

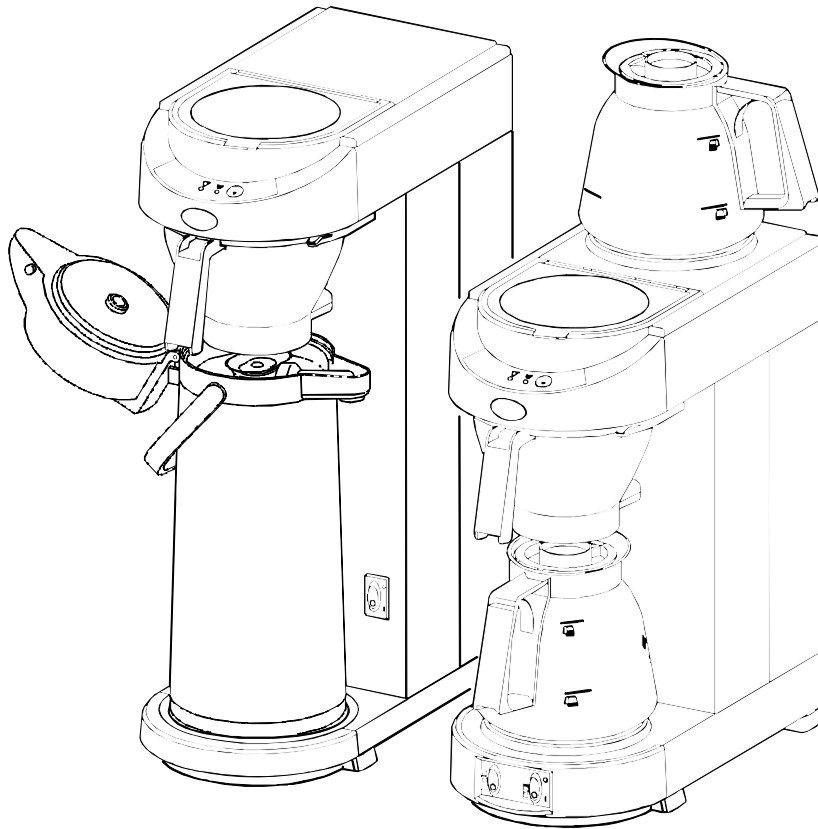
metos

COFFEE MAKER

M-Series

TYPE: M100, M102, MT100, MT100V

Installation and Operation Manual



S/N:

Rev.: 2.2

Dear Customer,

Congratulations on deciding to choose a Metos appliance for your kitchen activities. You made an excellent choice. We will do our best to make you a satisfied Metos customer like thousands of customers we have around the world.

Please read this manual carefully. You will learn correct, safe and efficient working methods in order to get the best possible benefit from the appliance. The instructions and hints in this manual will give you a quick and easy start, and you will soon note how nice it is to use the Metos equipment.

All rights are reserved for technical changes.

You will find the main technical data on the rating plate fixed to the equipment. When you need service or technical help, please let us know the serial number shown on the rating plate. This will make it easier to provide you with correct service.

For your convenience, space is provided below for you to record your local Metos service contact information.

METOS TEAM

Metos service phone number:.....

Contact person:.....

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1. General

Carefully read the instructions in this manual as they contain important information regarding proper, efficient and safe installation, use and maintenance of the appliance.

Keep this manual in a safe place for eventual use by other operators of the appliance.

The installation of this appliance must be carried out in accordance with the manufacturer's instructions and following local regulations. The connection of the appliance to the electric and water supply must be carried out by qualified persons only.

Persons using this appliance should be specifically trained in its operation.

Switch off the appliance in the case of failure or malfunction. The periodical function checks requested in the manual must be carried out according to the instructions. Have the appliance serviced by a technically qualified person authorized by the manufacturer and using original spare parts.

Not complying with the above may put the safety of the appliance in danger.

1.1 Symbols used in the manual



This symbol informs about a situation where a safety risk might be at hand. Given instructions are mandatory in order to prevent injury.



This symbol informs about the right way to perform in order to prevent bad results, appliance damages or hazardous situations.



This symbol informs about recommendations and hints that help to get the best performance out of the appliance.

1.2 Symbols used on the appliance



This symbol on a part informs about electrical terminals behind the part. The removal of the part must be carried out by qualified persons only.

1.3 Checking the relation of the appliance and the manual

The rating plate of the appliance indicates the serial number of the appliance. If the manuals are missing, it is possible to order new ones from the manufacturer or the local representative. When ordering new manuals it is essential to quote the serial number shown on the rating plate.

2. Safety instructions

2.1 General

This appliance meets the mandatory safety regulations. Inexpert use can result in personal injury and material damage. The following warnings and safety instructions must be observed before using the coffee maker.

2.1.1 Instructions for use

Read these instructions for use carefully, before using this appliance. This will protect your safety and prevent damage being caused to the appliance. Perform the various actions in the order given. Always keep this manual in the vicinity of the appliance.

2.1.2 Installation

- Place the appliance at buffet height and on a firm, level base, in such a way that it can be connected to the power supply.
- Connect the appliance to an earthed wall socket.
- Position the appliance in such a way that no damage can be caused if it leaks.
- Do not tilt the appliance, always position and move the appliance upright.
- The coffee maker is fitted with an overflow device that discharges at the bottom of the appliance - take this into account when positioning the appliance.
- Water always remains in the heating system: for this reason the appliance must not be placed in an area where the temperature can fall below freezing point.
- When installing the appliance, always observe the local rules and use approved materials and parts.
- The 'Installation' chapter must again be followed when repositioning the appliance.

2.1.3 Usage

- Inspect the appliance before using it and check it for damage.
- Never submerge or spray the appliance.
- Do not press the buttons with a sharp object.
- Protect the controls against dirt and grease.
- It is advisable to take the plug out of the socket if the appliance will not be used for longer periods of time.

