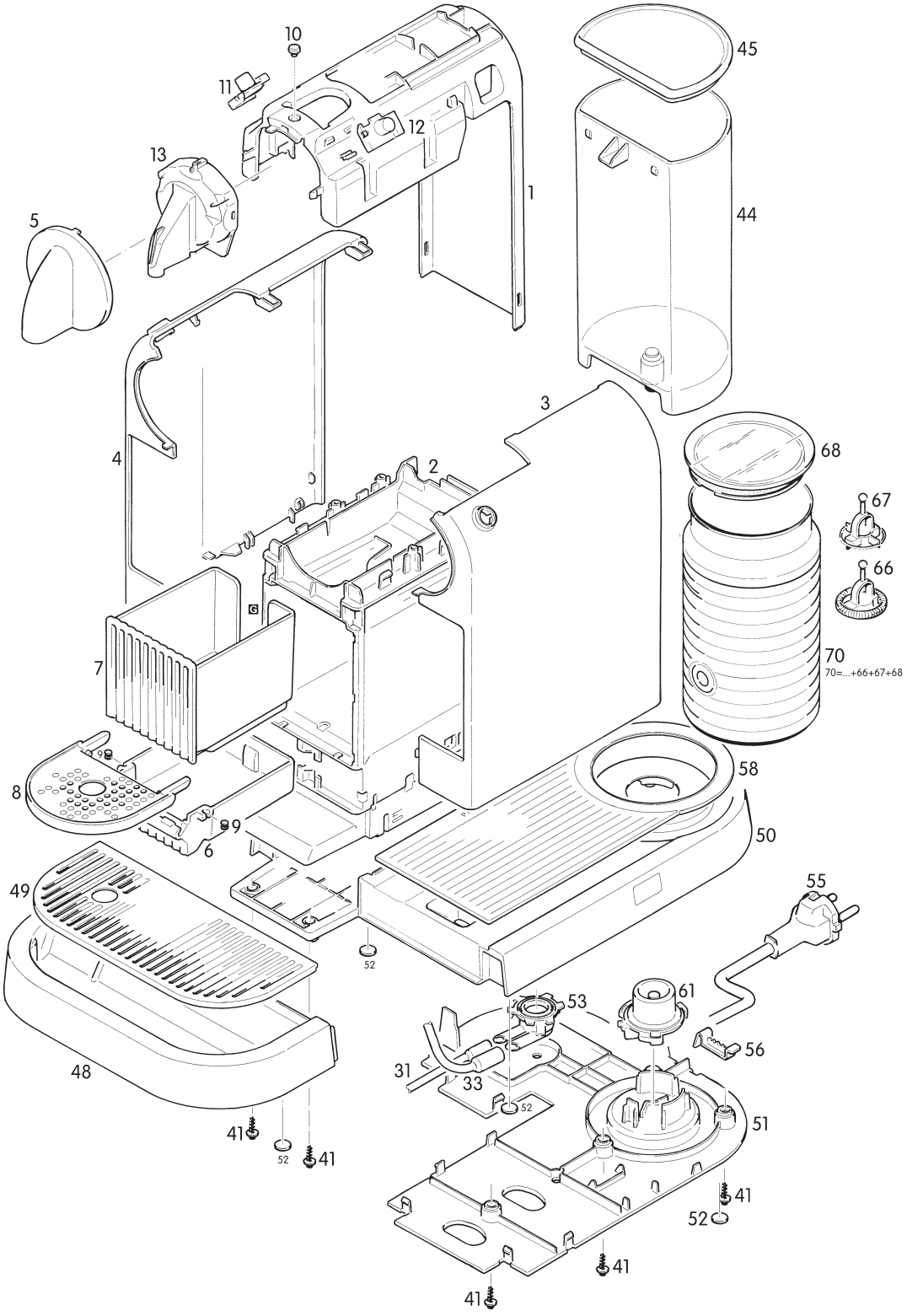
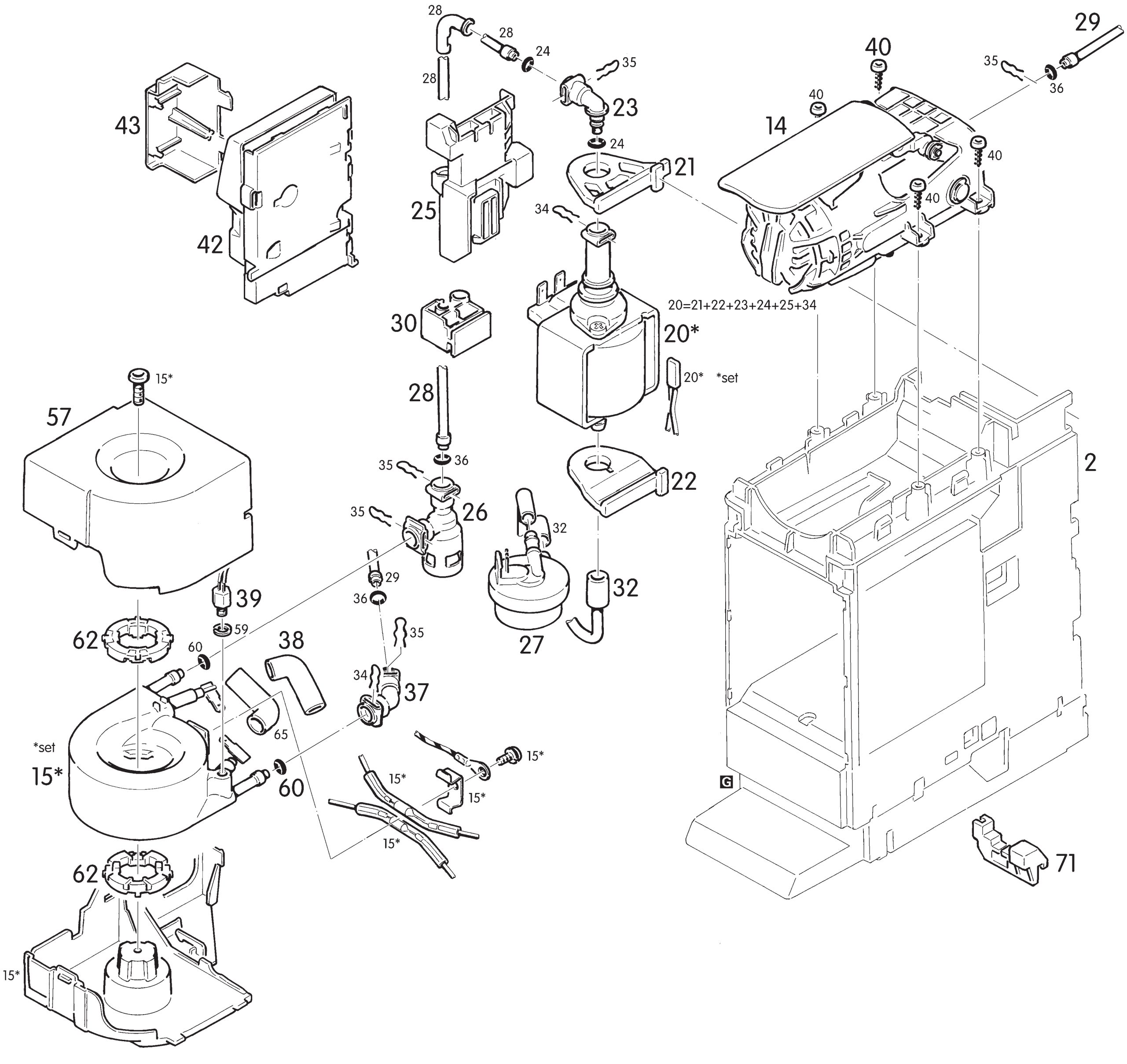
10.6 Parts List EF 467 C121

Pos	Part No.	Component	Remark
001	0077880	Hood 484 black V2	
002	0077859	Holder 451 black V2	
003	0079139	Side wall 484 right V3	red high gl.
	0079216	Side wall 484 right V3	titanium laquer
004	0066038	Side wall 484 left V2	red high gl.
	0057273	Side wall 484 left V2	titanium laquer
005	0079697	Cover 451 outlet TMBU cpl	
006	0055335	Remai.water tray 483 transp	
007	0055334	Caps contain 483 transp	
008	0054819	Cup shelf 484 chrom.pltd	high gl.
009	0062347	Rubber feet 3,4x 3,8mm	black 60 Shore,cup shelf
010	0055592	Rubber feet 483 TMBU black	60 Shore
011	0054815	Push-button 484 2x	translucent,silic,Espresso/coffee
013	0054741	Outlet 483 black	
014	0062039	Extract unit 484 TMBU cpl V2	black lacquer.
