

# 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.

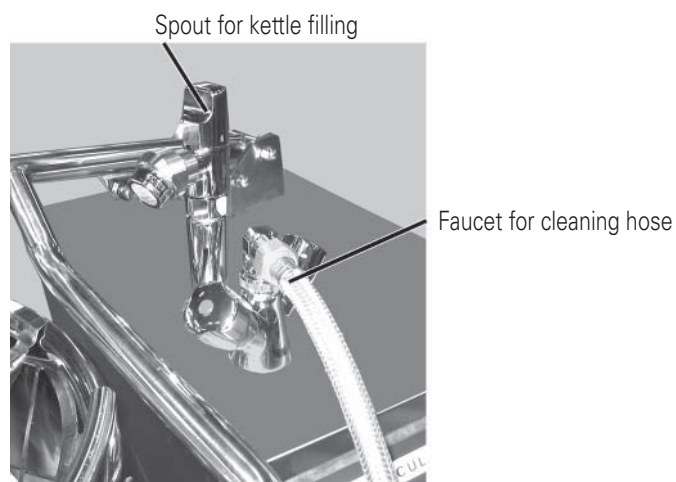
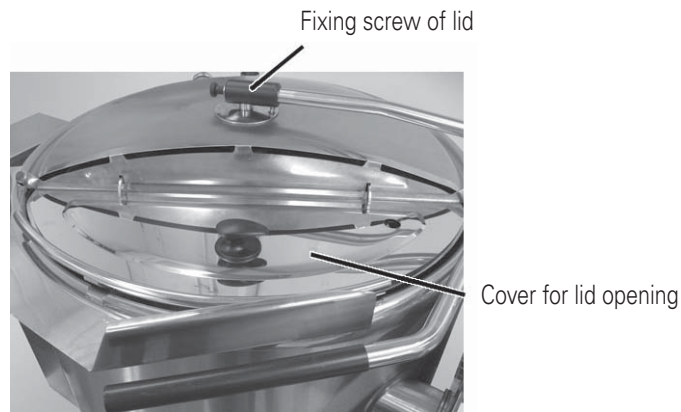


### 3.2. Construction and control panel

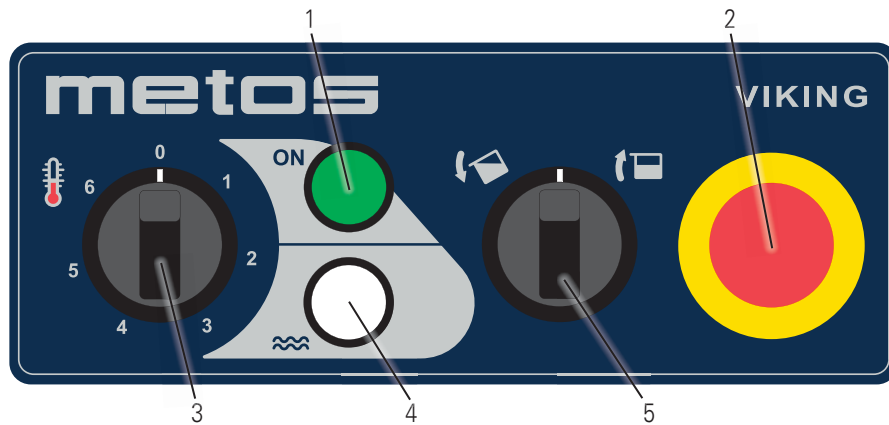
The main features of the Viking kettle are described in the following pictures.



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:**

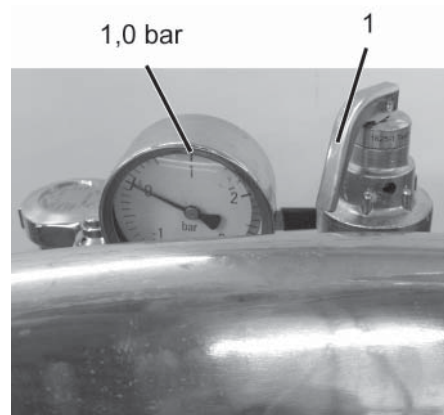
Check that:

- 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:

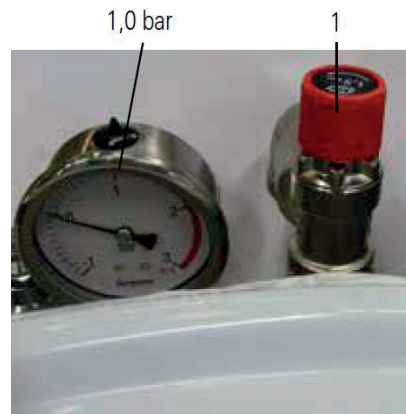
1. Do the checking when the kettle is empty.
2. Check the water level of the steam generator (electrically heated models).
3. Switch the kettle on by turning the power regulator to position 6.
4. Heat up the kettle until the pressure gauge shows 1,0 bar pressure.
5. Open the safety valve by cautiously 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)

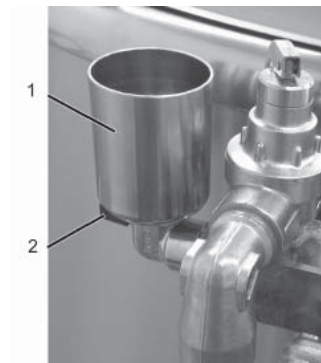


It is not allowed to open the control valve of the steam generator if the temperature of the steam jacket of the kettle is over +100°C. Watch out for releasing hot steam and water when you open the above mentioned valves.



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 

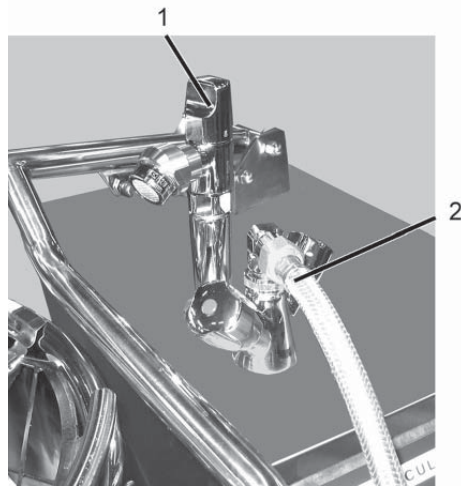


For security reasons, the kettle tilts only when the tilting switch is continuously held turned.