2.1.4 Maintenance and troubleshooting

- Observe the descaling intervals indicated by the descaling indicator light.
- Overdue maintenance to the heating system can result in high repair costs and annulment of the guarantee.
- Always follow the manufacturer's instructions when using the descaling agent.
- Do not leave the appliance unattended when maintenance is being performed.
- When descaling the appliance, it is advisable to wear safety glasses and protective gloves.
- Flush the appliance at least twice after descaling it.
- Wash your hands thoroughly after descaling the appliance.
- Always have repairs carried out by a qualified service engineer.
- The plug must be taken out of the socket if the appliance has to be opened for cleaning or repairs.

The manufacturer cannot be held liable for losses caused as a result of failure to observe these safety instructions.

2.2 Safeguards

The appliance is fitted with the following safeguards:

2.2.1 Dry-boil protection (14)

This application is equipped with a dry-boil protection. This protection triggers if the heating element overheats owing to a fault. Once the fault has been resolved, the dry-boil protection can be reset at the back of the appliance. The most common cause of the dry-boil protection being triggered is not descaling the heating system in time.

If the heating system does not switch back on, proceed as follows:

- Allow the appliance to cool down.
- Unscrew the protective cap, which can be found on the back of the appliance.
- Press the button which is now visible and firmly screw the protective cap back on.

If the dry-boil protection triggers owing to increased scale deposits, descale the appliance. Consult your dealer if the fault was caused by a problem other than the dry-boil protection being triggered.

2.2.2 On/off switch (1)

The on/off switch is used to switch the appliance on and off. Remember that the appliance can still be live after switching it off! For this reason you should always remove the plug from the socket to render the appliance voltage-free.

2.2.3 Jug detector (9)

This appliance is fitted with a jug detector that operates the leak stop under the filter. This jug detector also ensures that the appliance only makes coffee if there is a jug under the filter. If the jug is removed during the coffee brewing process, the process will be interrupted and the leak stop in the filter will prevent coffee dripping on the hot plate.

2.3 Appliances and the environment

2.3.1 The packing material

Your new coffee maker has been carefully packaged to protect it against damage.

The packing is not harmful to the environment and consists of the following materials:

- corrugated cardboard
- filler elements made of polyurethane foam <PUR> covered with a polythene film (>PE-HD<). The waste processing plant in your municipality will be pleased to inform you about where you can dispose of the materials.

2.3.2 Discarding the appliance

No appliance lasts forever. When the time comes to discard your appliance it will usually be possible to return it to your dealer. If this is not the case, ask your municipal council about the alternatives for recycling the materials. All plastic parts have been given standard codes. The parts of the appliance such as the printed circuit board and accompanying parts form electrical and electronic waste. The metal pipes are made of stainless steel and can be completely dismantled.

3. Functional description

3.1 Use of the appliance

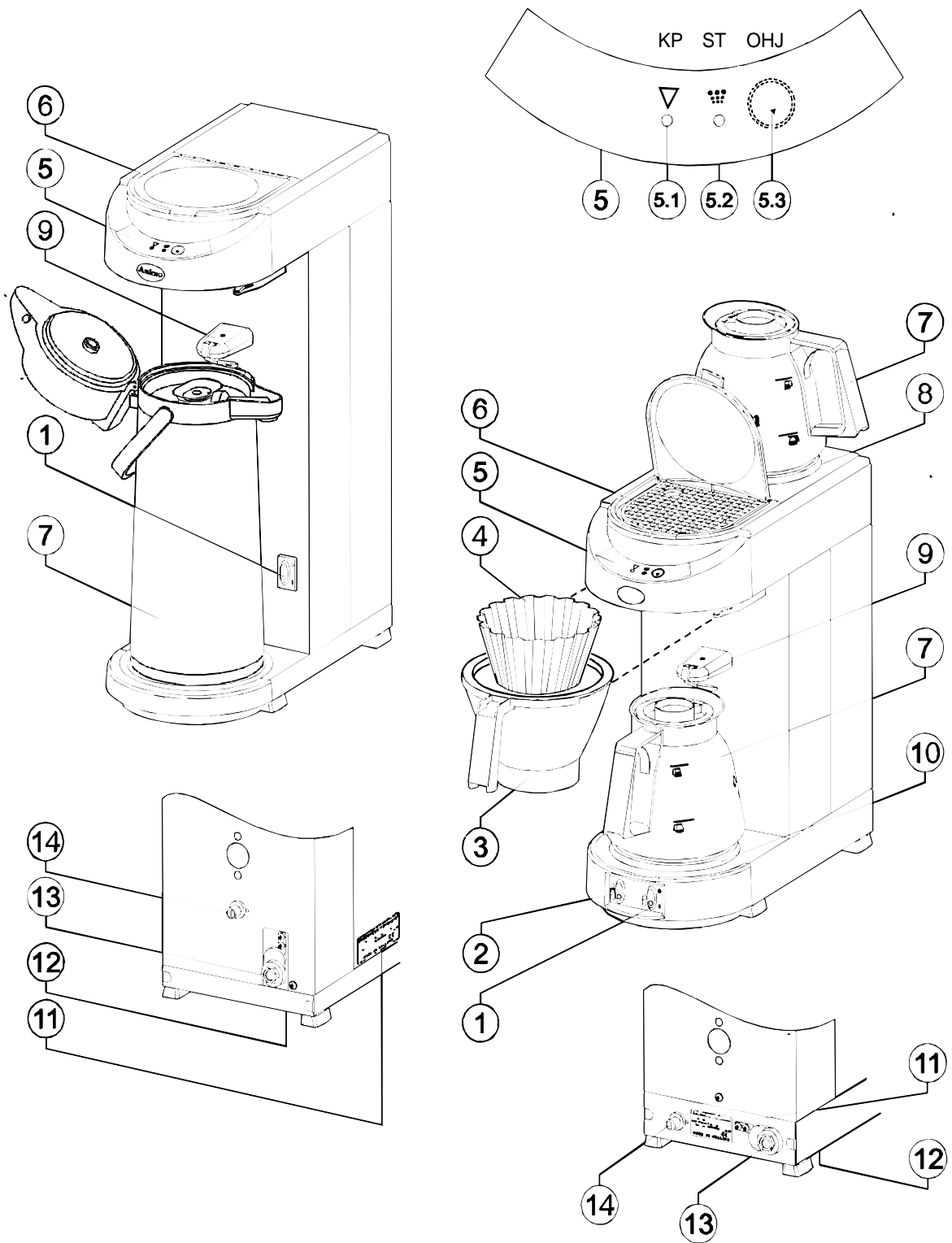
The sole use of this appliance is to make coffee and/or tea, and to warm water.

