Operation manual

Coffee Machine Model ECO / ECO 48

Item-No.: 317-2090 / 317-2094



317-2090
ECO



317-2094
ECO 48

English - Translation

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Dear Customer,

Congratulations on your new SARO coffee machine ECO / ECO 48.

The item you have purchased was developed for commercial use in restaurants, hotels, cafés, canteens, and supermarkets, to brew larger quantities of coffee and keep it warm on the warming plate. The required amount of coffee can be dispensed on-site.

Please read the operating instructions carefully before using the appliance for the first time.

We wish you lots of enjoyment with your new SARO product.

SCOPE OF DELIVERY

- 1 Coffee machine
- 2 glass jugs (Modell ECO) or 4 glass jugs(Modell ECO 48)
- 1 plastic filter holder (ECO model) or 2 stainless steel filter holders (ECO 48 model)
- Filter papers

STANDARDS AND DIRECTIVES

This device complies with the current EU standards and directives:

Low Voltage Directive – LVD 2014/35/EU
Electromagnetic Compatibility Directive – EMC 2014/30/EU
RoHS Directives 2011/65/EU and 2015/863/EU

We will be happy to provide you with the corresponding declaration of conformity upon request.

TECHNICAL OVERVIEW

Coffee Machine		
Model	ECO	ECO 48
Order-Nr.	317-2090	317-2094
Material	Housing made of stainless steel, filter holder made of plastic, glass jug	Housing and filter holder made of stainless steel, glass jug
On/Off Switch	YES	
Power Connection	Ready to plug in with Schuko plug	Ready to plug in with 2 Schuko plug
Brewing Time	Approx. 5-7 Minutes	
Boil-Dry Protection	YES	
Capacity Glass jug	2x 1,8 Liter	4x 1,8 Liter
Power Supply	230 V / 50/60 Hz / 2,06 kW	230 V / 50/60 Hz / 2x 2,06 kW
Dimension	W 205 x D 385 x H 435 mm	W 405 x D 410 x H 453 mm
Net/Gross Weight	6 / 9 kg	11,9 / 15,3 kg
GTIN [EAN-Code]	4017337317189	4017337071692

SYMBOL EXPLANATIONS



WARNUNG!
Dieses Symbol kennzeichnet Gefahren, die zu Verletzungen führen können. Halten Sie die angegebenen Hinweise zur Arbeitssicherheit unbedingt genau ein und verhalten Sie sich in diesen Fällen besonders vorsichtig.

WARNING!
This symbol indicates hazards that may cause injuries. Always follow the specified safety instructions precisely and exercise extra caution in these situations.



WARNUNG: GEFAHR DURCH ELEKTRISCHEN STROM!
Dieses Symbol macht auf gefährliche Situationen durch elektrischen Strom aufmerksam. Bei Nichtbeachten der Sicherheitshinweise besteht Verletzungs- oder Lebensgefahr!

WARNING: DANGER OF ELECTRIC SHOCK!
This symbol warns of hazardous situations caused by electric current. Failure to follow the safety instructions may result in injury or death!



WARNUNG: HEISSE OBERFLÄCHE - VERBRENNUNGSGEFAHR
Dieses Symbol weist auf die heiße Oberfläche des Gerätes, während des Betriebes und danach hin. Verbrennungsgefahr bei Nichtbeachten!

WARNING: HOT SURFACE - RISK OF BURNS
This symbol indicates the hot surface of the device during and after operation. Risk of burns if not observed!



WARNUNG: FEUERGEFÄHRLICHE STOFFE - VERBRENNUNGSGEFAHR
Dieses Symbol weist darauf hin, dass Gefahren aufgrund von feuergefährlichen Stoffen für Leben und Gesundheit von Personen bestehen. Verbrennungsgefahr bei Nichtbeachten!

WARNING: FLAMMABLE SUBSTANCES - RISK OF BURNS
This symbol indicates that flammable substances pose a danger to life and health. Risk of burns if not observed!

