

metos

VIKING KETTLE

VIKING / VIKING COMBI

ELECTRICALLY HEATED / DIRECT STEAM HEATED

TYPE:

40E, 60E, 80E, 100E, 150E, 200E, 300E, 400E
40EM, 60EM, 80EM, 100EM, 150EM, 200EM, 300EM, 400EM
40S, 60S, 80S, 100S, 150S, 200S, 300S, 400S 40SM,
60SM, 80SM, 100SM, 150SM, 200SM, 300SM, 400SM

Accessories

MIXER

COOLING

AUTOMATIC WATER FILLING

HACCP

Installation and Operation Manual

Translation of the original manual in Finnish



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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, steam 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 damage 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 relationship 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.

If language versions have information contradictions, the original language Finnish is the primary language regarding the information content.

This manual covers the following Viking and Viking Combi kettles and all their options:

- Electrically heated Viking kettles 40, 60, 80, 100, 150, 200, 300 and 400 liters
- Direct steam heated Viking kettles 40, 60, 80, 100, 150, 200, 300 and 400 liters
- Mixer (Viking Combi)
- Cooling attachment (option)
- Automatic water filling (option)

The user panel and the available functions of the Viking kettle are different depending on the kettle version:



Viking basic kettle



Viking Combi kettle with mixer

2. Safety

2.1. General



Modifying the equipment without the approval of the manufacturer invalidates the manufacturer's product liability.



To further improve safety during installation, operation and servicing, the operator and the personnel responsible for installing and servicing the appliance should read the safety instructions carefully.



Switch off the appliance immediately in the event of a fault or malfunction. The appliance must only be serviced by trained engineers. The regular checks described in the manual must be carried out in accordance with the instructions. The appliance must be serviced by a person authorized to do so by the manufacturer. Use original spare parts. Dangerous situations may arise if the instructions above are not followed.



Before using the appliance, ensure that personnel are given the necessary training in operating and maintaining the appliance.



Keep this manual in a safe place so that it can be used by other operators of the appliance.

This manual guides the user to use the device safely.



The appliance should not be used by anyone suffering from a physical or mental illness or by inexperienced people (including children).



Children should be watched to ensure that they do not play with the appliance.

2.2. Safety features

The kettle is built for 1,5 bar pressure, and the working pressure is 1,0 bar. The working height is 900 mm, with an exception of Viking 400 where it is 1050 mm.

The double steam jacket is isolated with a third casing jacket, throughout equipped with a foil and foam insulation, which limits the top temperature of the outer steam jacket under the skin burn limit. The kettle can be cleaned with a cleaning hose (IPX5). Water jets directed towards the vent holes and control panel from a near distance should be avoided.

The kettle is fitted with many different safety devices to ensure smooth and safe operation. The safety equipment at the rim behind the kettle includes a pressure gauge, a safety valve and an automatic vacuum valve. The safety valve opens if the steam pressure exceeds 1,5 bar.

A limit switch which is attached to the tilting axle turns off the heating during the tilting (steam heated models)

In addition to the safety valve, the kettle has a pressure switch which operates as a backup safety device of the safety valve. The control does not allow the steam jacket temperature to exceed 120°C. This temperature corresponds to a 1,0 bar steam pressure (electrically heated models).

The water level probe in the steam generator operates as a boil dry protector. In case of insufficient water level in the steam generator, the white water level indicator light on the control panel turns on and the kettle does not warm up. In addition, a limit switch which is attached to the tilting axle turns off the heating during tilting (electrically heated models).

Due to the safety switch which is on the safety lid it is not possible to start mixing (Viking Combi), if the safety grid is not in position. The kettle will not tilt, if the lid is on the kettle.

2.3. Emergency/stop button

All Viking kettles are equipped with an emergency/stop button, which disconnects the control circuit and all functions of the kettle and the mixer will be stopped. To restart the cooking/mixing, turn the emergency/stop button clockwise until it jumps to its upper position. After this has been done, all other switches and buttons can be activated again.

2.4. Warnings



Please take careful note of the following instructions and warnings. Further on in this manual, there are warnings which are to be noted in special operation situations. To prevent damage and accidents, please read the whole manual before attempting to operate the appliance.

- Viking kettles are to be used only for food preparation. Interacting or corrosive substances are not to be prepared in the kettle. Note that also long-term effect of some food preparation substances, such as salt, acetic acid, lemon acid and lactic acid, can be corrosive.
- To prevent burns, do not during the use touch the inner surface and the rim of the kettle, safety lid and mixing tool. Do not put your hands, without appropriate protection, above the kettle while cooking.
- Beware of hot steam when removing the lid.
- Do not open the control valve of the steam generator, the safety valve or the water inlet valve when there is pressure in the steam jacket. Releasing hot steam might cause burns.
- Do not stand behind the kettle during tilting.
- The mixer must be turned off before removing the mixing tool.
- Do not push utensils or your fingers through the openings in the safety lid into the kettle during mixing.
- It is under all circumstances absolutely forbidden to use the mixer without the safety lid.
- To prevent stress injuries do not lift the mixing tool from the kettle when it is in a vertical position. Tilt the kettle in a horizontal position and remove the mixing tool. We recommend the use of a trolley to help removing of the mixing tool of larger kettles (200-400 l).
- After using the kettle, check that the shower gun and the water inlet tap of the kettle are closed.
- After using the kettle, clean it according to the cleaning instructions given in this manual to keep the high hygiene level.
- It is forbidden to use the kettle without cover plates or if the cover plates are not properly fitted.
- The factory pre-set program parameters of the kettle and mixer may only be changed by authorized personnel according to the instructions given by the factory.
- Beware of sharp edges on the sheet construction inside the kettle pillars during installation and service work.
- The following danger of electrical shock mark is fitted on cover plates protecting electrical components from being touched which would cause danger to life.



The manufacturer will not take responsibility for potential damage caused to units or persons if the given instructions have not been followed.

3. Functional description

3.1. Operating principle

The electrically heated Viking kettle is heated by steam generated with heating elements. The steam generator is situated below the kettle. The steam jacket reaches the upper edge of the kettle. The cooking procedure is regulated with a stepless power regulator.

The steam heated Viking kettle is heated with direct steam provided from the facility's steam network. The steam jacket reaches the upper edge of the kettle. The cooking procedure is regulated with a stepless power regulator.

The kettle tilts by means of a tilting motor (high tilting). The inner surface of the kettle and the jacket are of acid proof stainless steel (EN 1.4432). All other construction is of stainless steel (EN 1.4301). The kettle is provided with a third jacket and it is throughout thermally isolated.

The motor and power transmission (Viking Combi) are situated below the mixing tool. The kettle with a mixer is provided with a safety lid having a large lid opening. When the safety lid is open the mixer does not work. The control panel for both the kettle and the mixer are in the control pillar.

The optional cooling system is based on cold water circulating inside the steam jacket. Cold water runs in a connection hose from the water faucet, which is in the control pillar, to the jacket drain valve and further to the outlet pipe of the upper edge and to the floor drain, which is in front of the kettle.

The optional automatic water filling enables filling of the kettle with a desired amount of water. Thus water filling takes place automatically, without supervision.

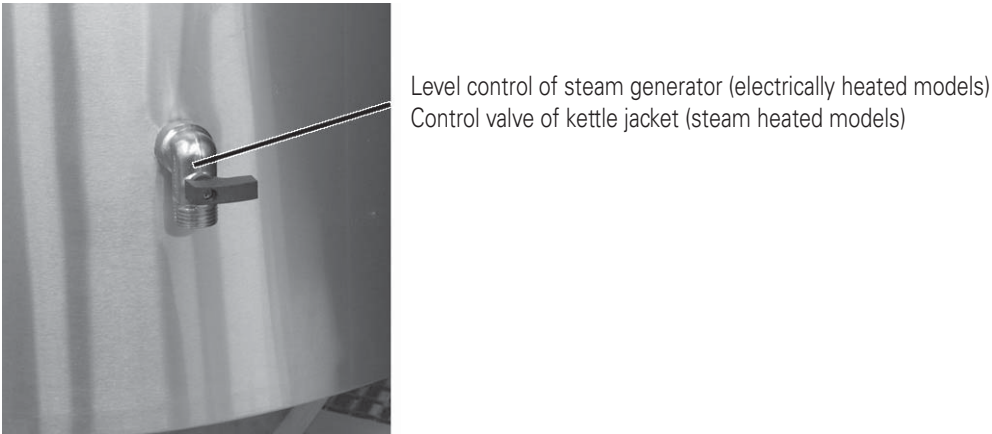
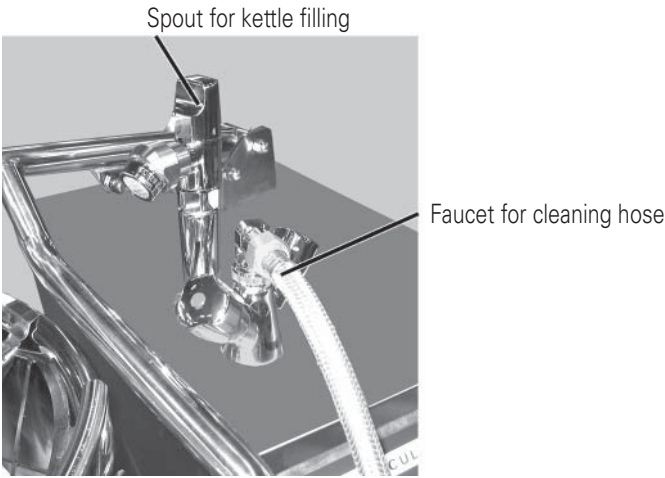
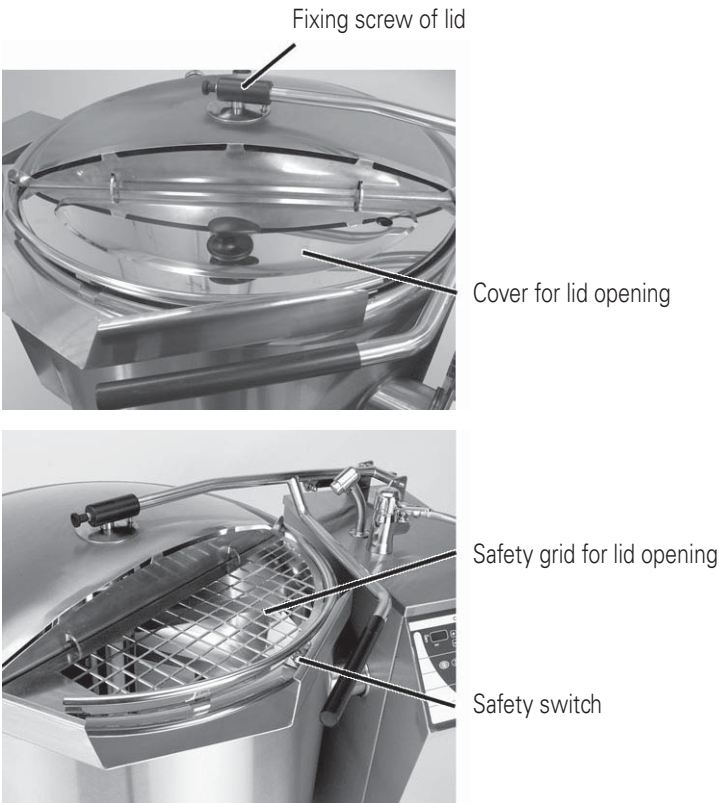
The corrosion resistance of stainless steel is due to a so called passive layer, which is a very thin chromium oxide film. This film is naturally and fairly quickly formed on the stainless steel surface when the surface is in contact with oxygen (air). The chromium oxide film is hard, but in some situations it is possible to damage it with hard materials. When using steel tools, there is a potential risk of scratching the inner jacket and hence increased risk of corrosion. Therefore, we recommend using wooden or plastic tools in the kettle, especially when mixing and scraping.

3.2. Construction and control panel

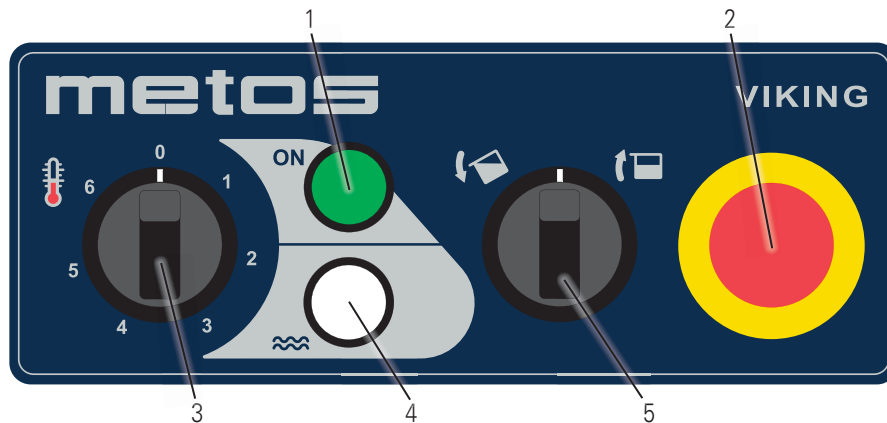
The main features of the Viking kettle are described in the following pictures.



1. Safety block
2. Safety lid
3. Safety grid for opening (option)
4. Lid hinge
5. Control panel
6. Cleaning hose
7. Control pillar
8. Support pillar
9. Peg for hanging tools



3.2.1. Controlpanel



1. "Kettle ON" indicator
2. Emergency/stop button
3. Power regulator
4. "Low water level" indicator (electrically heated models)
"Steam supply open" indicator (steam heated models)
5. Tilting switch



1. Power regulator
2. Heating on indicator
3. "Low water level" indicator (electrically heated models)
"Steam supply open" indicator (steam heated models)
4. Emergency/stop button
5. Mixing speed regulator
6. "Mixer ON" indicator
7. Mixing program selector switch
8. Tilting switch

4. Operating instructions



All personnel using the appliance must be given training in how the appliance works by the person responsible for staff safety.

4.1. Before use

Check the following points before using the kettle.

4.1.1. After the installation

Check that:

- The kettle has been installed horizontally according to the installation instructions
- All connections (electricity, water and steam) are tight and correctly made.

4.1.2. Before the first use

- Clean the kettle thoroughly with warm detergent solution and remove the dust and dirt with a cloth. Dry all surfaces after cleaning.

4.1.3. Daily

Electrically heated models:

Check that:

- The kettle is in its upright and horizontal position. The kettle does not heat if it is tilted.
- The scrapers are correctly attached to the mixing tool. See "Positioning the mixing tool and scraper".
- The mixing tool has been locked in its place: locking part (one end of the handle) in the groove of the mixer axle, with the handle turned in a horizontal position. Secure fixing by trying to lift the tool out of the kettle by the upper blade.
- The steam generator has the right amount of water (white water level indicator light on the control panel of the Viking kettle, normally water must be refilled a few times per year).

Steam heated models:

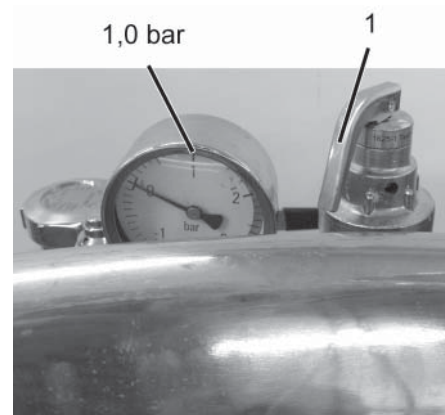
Check that:

- The kettle is in its upright and horizontal position. The kettle does not heat if it is tilted.
- The scrapers are correctly attached to the mixing tool. See "Positioning the mixing tool and scraper".
- The mixing tool has been locked in its place: locking part (one end of the handle) in the groove of the mixer axle, with the handle turned in a horizontal position. Secure fixing by trying to lift the tool out of the kettle by the upper blade.
- Surplus condensate water has been drained off from the steam jacket as needed.

4.1.4. Quarterly

Check that the safety valve functions correctly:

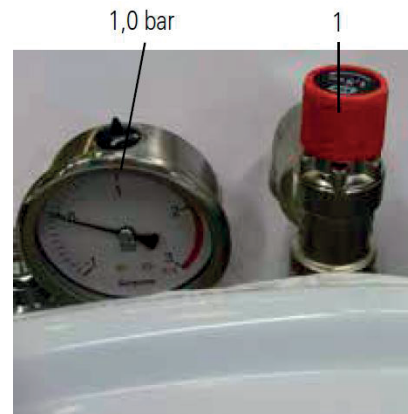
1. Do the checking when the kettle is empty.
2. Check the water level of the steam generator (electrically heated models).
3. Switch the kettle on by turning the power regulator to position 6.
4. Heat up the kettle until the pressure gauge shows 1,0 bar pressure.
5. Open the safety valve by cautiously lifting the relief lever (1) upwards. Now the safety valve should open and the pressure gauge should indicate a lower value.



Beware of hot steam.

Some models

1. Do the checking when the kettle is empty.
2. Check the water level of the steam generator (electrically heated models).
3. Switch the kettle on by turning the power regulator to position 6.
4. Heat up the kettle until the pressure gauge shows 1,0 bar pressure.
5. Open the safety valve by cautiously turning the relief knob (1) in the direction of the arrow on the nob. Now the safety valve should open and the pressure gauge should indicate a lower value.



Beware of hot steam.

4.1.5. Yearly

- It is advisable to have the unit checked once a year by qualified personnel. Preventive checking is the best guarantee for operational reliability and saves breakdown costs.
- Depending on the hardness of water, descaling must be done by qualified personnel. If the kettle is equipped with the cooling function and it has been used often descaling should be done more than once a year. When doing the first descaling the technician can estimate when the following descaling must be done.

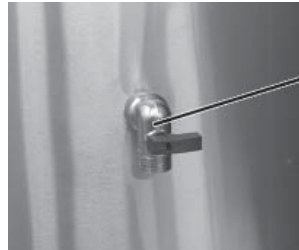


Fill out the form "Notes on service work" with information on service work which has been done according to the instructions. Maintenance work ensures the safe and reliable function of the kettle.

4.1.6. Checking the water level of the steam generator (electrically heated models)

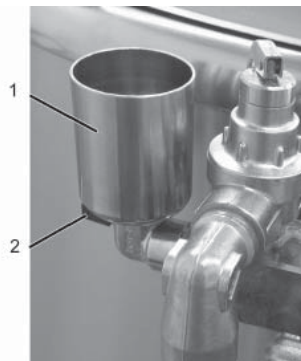


It is not allowed to open the control valve of the steam generator if the temperature of the steam jacket of the kettle is over +100°C. Watch out for releasing hot steam and water when you open the above mentioned valves.



Control valve of steam generator

- Check that the kettle is in its upright position.
- Open the control valve by turning the handle parallel to the valve.



1. Water inlet funnel
2. Handle of the water inlet valve

- Open the water inlet valve, which is under the water inlet funnel, by turning the handle (2) parallel to the valve.
- Let water into the water inlet funnel. Stop filling water when water starts to drop out of the control valve.
- Close the water inlet valve. Close the control valve when water has stopped running out of it.