3.1.1 Other use

The use of the appliance for other purposes is not permitted and may be hazardous. The manufacturer cannot be held liable for losses caused by using the appliance for purposes other than those indicated here or by incorrect use.

Functional description

3.2 Construction



Functional description

The most important parts (see pic.):

1. Appliance on/off switch and bottom hot plate
2. On/off switch for top hot plate
3. Basket filter with leak stop device
4. Basket filter paper
5. Control panel (see below for details)
6. Water reservoir opening and grid
7. Glass jug/thermos flask
8. Top hot plate
9. Jug detector
10. Bottom hot plate
11. Type plate
12. Water drain
13. Connection cable with plug
14. Dry-boil protection

Control panel:

- 5.1 Brewing process indicator light
- 5.2 Descale indicator light
- 5.3 Programming button

3.3 Control panel



Never press the buttons with a sharp object.

Protect the controls against dirt and grease.

3.3.1 Descale indication light



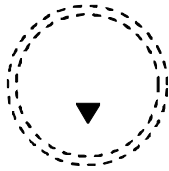
The red indicator light will light up if the appliance needs to be descaled. The appliance will continue to work so that it can be descaled when it is not being used.

3.3.2 Brewing process indicator light



The green indicator light lights up when the coffee passes through the system. At the end of the coffee making process a signal sounds three times and the green indicator light goes out. The indicator light flickers if the jug is temporarily removed during the coffee making process. A signal will also sound indicating that the coffee making process has temporarily stopped.

3.3.3 Programming button



This key is made visible with a small triangle. This programme key is used exclusively to set the appliance to the local water hardness.

3.3.4 Sound signals



Sounds three times at the end of the coffee making process. Sounds once if the jug is removed during the coffee making process. A long signal sounds when the appliance is switched on.

4. Operation instructions

4.1 First time use

- Slide an empty basket filter (3) into the appliance and place an empty jug (with lid) underneath it. For the MT100(V) model leave the lid of the thermos jug with pump open, and leave the riser tube in the jug. Adjust the height of the MT100V before positioning it.
- Pour one jug (water measuring cup, MT-model) of cold water into the cold water reservoir (6).
- Wait for three minutes so that the entire heating system can de-aerate.
- Check if the on/off switches (1+2, if present) are at position 0.
- Put the plug in the socket.
- Switch on the appliance by setting the on/off switch (1) to the I position, the indicator lights (5.1) and (5.2) will light up and an audible signal will sound.
- The green indicator light (5.2) will now light up until the appliance has finished making the coffee.
- When the appliance has finished making the coffee a signal will sound three times after about 1.5 minutes and the green indicator light (5.2) will go out.
- Follow the above steps again for the other coffee making section if the model has a double coffee making system (M102).
- The appliance is ready for use when the jug has been emptied.

4.1.1 Daily use

Leak stop

This appliance is fitted with a leak stop that ensures that no coffee drips out of the filter when you:

- take away the jug after making coffee.
- take the filter out of the appliance after making coffee to empty it.



The leak stop can only work if the jug detector is pressed in sufficiently by the jug. If you use a coffee jug with a narrow neck the jug detector will not be pressed in sufficiently and the appliance will not start.

Coffee quantity

Basic rules to good coffee making:

- use fine or medium ground coffee
- always keep the jug and basket filter clean
- use only clean and cold water, rich in oxygen

The amount of coffee can be measured using the coffee measuring cup supplied and generally amounts from 35 to 50 grams per litre. Before you start using the coffee maker you should make an objective flavour test in order to establish the right amount of coffee and water needed. The adjoining table gives guide lines for the ground coffee amount needed using different jug sizes.

Jug	Glass jug	Thermos jug	Thermos jug with pump	Thermos container
Content	1.8 litres	1.8 litres	2.2 litres	2.4 litres
Coffee	100-125 grams	100-125 grams	125-150 grams	150-180 grams

4.2 Operation procedures

4.2.1 Making coffee

- Place a sheet of basket filter paper containing the desired amount of coffee (fine grind type) in the basket filter. See the table above for the amount of coffee required.
- Slide the basket filter (1) into the appliance.
- Use a jug or water measuring cup (MT models) to pour fresh cold water into the opening (6).
- Then place the jug, with the lid on it, under the filter. With the MT100 model open the lid of the thermos jug with pump and leave the riser tube in the jug.
- Switch on the appliance using the on/off switch (1). The lamp in the switch will go on and the lower hot plate will switch on. The green indicator light (5.2) will light up and the coffee brewing process will begin.
- Once the coffee brewing process has been completed the green indicator light (5.2) will go out and an audible signal will sound three times, indicating that the coffee is ready. Once the filter has been cleaned you can immediately resume making coffee.



Warning Do not remove the jug until the indicator light has gone out and the audible signal has been given.

- Pour out the coffee or place the jug on the top hot plate (8) (except for the MT models). The top hot plate is switched on separately using on/off switch (2). Always switch off the extra hot plate when it is not being used.
- After cleaning the basket filter the appliance can immediately be used to make the next serving of coffee.

4.2.2 Making tea

This appliance can of course also be used to make tea using tea bags.

- Basic rule: never use a basket filter or a (thermos) jug that has already been used to make coffee. The coffee remnants will adversely affect the flavour of the tea.
- To make tea you should therefore always use a separate glass jug/thermos jug and basket filter that have not been used to brew coffee!
- Place the tea bags in the basket filter without using a paper filter or place/hang them in the jug. Tea is made using the same method as for brewing coffee, but without using paper filters or coffee.

4.3 Cleaning of the appliance and accessories



The appliance must not be submerged or sprayed.