#### 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.

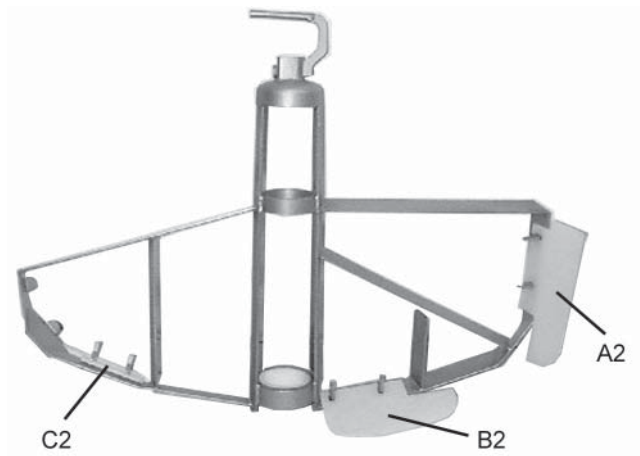
If the kettle lid is opened during mixing, the mixing function will be interrupted and it must be restarted using the mixing program selector switch.

##### 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.

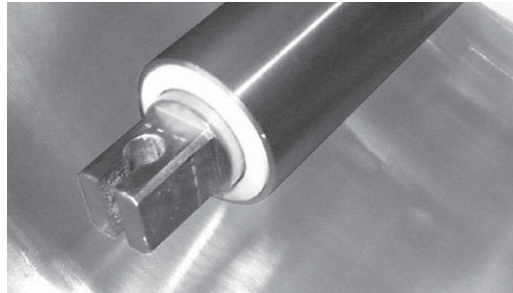


The mixing tool is equipped with 1-4 scrapers, depending on the size of the tool.

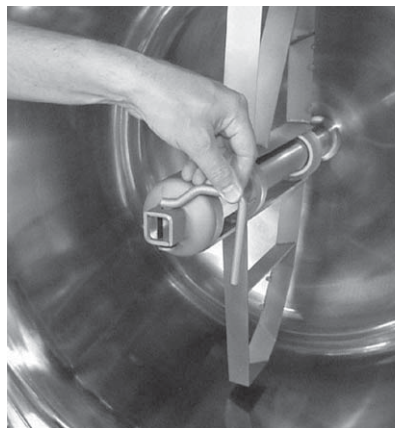


Scraper	40	60	80	100	150	200	300	400
Scraper A2	-	1	1	2	1	2	1	2
Scraper B2 (bottom)	-	-	1	1	1	1	1	1
Scraper C2 (bottom)	1	1	-	-	1	1	2	2

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.

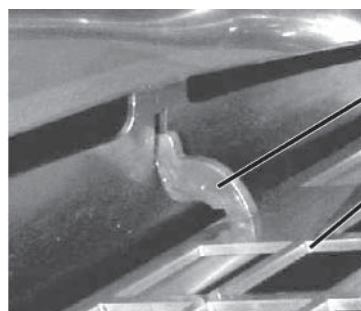
### Safety lid and safety grid for lid opening



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:**

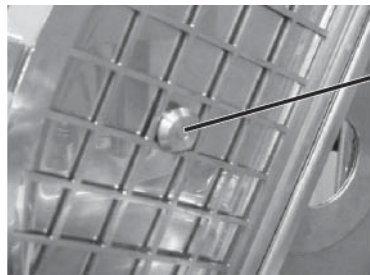
1. Turn the safety grid to an upright position, the slots in the hinges keep it in an open position. If the mixer is running it will stop.

**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:**

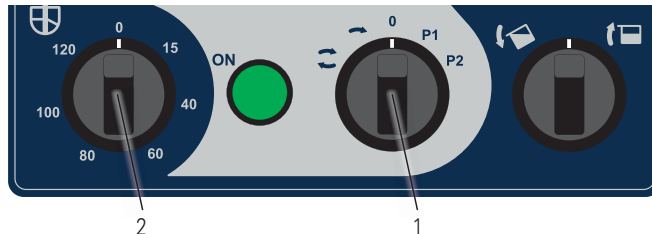
1. Switch off the mixer if it is on.
2. Lift the safety lid by the black part of the lifting arm to its utmost position. The gas spring will keep it in the open position.
3. If the cover for the lid opening was on, it remains on the safety grid because of a locking peg.



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.

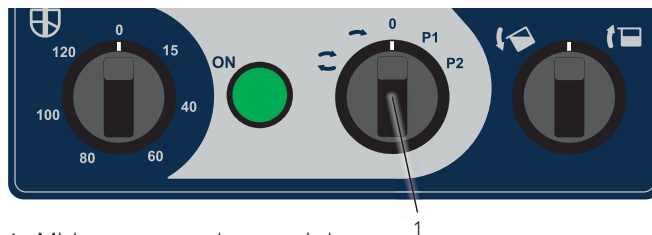


1. Mixing program selector switch
2. Mixing speed regulator

### 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.

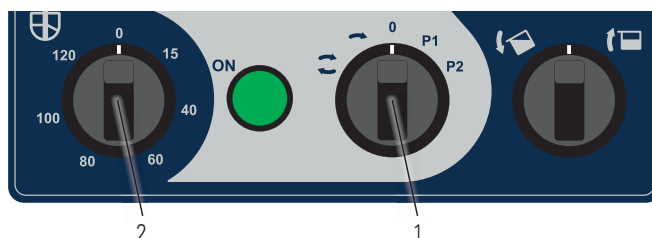


1. Mixing program selector switch

### 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)

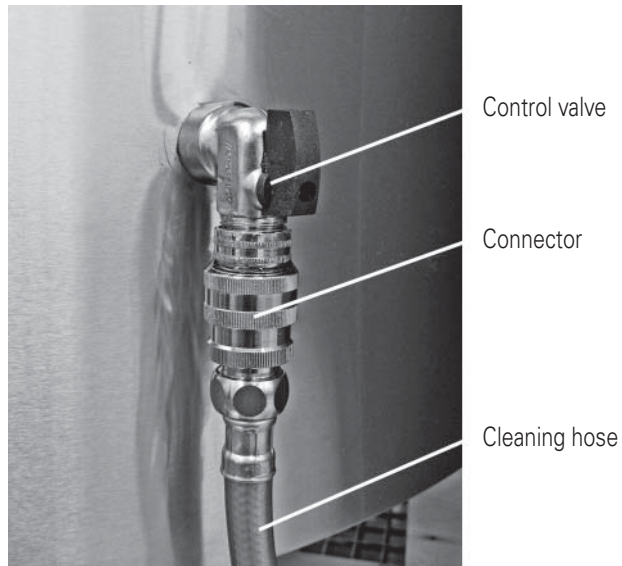
The cooling system is based on chilling tap water which is circulating inside the steam jacket. Mixing and use of scrapers makes the chilling more effective. The needed chilling time depends on the quantity of the product, the temperature at the beginning and at the end of the cooling, the flow of the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