015	0076004	Thermobl 2010/L 230V/1200W	EF467 cpl
016	0077878	Cover 484 black V2	
020	0079710	Pump 451 230V cpl	
021	0055590	Pump holder 483 upper black	60 Shore
022	0063839	Pump holder 483 lower black	50 Shore,Sysko
023	0063089	Fluid connect elbow 90° V2	black,1xF,1xmale,crosspiece
024	0061701	O-Ring 003,40x1,90 EPDM V3	black,70 Shore
025	0063837	Cover 483 pump	black,silic 55 shore,Sysko
026	0055341	Air valve 483 APD cpl mount.	
027	0067795	Flow meter FHKSC 12 0°	932-9521/A,double insulated
028	0077572	Hose FEP D4,0/2,50x215mm	2 clamp ring/2 tubul.rivets
029	0062528	Hose FEP D4,0/2,50x330mm	packed
030	0065057	Hose guideway 483 translucent	silic 50 shore V2
031	0055597	Molded tube 483 silic	transp,APD-water tank ventilation
032	0061019	Molded tube 483 silic V2	transp-blue,flow meter-pump
033	0055596	Molded tube 483 silic	transp-green,water tank-flow meter
034	0037384	Clip D=5mm browned	inox
035	0005470	Clip D=4mm L=14mm Inox	
036	0061701	O-Ring 003,40x1,90 EPDM V3	black,70 Shore
037	0063049	Fluid connect V shape 55° V3	black,2xF
038	0043202	Insul.sleeve elbow connect	black,FH6,3 US
039	0064816	Temperature gauge 710 cpl	NTC104M5-S160A2
040	0071635	Screw KST/PT 3,0x12 bl galvan	rd head Torx-10
041	0024863	Screw safety KST/PT 3,0x12	bl galvan oval head(SFS-Remform)

Pos	Part No.	Component	Remark
042	0075951	Electronic 451 230V cpl	
043	0075806	Cover 451 strd wires	black
044	0055340	Water tank 483 cpl	
045	0075809	Cover 451 water tank	black
048	0055203	Drip tray 485 black	
049	0055343	Drip plate 486 Inox	
050	0079135	Base 485 black V2	
051	0077877	Base plate 485 black V2	
052	0056659	Rubber feet 9,0x 0,8mm	black SJ-5832
053	0055768	Valve lifter 483 cpl mount.	
055	0076007	Line cord EU SF-71	H05VV-F3G0,75/L70/N70/ PE70,assembled
056	0007742	Strain relief clamp EU	neutral,snap-on
057	0075789	Cover 451 thermobl	black
058	0055208	Cup shelf 485 black	
059	0044585	Spring ring M 5 bl galvan	
060	0071881	O-Ring 003,40x1,90 silic/2-K	red,70 Shore 2-comp silic V2
061	0056658	Connect base CS7 360°	120/240V/50/60Hz/13A/15A
062	0080621	Damping element 347 thermobl	black,60 Shore V2
065	0079129	Insul.sleeve elbow connect V2	black,FH6,3
066	0058214	Beater Aero3 cpl mounted	
067	0058215	Mixer Aero3 magnet	black
068	0058213	Cover Aero3 mounted	
070	0062108	Milk foam Aero 3 cpl.V2	220-240V/410-490W/50/60Hz,packed
071	0065055	Cable holder 483 translucent	silic 50 shore V2
981	0079976	Picture carton 467 Nespr.C121	385x285x328mm V2
982	0066295	Polystyr.485 2-part.V2	
983	0066292	Covering box 485 1/slotted	394x292x338mm
990	0077039	Instr.man.467 Nespresso	Citiz+Milk,9-lang.NO/SW/DA/FI/GR/ arabic/TR/FR/GB,Zone 2

10.7 Model Citiz EF 468 D121

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10.8 Parts List EF 468 D121

Pos	Part No.	Component Remark	
001	0077860	Hood 483 black V2	
002	0077858	Holder 452 black V2	
003	0079137	Side wall 483 right V2	black high gl.
	0079138	Side wall 483 right V2	cream high gl.
004	0055369	Side wall 483 left	black high gl.