- Clean the outside of the appliance with a clean, damp cloth, if necessary using mild (non-abrasive) cleaning agent.
- Do not use an abrasive, as this will leave scratches and dull patches.
- The glass jugs and the basket filter can be washed normally and rinsed clean. Please note, however, that it is inadvisable to clean the basket filter in an industrial dish washer as its lightness may cause it to float and sustain damage.
- The thermos jug, thermos jug with pump and the filter can be rinsed with hot water.
- The coffee deposit in the coffee jugs and the filter can be cleaned with coffee fur remover.

4.3.1 Removing coffee deposits from glass jug and filter

- Fill a tray with approx. 5 litres of warm water and dissolve a sachet (10 gr) of coffee fur remover in it.
- Place the parts you want to clean in this solution and leave them to soak for 15 to 30 minutes.
- Rinse the parts several times with hot water. Repeat if necessary.
- Sprinkle the powder on to heavily soiled parts and clean them with a wet brush.

4.3.2 Removing coffee deposits from thermos jug

- Dissolve a quantity of coffee fur remover in warm water: use approx. 2 grams per litre.
- Fill the thermos jug with this solution. Leave the inner suction tube of the pump thermos in place.
- Leave the solution to soak for 15 to 30 minutes. Pump the solution out of the pump thermos, turn the tap of the thermos cistern on.
- Brush the inner jug clean carefully and rinse well with hot water. Clean the tap and measuring glass of the thermos cistern with a narrow bottle brush.

4.3.3 Descaling



Stay close to the appliance when performing maintenance. It is advisable to wear safety glasses and protective gloves when descaling the appliance. Flush the appliance at least two times after descaling it. Wash your hands thoroughly after descaling the appliance.



Observe the descaling intervals indicated by the descale indicator light. Overdue maintenance to the heating system can result in high repair costs and annulment of the guarantee.

Scale deposits are left in the heating system when the appliance is used. The amount of scaling depends on the hardness of the water being used. The appliance is fitted with a descale indicator light (5.1), which lights up when the heating system has processed a certain quantity of water and has to be descaled. The appliance continues to work so that it can be descaled when it is not being used.

Operation instructions

- Before descaling the appliance, carefully read the instructions for use of the scale remover.
- Dissolve one (50 gram) sachet of scale remover in 1 litre of warm water (approx. 60-70°C).
- Slide an empty basket filter (1) into the filter holder and place an empty jug under it.
- Carefully pour the solution into the reservoir (6) and switch the appliance on (1). The solution will now run through the heating system and discharge into the jug. Leave the lid of the reservoir open!
- Switch off the appliance using switch (1) after 1 minute.
- Now wait about 2 minutes. The solution will now react with the deposits in the heating system.
- After the waiting time, switch the appliance back on and allow the rest of the solution to run through the system.
- Wash away the solution in the jug until the filter has finished dripping.
- After descaling the appliance, flush the system by following the coffee brewing procedure twice but without using filter paper or coffee. Remember to empty the jug in the meantime.
- Switch off the appliance and thoroughly clean the basket filter and jug.
- The appliance is now ready for use.

4.3.4 Switching-off the descale indicator light

- Press the programme button (5.3) for 6 seconds; the descale indicator light (5.1) will go out.
- The control system resumes registering the number of brewing processes.

5. Installation

5.1 General

5.1.1 Unpacking

The machine has been carefully packed to prevent damage being caused to your new coffee maker. Remove the packing carefully without using sharp objects. Check if the appliance is complete. The appliance is delivered with the following accessories:

	M 100	M 102	MT 100	MT 100V
Glass jug	2	4	-	-
Basket filter	1	2	1	1
Filter paper (25 pcs.)	1	1	1	1
Coffee measuring cup	1	1	1	1
Water measuring cup	-	-	1	1
Manual	1	1	1	1

Please contact your dealer if any parts are missing or damaged.

5.2 Installation

5.2.1 Preparation for positioning the appliance



Water always remains in the heating system: for this reason the appliance must not be placed in an area where the temperature can fall below freezing point.

- Position the appliance at buffet height on a firm, level base that can bear the weight of the appliance when it is filled.
- Position the appliance level and in such a way that it cannot cause any damage if it leaks.
- The power connection must be located within a half metre of the appliance.
- The owner must have these installation-technical preparations performed by qualified engineers in accordance with general and local regulations.
- The service engineer may only connect the appliance to the prepared connections.

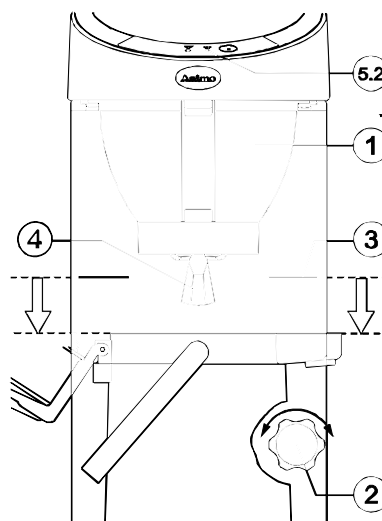
5.2.2 Electrical connections

Supply voltages and frequencies can differ between countries. Check if the appliance is suitable for connection to the local power mains. Check if the details on the type plate correspond. Connect the appliance to an earthed wall socket.

5.2.3 Water drainage

The water reservoir has a maximum content of 2.7 litres. If the reservoir is overfilled, the excess water will be discharged via the drain at the bottom of the appliance. Take this into account when positioning the appliance.

5.2.4 Height setting model MT100V






The MT100V model is in height adjustable. Follow the steps below to optimally set the appliance to the height of the thermos flask being used.

- Slide the basket filter (1) into the appliance.
- Grasp the top part of the appliance and turn the adjustment button (2) a half-turn anti clockwise.
- Lift the top part of the appliance upwards.
- Place the thermos jug you intend to use at the base of the appliance.
- Now slowly allow the top section to go down until the marking line (3) on the column is level with the top side of the thermos jug. (This column height adjustment must be done with the top open if the appliance is used in combination with a thermos jug with a pump).
- Tighten the adjustment button (clockwise).
- After repositioning, check if the thermos jug properly presses in the jug detector handle (4) (the green indicator light (5.2) must not blink when a coffee making process begins).