#### Starting the cooling

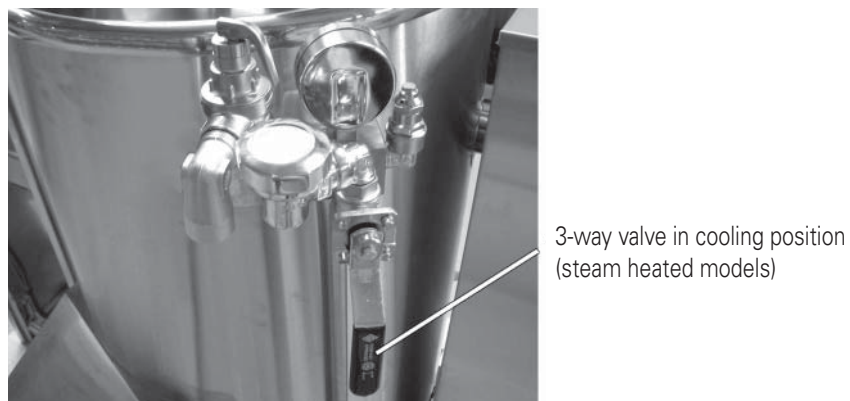
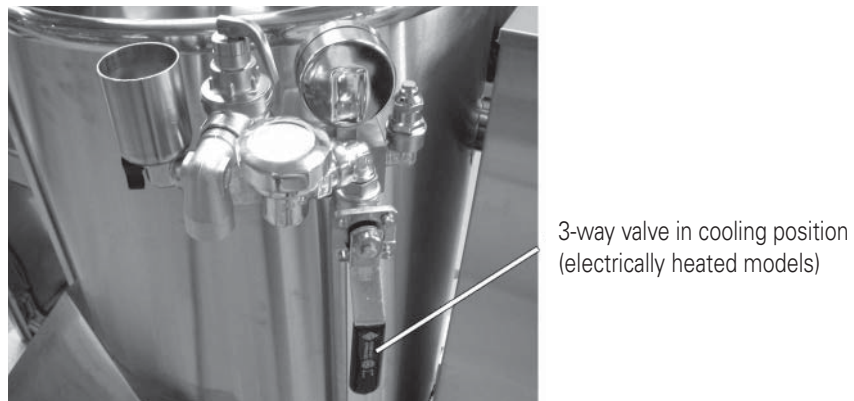
1. Turn the power regulator to position 0.
2. Close the faucet.



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 flow 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.



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

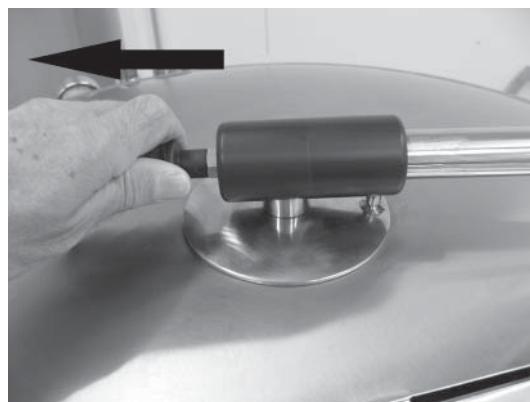
Safety grid for lid opening



Cover for lid opening

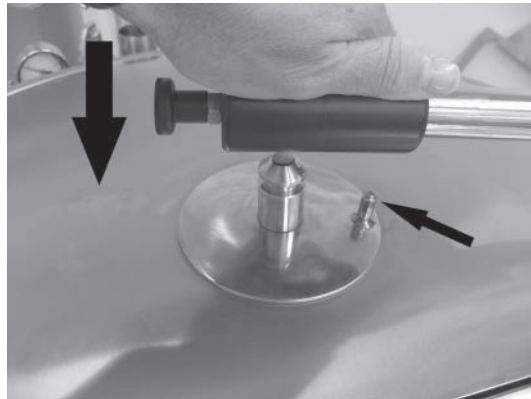
### Taking the safety lid apart

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

**Yearly maintenance:**

Date	Checked by	Notes	Date	Checked by	Notes

**Descaling:**

Date	Checked by	Notes	Date	Checked by	Notes

## 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/excite 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/excite 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/excite 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.

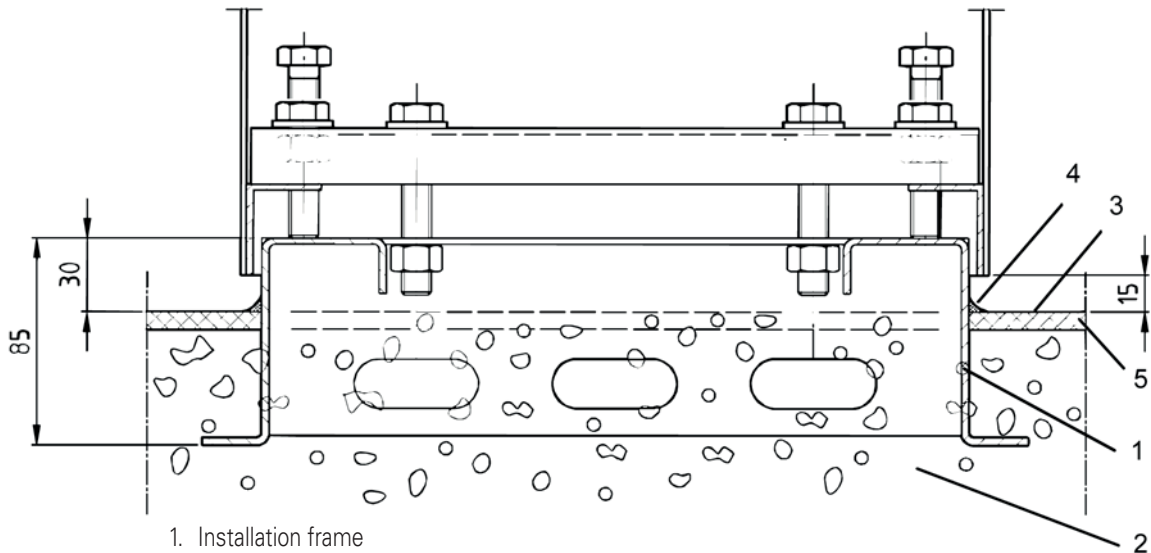
The kettle can be installed in the following two ways:

- 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.