GENERAL INSTRUCTIONS

- Keep this operating manual readily accessible near the appliance.
- The manufacturer/dealer cannot be held responsible for any damage resulting from failure to follow these instructions.
- If this manual is not observed, the safety of the appliance is no longer guaranteed.
- When passing the appliance on to a third party, this manual must be included.
- This appliance must not be operated by children or persons with limited physical, sensory, or mental abilities, as they may not recognize the hazards of using electrical devices, which can result in accidents, fire, explosions, or property damage.
- After unpacking the appliance, ensure that everything is in perfect condition. If you notice any damage, do not connect the appliance – contact your dealer immediately.
- Check whether all components listed in the scope of delivery are present. If anything is missing, notify your dealer.
- Keep the appliance packaging. The device can only be safely transported (e.g., for repairs or moving) in the original packaging. Note that all packaging materials (plastic bags, cardboard, styrofoam parts, etc.) can be hazardous to children and must not be stored near them.
- If keeping the packaging is not possible, separate the packaging materials accordingly and take them to the nearest recycling center for proper disposal.
- Do not use the appliance outdoors in the rain or in damp environments.
- Do not operate the appliance unattended.
- Observe accident prevention regulations and general safety guidelines applicable to the area of use.
- Place the appliance in a dry, well-ventilated location on a flat, stable surface.
- Before connecting to the power supply and using the appliance, clean it thoroughly as described in the “Cleaning” section.
- Before plugging in the appliance, ensure that a grounded 230 V Schuko socket is available and that the electrical data match the information on the rating plate. Using a different power supply than specified can cause overheating or damage to the appliance.
- Do not drill or puncture the interior or exterior of the appliance. The system may be damaged.
- The manufacturer/dealer cannot be held responsible for damage caused by failure to follow this manual. In such cases, the safety of the appliance is no longer guaranteed.
- In case of malfunction or error, disconnect the appliance from the power supply and contact your dealer. Repairs should be carried out with original spare parts.
- Do not store the appliance at low temperatures, as water remains inside the boiler.

SAFETY INSTRUCTIONS



- Improper use and incorrect handling can lead to malfunctions and injury to the user.
- During operation, there is a risk of scalding from hot steam and liquids – exercise caution when handling lids, taps, and containers.
- Observe the accident prevention regulations and general safety guidelines applicable to the intended area of use.
- Ensure the appliance stands securely on a dry, slip-resistant surface that can support its weight, and place it in a well-ventilated location.
- Do not expose the appliance to direct sunlight, do not place it near other heat sources (radiators, stoves, ovens, open flames), and do not place it on a hot surface.



- Do not store flammable or explosive substances near the appliance.
  Do not carry out work with flammable substances near the appliance (e.g., spraying paint or lacquer). This could lead to fire or explosion.
- Do not place heavy objects, loads, or liquids on top of the appliance.
- Before connecting to your power supply, check that the type of current and voltage match the specifications on the rating plate. Only in case of a match can the appliance be operated safely to avoid accidents or damage.
- Do not use adapters, power strips, and/or extension cords; they may overheat quickly, especially when other devices are connected. This increases the risk of fire.
- Do not move the appliance while in use.
- Before moving the appliance, switch it off (if a switch is present) and unplug it from the socket.
- Always unplug the appliance by holding the plug housing – never pull on the cable.



- Make sure the appliance does not tip over while being moved. This could cause injury.
- In the event of a power outage or if the plug has been pulled briefly, turn off the appliance, wait 5 minutes, then plug it back in and restart the appliance.
- Do not let the power cord hang over sharp edges, do not crush it, and keep it away from hot surfaces and open flames.
- Ensure the cable cannot be pulled accidentally or tripped over.
- Regularly inspect the power cord. If it is damaged, e.g. crushed, it must be replaced by a qualified technician.
- Do not touch the appliance, cable, or plug with wet or damp hands.



- Caution! The appliance remains under voltage as long as it is connected to the power supply.
- Protect the appliance from moisture.
- Do not clean the appliance with a direct water jet.
- Do not immerse the appliance in water or other liquids, and do not allow liquids to enter the appliance.
  If the appliance does become wet, unplug it immediately and have it checked by a qualified technician before using it again. There is a risk of fatal electric shock.
- A damaged appliance must not be used!
  In such cases, disconnect it from the power supply and contact your dealer.
- Never attempt to open or repair the appliance yourself. There is a risk of fatal injury!
- Do not drill or puncture the appliance, neither on the exterior nor the interior.
  Do not install other devices or attach foreign objects to it.
- Repairs must be carried out by qualified professionals using original spare parts.
- Always unplug the appliance before cleaning or when not in use for an extended period.
- For hygienic reasons, at least one daily cleaning is recommended, or more frequently if needed throughout the day.