5.2.5 Setting the descale indicator

Scale deposits are left in the heating system when the appliance is used. The amount of scaling depends on the hardness of the water being used. The appliance is fitted with a descale light (5.1), which lights up when the heating system has processed a certain quantity of water and has to be descaled. The appliance continues to work so that it can be descaled when it is not being used.

Water hardness	Indication lights	Brewing processes	Hardness		
			°D	mmol/l	°f
Soft		512	< 8	< 1,44	< 14
Normal*		256	8 – 12	1,44 – 2,16	14-21
Hard		128	> 12	> 2,16	> 21

*Standard setting

If you are unaware of the hardness of your mains water, you are advised to contact your local water supply company.

Set the appliance to your water hardness as follows, using the table above as a guideline.

- Switch off the appliance (1).
- Hold in the programme button (5.3) and switch the appliance back on.
- Press the programme button (5.3) until the right indicator light (5.1/5.2) lights up. (E.g. only the red lamp should light up for hard water. The water in the area is hard, over 12 °D).
- Wait for 6 seconds. The water hardness has now been set.

5.2.6 Resetting the descale indicator light

After the descaling procedure (see chapter 'Descaling') hold in the programme button for 6 seconds. The descaling indicator light will now go out.

6. Troubleshooting



Have all repairs to the electrical system performed by a qualified service technician.

If your appliance is not functioning correctly, use the troubleshooting guide below to see whether you can resolve the problem yourself. If not, please contact your dealer.

Symptom	Possible cause	Action
The appliance is not working and the lamps in the switch are not lighting up	The fuse in the fuse box has been triggered, the group is too loaded heavily. The jug indicator is not registering a jug.	Replace the fuse or reset it. Connect the appliance to a separate group.
The brewing process indicator light is flickering, no water is getting into the filter.	There is no jug under the filter, the wrong coffee jug is being used or the height adjustment of the MT100V model is incorrect.	Position a jug, use the correct jug or re-adjust the height of the appliance.
The brewing process indicator light is on, but no water is getting into the filter.	The dry-boil protection has been triggered.	Reset the dry-boil protection.
The descaling and brewing process indicator light are flickering in alternation.	The appliance has heated up for more than 20 minutes and completely shut down.	Switch off the appliance and the turn it back on again. The error message will disappear.
The descale indicator light has come on.	The scaling deposits in the heating system exceed the set limit.	Descalate the appliance.
The descale indicator light remains on after descaling the appliance.	The appliance has not yet been reset.	Press the programme button for 6 seconds. The light will go out.
Steam coming from the filter.	The appliance was not descaled when indicated by the descaling indicator light or the wrong water setting has been applied.	Descalate the appliance.
Coffee is dripping out of the filter when there is no jug under it.	The leak stop valve on the outlet of the filter is soiled or damaged.	Clean the filter and check the leak stop valve for damage.
Water is coming out from under the appliance	The overflow is operating. The water reservoir had been filled or has been overfilled.	Make coffee, so that the reservoir empties.
The coffee is too strong.	Too much coffee has been placed in the filter.	Reduce the amount of coffee.
The coffee is too weak.	Not enough coffee has been placed in the filter.	Increase the amount of coffee.
	The water distributor is soiled, so that the coffee is not being completely drenched.	Unscrew the water distributor and clean it.
The coffee is not hot enough	There is no lid on the jug	Use the lid.