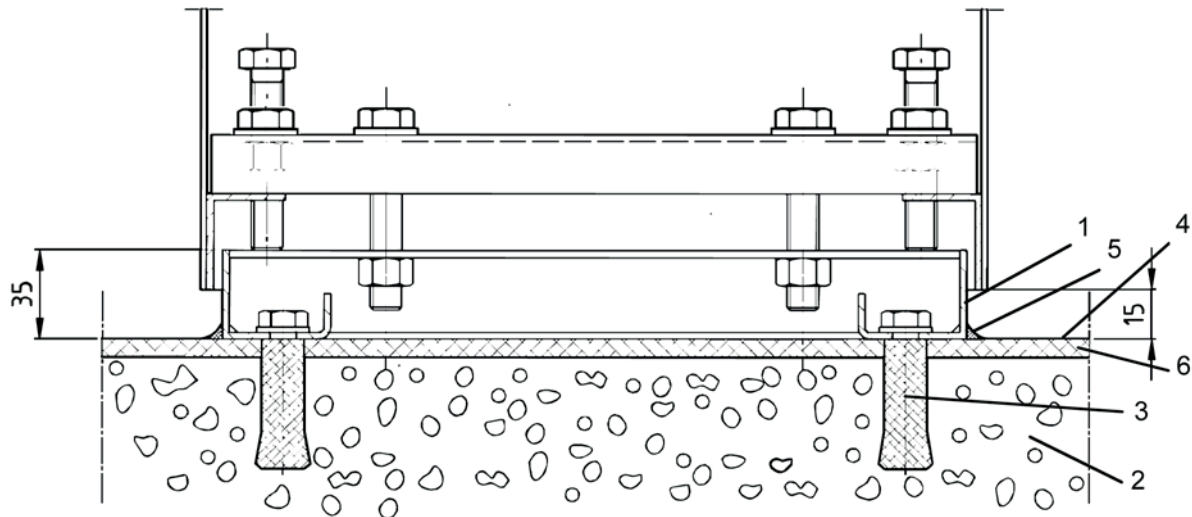
1. Installation frame
2. Concrete casting
3. Finished floor surface
4. Silicone mastic
5. Acrylic filler

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

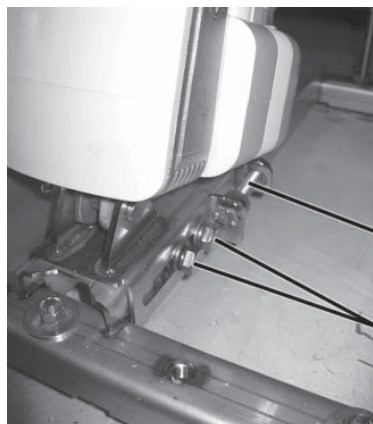
In case the combi-kettle being installed is provided with a self-control option (HACCP), and it is taken into use, the data cabling and the installation of the program must be carried out according to separate instructions.

## 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.

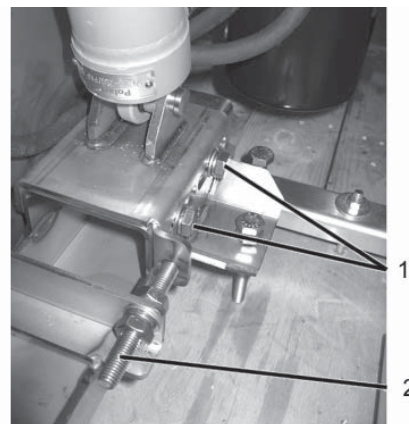
The adjustment is done from the lower mounting point of the tilting motor as follows:

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



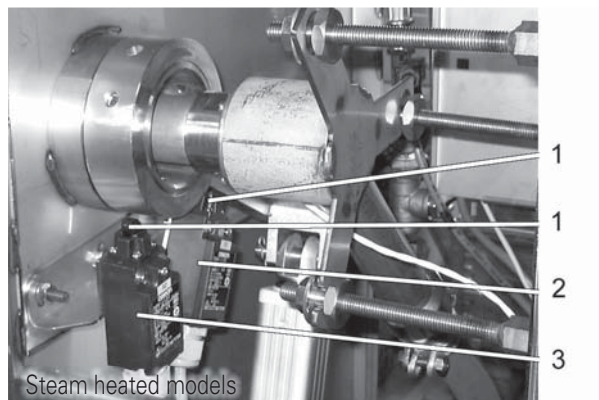
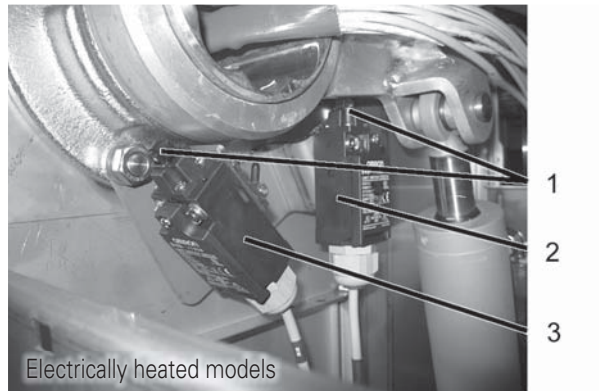
*Viking 40-300 I, Viking Combi 40-200 I*

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)

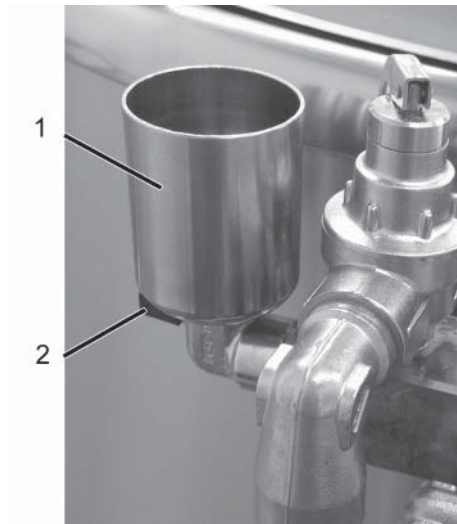
Before the kettle is switched on, the steam generator must be filled with water.