The kettle does not heat if there is not enough water in the steam generator. Add water if needed according to the instructions.



A white water level indicator light on the control panel displays when water must be added to the steam generator. If you sometimes use the cooling system (optional), water must not be added at all.

4.1.7. Emptying of surplus condensate water (steam heated models)



It is not allowed to open the control valve of the kettle jacket, if the temperature of the steam jacket of the kettle is over +100°C. Watch out for releasing hot steam and water when you open this valve.



Control valve of kettle jacket

- Check that the kettle is in its upright position.
- Open the control valve by turning the handle parallel to the valve.



The kettle does not heat, if there is a lot of surplus condensate water or undrained cooling water in the kettle jacket.

4.1.8. Total emptying of the kettle jacket



It is not allowed to open the

- control valve of the steam generator (Electrically heated models)
- control valve of the kettle jacket (steam heated models)

if the temperature of the steam jacket of the kettle is over +100°C. Watch out for releasing hot steam and water when you open this valve.

1. Open the control valve.
2. Tilt the kettle approximately 45°.
3. When water stops to flow out, tilt the kettle slightly forwards and backwards until water no longer flows out.
4. Return the kettle to the cooking position.
5. Close the control valve.

4.2. Operation

4.2.1. Cooking

The temperature of the steam jacket of the kettle is always at least the same as the room temperature or the same as the temperature of the cooling agent, if the kettle is equipped with a cooling attachment (option).

Starting to cook

- Check that the emergency/stop button is not pressed down. The emergency/stop button can be released by turning it clockwise until it jumps up.
- Switch on the power by turning the power regulator to the right (green signal lamp illuminates).
 - If the white water level indicator light (3) does not go off, add water to the steam generator according to instructions, see "Checking the water level of the steam generator" (electrically heated models)
 - The white signal lamp (3) illuminates when the steam supply is open (steam heated models).



1. Power regulator
2. Indicator light "kettle ON"
3. Indicator light for low water level (electrically heated models)
Indicator light "steam supply open" (steam heated models)
4. Emergency/stop button

Stopping the cooking

Turn the power regulator to the left to position 0. The green indicator light goes off and the kettle stops cooking.



The kettle tilts only if the kettle is switched on. Since the kettle chills slowly, you can stop cooking and begin the simmering by decreasing the temperature.



The cooking will automatically stop when the kettle is tilted. The cooking goes on automatically when the kettle is returned to an upright position.

4.2.2. Tilting the kettle



Open the safety lid of the kettle before tilting and ensure that there is enough space for tilting behind the kettle.



The kettle is emptied by turning the tilting switch to the left to position

The kettle goes back to its upright/cooking position by turning the tilting switch to the right to position

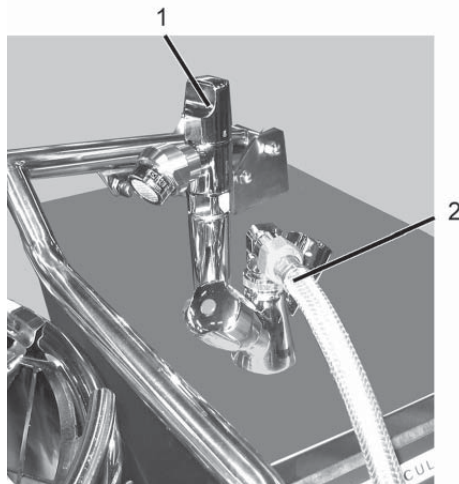


For security reasons, the kettle tilts only when the tilting switch is continuously held turned.

4.2.3. Filling water into the kettle(Viking 40-400)

Depending on the kettle version, the water supply fittings can consist of

- a filling faucet (1)
- a filling faucet (1) + a faucet with spray gun (2)
- a spout for automatic water filling + a faucet with spray gun (2)



Automatic water filling



Use only cold tap water for cooking.

4.2.4. Mixer operation (Viking Combi)

The mixer operates only when the safety lid and the safety grid of the lid opening are attached and closed.

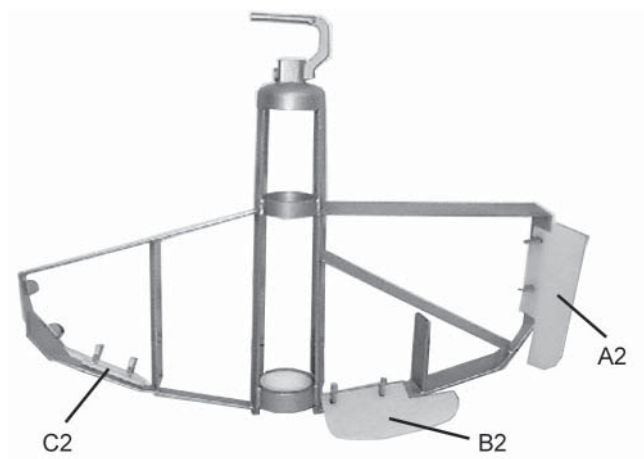
If the kettle lid is opened during mixing, the mixing function will be interrupted and it must be restarted using the mixing program selector switch.

Positioning the mixing tool and scrapers

Attach the scrapers by placing the pins on the mixing tool into the holes on the scrapers. After that turn the scraper into place by lifting the scraper's lower part. Finally pull the scraper forward. The bevel (1) will on the lower scraper point upwards and on the side scraper away from the mixer axle.

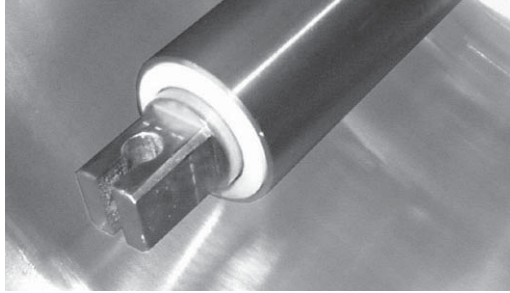


The mixing tool is equipped with 1-4 scrapers, depending on the size of the tool.



| Scraper | 40 | 60 | 80 | 100 | 150 | 200 | 300 | 400 |
|---------------------|----|----|----|-----|-----|-----|-----|-----|
| Scraper A2 | - | 1 | 1 | 2 | 1 | 2 | 1 | 2 |
| Scraper B2 (bottom) | - | - | 1 | 1 | 1 | 1 | 1 | 1 |
| Scraper C2 (bottom) | 1 | 1 | - | - | 1 | 1 | 2 | 2 |

Scrapers are not needed when preparing large quantities of mashed potatoes or when kneading dough. Use scrapers in all other cooking modes to increase the efficiency of heat transfer and to help the cleaning of the kettle.



It is easiest to attach the mixing tool to the mixer axle when the kettle is in a tilted position. Push the ring on the mixing tool into the kettle's mixer axle and fit the mixing tool in place, while the lifting handle is straight so that the locking device of the lifting handle sets in the groove at the upper end of the mixer axle.



Then turn the handle aside.



Make sure that the mixing tool is locked in its place by trying to lift/pull it out of its place by pulling at the mixer blade, for example.

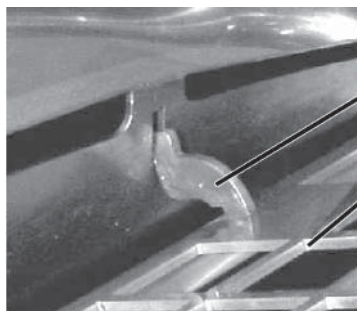
Safety lid and safety grid for lid opening



It is absolutely forbidden to use the mixer without the safety lid and the safety grid for lid opening (working safety regulations).

The safety lid and the safety grid for lid opening are to be attached as follows:

1. When the safety lid is closed, put the ends of the hinges into the oblong holes on the front edge of the safety lid.



Hinge

Safety grid for lid opening

2. Turn the safety grid down to its place, the safety switch enables the operation of the mixer.
3. It is possible to put a stainless steel cover over the safety grid to decrease the steam outflow when cooking.



Cover for lid opening

Opening the safety grid:

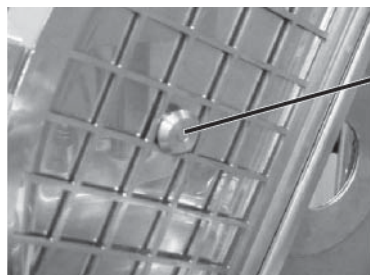
1. Turn the safety grid to an upright position, the slots in the hinges keep it in an open position. If the mixer is running it will stop.

**Closing the safety grid:**

1. Lift the safety grid lightly upwards and turn it after that down over the kettle.
2. If necessary, switch the mixer on according to the instructions given below.



Opening of the whole safety lid:

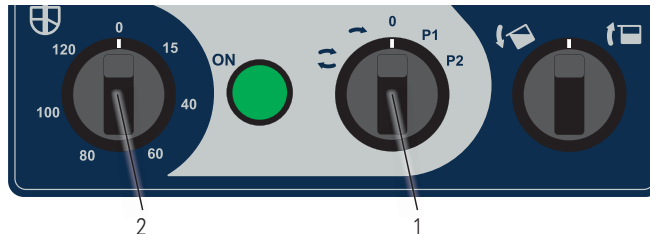
1. Switch off the mixer if it is on.
2. Lift the safety lid by the black part of the lifting arm to its utmost position. The gas spring will keep it in the open position.
3. If the cover for the lid opening was on, it remains on the safety grid because of a locking peg.



Locking peg

Manual operation of the mixer

1. Make sure that the emergency/stop button is not pressed down. If pressed, release it by turning it clockwise until it jumps up.
2. Choose mixing in one direction by turning the mixing program selector switch (1) from position 0 to position  or choose auto-reverse mixing by turning this switch from position 0 to position .
3. Start the mixer with the mixing program selector switch (1) while the mixing speed regulator (2) is in position 0. The mixer starts at the lowest speed.

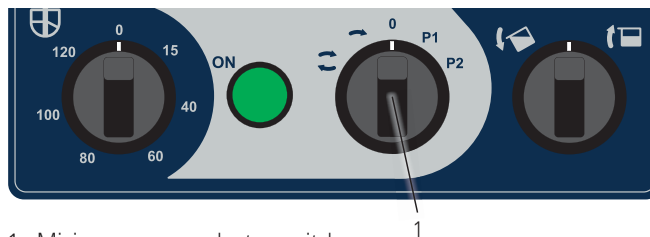


1. Mixing program selector switch
2. Mixing speed regulator

Operation of the pre-set mixing programs

The automatic mixing programs are preset and cannot be changed. The programs will start immediately when the mixing program selector switch is turned to position P1 or P2.

You can at any time directly switch over from one program to another program.

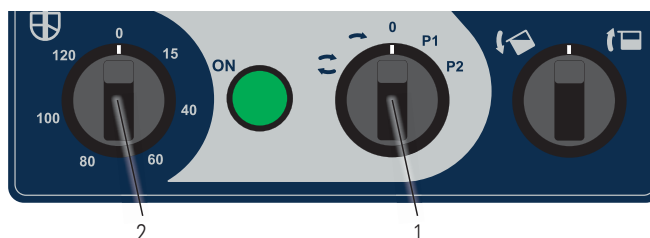


1. Mixing program selector switch

Stopping the mixing and the preset programs

The preset programs can be interrupted by turning the mixing program selector switch (1) or the mixing speed regulator (2) to position 0. The mixing programs can be interrupted by turning the mixing program selector switch to position 0.

Pressing the emergency/stop button will immediately stop all mixing functions.



1. Mixing program selector switch
2. Mixing speed regulator

Mixing speeds

The mixing speed can be steplessly chosen between 20-110 rpm.

Auto-reverse function

In spite of the speed selected, the mixer will run 6 seconds clockwise and 6 seconds counterclockwise.

Description of the preset mixing programs

The purpose of use, different phases of the program and the mixing speeds are shown in the following table.

| Program | No. phase | Duration | Speed | Seconds/direction | Other |
|---------|-----------|------------|--------|------------------------------|------------|
| P1 | 1 | Continuous | 15 rpm | 6 cw/6 ccw/6 cw/pause 2 min. | Continuous |
| P2 | 2.1 | | 60 rpm | 2 cw/2 ccw | 3 times |
| | 2.2 | 1 min | 60 rpm | 10 cw/3 ccw | 5 times |
| | 2.4 | 5 min | 80 rpm | 10 cw/2 ccw | 36 times |
| | 2.4 | 4 min | 60 rpm | 8 cw/2 ccw | 36 times |



Maximum amount of mixing

The turning force and mixing features of the mixer are designed to mix most food ingredients. There might although be food ingredients with a consistency that requires decreasing the kettle contents or adding liquid to improve the mixing result. The turning force is best in the range 20-60 rpm.

4.2.5. Cooling system (optional)

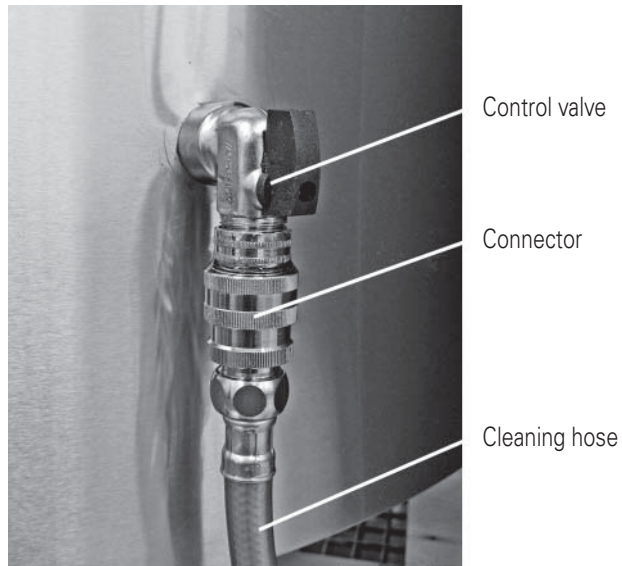
The cooling system is based on chilling tap water which is circulating inside the steam jacket. Mixing and use of scrapers makes the chilling more effective. The needed chilling time depends on the quantity of the product, the temperature at the beginning and at the end of the cooling, the flow of the chilling water and its temperature and the mixing.

Starting the cooling

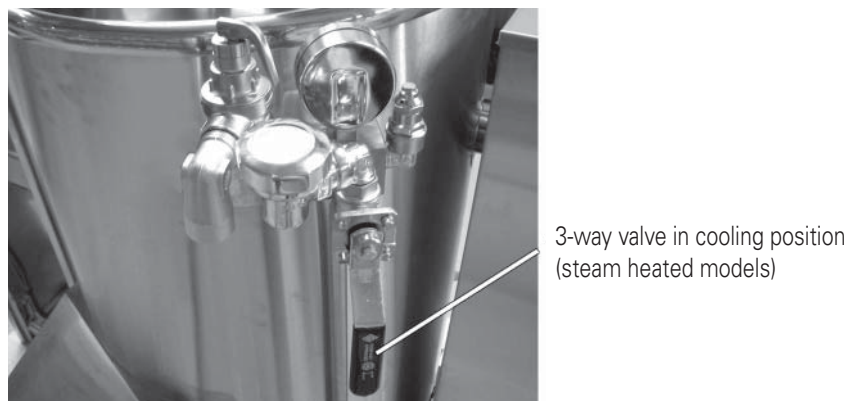
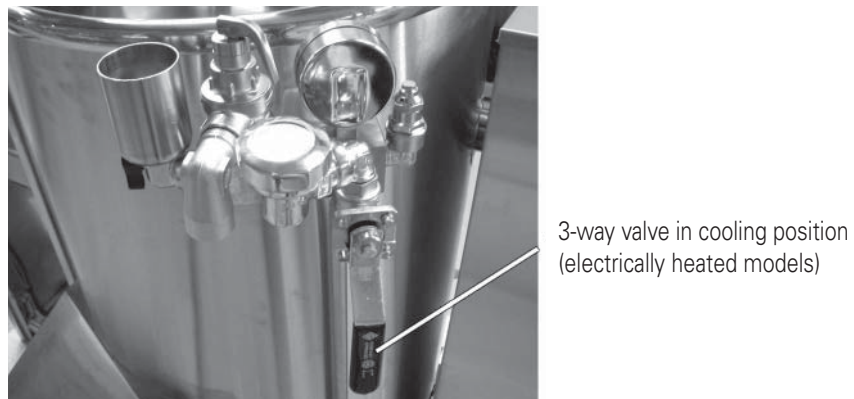
1. Turn the power regulator to position 0.
2. Close the faucet.



3. Remove the spray gun from the cleaning hose by pulling the connector away from the spray gun. Connect the cleaning hose to the control valve which is on the lower right front side of the kettle.



4. Open the control valve by turning the handle parallel to the valve.
5. Turn the 3-way valve in the safety block to the cooling position (downwards).



6. Open the cold-water faucet.

Stopping the cooling

1. Close the faucet.
2. Remove the cleaning hose from the control valve.
3. Turn the 3-way valve to the cooking position (upwards).



3-way valve in cooking position

4. Let the extra water run out of the steam jacket through the control valve. Close the control valve when the kettle is in an upright position and water stops flowing out.



It takes a few minutes to let the extra water run out of the steam jacket. If you first want to empty the kettle, close the control valve before tilting. If the control valve is open during the tilting, it is possible that the steam generator gets drained of water, see "Filling the steam generator" (electrically heated models).



The kettle will not warm up properly if the water level is not lowered to the normal cooking level.

4.2.6. Automatic water filling (option)



Automatic water filling unit

A desired amount of cold water can be dispensed to the kettle by the automatic water dispenser in the following way:

- water filling is manually kept on until the desired amount of liters appears on the display of the control unit

or

- automatic water running stops when the amount of liters set beforehand in the control unit are achieved.




1 2 3 4 5

1. 3-digit display
2. Automatic flow on/off
3. Manual flow + reset
4. Setting is increasing
5. Setting is decreasing






Basic mode

- The appliance is on when the kettle on-off switch is on; 0 appears in the last digit's position.
- Decimal point is illuminating.
- The set amount of filling has been achieved. The values are 0.
- If the function of the appliance is interrupted by switching off the control voltage, the switching on again will always set it to this basic mode.





Manual water filling

- Filling starts when the  button is pushed and held down for the duration of filling.
- The display is updated with an accuracy of one liter as long as the button is held down.
- The achieved value in liters is shown on the display for 10 seconds after stopping the filling. Then 0 appears on the display.
- If you want to continue filling within the mentioned time, the value on the display will continue increasing.


Automatic filling of water

- Set the desired amount by pushing the -button (4). The set value appears on the display.
- The value can be decreased by using the  button (5).
- The value is shown on the display for 10 seconds after which the set value will be 0.
- Start the filling by briefly pushing the  button while the set value is illuminating on the display.
- After starting the filling function, the display will cumulatively show the amount of water filled (in liters) and the flow stops automatically when the set value has been achieved. The set value is reset to zero.
- The amount of water flown will stay on the display and the appliance reverts to the basic mode by pushing either  or .