DEVICE INSTALLATION

Place the appliance in a dry and well-ventilated room. Ensure it stands securely on a dry and non-slip surface.

Position the appliance with its back at least 10 cm away from the wall to allow sufficient air circulation at all times. There should be at least 30 cm of space above the appliance and 10 cm on each side.

Performance and power consumption may be affected by ambient temperature or direct sunlight. Therefore, do not expose the appliance to direct sunlight and do not place it near a stove, radiator, or any other heat source.

Make sure that the power plug is always easily accessible and can be disconnected from the power supply without difficulty.

ELECTRICAL CONNECTION

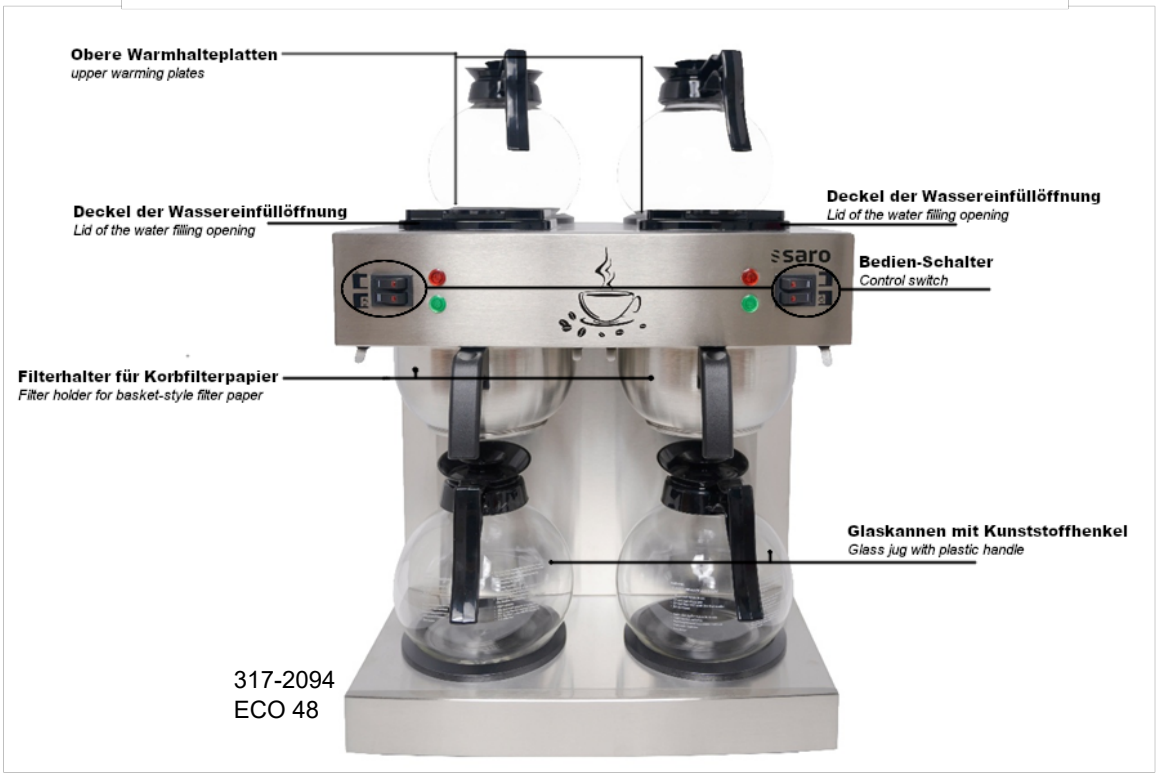
Before connecting the appliance, make sure that the voltage and frequency of the power supply match the specifications on the rating plate! Using the wrong voltage can lead to overheating of the appliance!!!