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

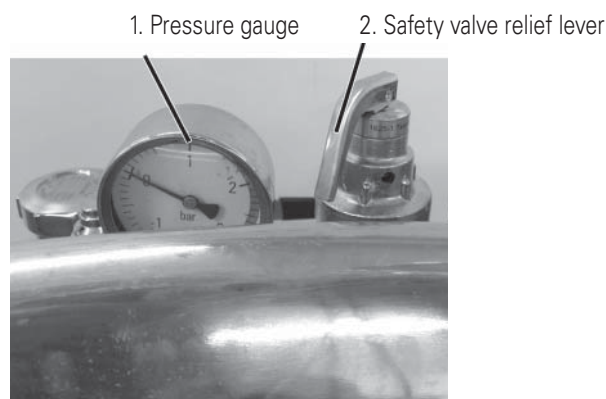
Do the following steps in order to check the safety valve:

#### 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.

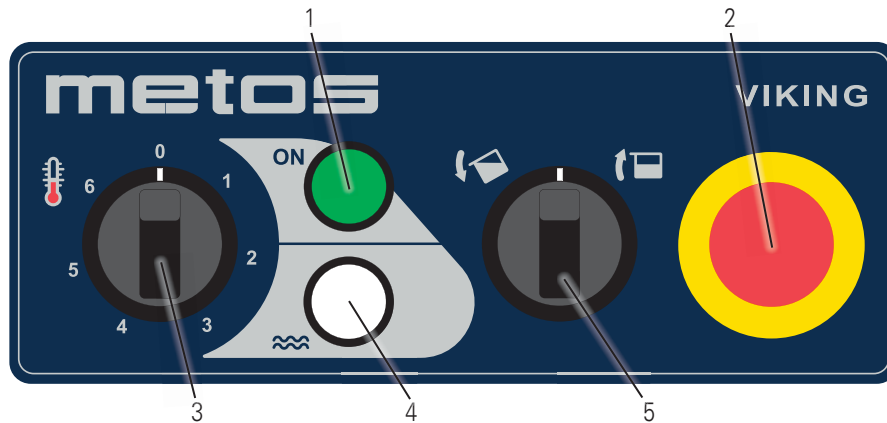


1. Pressure gauge

2. Safety valve relief lever



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



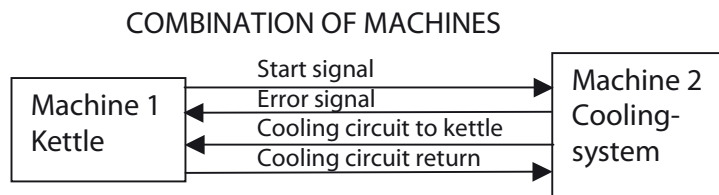
The mixer must stop when the safety grid or the lid itself is removed. When the lid and the safety grid are replaced, the mixer can be restarted.



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**

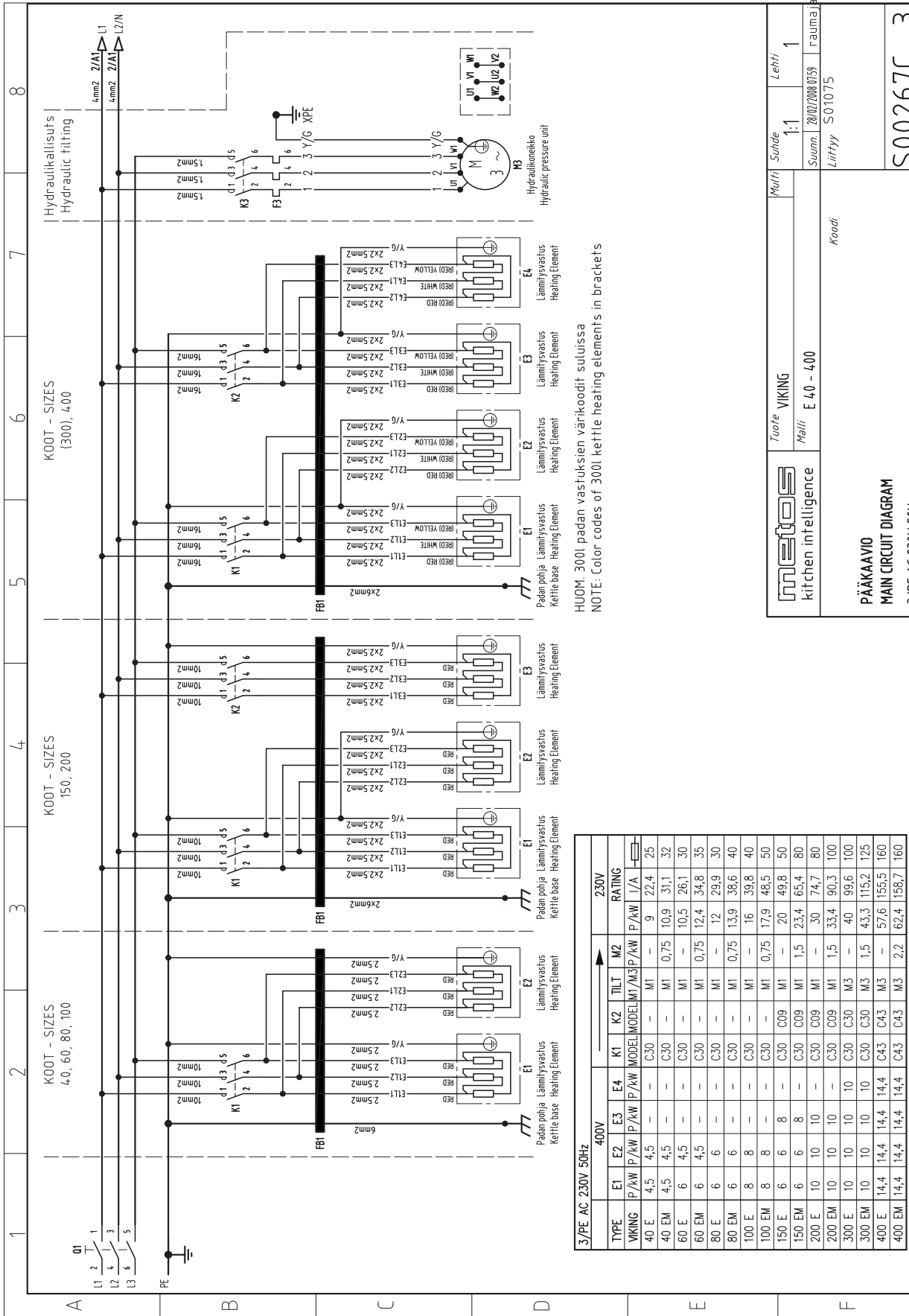
**Installation drawings**

**Steam supply recommendations (steam heated models)**

**Text part**

**Technical specifications**





HUOM: 300l padan vastuksien värikoodit suluisissa  
 NOTE: Color codes of 300l kettle heating elements in brackets