8. Technical specifications

Electrical diagram M100

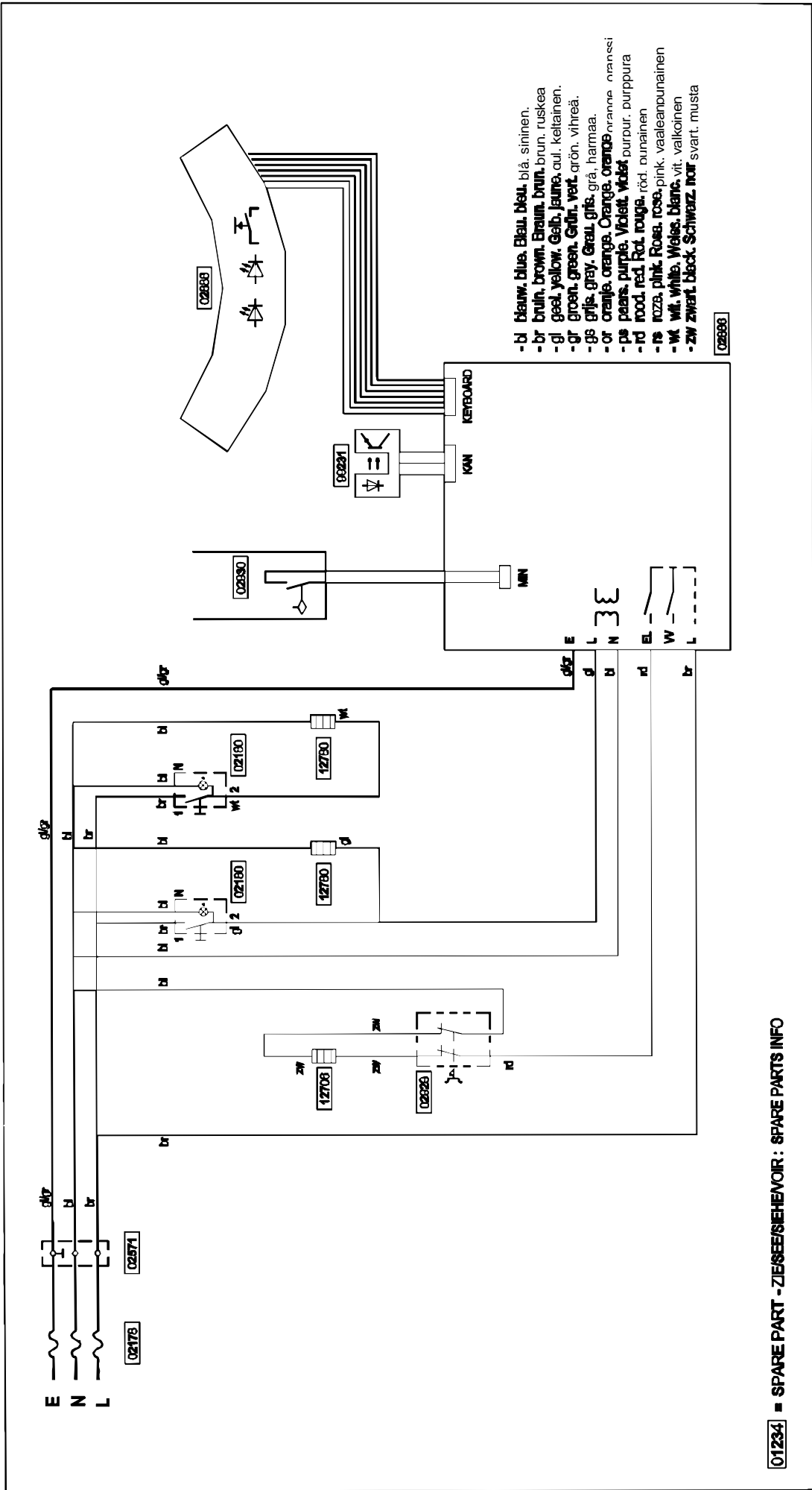
Electrical diagram M102

Electrical diagram MT100

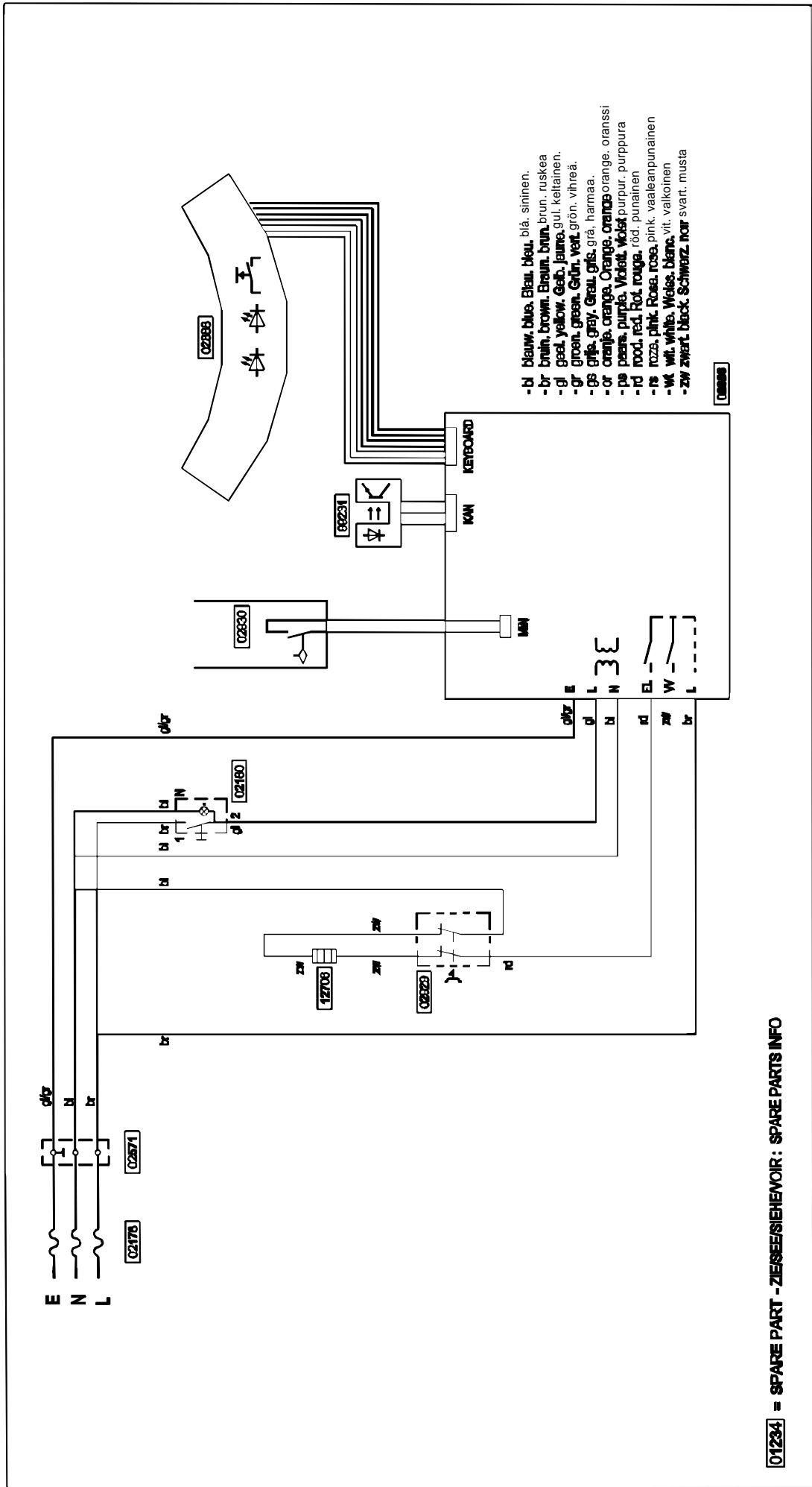
Electrical diagram MT100v

Installation drawing M100, M102