Only connect the appliance to a grounded socket with a 230-volt power supply.

After a power failure or if the appliance has been disconnected from the power supply, wait at least 5 minutes before reconnecting and starting the appliance!

STRUCTURE AND COMPONENTS





INITIAL START-UP

Before first use:
Unpack the appliance, check that all parts are included, and set it up (see Installation). Clean the appliance (see Cleaning). Connect the cleaned coffee machine (see Electrical Connection) to a 230 V socket. Before the first use, operate the appliance with water only to flush out any residues from the boiler.
Do not draw coffee until the brewing process is fully completed.

Please note that approximately 0.3 L of water will remain in the appliance after first use, as the boiler remains filled.

OPERATION – SETTINGS



Installation

1. Place the machine on a stable, level surface.
2. Slide the filter holder into position.
3. Pour cold water (no more than 1.8 liters) into the water tank, then wait 1 minute to allow the water to push out any air inside the machine.
4. Place an empty decanter correctly under the filter holder.
5. Switch on the machine – the indicator light will turn on.
6. Hot water will begin to flow into the decanter.
7. After 5–7 minutes, the indicator light turns off. The brewing process is complete.
8. Before brewing coffee, repeat the above steps 2–3 times to thoroughly clean the internal components of the machine.
9. During this process, it is normal to hear a hissing sound or see steam escaping.

Operation

1. Insert a paper filter into the filter holder and add the desired amount of coffee (depending on taste). The recommended amount is 75 g – 90 g of coffee for 1.6 to 1.8 liters of water.
2. Slide the filter holder into position.
3. Pour 1600 to 1800 ml of water into the water reservoir.
4. Place the empty glass decanter correctly under the filter holder.
5. Switch on the appliance – the indicator light will turn on. The brewing process begins.
6. Coffee flows into the glass decanter.
7. When the indicator light turns off, the brewing process is finished.
8. The coffee is now ready to be served.

Note:

- The water tank has a capacity of 1.8 liters. Please avoid overfilling.
- If the coffee machine has not been used for an extended period, please repeat steps 1–8 under the “Installation” section.

Caution: Do not store the appliance at low temperatures – water remains inside the boiler!

CLEANING

Make sure the appliance is unplugged and has cooled down.
Wipe the exterior and interior surfaces with a damp, soft cloth.
A mild dishwashing detergent may be used.
Wipe again with clean water (without detergent), then dry thoroughly.
Do not use harsh, bleaching, corrosive, or abrasive cleaning agents or tools, as they may damage or scratch the surfaces.

As there is always some water left in the hoses and the boiler of the machine, you should make sure to remove the remaining water from the coffee machine before storing it.

Descale the appliance regularly. Follow the manufacturer's instructions regarding the descaling agent.

MAINTENANCE

After a certain period of use, limescale will build up on the heating element and along the water path inside the appliance.
You should descale the appliance regularly to ensure optimal performance and to preserve the taste and aroma of the coffee.

Steps for descaling:

1. Use a descaling agent, lemon juice, or cleaning vinegar.
2. If using lemon juice or vinegar, mix 1/3 lemon juice or vinegar with 2/3 water.
3. Place the filter funnel on the holder of the appliance.
4. Place an empty decanter under the filter funnel.
5. Pour the descaling agent, lemon juice solution, or vinegar solution into the water tank.
6. Switch on the appliance.
7. As soon as the descaling solution begins to flow through the machine, switch it off.
8. Let the appliance sit for about 5 minutes to allow the limescale to dissolve.
9. Switch the appliance back on so the solution can run through completely.
10. Once all of the descaling solution has passed through, switch off the appliance again.
11. Fill the water tank with clean water and repeat the brewing cycle until no odor or taste remains in the water.

Regular Maintenance

To keep the appliance in optimal condition, clean it regularly and descale it at regular intervals.
How often maintenance is needed depends on how frequently the appliance is used.