Interrupting the automatic filling of water

- The function is interrupted by pushing the automatic flow on/off button.
- The achieved value stays on the display and the decimal point is blinking.
- The set value is saved in the memory.
- In the interrupted mode, the setting can be changed using the  and  buttons.
- The water dispenser reverts to the basic mode by pushing either  or .
- If the function is interrupted by pushing the emergency-stop button, the appliance reverts to the basic mode and the settings must be done again.

Continuing the automatic water filling after interruption





- The filling will continue from the achieved value up to the set value by pushing the  button.
- After this the decimal point will illuminate continuously.

Error in automatic water filling





- If there is an error in flow measurement or if water does not flow, the value on the display blinks.
- The water dispenser reverts to the basic mode by pushing either  or .

Settings

Maximum filling amount

- The maximum filling amount has been set in the factory according to the kettle size.
- The setting is changed by first pushing the  button and immediately after that the  button for 5 seconds, after which the display value starts to blink. The new setting value according to the kettle size is set using the  and  buttons. The maximum set value is 400 liters.
- The set value is saved if the setting is not changed in 5 seconds.

Calibration of flow measurement

- Basic calibration has always been done in the factory, so normally it need not be done again.
- If, however, calibration is needed, first push the  -button and immediately after that the  button for 5 seconds after which the value 855 starts to blink on the display.
- To decrease the flow, push the  button, so the value decreases. To increase the flow, push the  button, so the value increases. The amount of flow must be checked by pouring 5 liters of water into a measuring vessel.
- The set value is saved if the value is not changed within 5 seconds.

4.2.7. Temperature display (option, Viking Combi)



Lämpötilanäyttö

The temperature display shows the temperature of the food (shows the actual temperature of the food only when the mixer is running)

4.3. After use

4.3.1. Cleaning the kettle



Use of a high pressure hose for cleaning of the kettle is forbidden.



Cleaning the panel overlay with steam is forbidden!



Note that it is not allowed to spray the air inlets or the control panel with water when cleaning the kettle with a spray gun.

Always clean the unit carefully, considering the hygienic aspects, immediately after use. Cleaning is more easy to do and needs less water in this way.



Recommended tools for cleaning:

- Special cleaning detergents for stainless steel
- Nylon brush
- Soft rubbing sponge (white)
- Other materials meant for stainless steel which do not scratch the surfaces of the kettle



Tools not allowed for cleaning:

- High pressure hose
- All metallic tools
- Rough rubbing sponge (green)
- Steel wool
- Abrasive detergents

Cleaning procedure:

1. Chill the kettle with cold water
2. Scrape the dirt with a plastic scraper.
3. Spray detergent in the kettle, brush and wash clean with a water hose
4. Dry the kettle

Clean the outer parts of the kettle using running water only if necessary. Do not use water more than is necessary. Cleaning with a damp cloth will often be enough.



All optional extras of the kettle such as strainer plates, mixing tools and scrapers, cooking baskets and parts of the safety lid can be washed in a dishwasher.

The dosing and impact time instructions for cleaning detergents must be followed - e.g. exceeding the impact time for foam cleaning detergents in combination with salt residues has been observed to cause severe spot corrosion even on stainless steel.

The manufacturer does not take any responsibility for possible damage caused by not following the instructions above.

Using the different parts of the safety lid

The safety lid consists of the following parts: the solid lid, the safety grid for the lid opening and the cover for the lid opening. All these parts can be washed in a dishwasher.



Solid lid

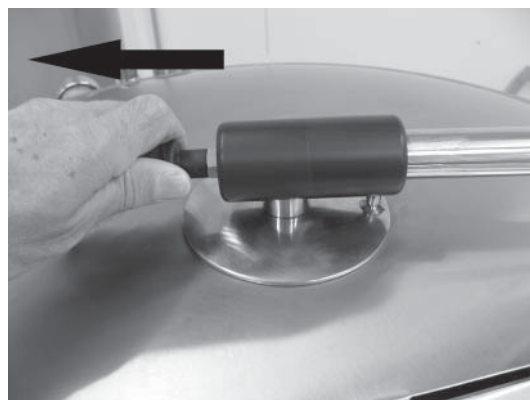
Safety grid for lid opening



Cover for lid opening

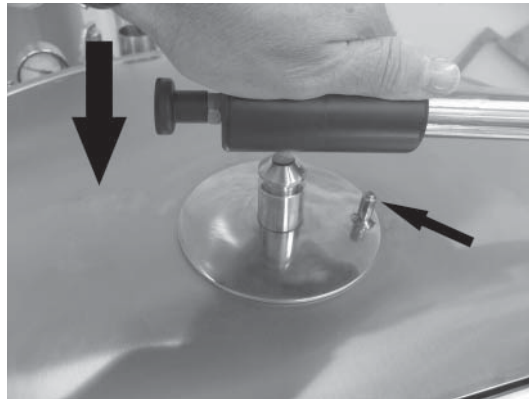
Taking the safety lid apart

1. Close the lid.
2. Remove the cover of the safety grid by raising it upwards.
3. Remove the safety grid by raising it first to an upright position (open position) and then simultaneously raising and pulling it towards yourself.
4. Remove the solid lid by pulling the interlock lock, at the same time holding the lid's lifting handle with the other hand.



Fitting the parts of the lid

1. Put the solid lid over the kettle and put the lifting arm down so that the guide cone meets the hole on the arm. Also make sure that the smaller guide cone meets the counter hole on the arm. Ensure that the lock pin sets in its lowest position.



2. Position the safety grid by putting the ends of the hinges into the oblong holes which are on the front edge of the safety lid and then lowering the grid down on the kettle.

4.3.2. Treatment of stainless steel

The following table contains the most typical problems encountered in the treatment of stainless steel and their solutions.



Note that some substances mentioned in the table can damage the stainless steel surface if they are used too long or they are too strong. Therefore, the instructions given in the schedule must be strictly followed.

| Effect | Cause | How to avoid/remove |
|--|--|---|
| Little white spots on the bottom of the kettle | Salt has been added to cold water. | Add salt always into boiling water or when the food is ready. Clean with acetic solution (0,5 dl vinegar/1 l water), heat appr. 1/2 hours, brush and rinse. |
| Grey-white blotches and spots, calcareous deposits | Hard water containing calcium and magnesium salts. | Clean with acetic solution (1 dl vinegar/1 l water), heat approx. 1/2 hours, brush and rinse. |
| Brown spots | Dirt from food ingredients, steel particles coming from outside. | Clean with acetic or alkaline solution according to the cause. |
| "Rainbow colors" | Sudden temperature change. | Totally harmless, disappears in use. |
| Tightly stuck food | Too high cooking temperature. | Soak water in the kettle and cook diluted alkaline solution according to instructions given with the detergent. Reduce cooking temperature. |
| Blue coating | Substances containing carbohydrate or old coffee and tea spots. | Sometimes hard to remove. Soak water in the kettle and cook diluted alkaline solution according to instructions given with the detergent. |
| Firmly adhered label or sellotape | Adhesive from labels or sellotape | Rub the adhesive with a cloth dipped in cooking oil. Do not scratch the surface. |

4.3.3. Notes on service work

Kettle/kettle group _____ Date of installation _____

Checking the safety valve four times per year:

| Date | Checked by | Notes | Date | Checked by | Notes |
|------|------------|-------|------|------------|-------|
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Yearly maintenance:

| Date | Checked by | Notes | Date | Checked by | Notes |
|------|------------|-------|------|------------|-------|
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Descaling:

| Date | Checked by | Notes | Date | Checked by | Notes |
|------|------------|-------|------|------------|-------|
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5. Troubleshooting

| MALFUNCTION | POSSIBLE CAUSE | WHAT TO DO |
|-------------------------------|---|--|
| The kettle does not heat | The emergency/stop button is activated | Release the emergency/stop button by turning it clockwise |
| | The fuses in the main fuse box are blown/triggered | Change/replace the fuses |
| | The kettle is not returned to an upright position after tilting | Press the tilting button until the kettle is in a totally horizontally position |
| | Electric kettle: Not enough water in the steam generator, white water level indicator light illuminated | Check and add water to the steam generator according to instructions |
| | Steam kettle: Shut-off valve of the steam input is closed | Open the valve |
| | The mains switch is in the OFF position | Turn the mains switch to the ON position |
| | Other technical fault | Contact qualified technical personnel |
| Heating of the kettle is slow | Steam kettle: Condensate water gathered in the steam jacket has not been emptied | Check the water level of the steam generator according to the instructions by opening the control valve. |
| | Steam kettle: Condensate water gathered in the steam jacket has not been emptied | Remove the condensate by opening the control valve which is in the steam jacket |
| | Steam jacket of a kettle equipped with a cooling system is full of cooling water which has not been emptied. | Remove the chilling water by opening the control valve |
| | On a kettle equipped with a cooling system air cannot flow out of the steam jacket because the 3-way valve of the cooling is in a wrong position. | Check that the handle of the 3-way valve in the safety block is turned upwards |
| | There is air in the steam jacket which does flow out because the automatic vacuum valve does not function. | If the air does not exit through the automatic vacuum valve, contact qualified technical personnel |
| | The fuses in the main fuse box are blown/triggered | Change/replace the fuses |
| | Other technical fault | Contact qualified technical personnel |
| The kettle does not tilt | The emergency/stop button is pressed down | Release the emergency/stop button by turning it clockwise |
| | The mains switch is in the OFF position | Turn the mains switch to the ON position |
| | The fuses in the main fuse box are blown/triggered | Change/replace the fuses |

| MALFUNCTION | POSSIBLE CAUSE | WHAT TO DO |
|-------------------------------|--|--|
| The mixer does not start | The emergency/stop button is pressed down | Release the emergency/stop button by turning it clockwise |
| | The mixing program selector switch is in the 0 position | Turn the switch to one of the four program positions |
| | The mixing speed regulator is in the 0 position | Start the mixer by turning the speed regulator |
| | The fuses in the main fuse box are blown/triggered | Change/excite the fuses |
| | The safety lid and the safety grid for the lid opening are not on the kettle | Place the safety lid and safety grid for lid opening on the kettle and restart |
| | The mains switch is in the OFF position | Turn the mains switch to the ON position |
| | Other technical fault | Contact qualified technical personnel |
| The mixer stops during mixing | A preset program including stopping of the mixer is in use | Check if a preset program is in use |
| | The stuff to be mixed is too thick or there is too much contents in the kettle | Make the contents of the kettle thinner or reduce the amount and restart. Do not use a speed higher than 80 rpm. |
| | The safety lid or the safety grid for the lid opening has moved | Place the safety lid and safety grid for lid opening on the kettle and restart |
| | Other technical fault | Contact qualified technical personnel |

When you contact the service personnel, give the following information for the unit in question:

- What is the type and model of the unit
- What is the serial number of the unit and the date the unit has been installed
- A short description of the fault
- What happened/was done immediately before the fault occurred

6. Installation

6.1. Before installation



Please observe the following instructions and warnings when planning and carrying out the transport and installation of the kettle in order to reduce the risk of damage, failure or injury. This applies to forwarders, transport personnel, installation professionals and end users alike. Not following the instructions might cause damage to the units and personnel.

6.1.1. Transport and reception

The unit must be transported in its own package to avoid transport damage. It is forbidden to load any heavy packages on the unit during transport and storage.

The unit is not stable until bolted down to the floor. For this reason it is imperative not to operate or tilt the kettle until it is bolted down according to the installation instructions. When the kettle is removed from its transport pallet, it must be supported to prevent it from falling over before it is fixed to the floor. If the kettle falls down, this may cause damage to the unit and put personnel at risk.

The consignee of the kettle must check the unit immediately after transport and, if any damage is detected, it must be noted on the bill of freight. If this is neglected, all transport damage detected later on (except those covered by normal product guarantee) will be repaired at the customer's cost.

6.1.2. Storage

The unit must be stored in a dry place where the temperature is between + 0° and 40°C. The unit must remain in its own package during storage.



If the unit is stored on a construction site, special care must be taken not to damage the unit when carrying out other construction work.

- Protect the outer surfaces of the unit from scratches and knocks.
- Protect the unit from construction site dust.
- Protect the unit from welding, grinding and abrasive cutting wheel sparks. These might later cause rust spots on the stainless steel surfaces of the unit.

6.1.3. Facilities

Electrically heated models

The kettle can be used in a normal, air-conditioned professional kitchen. The room temperature of the installation place must not exceed +40°C and the relative humidity must be less than 80% (condensation on surfaces not allowed to occur). If the temperature of the facility in winter conditions is below 0°C, the steam generator of the kettle must be drained and the kettle must be emptied to avoid damage caused by freezing. The kettle's pipes and solenoid valve bodies must be emptied at the same time.

Steam heated models

The kettle can be used in a normal, air-conditioned professional kitchen. The room temperature of the installation place must not exceed +40°C and the relative humidity must be less than 80% (condensation on surfaces not allowed to occur). If the temperature of the facility in winter conditions is below 0°C, the steam jacket of the kettle must be drained and the kettle must be emptied to avoid damage caused by freezing. The kettle's pipes and solenoid valve bodies must be emptied at the same time.

6.1.4. Unpacking the unit

The kettle is transported in its own package as near the installation place as possible before final unpacking. Remove the plastic foil wrapped round the kettle after the installation just before the first use of the kettle. When unpacking all packing material must be sorted and disposed of according to local recycling regulations.

6.1.5. Industrial safety during installation



Beware of sharp edges of sheet constructions in the kettle pillars when installing the unit.

Do not switch the power on, if the unit's installation area is wet or moist.

6.2. Installation

Check before installation from the installation drawing that there is enough space behind the kettle for tilting. Check also the location of the floor drain.

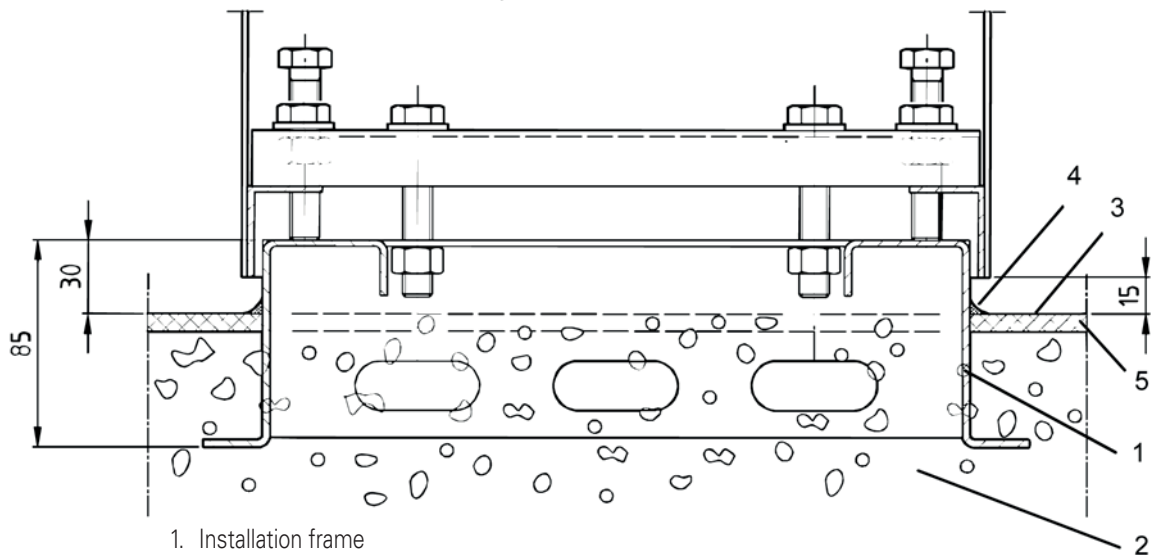
The kettle can be installed in the following two ways:

- On subsurface installation frames, frames cast into the floor
- On surface installation frames, frames fixed between the kettle and the floor

Remove the front panels of the control pillar and support pillar when installing. It is recommended to put wooden slats below the kettle axles when raising the unit during the installation to avoid possible falling of the kettle. If you are installing a kettle group, first separate the kettles. Begin the installation with the left-hand kettle and do not forget to support the right-hand kettle after removal from the left-hand temporary support.

6.2.1. Installation on subsurface frames cast into the floor

The optional subsurface installation frame is to be correctly positioned before casting. The frame should be installed in a horizontal position and fixed so that it will not move during the casting. The top of the installation frame must be approx. 30 mm above the finished floor surface. The junction between the floor and the frame is to be covered with flooring material up to the level of the installation frame as shown in the picture below.



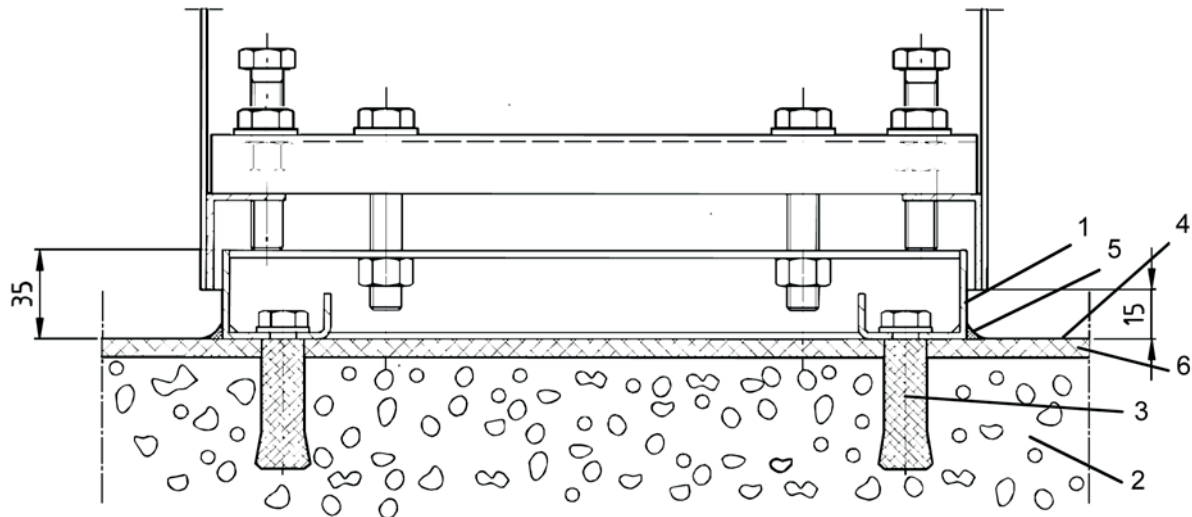
1. Installation frame
2. Concrete casting
3. Finished floor surface
4. Silicone mastic
5. Acrylic filler

Place the kettle on the installation frame and adjust to a horizontal position with the adjusting bolts which are in the corners of the pillars. When the kettle is in a horizontal position, it must be fixed to the installation frames with the help of M12 fixing bolts. The control pillar has 4 bolts and the support pillar has 2 bolts. Tighten the adjusting nuts carefully. Do not seal the space between the kettle pillars and installation frame as there must be enough change of air.

6.2.2. Installation on surface installation frames

The optional installation frame is to be installed according to the installation drawing. If the floor is not even, it might be necessary to straighten the installation frame to a position nearer to the horizontal by putting some stainless steel spacers between the frame and the floor, so that the adjustment range of the pillar is sufficient.