	0064114	Side wall 483 left	cream high gl.
005	0054742	Cover 483 outlet	high gl.chrom.pltd
006	0055335	Remai.water tray 483 transp	
007	0055334	Caps contain 483 transp	
008	0054818	Cup shelf 483 chrom.pltd	high gl.
009	0062347	Rubber feet 3,4x 3,8mm	black 60 Shore,cup shelf
010	0055592	Rubber feet 483 TMBU black	60 Shore
011	0054813	Push-button 483 Espresso	translucent,silic
012	0054814	Push-button 483 coffee	translucent,silic
013	0054741	Outlet 483 black	
014	0062038	Extract unit 483 TMBU cpl V2	high gl.chrom.pltd
015	0076004	Thermobl 2010/L 230V/1200W	EF467 cpl
020	0079710	Pump 451 230V cpl	
021	0055590	Pump holder 483 upper black	60 Shore
022	0063839	Pump holder 483 lower black	50 Shore,Sysko
023	0063089	Fluid connect elbow 90° V2	black,1xF,1xmale,crosspiece
024	0061701	O-Ring 003,40x1,90 EPDM V3	black,70 Shore
025	0063837	Cover 483 pump	black,silic 55 shore,Sysko
026	0055341	Air valve 483 APD cpl mount.	
027	0067795	Flow meter FHKSC 12 0°	932-9521/A,double insulated
028	0077572	Hose FEP D4,0/2,50x215mm	2 clamp ring/2 tubul.rivets
029	0062528	Hose FEP D4,0/2,50x330mm	packed
030	0065057	Hose guideway 483 translucent	silic 50 shore V2
031	0055597	Molded tube 483 silic	transp,APD-water tank ventilation
032	0061019	Molded tube 483 silic V2	transp-blue,flow meter-pump
033	0055596	Molded tube 483 silic	transp-green,water tank-flow meter
034	0037384	Clip D=5mm browned	inox
035	0005470	Clip D=4mm L=14mm Inox	
036	0061701	O-Ring 003,40x1,90 EPDM V3	black,70 Shore
037	0063049	Fluid connect V shape 55° V3	black,2xF
038	0043202	Insul.sleeve elbow connect	black,FH6,3 US
039	0064816	Temperature gauge 710 cpl	NTC104M5-S160A2
040	0071635	Screw KST/PT 3,0x12 bl galvan	rd head Torx-10
041	0024863	Screw safety KST/PT 3,0x12	bl galvan oval head(SFS-Remform)

Pos	Part No.	Component Remark	
042	0075951	Electronic 451 230V cpl	
043	0075806	Cover 451 strd wires	black
044	0055340	Water tank 483 cpl	
045	0075809	Cover 451 water tank	black
048	0055203	Drip tray 485 black	
049	0055342	Drip plate 485 Inox	
050	0079135	Base 485 black V2	
051	0077877	Base plate 485 black V2	
052	0056659	Rubber feet 9,0x 0,8mm	black SJ-5832
053	0055768	Valve lifter 483 cpl mount.	
055	0076007	Line cord EU SF-71	H05VV-F3G0,75/L70/N70/ PE70,assembled
056	0007742	Strain relief clamp EU	neutral,snap-on
057	0075789	Cover 451 thermobl	black
058	0055208	Cup shelf 485 black	
059	0044585	Spring ring M 5 bl galvan	
060	0071881	O-Ring 003,40x1,90 silic/2-K	red,70 Shore 2-comp silic V2
061	0056658	Connect base CS7 360°	120/240V/50/60Hz/13A/15A
062	0080621	Damping element 347 thermobl	black,60 Shore V2
065	0079129	Insul.sleeve elbow connect V2	black,FH6,3
066	0058214	Beater Aero3 cpl mounted	
067	0058215	Mixer Aero3 magnet	black
068	0058213	Cover Aero3 mounted	
070	0062108	Milk foam Aero 3 cpl.V2	220-240V/410-490W/50/60Hz,packed
071	0065055	Cable holder 483 translucent	silic 50 shore V2
981	0077630	Picture carton 468 Nespr.D121	385x285x328mm
982	0066295	Polystyr.485 2-part.V2	
983	0066292	Covering box 485 1/slotted	394x292x338mm
990	0077042	Instr.man.468 Nespresso	Citiz+Milk,,9-lang.NO/SW/DA/FI/GR/ arabic/TR/FR/GB,Zone 2