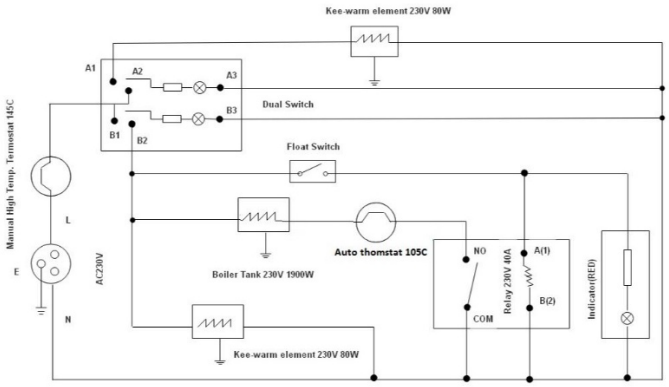
TAKING THE COFFEE MACHINE OUT OF OPERATION / STORAGE / TRANSPORT

Switch off the appliance and unplug it from the power outlet.
Thoroughly clean the interior and exterior of the appliance. Once it is dry and not intended for use for an extended period, store it in a dry, dust-free, and non-heated place. Empty the boiler by turning the appliance upside down. It is best to cover the appliance or use the original packaging to protect it from damage.
Make sure to secure the appliance to prevent pets from climbing inside and possibly getting trapped.
When storing only the packaging materials, please be aware that components such as plastic bags, cardboard, and styrofoam can pose a danger to children if they play with them unsupervised (e.g. risk of suffocation).
For transporting the appliance, it is best to use the original packaging to protect it optimally against impacts, sharp edges, weather conditions, etc.
Do not expose the appliance to moisture or rain, and avoid strong vibrations.

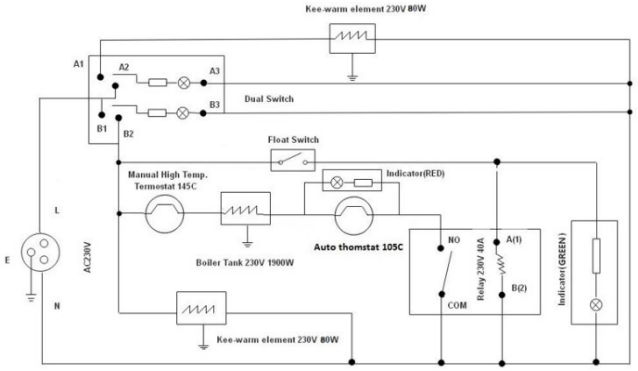
TROUBLESHOOTING

Problem	Possible Causes	Solution
The ON/OFF switch does not light up	– No power supply to the appliance – The ON/OFF switch is damaged	– Check the power plug – Contact customer service
The appliance works, but water flow is irregular	– Electronic control is not functioning – Temperature fuse is defective	– Contact customer service
The fuse trips when the appliance is switched on	– A short circuit has occurred	– Contact customer service
If the problems cannot be solved by basic troubleshooting, please contact your dealer.		