The junction between the installation frame and the floor is sealed with silicone or similar.



1. Surface frame
2. Concrete casting
3. Fixing bolt for surface frame
4. Finished floor surface
5. Silicone mastic
6. Acrylic filler

Fixing bolts of the surface installation must be chosen according to the floor material. Recommended type is a UKA 12x200 chemical bolt, which is suitable for different floor materials. Alternatively expansion-shell bolts or equivalent can be used.

Place the kettle on the surface installation frame and adjust to a horizontal position with 4 adjusting bolts which are in the corners of the pillars. When the kettle is in a horizontal position it must be fixed to the surface frame with the help of M12 fixing bolts. The control pillar has 4 bolts and the support pillar has 2 bolts. Tighten the fixing nuts carefully. Do not seal the space between the kettle pillars and surface installation frames, as there must be enough change of air.

6.3. Electrical and water connections

The electrical and water connections for each kettle (single or group) are made to the right-hand kettle pillar according to the installation drawing.

6.3.1. Electrical connection

Connections are to be done according to the installation drawing and the electric diagram.



The kettle is equipped with a decoupling switch, which separates the kettle totally from the electrical network.

6.3.2. Water connection (electrically heated models)

The water connection is to be done according to the installation drawing. Connections to the water tap are to be fitted with one-way and shut-off valves (not included in delivery). The cold water connection is of size Ø 15 mm (G 1/2") and the warm water connection of size Ø 10 mm (G 3/8").

Quality requirements for water used for filling the steam generator.

- Water conductivity should be below 1000µS/cm. Already when the conductivity is over 500µS/cm, a water analysis is recommended.
- Maximum chloride concentration allowed is less than 60 mg/l.
- Maximum chlorine concentration allowed is less than 0,2 mg/l.
- The pH value of the water should be between 6,5 and 9,5.
- Unit damages caused by chloride, chlorine or pH values exceeding the stated limits are not covered by manufacturer warranty.

Extreme water conditions

When extreme water conditions not fulfilling the requirements above exist, filters and water treatment devices should be installed in order to ensure proper water quality for steam generator filling. Specified water quality is a mandatory requirement for proper function of the unit and for avoidance of corrosion. When extreme water conditions are at hand, a water quality analysis must be carried out. Depending on the results of the analysis, needed filters and water treatment devices are installed by the customer. The most common filters and treatment equipment are:

1. Particle filter

A 5-15µm particle filter is recommended when water contains sand, iron particles or other suspended matters.

2. Active carbon filter

An active carbon filter must be used if the chlorine level exceeds 0,2 mg/l.

3. Reverse osmosis system

A reverse osmosis system must be used if the chloride concentration exceeds 60 mg/l. This is very crucial in order to avoid corrosion.

4. Water softener

If a high level of scale build-up is experienced, a water softener is needed. H+ Ion Exchanger or Kleensteam are recommended systems. Sodium ion exchangers must not be used because of problems caused by high salt content.

6.3.3. Water connection (steam heated models)

The water connection is to be done according to the installation drawing. Connections to the water tap are to be fitted with one-way and shut-off valves (not included in delivery). The cold water connection is of size Ø 15 mm (G 1/2") and the warm water connection of size Ø 10 mm (G 3/8").

6.3.4. Steam and condensate connections (steam heated models)



The steam and condensate connections of the Viking combi-kettle must be carried out by a person with professional competence in the field. Improper connections and piping may severely impact the correct function of the kettle.

The location of the steam and condensate connection points appears from the installation drawing.

The maximum steam pressure in the kettle is 1 bar. The steam supply line must be fitted with a one-way valve, a shut-off valve, a filter, a pressure reduction valve and a safety valve set at 1,5 bar.

The condensate pipe must be on the same floor as the kettle or go to the floor below. Leading the condensate pipe to the floor above the kettle is not allowed, as it creates a water trap that prevents normal function of the kettle.

The condensate pipe must be free from pressure created by other appliances.

6.4. Ventilation

The heat and steam load of the kettle must be taken into account in the kitchen's ventilation plan. A ventilation hood must be installed above the kettle, because plenty of steam is released when the kettle lid is opened. When dimensioning the ventilation hood, the space requirement for opening the lid must be taken into account (see installation drawing).

6.5. Other installations

In case the combi-kettle being installed is provided with a self-control option (HACCP), and it is taken into use, the data cabling and the installation of the program must be carried out according to separate instructions.

6.6. Adjusting the tilting

Ensure that the kettle pillars are in a horizontal position. If not, adjust according to the installation instructions. Ensure that the rim of the kettle also is horizontal. If not, adjust the tilting as follows.

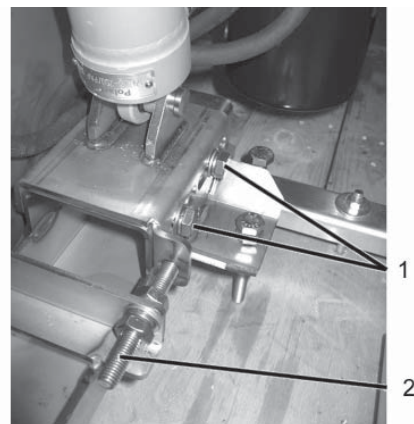
The adjustment is done from the lower mounting point of the tilting motor as follows:

1. Open the locking screw
2. Open the locking nut.



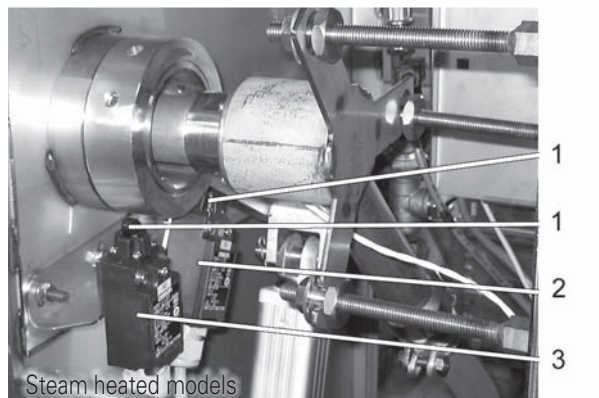
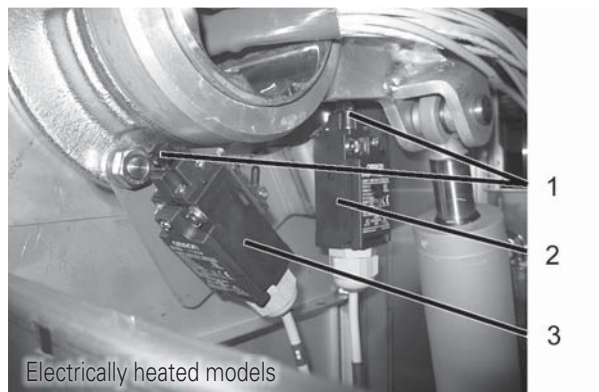
Viking 40-300 I, Viking Combi 40-200 I

1. Locking screw
2. Adjusting screw



Viking Combi 300-400 I

3. Adjust with the adjusting screw which is inside the U-profile.
4. Lock with the screw and tighten with the nut.
5. Finally check that the roller plunger of the tilting limit switch trips when the kettle is in an upright position.



1. Roller plunger
2. Tilting limit switch - cooking position
3. Tilting limit switch - extreme position

6.7. Testing the kettle

Do the following measurements and checks before taking the kettle into use.

6.7.1. Filling the steam generator (electrically heated models)

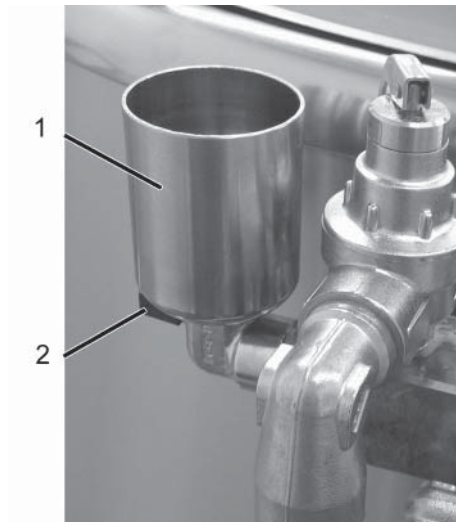
Before the kettle is switched on, the steam generator must be filled with water.

Do the following:

- Check that the kettle is in its upright position.



- Open the control valve by turning the handle parallel to the valve.



- 1. Water inlet funnel
- 2. Handle of the water inlet valve

- Open the water inlet valve, which is under the water inlet funnel, by turning the handle parallel to the valve.
- Let water into the water inlet funnel. Stop filling water when water starts to drop out of the control valve.
- Close the water inlet valve. Close the control valve when water has stopped running out of it. Now the steam generator is filled up to the maximum level.



Overfilling might prevent proper warming of the kettle. Thanks to the steam condensing system, the steam generator requires filling only a few times per year. Depending on the use of the kettle, it will be 2-4 times per year. If the kettle is often used at low temperatures less than 100°C, water must be added to the steam generator more frequently. This is caused by the closing temperature of the automatic vacuum valve.

A white water level indicator light on the control panel displays when water must be added to the steam generator. When the indicator light illuminates, the kettle does not warm up. This protects the heating elements. Add water according to the instructions. The indicator light switches off, when the minimum water level has been reached. Water is needed in the steam generator as follows:

| Model | |
|------------|------|
| Viking 40 | 14 l |
| Viking 60 | 14 l |
| Viking 80 | 15 l |
| Viking 100 | 15 l |
| Viking 150 | 21 l |
| Viking 200 | 21 l |
| Viking 300 | 37 l |
| Viking 400 | 37 l |



Do not leave the control valve of the steam generator, the safety valve and the water inlet valve open when the kettle heating is on. The discharging steam might cause burns or other damage.

Preventing the scale build-up

Hard or otherwise low-quality water can cause scale or other build-ups on the heating elements. The build-up can damage or destroy the heating elements. Under bad water conditions, use of purified water is recommended for the steam generator in order to protect the boiler and heating elements from damage.

6.7.2. Cooking mode (steam heated models)

Before the kettle is switched on, the kettle jacket control valve must be closed.

Do the following:

- Check that the kettle is in its upright position.



1. Control valve of steam jacket

- Close the control valve by turning the handle to the horizontal position.

6.7.3. Checking the safety valve

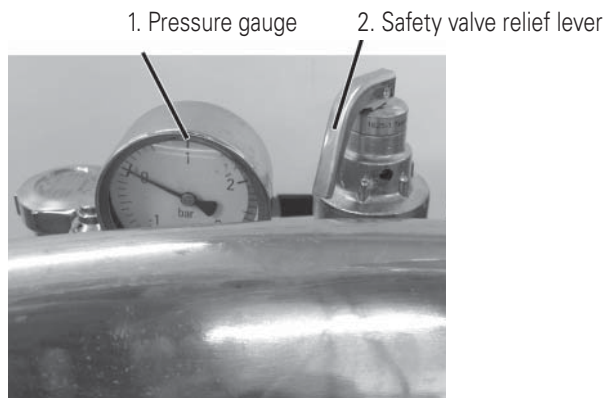
Do the following steps in order to check the safety valve:

Electrically heated models

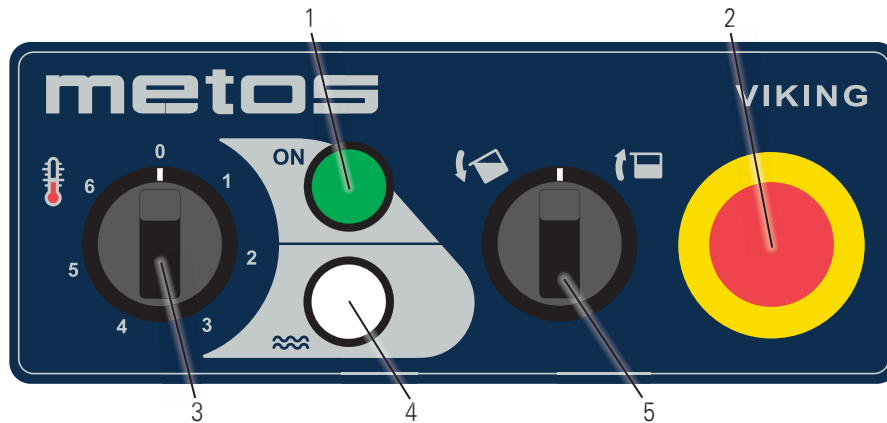
1. Do the checking when the kettle is empty.
2. Check the water level of the steam generator
3. Switch the kettle on by turning the power regulator to position 6.
4. Heat up the kettle until the pressure gauge (1) shows 1,5 bar pressure
Open the safety valve by cautiously lifting the relief lever (2) upwards. Now the safety valve should open and the pressure gauge should indicate a lower value.

Steam heated models

1. Do the checking when the kettle is empty.
2. Switch the kettle on by turning the power regulator to position 6.
3. Heat up the kettle until the pressure gauge (1) shows 1,0 bar pressure
4. Open the safety valve by cautiously lifting the relief lever (2) upwards. Now the safety valve should open and the pressure gauge should indicate a lower value.



Beware of hot steam.



1. Green indicator light "kettle ON"
2. Emergency/stop button
3. Power regulator
4. Indicator light for low water level (electrically heated models)
Indicator light "steam supply open" (steam heated models)
5. Tilting switch



If the safety valve does not open, so latest when the pressure gauge indicates 2 bar, switch off the power by turning the power regulator (3) to position 0 or push the emergency/ stop button (2). Contact immediately the qualified service personnel. It is not allowed to use the unit until it has been checked.


The safety valve function must be checked at least four times per year. The manufacturer will not take responsibility for damage caused by neglecting the regular checking of the safety valve.


THE KETTLE IS NOW READY FOR USE!

6.8. Testing the mixer

The basic conditions for the perfect functioning of the mixer are that the kettle is correctly fixed to the floor according to the installation instructions. The kettle and the kettle pillars must also be in a horizontal position.

6.8.1. Checking the functions

Switch on the mixer by turning the mixing program selector (7) to position  and the speed regulator (5) slightly away from the 0 position. Check the following functions:

- The mixer is mixing at the lowest speed and the green indicator light (2) illuminates
- The mixer rotates clockwise
- Turn the selector switch to position  turn the speed regulator to position 0 for a while and then turn it again slightly away from the 0 position
- Check the auto-reverse function: approx. 6 seconds clockwise and approx. 6 seconds counter clockwise
- Test the speed of rotation by turning the speed regulator to the maximum position
- Test both preset mixing programs



1. Power regulator
2. Green indicator light (heating ON)
3. Indicator light for low water level (electrically heated models)
Indicator light "steam supply open" (steam heated models)
4. Emergency/stop button
5. Mixing speed regulator
6. Green indicator light (mixer ON)
7. Mixing program selector switch
8. Tilting switch

You will find the speeds and the preset programs in the section "Mixer operation".

6.8.2. Checking the safety equipment



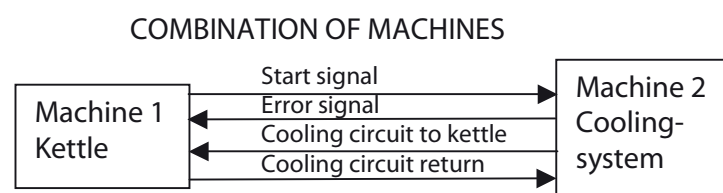
The mixer must stop when the safety grid or the lid itself is removed. When the lid and the safety grid are replaced, the mixer can be restarted.



The mixer must stop immediately when the emergency/stop button is activated. The switch is released by turning it clockwise until it jumps to its upper position. After this the mixer can be restarted.

6.9. Combination of machines

When the kettle is connected to a closed loop cooling system, a combination of machines as specified in the machinery directive is created for which, at commissioning, a signed declaration of conformity must be provided covering the combination of machines.