TYPE	400V				230V			
	E1	E2	E3	E4	TILT	M2	M3	RATING
VIKING	P/kW	P/kW	P/kW	P/kW	MODEL	M1/M3	P/kW	I/A
40 E	4,5	4,5	-	-	C30	M1	9	22,4 25
40 EM	4,5	4,5	-	-	C30	M1	10,9	31,1 32
60 E	6	4,5	-	-	C30	M1	10,5	26,1 30
60 EM	6	4,5	-	-	C30	M1	12,4	34,8 35
80 E	6	6	-	-	C30	M1	12	29,9 30
80 EM	6	6	-	-	C30	M1	13,9	38,6 40
100 E	8	6	-	-	C30	M1	16	39,8 40
100 EM	8	6	-	-	C30	M1	17,9	48,5 50
150 E	6	6	8	-	C30	C09	20	49,8 50
150 EM	6	6	8	-	C30	C09	1,5	23,4 65,4 80
200 E	10	10	10	-	C30	C09	1,5	30 74,7 80
200 EM	10	10	10	-	C30	C09	1,5	33,4 90,3 100
300 E	10	10	10	10	C30	C30	M3	- 40 99,6 100
300 EM	10	10	10	10	C30	C30	M3	1,5 43,3 115,2 125
400 E	14,4	14,4	14,4	14,4	C43	C43	M3	- 57,6 155,5 160
400 EM	14,4	14,4	14,4	14,4	C43	C43	M3	2,2 62,4 158,7 160

**metos** kitchen intelligence

**PÄÄKAAVIO**  
**MAIN CIRCUIT DIAGRAM**  
 3/PE AC 230V 50Hz

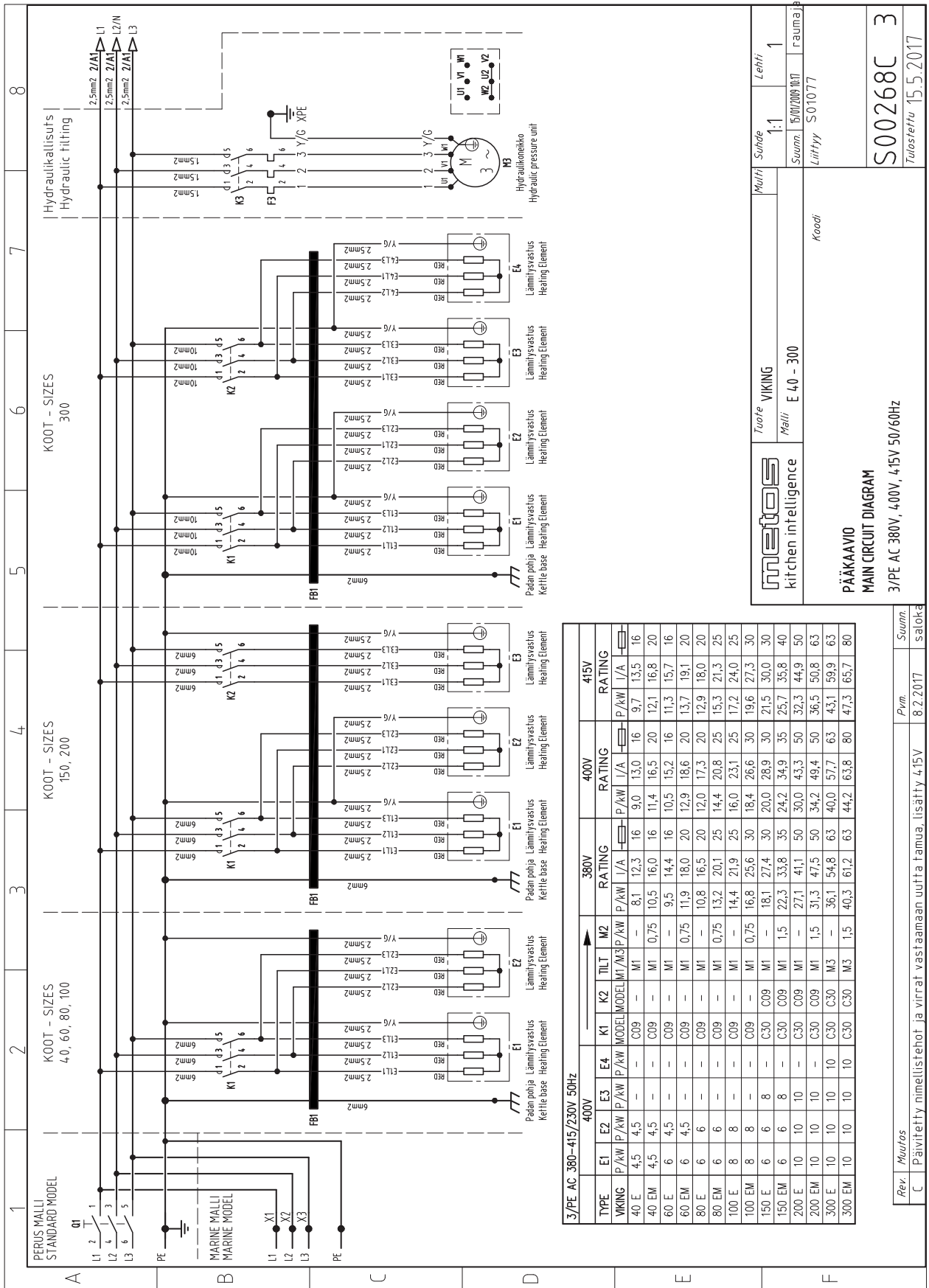
**Koodi**  
 Tuote VIKING  
 Malli E 40 - 400

**Suhte** 1:1  
**Lehti** 1

Suunn. 28.02.2008/0759 | rauma@metos.fi  
 Liitrytys S01075

**S00267C**  
 Tulostettu 21.4.2017

Rev. Muutos	Pvm.	Suunn.
C	Päivitetty nimellistehot ja virrat vastaamaan uutta raajausmuuttajaa	8.2.2017
	salokk	