WIRING DIAGRAM

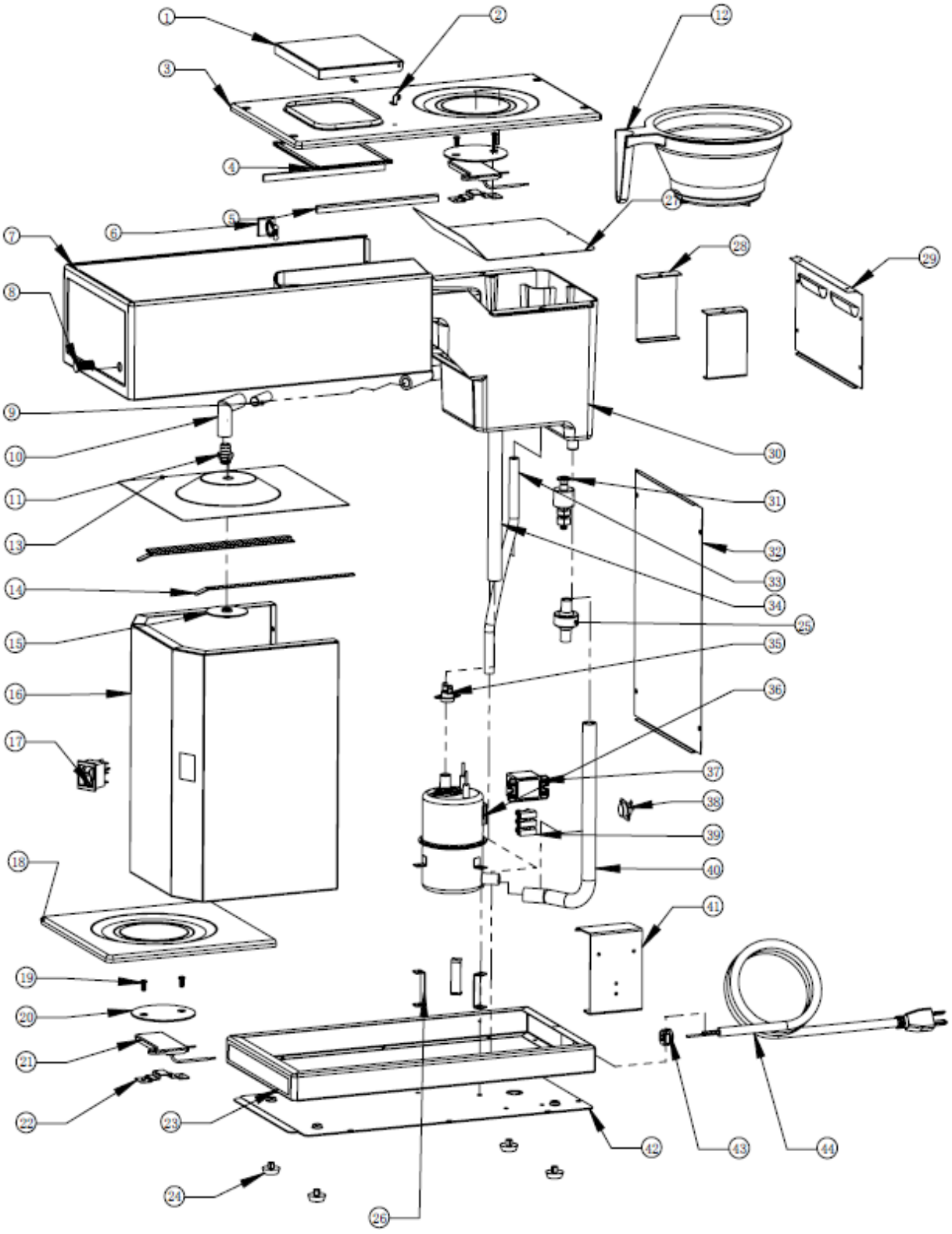


317-2090
ECO



317-2094
ECO 48

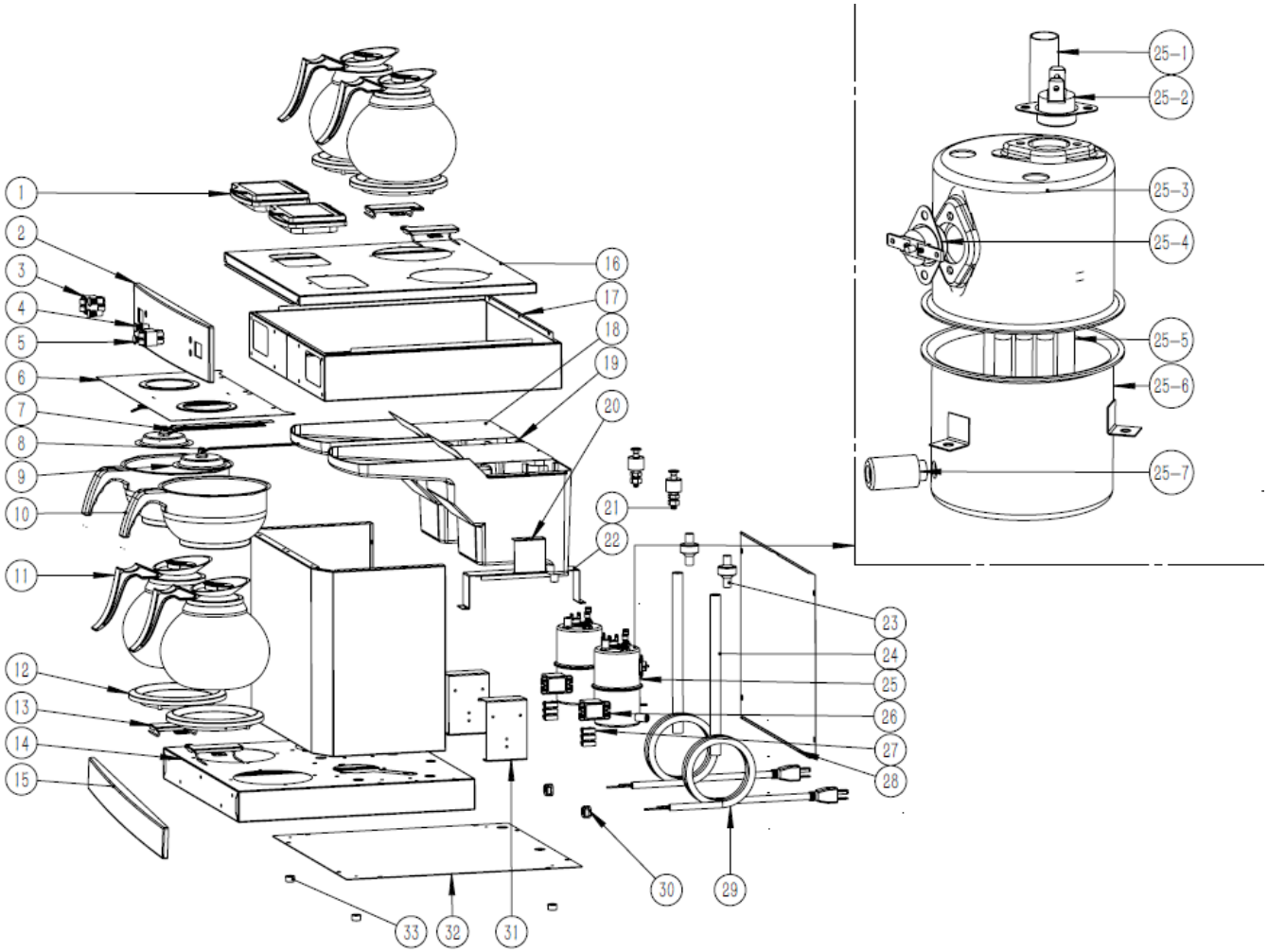
EXPLODED VIEW DRAWING: 317-2090 ECO



EXPLODED VIEW DRAWING – LEGEND: 317-2090 ECO

1	Lid of water reservoir	Deckel für Wassereinfüllschacht
2	Fixer of water inlet	Fixierung für Wassereinlass
3	Reservoir cover	Gehäuseoberteil
4	Plastic net of water entrance	Netz für Wassereinlass
5	Sealing washer of tank	Behälter f. Dichtung
6	Corder Holder	Halterclip
7	Upper frame	Oberer Rahmen
8	Indication Lamp	Kontrollleuchte (317-3057)
9	Tube connector	Schlauchverbinder
10	Pipe of hot water	Heißwasserschlauch
11	Sprinkler joint with screw	Muffe
12	Plastic filter pan	Filterhalter (317-3059)
13	Sprinkler cover	Abdeckblech Sprühdüse
14	Guide (left/right)	Gleitschiene
15	Sprinkler Set	Sprühdüse (317-3056)
16	Body frame	Gäuse
17	Dual switch	Ein-/Ausschalter (213-4017)
18	Lower panel	Untere Heizplatte
19	M5 x 10 screw	M5 x 10 Schraube