7. Technical specifications

Main circuit diagrams

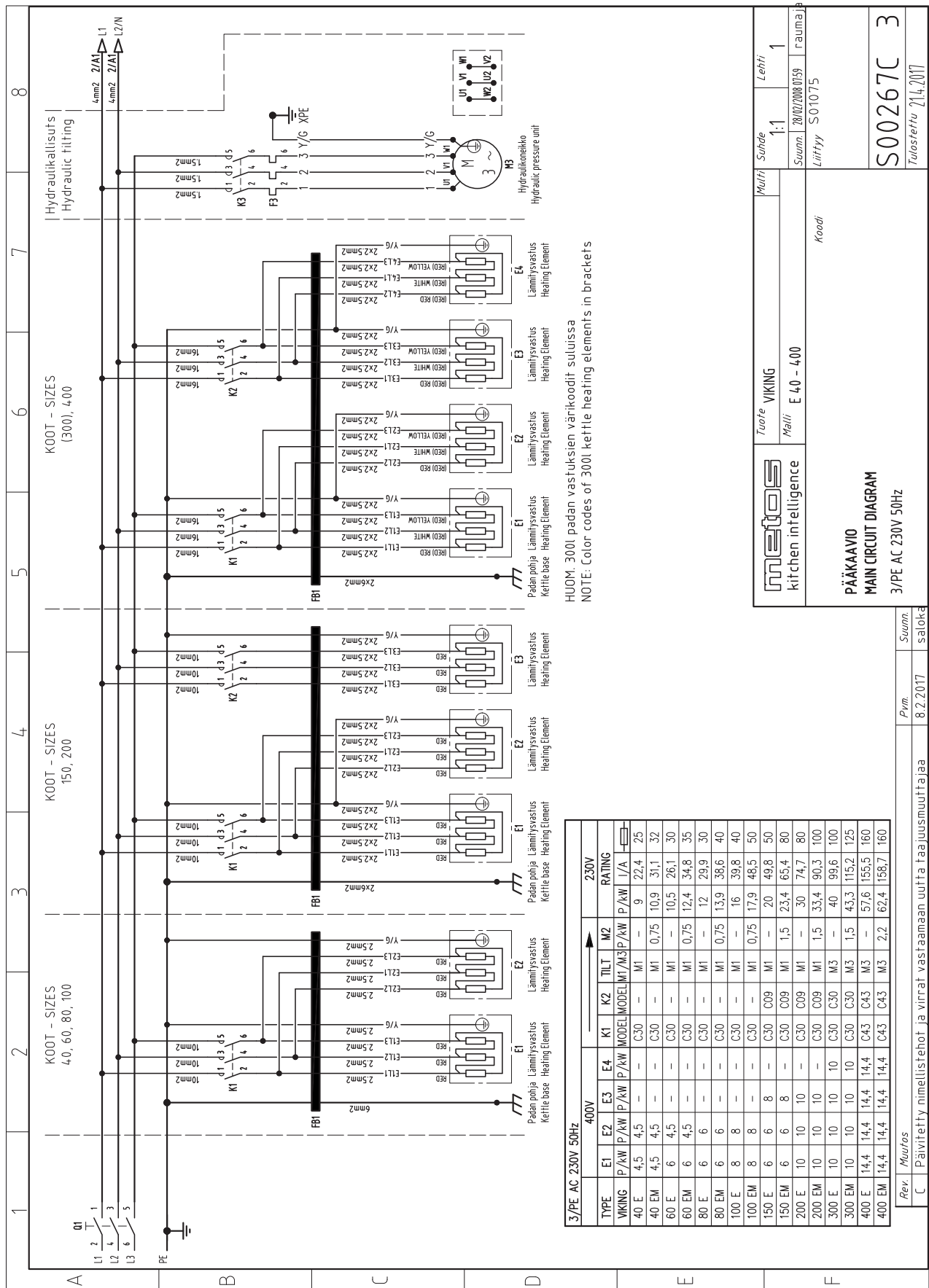
Control circuit diagrams

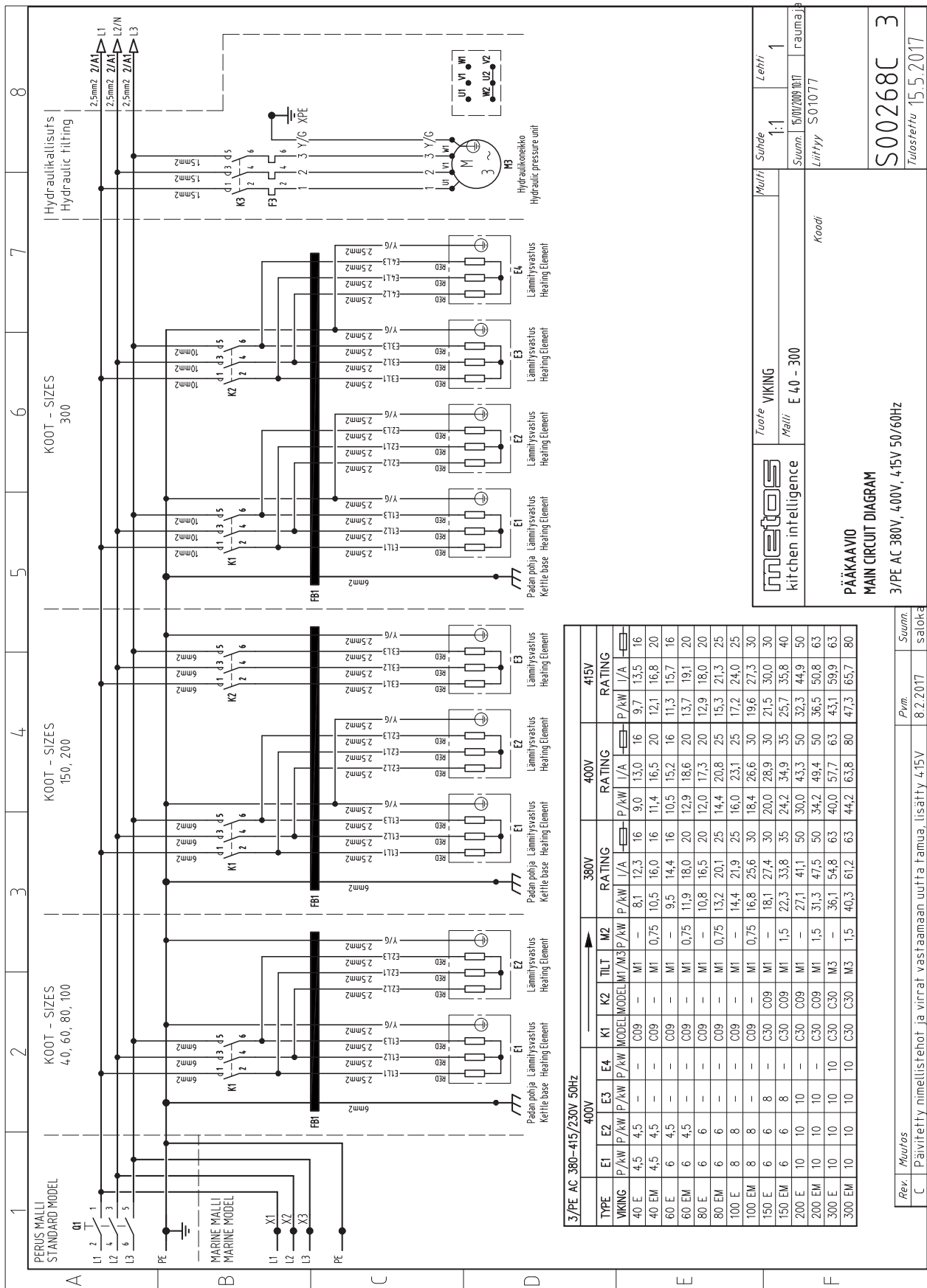
Installation drawings

Steam supply recommendations (steam heated models)