TYPE	400V			380V			400V			415V		
	E1	E2	E3	E1	E2	E3	E1	E2	E3	E1	E2	E3
VIKING	P/kW	P/kW	P/kW	P/kW	P/kW	P/kW	P/kW	P/kW	P/kW	P/kW	P/kW	P/kW
40 E	4.5	4.5	4.5	8.1	12.3	16	9.0	13.0	16	9.7	13.5	16
40 EM	4.5	4.5	4.5	M1	M1	M1	M1	M1	M1	M1	M1	M1
60 E	6	6	6	9.5	14.4	16	10.5	15.2	16	11.3	15.7	16
60 EM	6	6	6	M1	M1	M1	M1	M1	M1	M1	M1	M1
80 E	6	6	6	10.8	16.5	20	12.0	17.3	20	12.9	18.0	20
80 EM	6	6	6	M1	M1	M1	M1	M1	M1	M1	M1	M1
100 E	8	8	8	14.4	21.9	25	16.0	23.1	25	17.2	24.0	25
100 EM	8	8	8	M1	M1	M1	M1	M1	M1	M1	M1	M1
150 E	6	6	6	18.1	27.4	30	20.0	28.9	30	21.5	30.0	30
150 EM	6	6	6	M1	M1	M1	M1	M1	M1	M1	M1	M1
200 E	10	10	10	22.3	33.8	35	24.2	34.9	35	25.7	35.8	40
200 EM	10	10	10	M1	M1	M1	M1	M1	M1	M1	M1	M1
300 E	10	10	10	27.1	41.1	50	30.0	43.3	50	32.3	44.9	50
300 EM	10	10	10	M1	M1	M1	M1	M1	M1	M1	M1	M1
300 E	10	10	10	31.3	47.5	50	34.2	49.4	50	36.5	50.8	63
300 EM	10	10	10	M3	M3	M3	M3	M3	M3	M3	M3	M3
300 E	10	10	10	36.1	54.8	63	40.0	57.7	63	43.1	59.9	63
300 EM	10	10	10	M3	M3	M3	M3	M3	M3	M3	M3	M3

**metos** kitchen intelligence

**PÄÄKAAVIO**  
**MAIN CIRCUIT DIAGRAM**

3/PE AC 380V, 400V, 415V 50/60Hz

**Koodi**  
E 40 - 300

**Maat**  
E 40 - 300

**Lehti**  
1

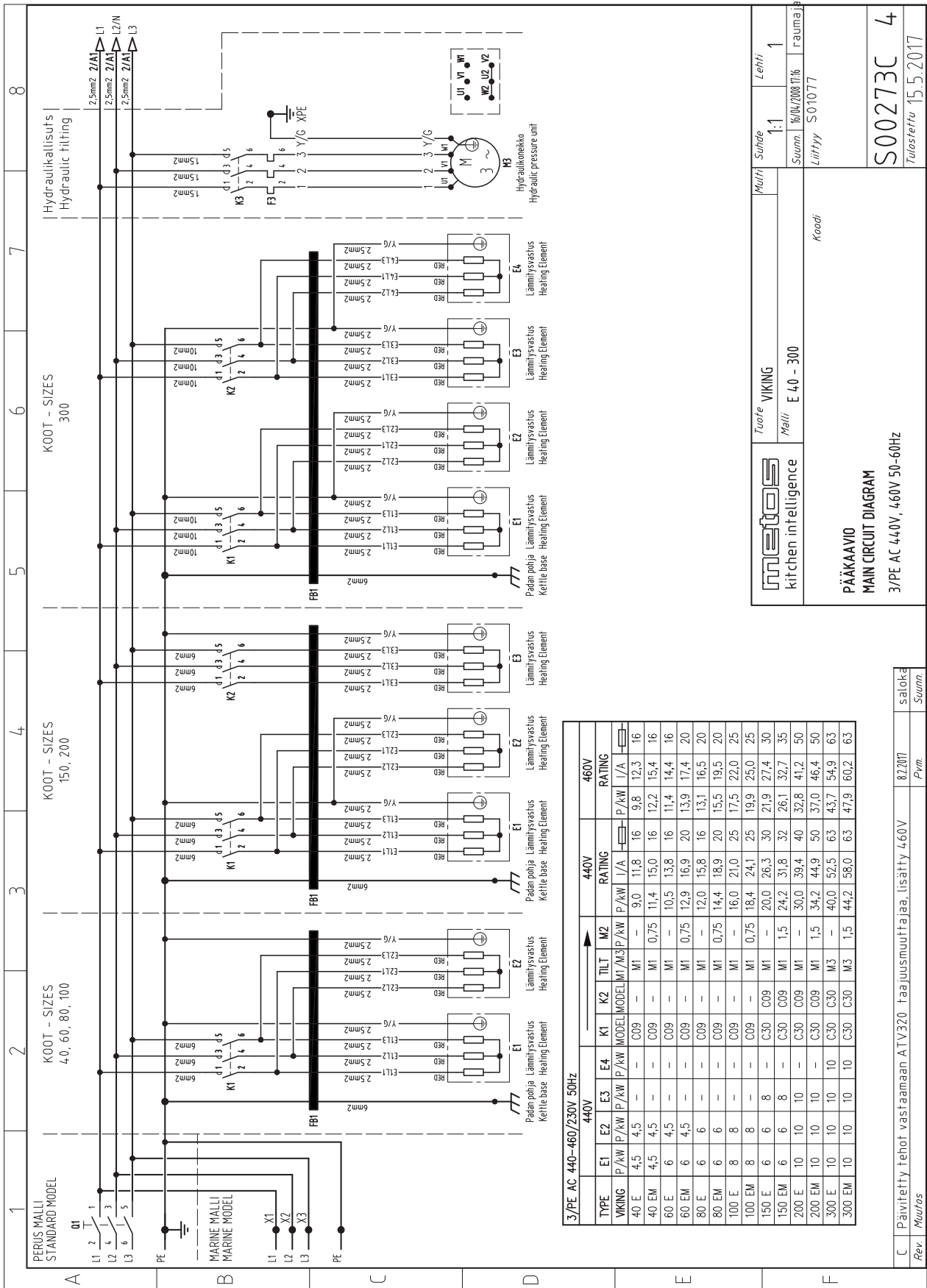
**Suunn.**  
15/07/2009 10:17

**Lisätyt**  
S01077

**S00268C** 3

Tulostettu 15.5.2017

Rev.	Muutos	Pvm.	Suunn.
C	Päivitetty nimellistehot ja virrat vastaamaan uutta tammua, lisätty 415V saloka	8.2.2017	saloka