Installation drawing MT100, MT100v



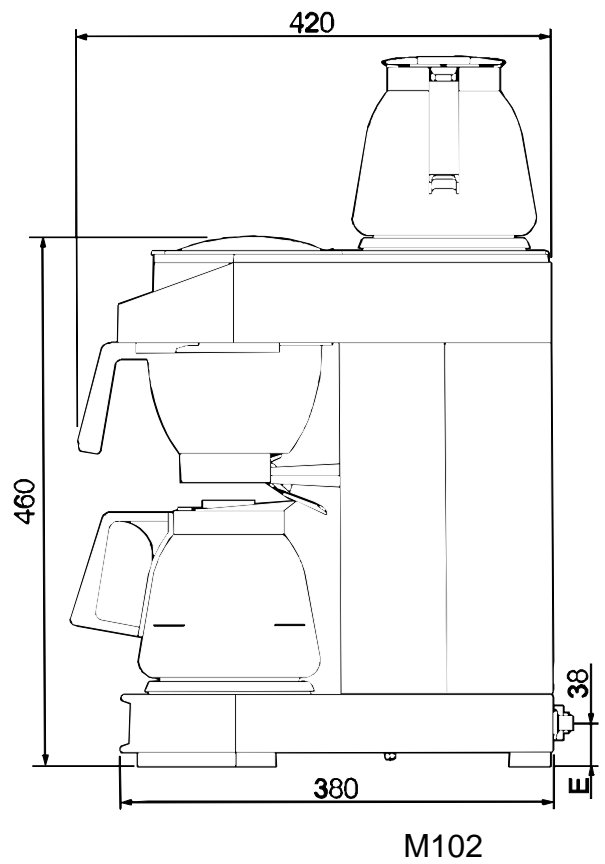
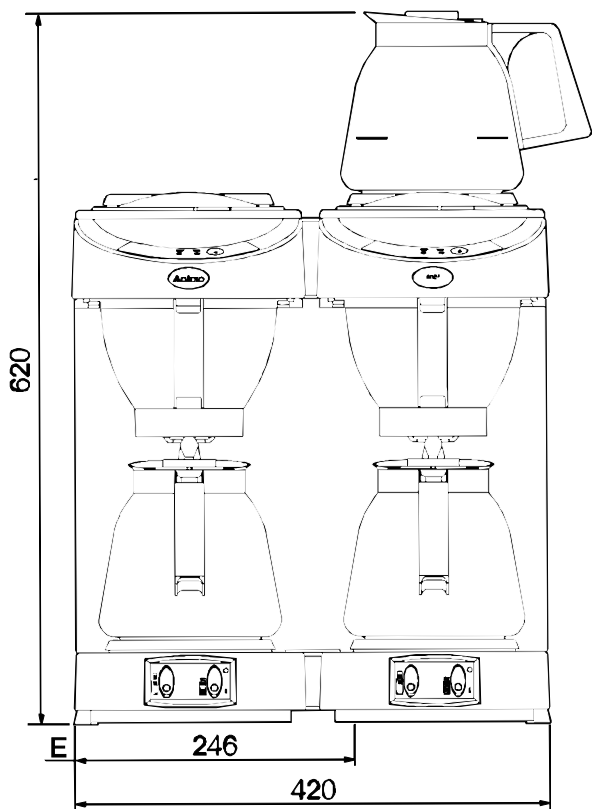
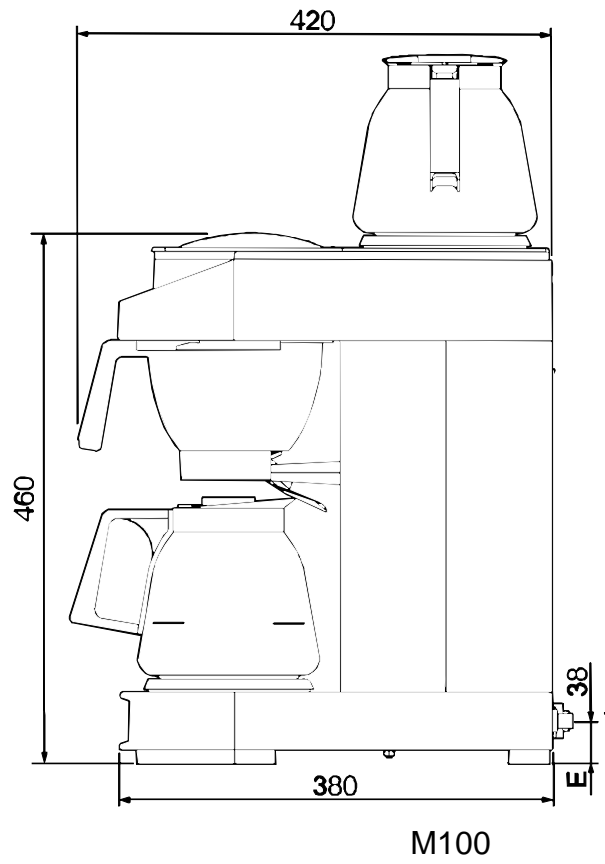
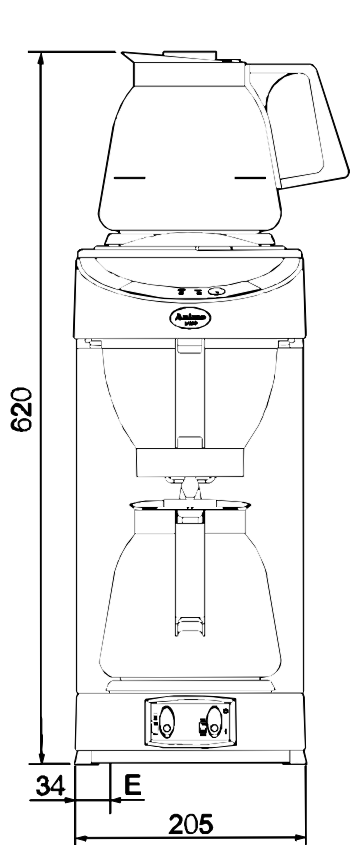
Electrical diagram M100