20	Alu plate for keep warm element	Aufnahmeplatte für Warmhalteelement
21	Mica warming plate	Warmhalteelement (317-3000)
22	Mica warming plate holder	Bügel für Warmhalteelement
23	Base frame	Bodenrahmen
24	Bottom heel	Fuß (175-5097)
25	Valve	25
26	Boiler Fixer	Befestigungsbügel für Boiler
27	Plate for water stop	Schutzblech
28	Reservoir fixer	Fixierung für Wasserbehälter
29	Rear cover	Obere Rückwand
30	Plastic reservoir	Wasserbehälter (317-5058)
31	Float switch	Schalter für Schwimmer (213-4014)
32	Back cover	Gehäuse Rückwand
33	Drain pipe	Ablassrohr
34	Outflow pipe	Auslassrohr
35	Thermostat 105 °C	Thermostat 105 °C (317-5060)
36	Boiler Tank	Boiler komplett (317-3058)
37	Relay	Relais (213-4015)
38	Manual high temp. Thermostat	Sicherheitsthermostat 145 °C (317-5065)
39	Terminal Block	Klemmstein
40	Inflow Pipe	Kaltwasserschlauch (317-3060)
41	Relay Fixer	Fixierung für Relais (317-3060)
42	Bottom Cover	Bodenblech
43	Cord clip	Zugentlastung (175-5087)
44	Plug + Power Cord	Zuleitung (175-5079)