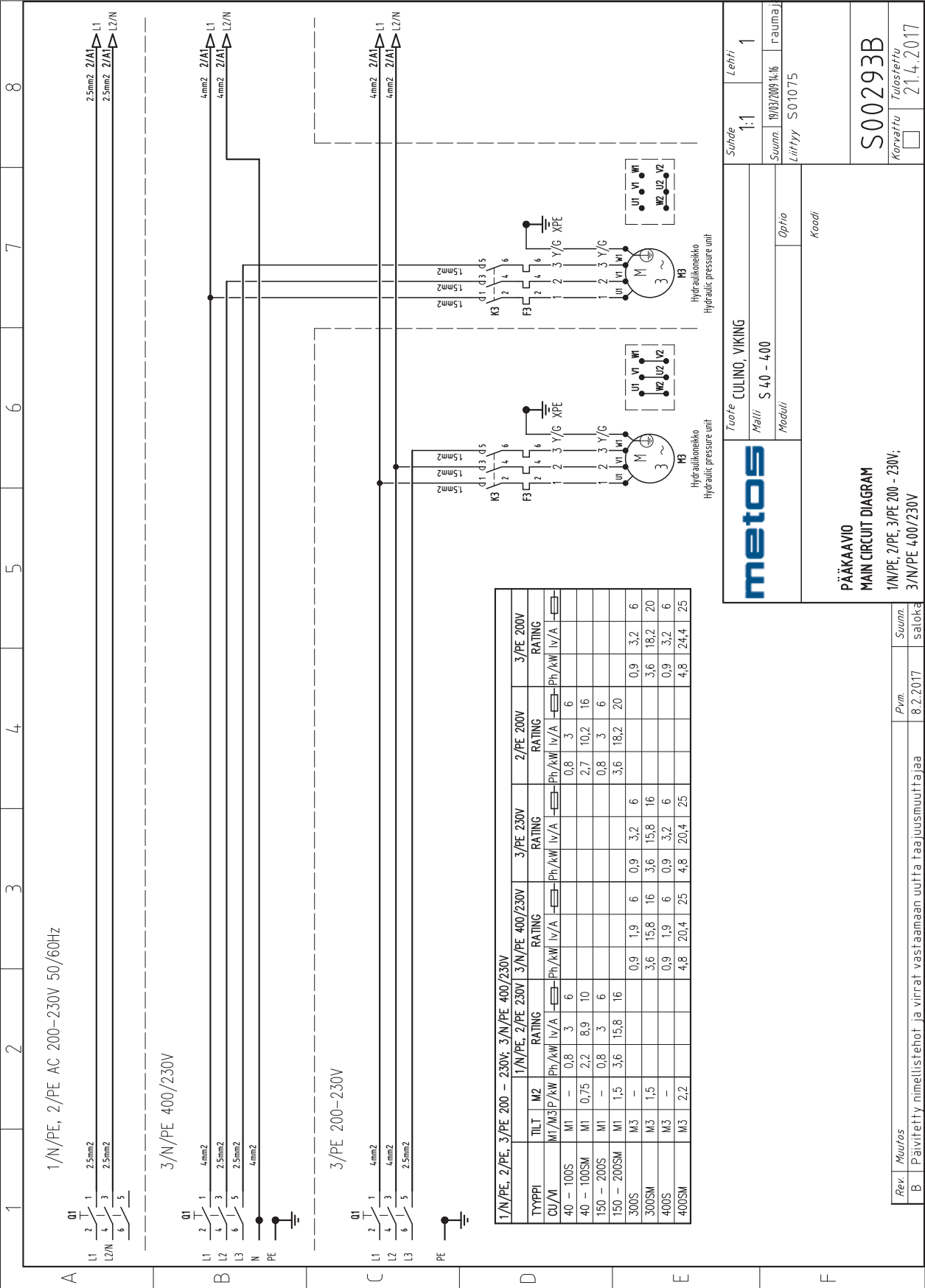
Text part

Technical specifications

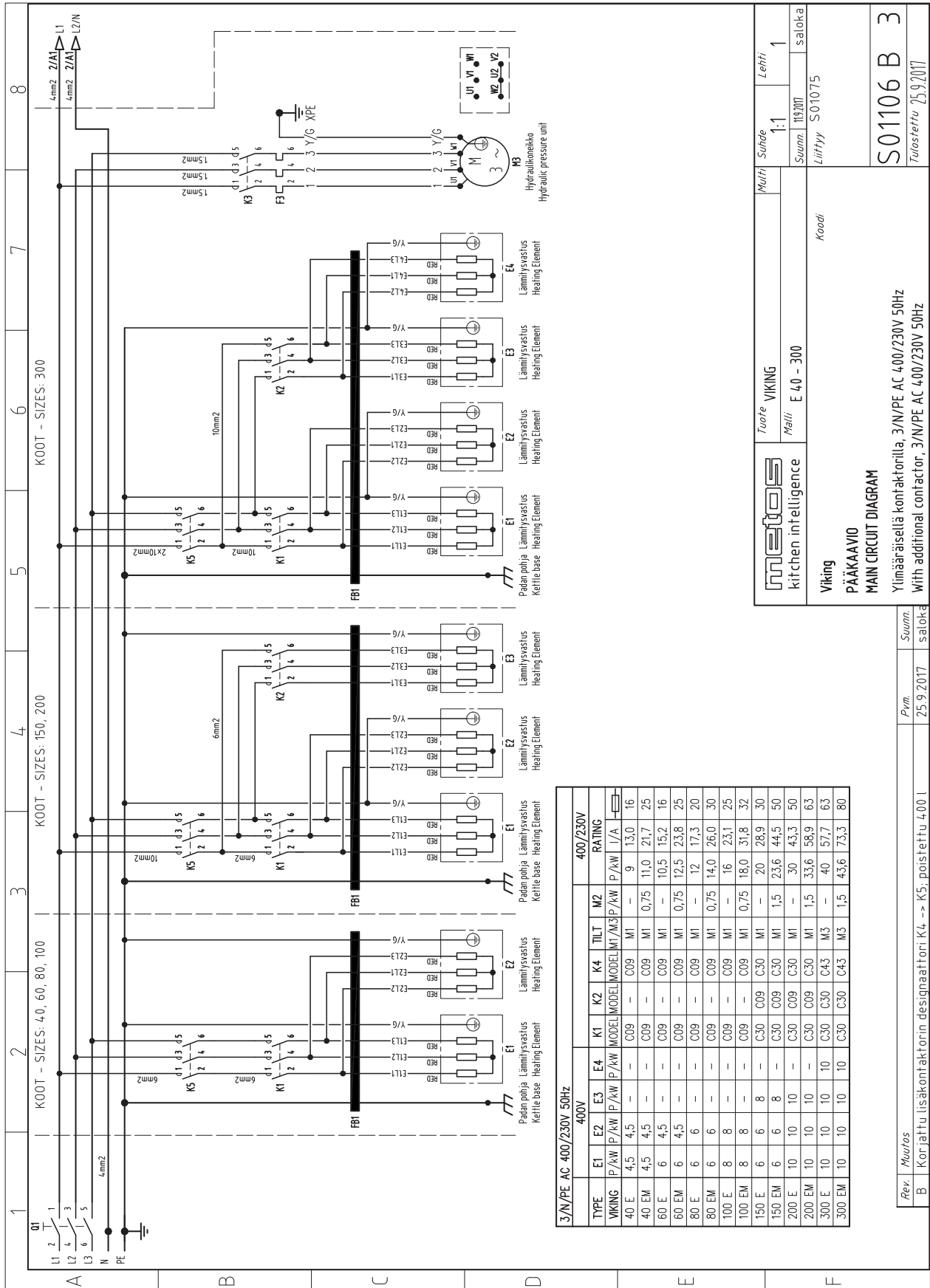


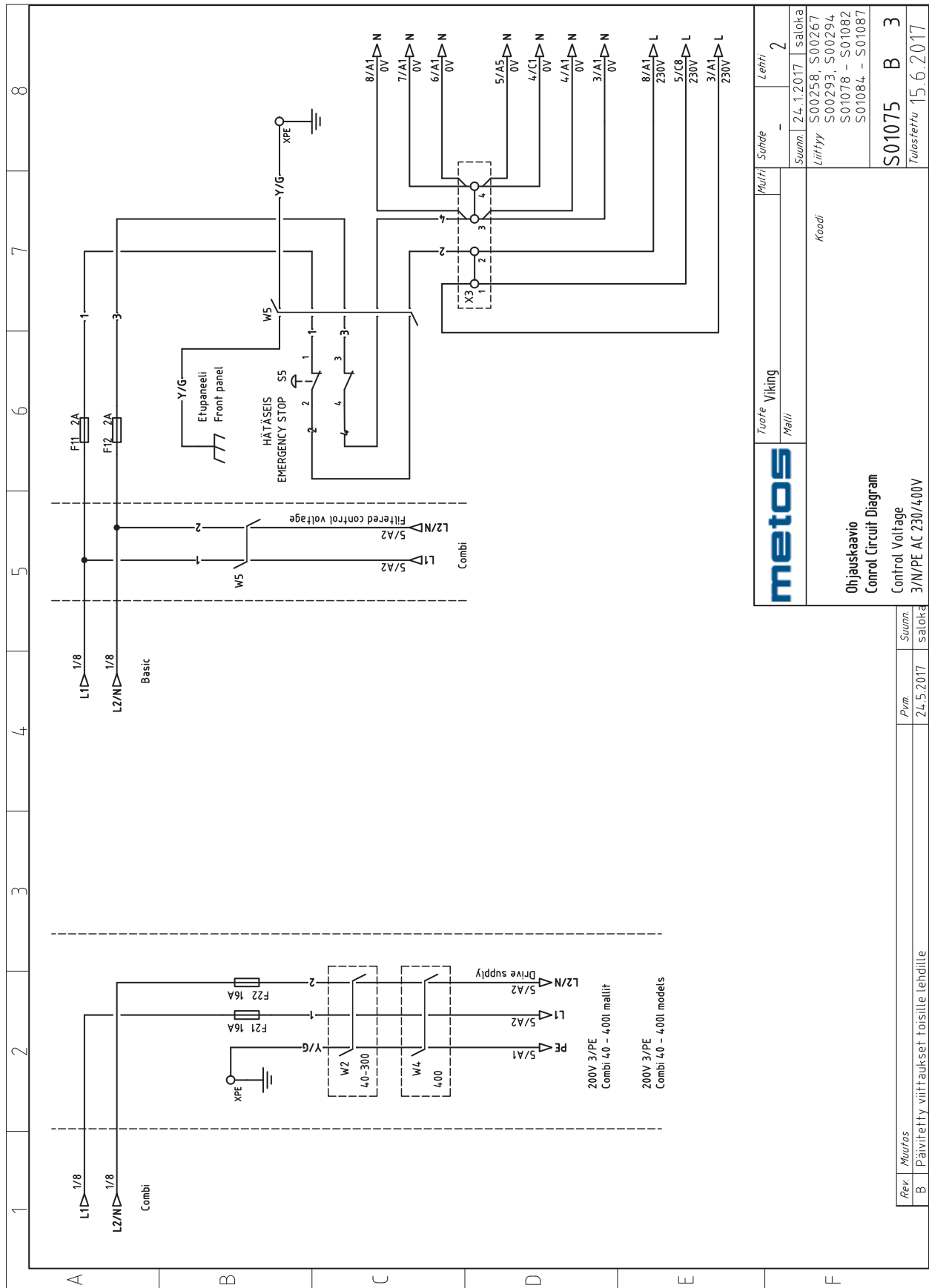


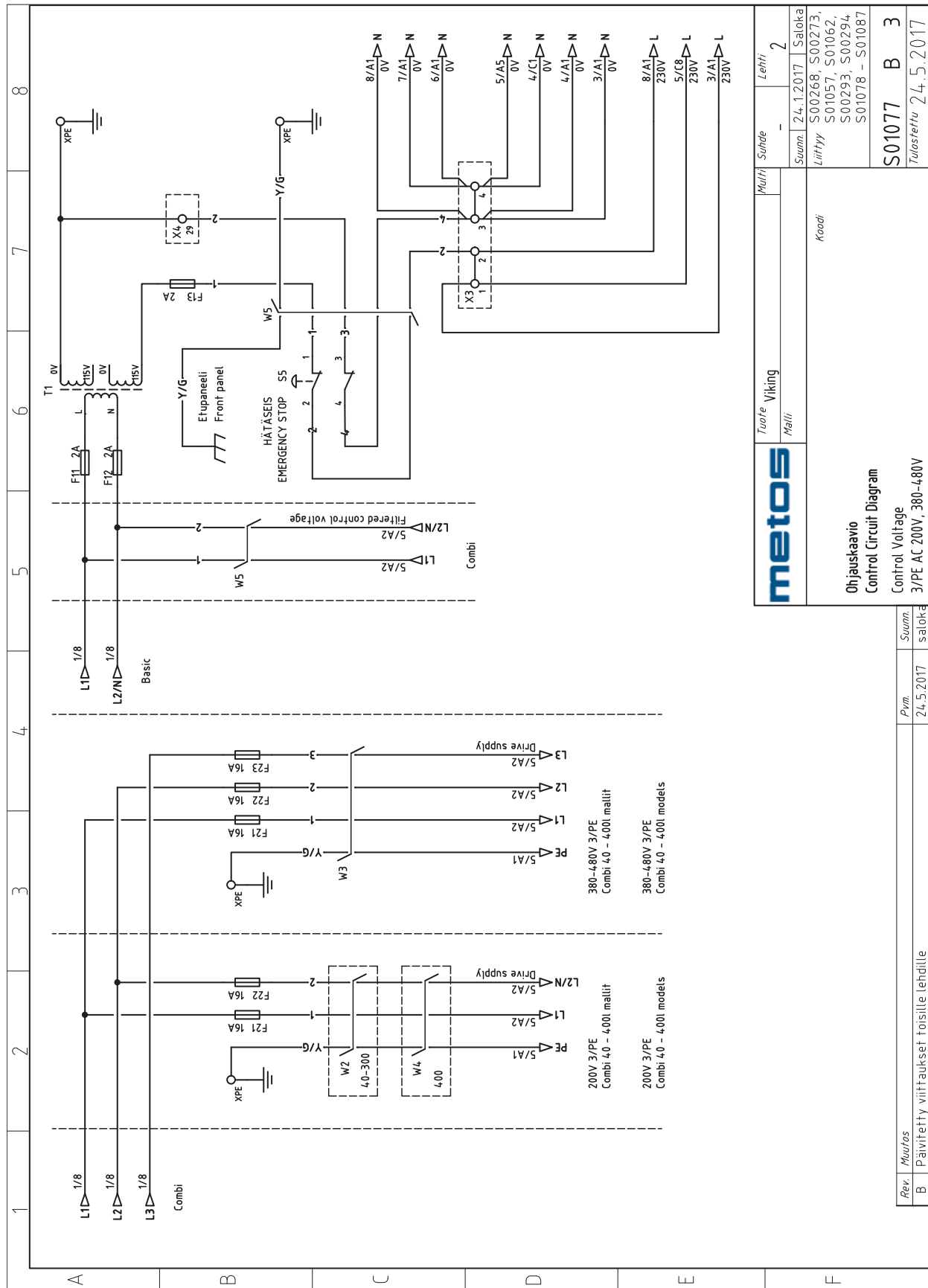


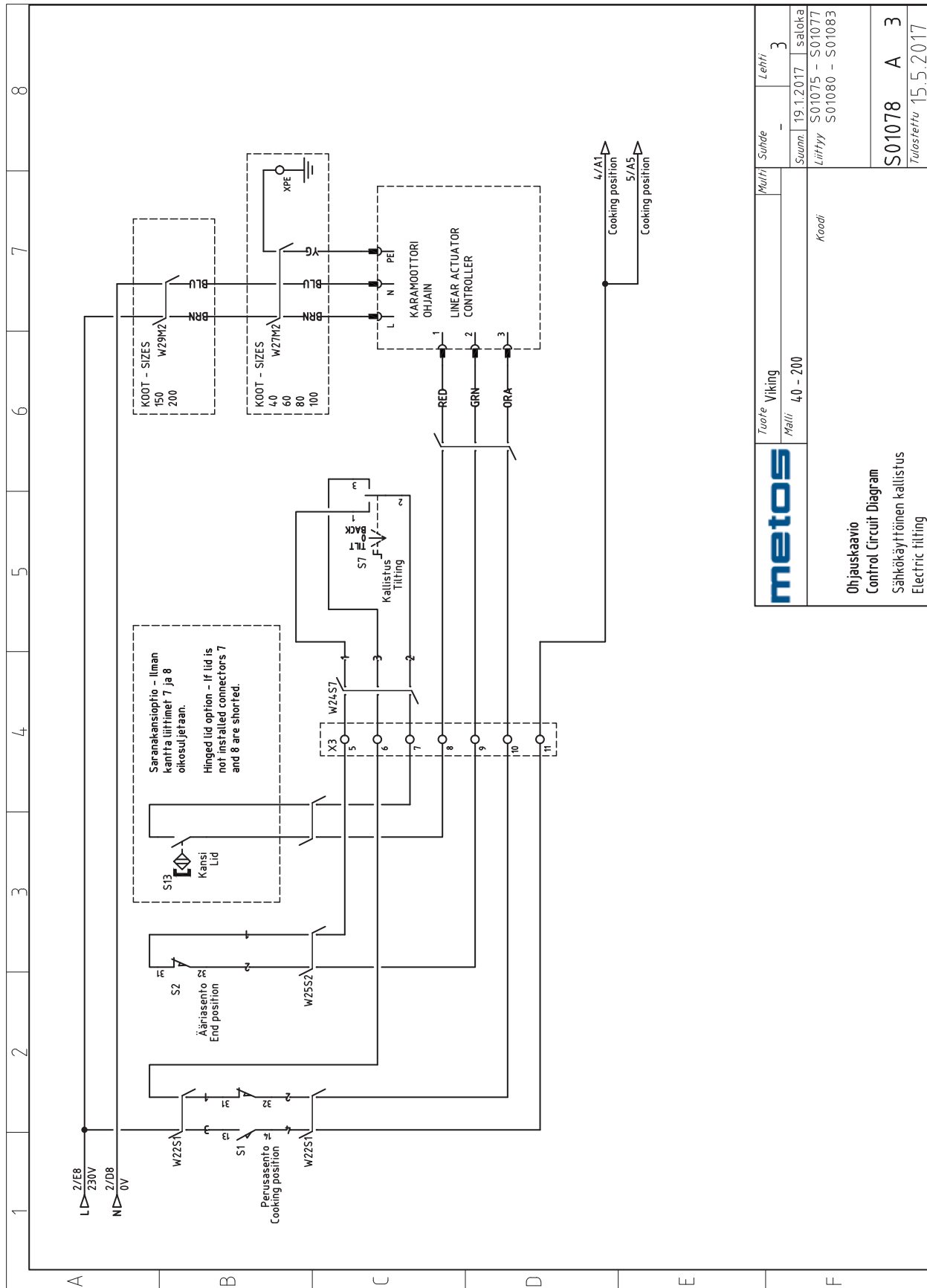


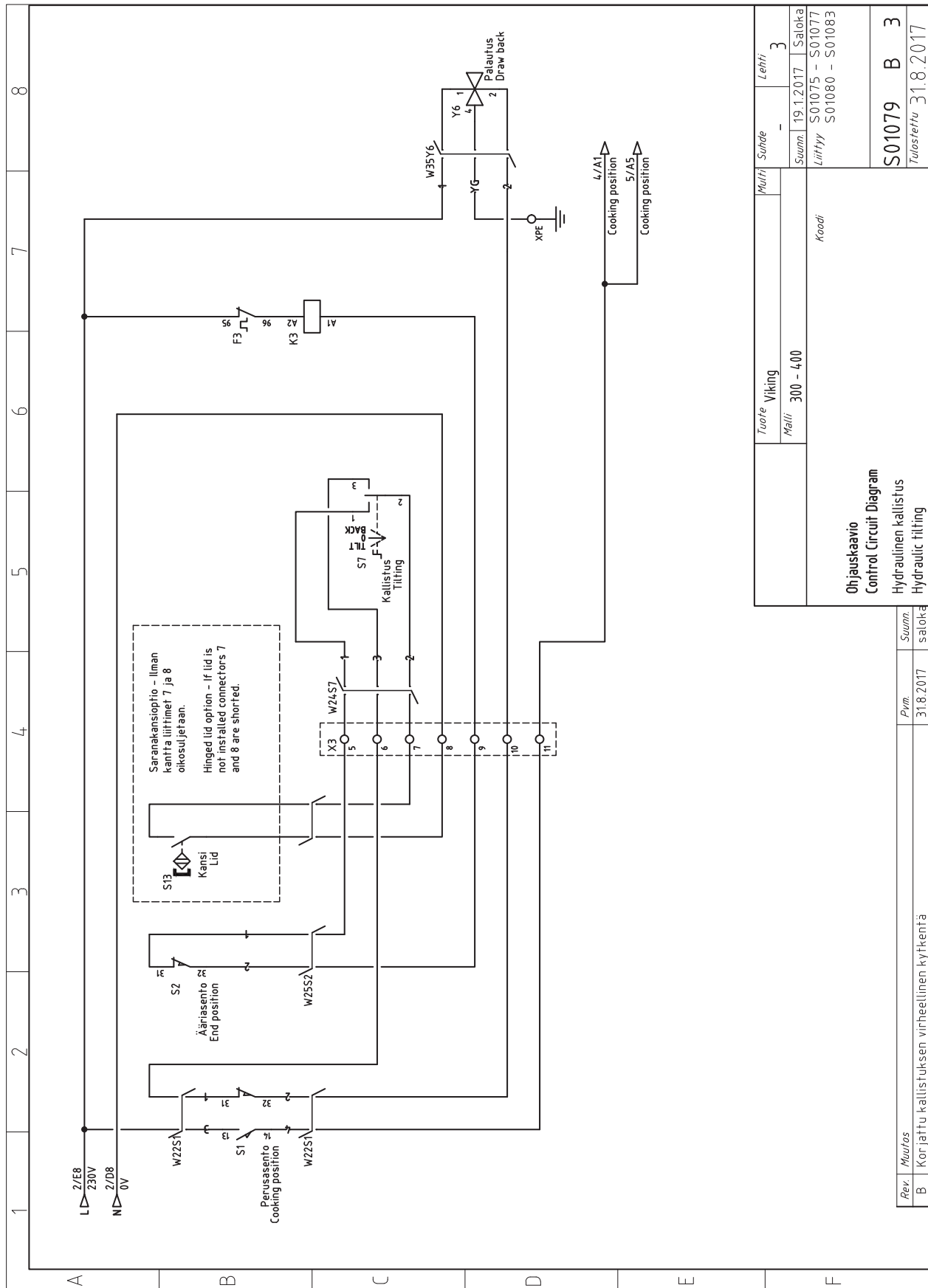


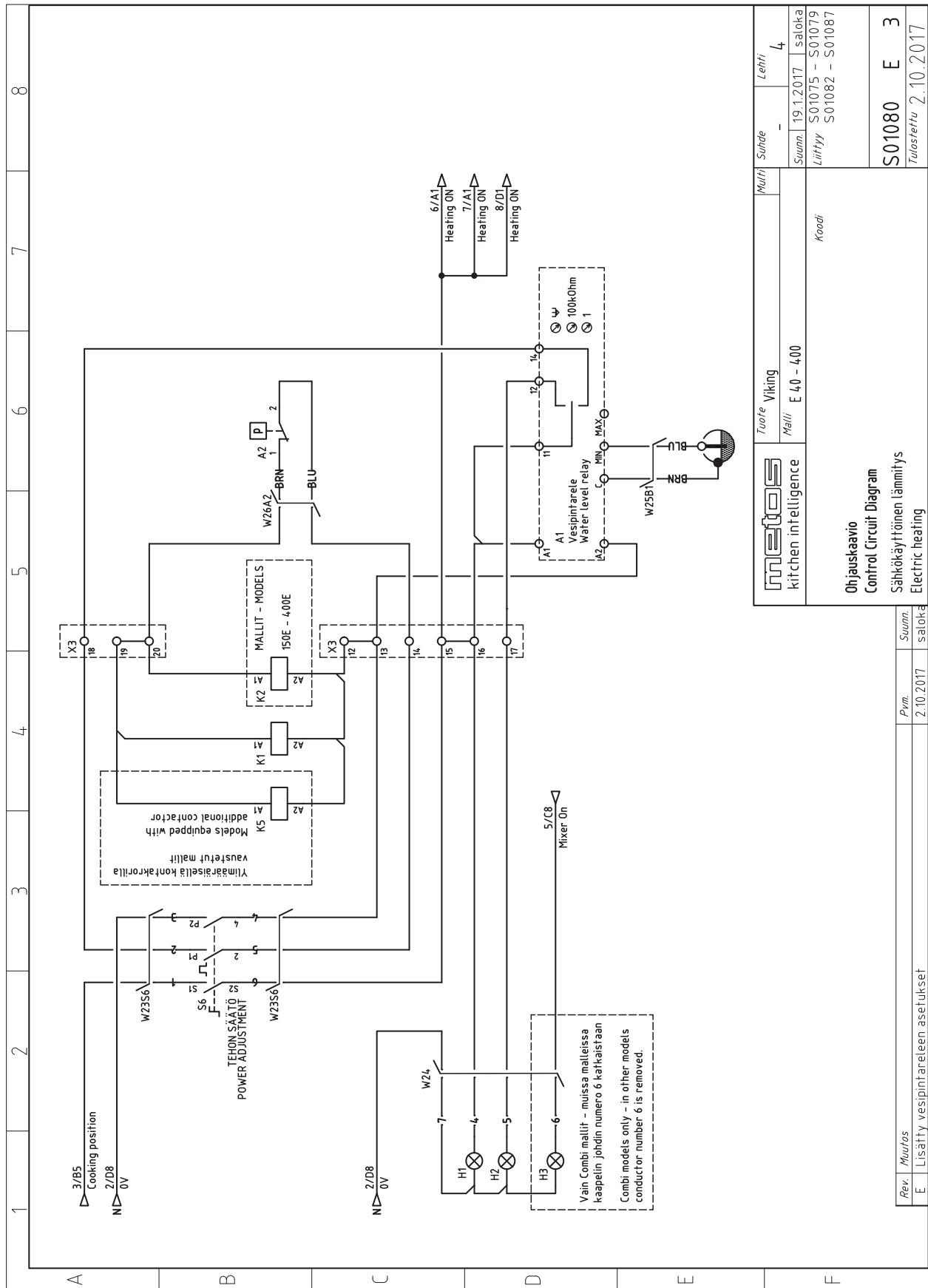


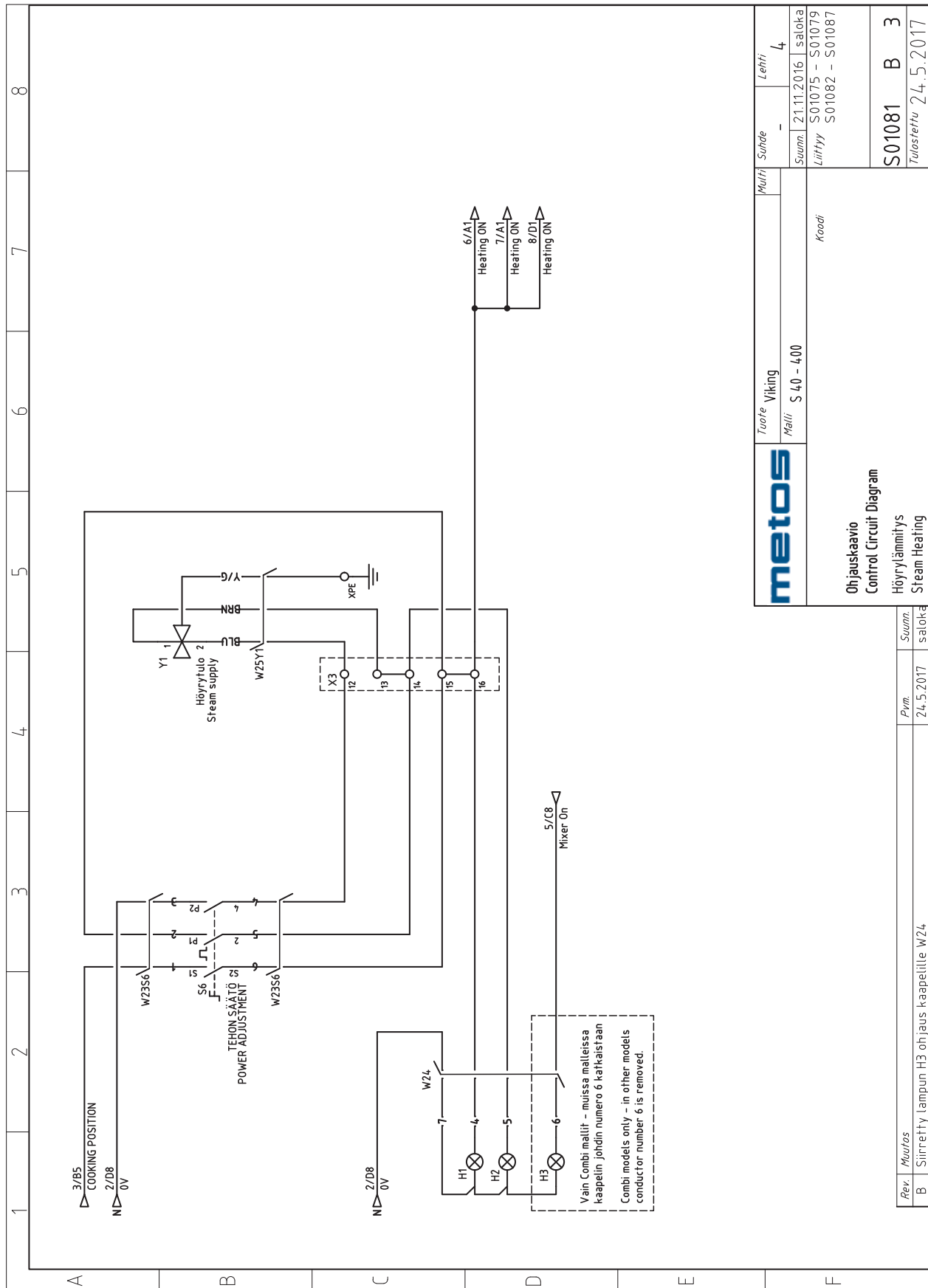




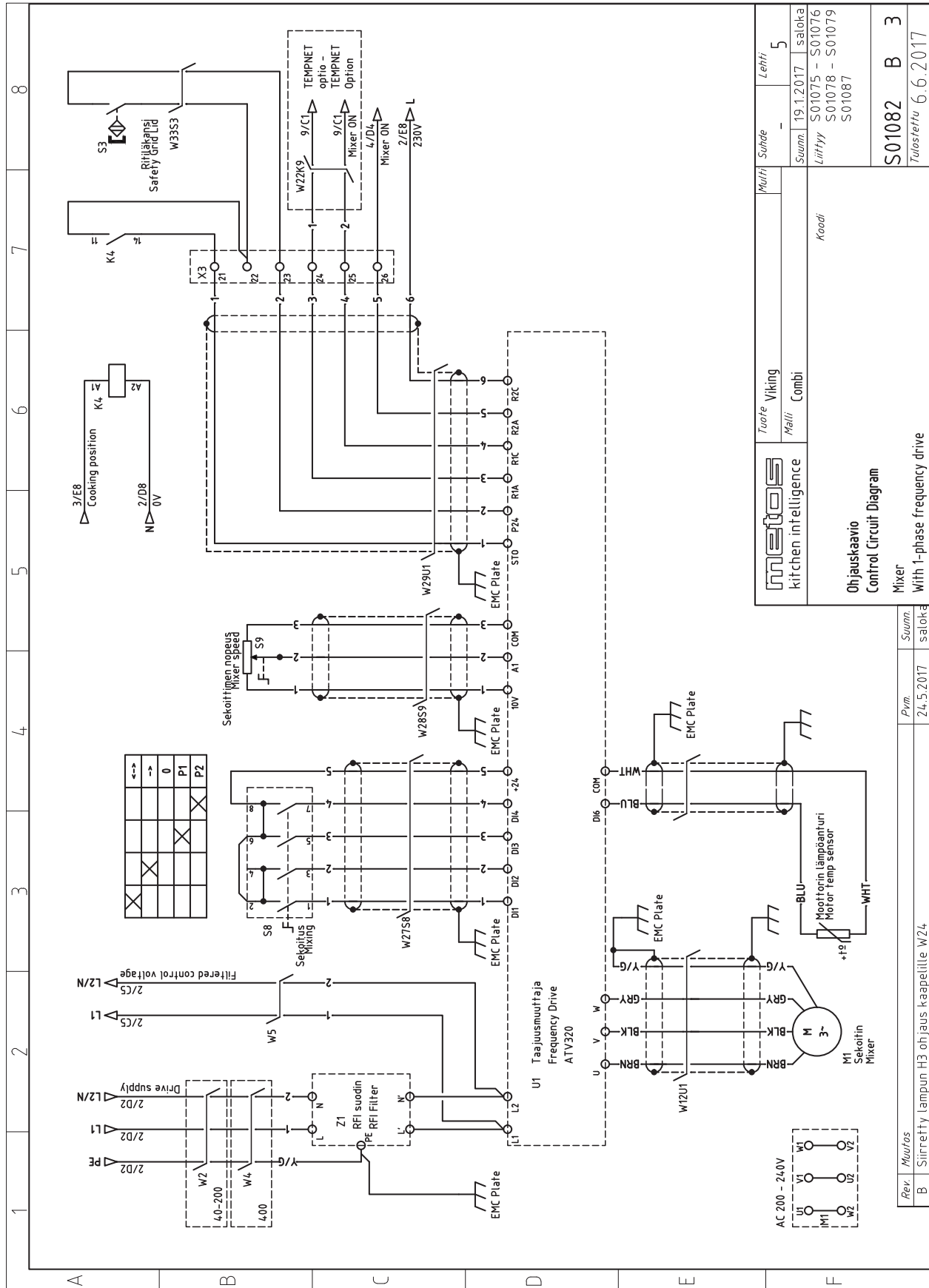


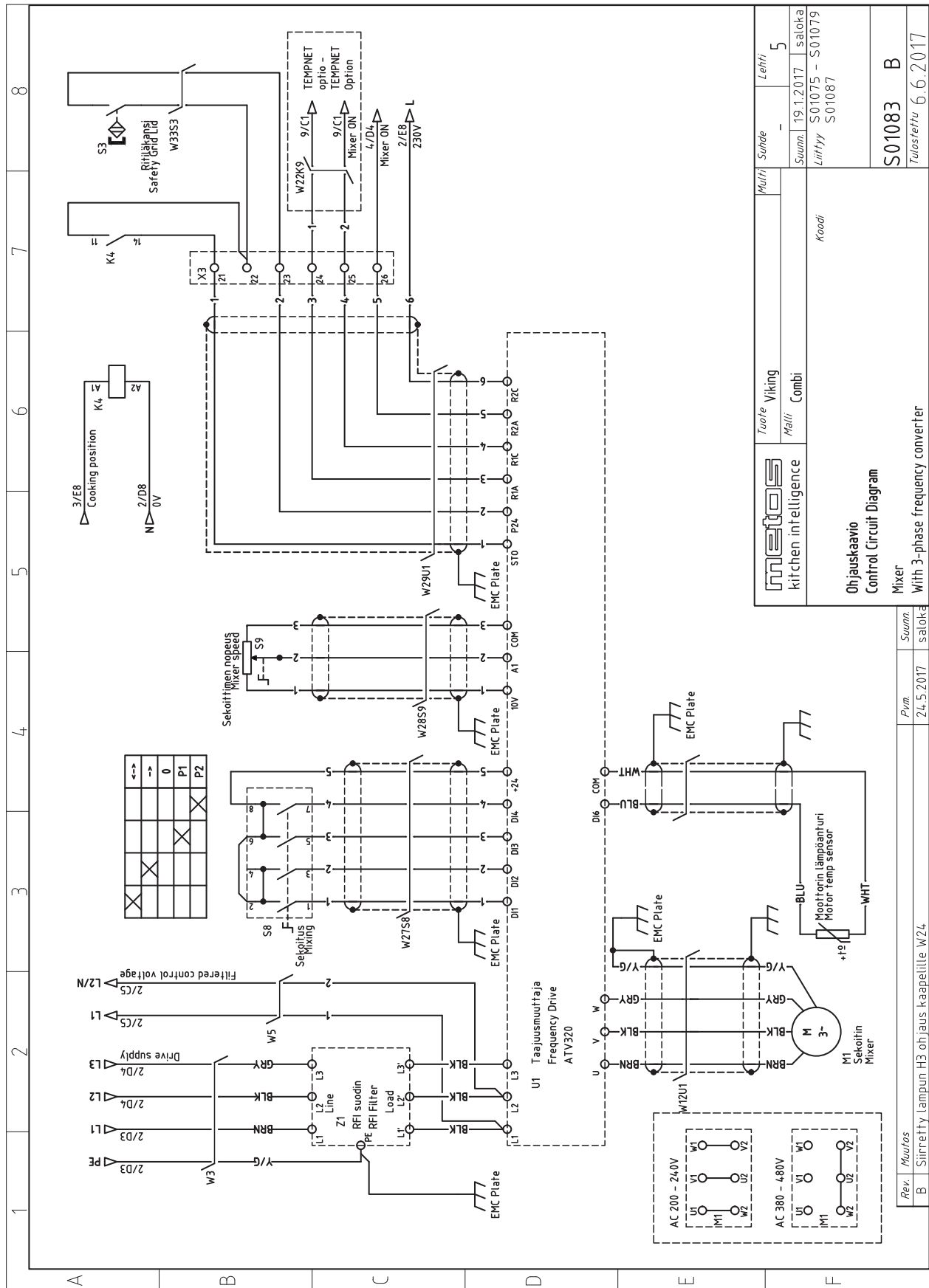


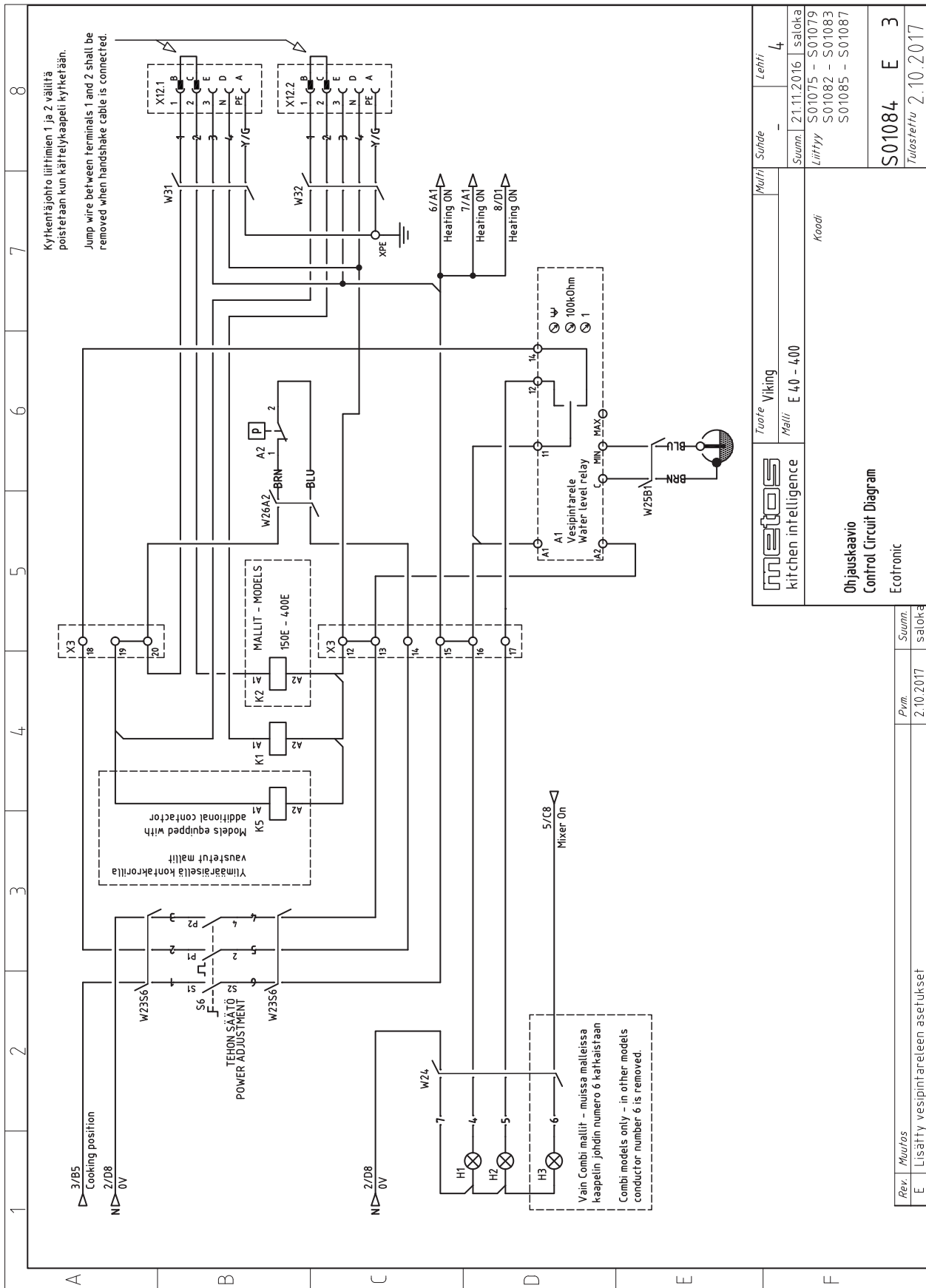


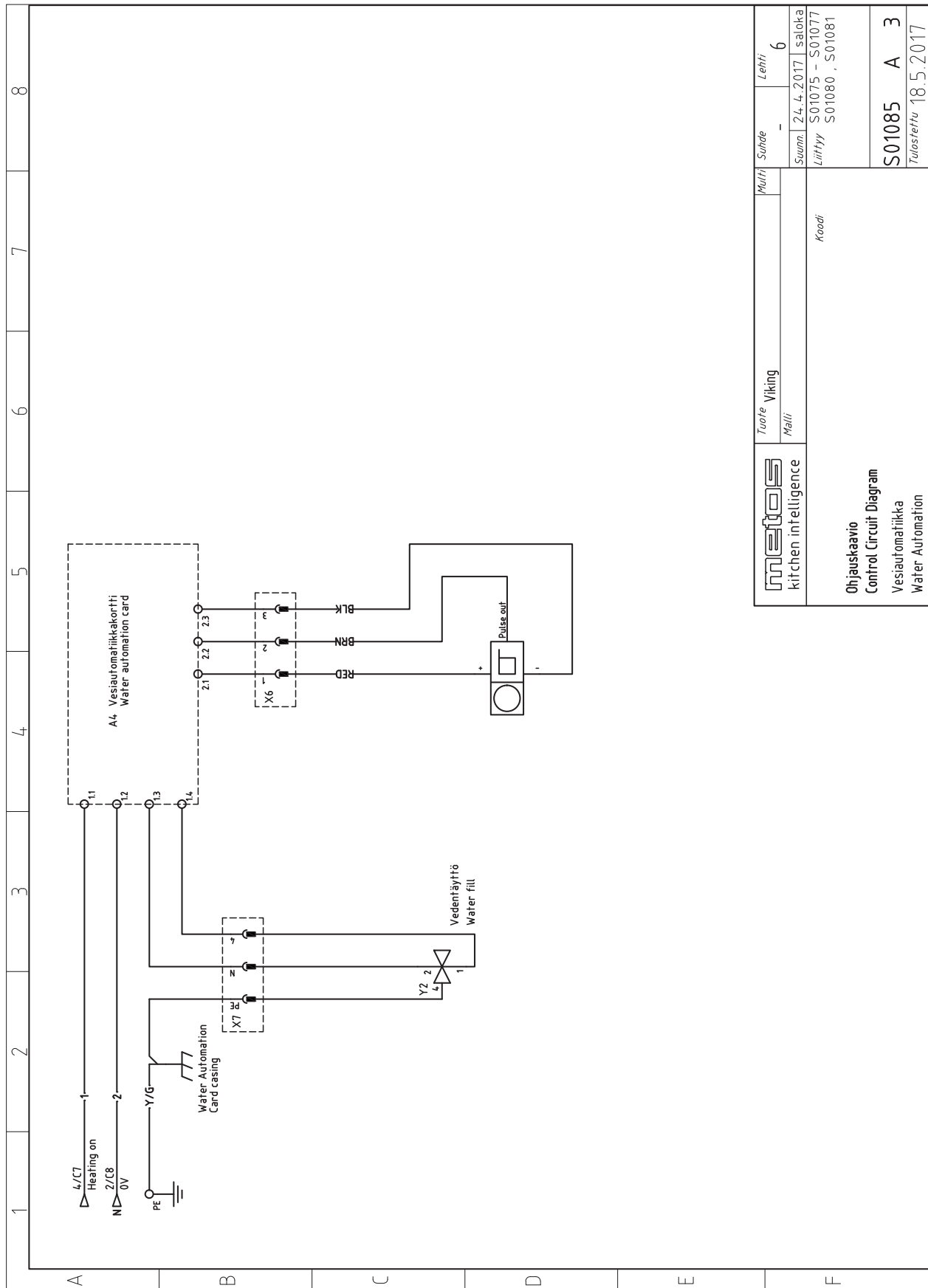