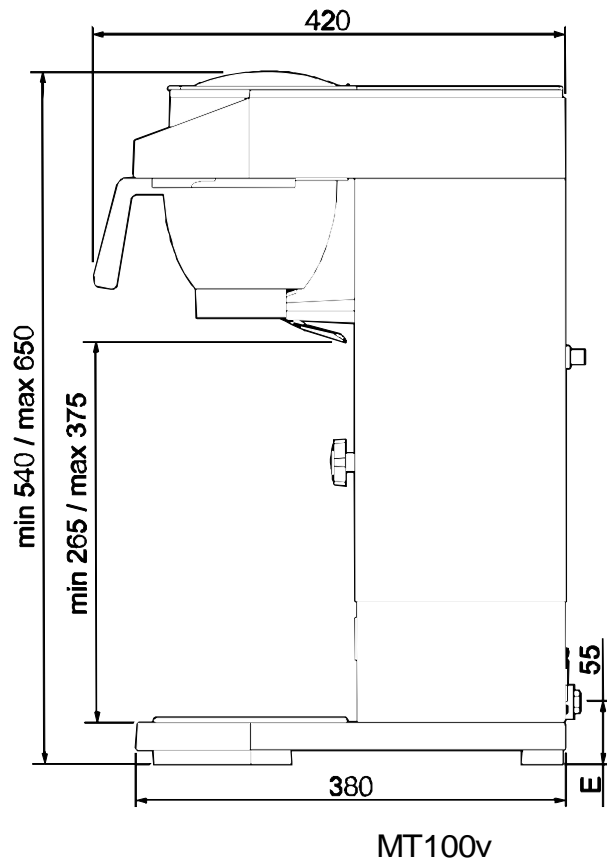
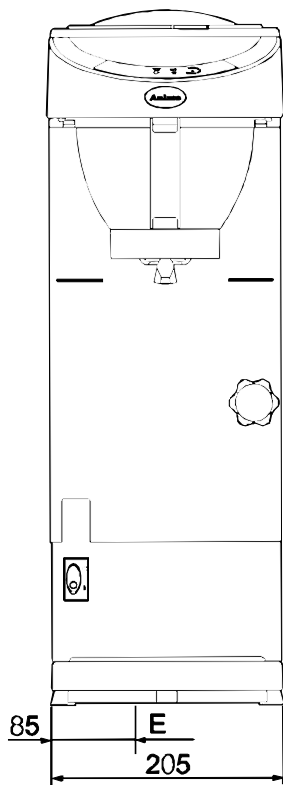
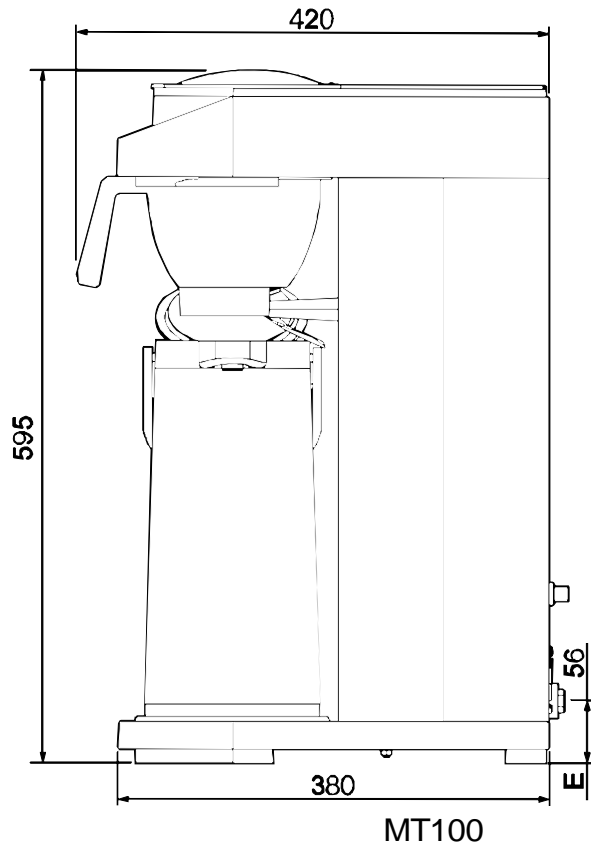
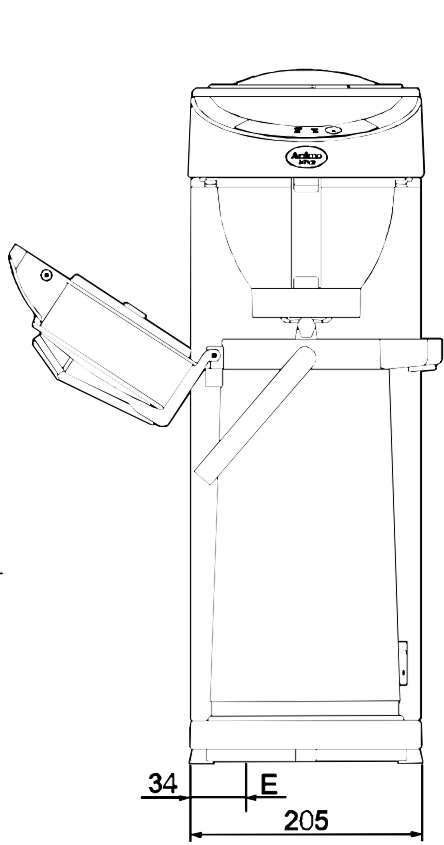
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Artikel	: 10535-1	Date	: 17-11-00	Rev.	: 0	Date	: 09-04-01	
Rated voltage:	1N~ 220-240V 50-60Hz 2100W	CIRCUIT DIAGRAM		Animo Assen Holland		Checked	:	
							Drawing nr.:	S10535-1

Electrical diagram MT100v



Installation drawing M100, M102



Installation drawing MT100, MT100v

Technical specifications

Item	Type	Specification
Buffer stock coffee	M100	3.6 l. / 28 cups
Buffer stock coffee	M102	7.2 l. / 56 cups
Hourly coffee capacity	M100,MT100,MT100V	18 l. / 144 cups
Hourly coffee capacity	M102	28 l. / 224 cups
Jug filling time	M100	approx. 6 min.
Jug filling time	M102	approx. 8 min.
Jug filling time	MT100,MT100V	approx. 7.5 min./ 2.2 l.
Contend cold water reservoir	M100,M102,MT100,MT100V	2.7 l.
Supply voltage	M100,M102,MT100,MT100V	220-240V
Frequency	M100,M102,MT100,MT100V	50-60Hz
Total output	M100	2250W
Total output	M102	3500W
Total output	MT100,MT100V	2100W
Filter paper	M100,M102,MT100,MT100V	90 / 250
Empty weight	M100,MT100	6 kg
Empty weight	M102	10 kg
Empty weight	MT100V	7 kg
Transport dimensions (LxWxH)	M100	600x275x520 mm
Transport dimensions (LxWxH)	M102	600x450x520 mm
Transport dimensions (LxWxH)	MT100,MT100V	445x275x665 mm