EXPLODED VIEW DRAWING: 317-2094 ECO 48



EXPLODED VIEW DRAWING – LEGEND: 317-2094 ECO 48

1	Plastic Water Entrance and cover	Kunststoff-Wasserzulauf und Abdeckung
2	Alu Front Pannel(upper)	Aluminium-Frontblende (oben)
3	Dual Switch	Doppelschalter
4	Indicator Lamp(Red) with wire	Kontrollleuchte (Rot) mit Kabel
5	Indicator Lamp(Green) with wire	Kontrollleuchte (Grün) mit Kabel
6	Removable Sprinkler Cover	Abnehmbare Sprinklerabdeckung
7	Guide rail	Führungsschiene
8	Sprinkler Joint with screw	Sprinkleranschluss mit Schraube
9	Sprinkler Set	Sprinklerset
10	Stainless Filter Pan	Edelstahl-Filterpfanne
11	Glass Decander	Glaskanne
12	Cast-alu warming Plate	Guss-Aluminium-Wärmeplatte
13	Mica Warming Plate	Mica-Wärmeplatte
14	Base Frame	Grundrahmen
15	Alu Front Pannel(lower)	Aluminium-Frontblende (unten)
16	Upper Cover	Obere Abdeckung

17	Upper Frame	Oberer Rahmen
18	Baffle of water receivor	Spritzschutz des Wasserauffangbehälters
19	Water receivor	Wasserauffangbehälter
20	Receivor bracket	Halterung für Auffangbehälter
21	Float Switch	Schwimmerschalter
22	Receivor bracket-1	Halterung für Auffangbehälter-1
23	OneWay Valve	Rückschlagventil
24	Draining pipe	Ablaufrohr
25	SS Heating Boiler including thermostats assemblly	Edelstahl-Heizkessel mit Thermostatbaugruppe
25-1	SS Heating outlet pipe	Edelstahl-Auslassrohr
25-3	SS Boiler body(upper)	Edelstahl-Kesselkörper (oben)
25-5	SS Heating Tube	Edelstahl-Heizstab
25-6	SS Boiler body(lower)	Edelstahl-Kesselkörper (unten)
25-7	SS Heating inlet pipe	Edelstahl-Einlassrohr
25-2	Auto Thermostat	Automatischer Thermostat
25-4	Manual High Temp. Thermostat	Manueller Hochtemperatur-Thermostat
26	Relay	Relais
27	Terminal Block	Anschlussblock
28	Back Cover of middle frame	Rückwand des Mittelrahmens
29	Plug+Power Cord	Stecker mit Stromkabel
30	Wire clip	Kabelclip
31	Relay Fixer	Relaishalter
32	Bottom Cover	Bodenabdeckung
33	Bottem Heel	Unteres Fußteil

PACKAGING DISPOSAL



Please separate the packaging materials accordingly and take them to the appropriate collection points for recycling and environmental protection.

DEVICE DISPOSAL



Once the appliance has reached the end of its life, please dispose of it properly at a designated collection point for electrical devices.
Electrical appliances do not belong in household waste.
Your local authority can provide information on the locations and opening hours of disposal sites.
This is the only way to ensure that old appliances are disposed of and recycled correctly.
Thank you!

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Note: Technical, design, and model changes as well as errors are subject to change without notice.