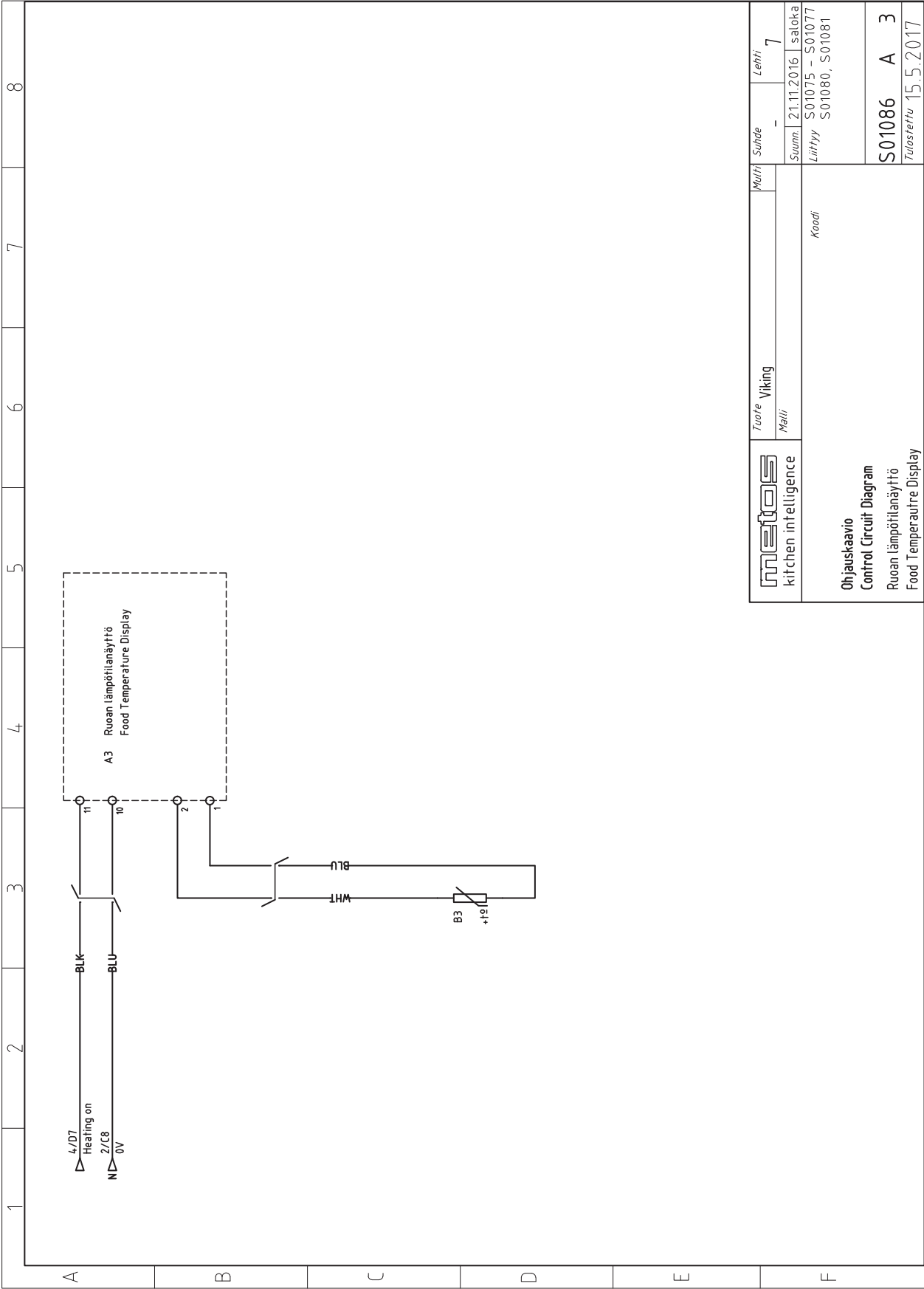
| | | | | | | |
|---|--|-----------------------|------------------|-----------------------|-------|--------|
| metos | | Tuote Viking | Malli S 40 - 400 | Multi | Lehti | 4 |
| Ohjauskaavio Control Circuit Diagram | | Koodi | | Suom. 21.11.2016 | | saloka |
| Höyrylämmitys Steam Heating | | Lithy S01075 - S01079 | | Lithy S01082 - S01087 | | |
| Rev. Muutos | | Pvm. | | Suom. 24.5.2017 | | saloka |
| B Siirretty lampun H3 ohjaus kaapelille W24 | | | | | | |
| S01081 B 3 | | Tulostettu 24.5.2017 | | | | |

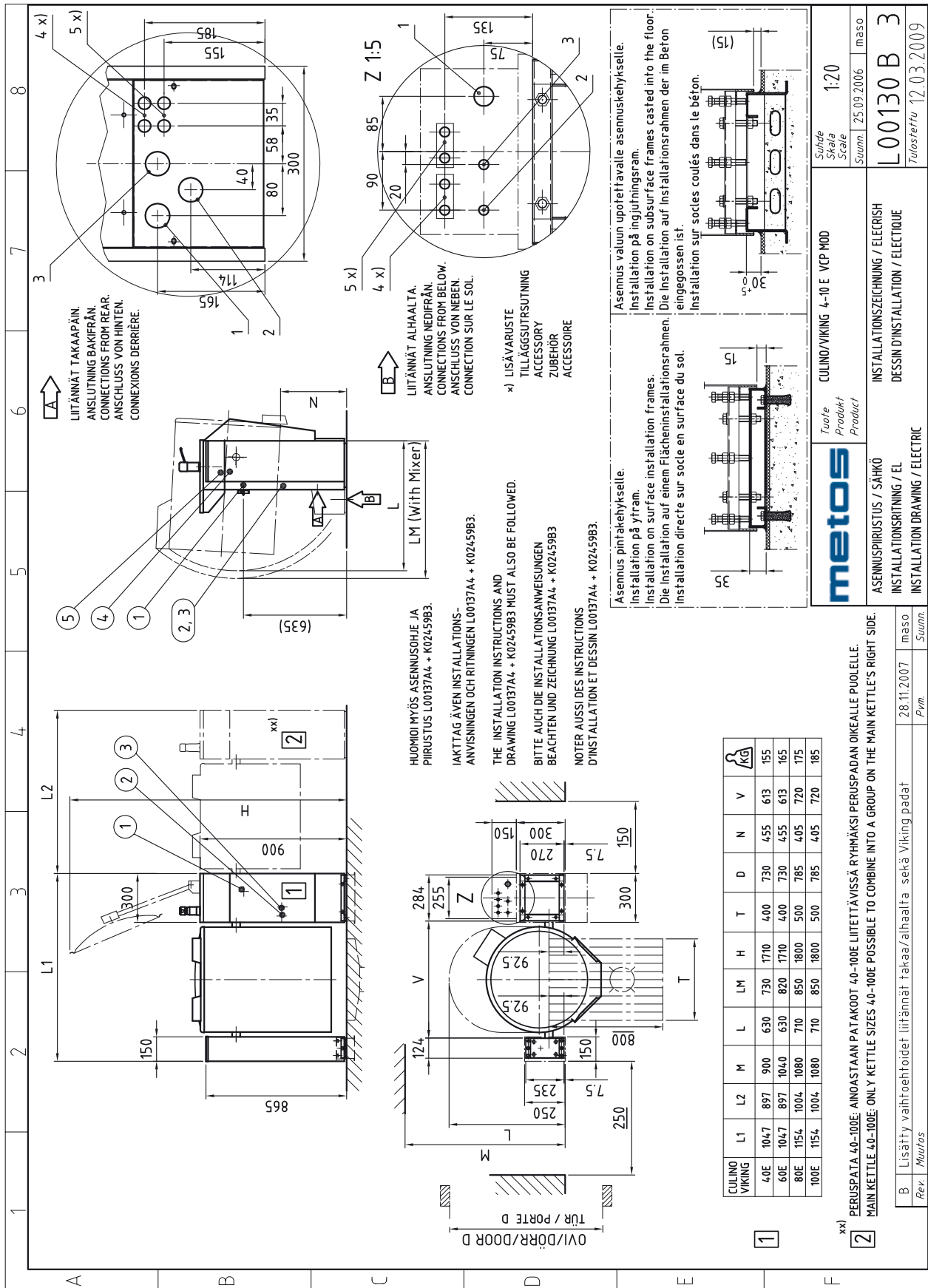













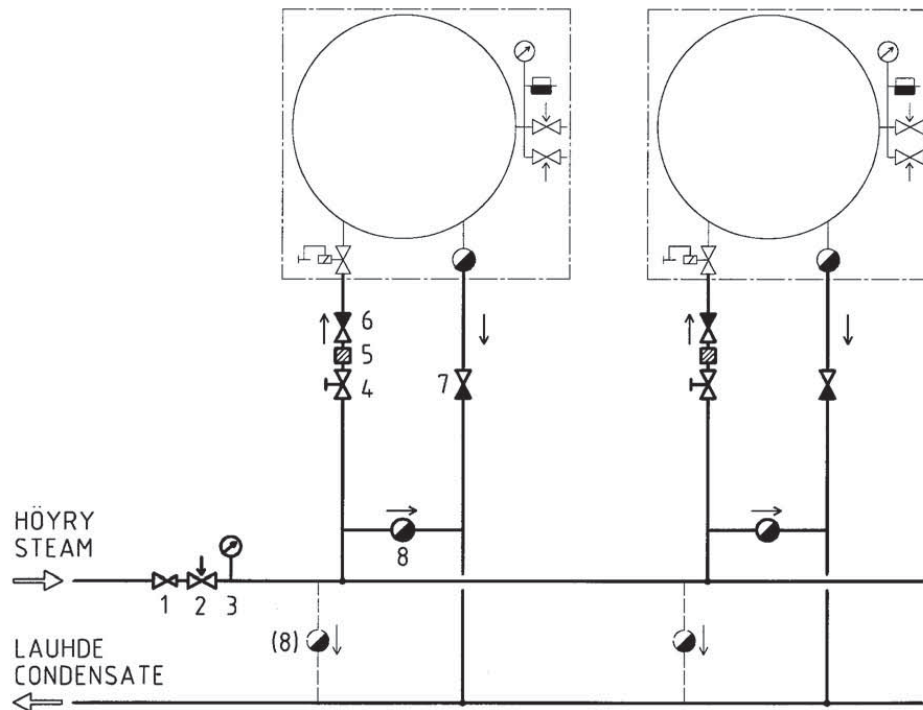






| | 1 | 2 | 3 | 4 |
|---|---|---|---|--|
| A | 1. SÄHKÖLIITÄNTÄ, VARATTAVA LATTIASTA 1,5M SÄHKÖKAAPELIA. 2. KYLMÄVESILIITÄNTÄ Ø15 (G1/2"), VARUSTETTAVA TAKAISKU- JA SULKUVENTTIILILLÄ. 3. LÄMMINVESILIITÄNTÄ (MAKS. 60°C) Ø10 (G3/8"), VARUSTETTAVA TAKAISKU- JA SULKUVENTTIILILLÄ. x) 4. TIETOLIIKENNEKAAPELOINTI (HACCP), VARATTAVA 2 KPL MIN. 20 MM PUTKITUSTA. x) 5. OHJAUSKAAPELIT KIINTEISTÖÖN PADAN LÄMMITYSOHJAUKSELLE. VARATTAVA 2 KPL MIN 20 MM PUTKITUSTA. | | | |
| B | 1. ELANSLOTNING, RESERVERA EL.KABEL 1,5M FRÅN GOLV 2. KALLVATTENANSLOTNING Ø15 (G1/2"), BÖR FÖRSES MED ENVÄGS- OCH AVSTÄNGNINGSVENTIL. 3. VARMVATTEN (HÖGST 60°C) Ø10 (G3/8"), BÖR FÖRSES MED ENVÄGS- OCH AVSTÄNGNINGSVENTIL. x) 4. DATA KABEL (HACCP), 2 ST MIN 20 MM SKYDDSRÖR BÖR RESERVERAS. x) 5. STYRKABLAR TILL FASTIGHET FÖR GRYTANS VÄRME-EFFEKTkontroll. 2 ST MIN. 20 MM SKYDDTUB BÖR RESERVERAS. 1. RESERVE 1,5M OF POWER CABLE ABOVE THE FLOOR LEVEL. 2. COLD WATER CONNECTION Ø15 (G1/2"), ONE-WAY AND SHUT-OFF VALVES MUST BE FITTED. 3. WARM WATER CONNECTION (MAX 60°C) Ø10 (G3/8"), ONE-WAY AND SHUT-OFF VALVES MUST BE FITTED. x) 4. DATA CABLE (HACCP), 2 PCS OF MIN. 20 MM COVER TUBES MUST BE RESERVED. x) 5. CONTROL CABLES TO BUILDING FOR HEATING CONTROL OF THE KETTLE. 2 PCS OF MIN. 20 MM COVER TUBES MUST BE RESERVED. | | | |
| C | 1. ELEKTROANSCHLUSS, 1,5M EL.KABEL ÜBER FUSSBODEN FREI LASSEN. 2. KALTWASSERANSCHLUSS Ø15 (G1/2"), SOLL MIT EINEM RÜCKSCHLAGVENTIL UND ABSPERRVENTIL VERSEHEN WERDEN. 3. WARMWASSERANSCHLUSS (ALLER HÖCHSTENS 60°C) Ø10 (G3/8"), SOLL MIT EINEM RÜCKSCHLAGVENTIL UND ABSPERRVENTIL VERSEHEN WERDEN. x) 4. DATENÜBERTRAGUNGSKABEL (HACCP), 2 x MIND. 20MM VERROHRUNG ZU RESERVIEREN. x) 5. STEUERUNGSKABEL ZUM GRUNDSTÜCK FÜR HEIZUNGSKONTROLLE DES KESSELS. 2 x MIND 20 MM VERROHRUNG ZU RESERVIEREN. | | | |
| D | 1. BRANCHEMENT ÉLECTRIQUE 1,5M DU CÂBLAGE SUR LE SOL À RÉSERVER. 2. CONNECTION D'EAU FROIDE Ø15 (G1/2"), DOIVENT ÊTRE MUNIES DE SOUPAPE DE RETENUE ET VANNES D'ARRÊT. 3. CONNECTION D'EAU CHAUDE (AU MAXIMUM 60°C) Ø10 (G3/8"), DOIVENT ÊTRE MUNIES DE SOUPAPE DE RETENUE ET VANNES D'ARRÊT. x) 4. CÂBLAGE INFORMATIQUE (HACCP). A RÉSERVER: TUYAUX 2 x À MIN 20 MM. x) 5. CÂBLAGE POUR LA TRANSMISSION DE DONNÉES DANS LE BÂTIMENT, CÔNTRÔLE CHAUFFAGE DE LA MARMITE. A RÉSERVER: TUYAUX 2 x À MIN 20 MM. x) LISÄVARUSTE TILLÄGGSUTRSUTNING ACCESSORY ZUBEHÖR ACCESSOIRE | | | |
| E | | | | |
| F |  | | <i>Tuote</i> CULINO/VIKING 4-40 E VCP MOD <i>Produkt</i> <i>Product</i> | <i>Suhde</i> 1:50 <i>Skala</i> <i>Scale</i> <i>Suunn.</i> 28.11.2007 maso |
| | TEKSTIOSA / SÄHKÖ TEXT DEL / EL TEXT PART / ELECTRIC | | TEXT / ELECTRISH TEXT / ELECTRIQUE | L00137 A 4 <i>Tulostettu</i> 17.03.2009 |

Steam supply recommendations



1. Paineenallennusventtiili
2. Varoventtiili
3. Painemittari
4. Sulkuventtiili
5. Suodatin
6. Takaiskuventtiili (mikäli kyseessä on jäähdytyksellä varustettu laite)
7. Takaiskuventtiili (0 bar)
8. Lauhteenerotin

1. Pressure reduction valve
2. Safety valve
3. Manometer
4. Shut-off valve
5. Filter
6. Non-return valve (in case of a cooling equipped appliance)
7. Non-return valve (0 bar)
8. Condensate remover

| Item | Type | Access- sory | Specification |
|---|---------|-----------------|--|
| Overall dimensions incl. support pillar WxDxH | 40,60 | | 1047x730x900/1070 mm |
| Overall dimensions incl. support pillar WxDxH | 80,100 | | 1154x785x900/1070 mm |
| Overall dimensions incl. support pillar WxDxH | 150,200 | | 1360x945x900/1070 mm |
| Overall dimensions incl. support pillar WxDxH | 300 | | 1560x1165x900/1070 mm |
| Overall dimensions incl. support pillar WxDxH | 400 | | 1560x1165x1050/1220 mm |
| Support pillar dimensions LxDxH | | | 150x250x865 mm |
| Distance needed behind the kettle | 40 | | 730 mm |
| Distance needed behind the kettle | 60 | | 820 mm |
| Distance needed behind the kettle | 80,100 | | 850 mm |
| Distance needed behind the kettle | 150 | | 895 mm |
| Distance needed behind the kettle | 200 | | 895 mm |
| Distance needed behind the kettle | 300,400 | | 1135 mm |
| Tilting height from outer shell to floor | 40,60 | | 455 mm |
| Tilting height from outer shell to floor | 80,100 | | 405 mm |
| Tilting height from outer shell to floor | 150,200 | | 420 mm |
| Tilting height from outer shell to floor | 300 | | 450 mm |
| Tilting height from outer shell to floor | 400 | | 440 mm |
| Maximum height of cover | 40,60 | | 1710 mm |
| Maximum height of cover | 80,100 | | 1800 mm |
| Maximum height of cover | 150,200 | | 1980 mm |
| Maximum height of cover | 300 | | 2100 mm |
| Maximum height of cover | 400 | | 2235 mm |
| Distance needed for service, left side | | | 250 mm |
| Distance needed for service, right side | | | 150 mm |
| Inner diameter | 40, 60 | | 472 mm |
| Inner diameter | 80,100 | | 545 mm |
| Inner diameter | 150,200 | | 744 mm |
| Inner diameter | 300,400 | | 944 mm |
| Material of inner jacket and bottom | | | Acid proof stainless steel AISI 316 |
| Other parts of the kettle | | | Stainless steel AISI 304 |
| Weight with package | 40 | | 190 kg |
| Weight with package | 60 | | 200 kg |
| Weight with package | 80 | | 215 kg |
| Weight with package | 100 | | 255 kg |
| Weight with package | 150 | | 310 kg |
| Weight with package | 200 | | 335 kg |
| Weight with package | 300 | | 520 kg |
| Weight with package | 400 | | 620 kg |
| Weight | 40 | | 155 kg |
| Weight | 60 | | 165 kg |
| Weight | 80 | | 175 kg |
| Weight | 100 | | 185 kg |
| Weight | 150 | | 250 kg |
| Weight | 200 | | 270 kg |

| Item | Type | Access- sory | Specification |
|---|--------------|-----------------|--------------------------|
| Weight | 300 | | 420 kg |
| Weight | 400 | | 480 kg |
| Transport volume | 40,60 | | 1,32 |
| Transport volume | 80,100 | | 1,45 |
| Transport volume | 150,200 | | 2,01 |
| Transport volume | 300,400 | | 2,73 |
| Mixer power | 40,60,80,100 | M | 0,75 kW |
| Mixer power | 150,200,300 | M | 1,5 kW |
| Mixer power | 400 | M | 2,2 kW |
| Electricity connections | | | see Wiring diagram |
| Water connections | | | see Installation drawing |
| Steam and condense connections (steam heated models) | | | see Installation drawing |
| Sound level of the appliance measured 1m straight in front of the appliance and at a height of 1,5m | | | <70 dB(A) |
| Weight of mixing tool | 40 | M | 2,8 kg |
| Weight of mixing tool | 60 | M | 4,2 kg |
| Weight of mixing tool | 80 | M | 4,2 kg |
| Weight of mixing tool | 100 | M | 4,5 kg |
| Weight of mixing tool | 150 | M | 4,7 kg |
| Weight of mixing tool | 200 | M | 5,5 kg |
| Weight of mixing tool | 300 | M | 6,5 kg |
| Weight of mixing tool | 400 | M | 7,5 kg |
| Number of scrapers | 40 | M | 1 |
| Number of scrapers | 60,80 | M | 2 |
| Number of scrapers | 100,150 | M | 3 |
| Number of scrapers | 200,300 | M | 4 |
| Number of scrapers | 400 | M | 5 |
| Emptying valve | | | |
| Mixer M | | | |
| HACCP option | | | |
| Manual cooling C1 | | | |
| Icebank cooling C3 | | | Icebank cooling |
| Automatic water filling AW | | | |

40=40 l, 60=60 l, 80=80 l, 100=100 l, 150=150 l, 200=200 l, 300=300 l, 400=400 l

M=MIXER, C1=MANUAL COOLING, C3=ICEBANK COOLING, AW=AUTOMATIC WATER FILLING, HACCP= HACCP, X=SPECIAL MODEL

METOS OY AB
LOMAKE LT30024
 Rev. PED 5.7 17.10.2017

EY-VAATIMUSTENMUKAISUUSVAKUUTUS
EG-FÖRSÄKRAN OM ÖVERENSSTÄMMELSE
EC DECLARATION OF CONFORMITY

| |
|---|
| Valmistajan nimi / Tillverkarens namn / Manufacturer's name METOS OY AB |
| Osoite / Adress / Address 04220 KERAVA FINLAND |

Vakuuttaa, että seuraava tuote / Försäkrar att följande produkt / Declare that the following product

| |
|--|
| Nimi, tyyppi tai malli / Namn, typ eller modell / Name, type or model Patasarjat/Grytsserierna/Kettle series Metos Culino Basic/Combi ja/ och / and Viking Basic/Combi Mallit/ Modeller /Models: 40, 60, 80, 100, 150, 200, 300, 400 |
|--|

on seuraavien direktiivien asiaankuuluvien säännösten mukainen / överensstämmer med tillämpliga bestämmelser i följande direktiv / is in conformity with the relevant provisions of the following directives

| |
|--|
| <p>MD 2006/42/EC, LVD 2014/35/EU, EMC 2014/30/EU, RoHS 2011/65/EC, WEEE 2012/19/EU, PED 2014/68/EU, moduulit / modelerna / modules B1 + D</p> <ul style="list-style-type: none"> - SEP: 40 – 60 höyry/ånga/steam - Cat I: 40 – 60 sähkö/el/electric, 80 – 400 höyry/ånga/steam - Cat II: 80 – 400 sähkö/el/electric <p>HUOM: PED 2014/68/EU:n mukaisesti vaatimustenmukaisuusvakuutus ja CE-merkintä ei koske SEP luokiteltuja laitteita.</p> <p>OBS: Enligt PED 2014/68/EU försäkran om överensstämmelse och CE-märkningen ej produkter i SEP kategorin.</p> <p>ATT: According to PED 2014/68/EU the declaration of conformity and the CE-marking does not apply to SEP category products.</p> |
|--|

ja lisäksi vakuuttaa, että seuraavia yhdenmukaistettuja standardeja (tai niiden osia/kohtia) on sovellettu / och försäkrar dessutom att följande harmoniserade standarder (eller delar/paragrafer) har använts / and furthermore declares that the following harmonised standards (or parts/clauses) have been used

| |
|---|
| <p>EN ISO 12100:2010, EN ISO 13857:2008, EN 61000-6-1:2005, EN 61000-6-3:2007 EN 60204-1:2006, EN 13445:2014</p> |
|---|

ja lisäksi vakuuttaa, että seuraavia muita standardeja (tai niiden osia/kohtia) on sovellettu / och försäkrar dessutom att följande andra standarder (eller delar/paragrafer) har använts / and furthermore we declare that the following other standards (or parts/clauses) have been used

| |
|--|
| <p>EN 13886:2005+A1:2010, EN 1717:2001</p> |
|--|

Tuotteen suunnitelmatakatustodistus ja laatujärjestelmää valvova ilmoitettu laitos (vain painelaitteet)
 Produktens konstruktionskontrollcertifikat och anmält organ, som övervakar kvalitetssystemet (endast tryckkärl)
 Product design examination certificate and the notified body supervising the quality system (only pressure vessels)

| | |
|---|--|
| <p>RS 489-02 + Quality system Inspecta Tarkastus Oy, Helsinki, Finland 0424</p> | <p>DA 30289-2008(400E), 30317-2009 (400S) Polartest Oy, Vantaa, Finland</p> |
|---|--|

Alla mainittu henkilö on valtuutettu kokoamaan teknisen tiedoston / Nedan nämnda person är bemyndigad att sammanställa den tekniska dokumentfilen / The person mentioned below is authorized to compile the technical file

| |
|---|
| <p>Risto Koskelainen Metos Oy Ab, Ahjonkaare, 04220 Kerava, Finland</p> |
|---|

Tämä vaatimustenmukaisuusvakuutus on annettu valmistajan yksinomaisella vastuulla. Edellä kuvattu vakuutuksen kohde on unionin asiaankuuluvan yhdenmukaistamislainsäädännön vaatimusten mukainen.

Denna EU-försäkran om överensstämmelse utfärdas på tillverkarens eget ansvar. Föremålet för försäkran ovan överensstämmer med den relevanta unionslagstiftningen om harmonisering.

This declaration of conformity is issued under the sole responsibility of the manufacturer. The object of the declaration described above is in conformity with the relevant Union harmonisation legislation

| |
|--|
| <p>Antopaikka ja päivä / Utfärdad på ort och datum / Place and date of issue KERAVA 17.10.2017</p> |
|--|

| | |
|---|--|
| <p>Vakuutuksen antajan nimi ja asema / Namn och befattning av personen som försäkrar / Name and title of declaring person</p> <p> Hannu Ahola – Director of Business Unit</p> | <p> Marko Immonen – R&D Manager</p> |
|---|--|

Alkuperäinen/Original