TYPE	440V			460V										
	E1	E2	E3	E4	K1	K2	TILT	M2	440V RATING	460V RATING				
VIKING	P/kW	P/kW	P/kW	P/kW	MODEL	MODEL	MODEL	M3	P/kW	I/A				
40 E	4,5	4,5	-	-	C09	-	M1	-	9,0	11,8	16	9,8	12,3	16
40 EM	4,5	4,5	-	-	C09	-	M1	0,75	11,4	15,0	16	12,2	15,4	16
60 E	6	4,5	-	-	C09	-	M1	0,75	12,9	16,9	20	13,9	17,4	20
60 EM	6	4,5	-	-	C09	-	M1	0,75	12,0	15,8	16	13,1	16,5	20
80 E	6	6	-	-	C09	-	M1	0,75	14,4	18,9	20	15,5	19,5	20
80 EM	6	6	-	-	C09	-	M1	0,75	14,4	18,9	20	15,5	19,5	20
100 E	8	8	-	-	C09	-	M1	-	16,0	21,0	25	17,5	22,0	25
100 EM	8	8	-	-	C09	-	M1	0,75	18,4	24,1	25	19,9	25,0	25
150 E	6	6	8	-	C30	C09	M1	-	20,0	26,3	30	21,9	27,4	30
150 EM	6	6	8	-	C30	C09	M1	1,5	24,2	31,8	32	26,1	32,7	35
200 E	10	10	10	10	C30	C09	M1	-	30,0	39,4	40	32,8	41,2	50
200 EM	10	10	10	10	C30	C09	M1	1,5	34,2	44,9	50	37,0	46,4	50
300 E	10	10	10	10	C30	C30	M3	-	40,0	52,5	63	43,7	54,9	63
300 EM	10	10	10	10	C30	C30	M3	1,5	44,2	58,0	63	47,9	60,2	63

**metos**  
kitchen intelligence

**PÄÄKAAVIO**  
**MAIN CIRCUIT DIAGRAM**  
3/PE AC 440V, 460V 50-60Hz

**Koodi**  
E 40 - 300

**Mahti**  
E 40 - 300

**Tuote**  
VIKING

**Mahti**  
Schöde

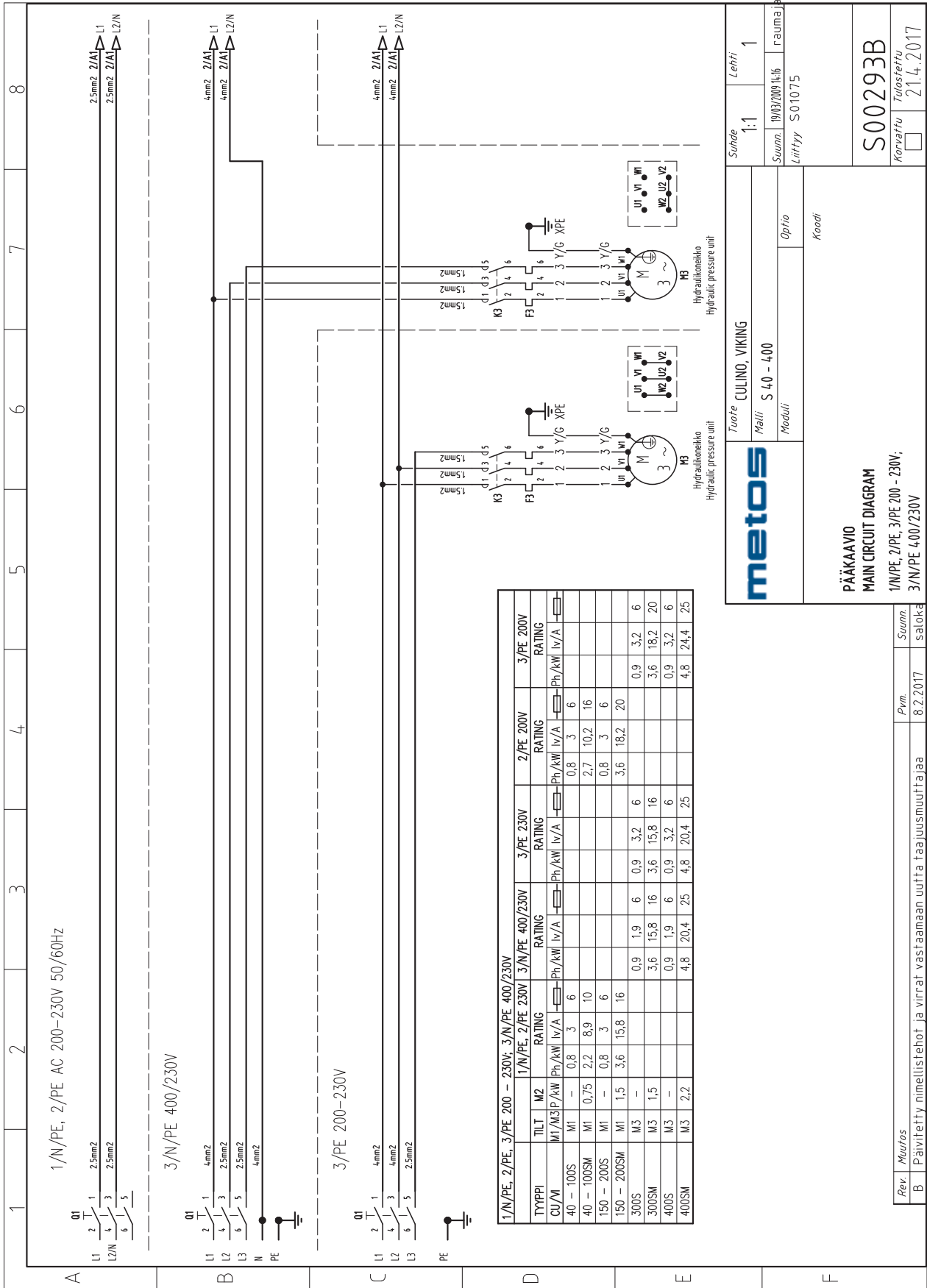
**Lehti**  
1

**Suunn.**  
16/04/2008 Tille

**rauma**  
Lifttyy S01077

**S00273C**  
Tulostettu 15.5.2017

C	Päivitetty tehot vastaamaan ATV320	faajuuksuuftajaa...	lisyttä 460V	saloka
Rev.	Muutos			Suunn.
			822007	Prvm.



**metos** CULINO, VIKING  
Malli S 40 - 400  
Moduuli

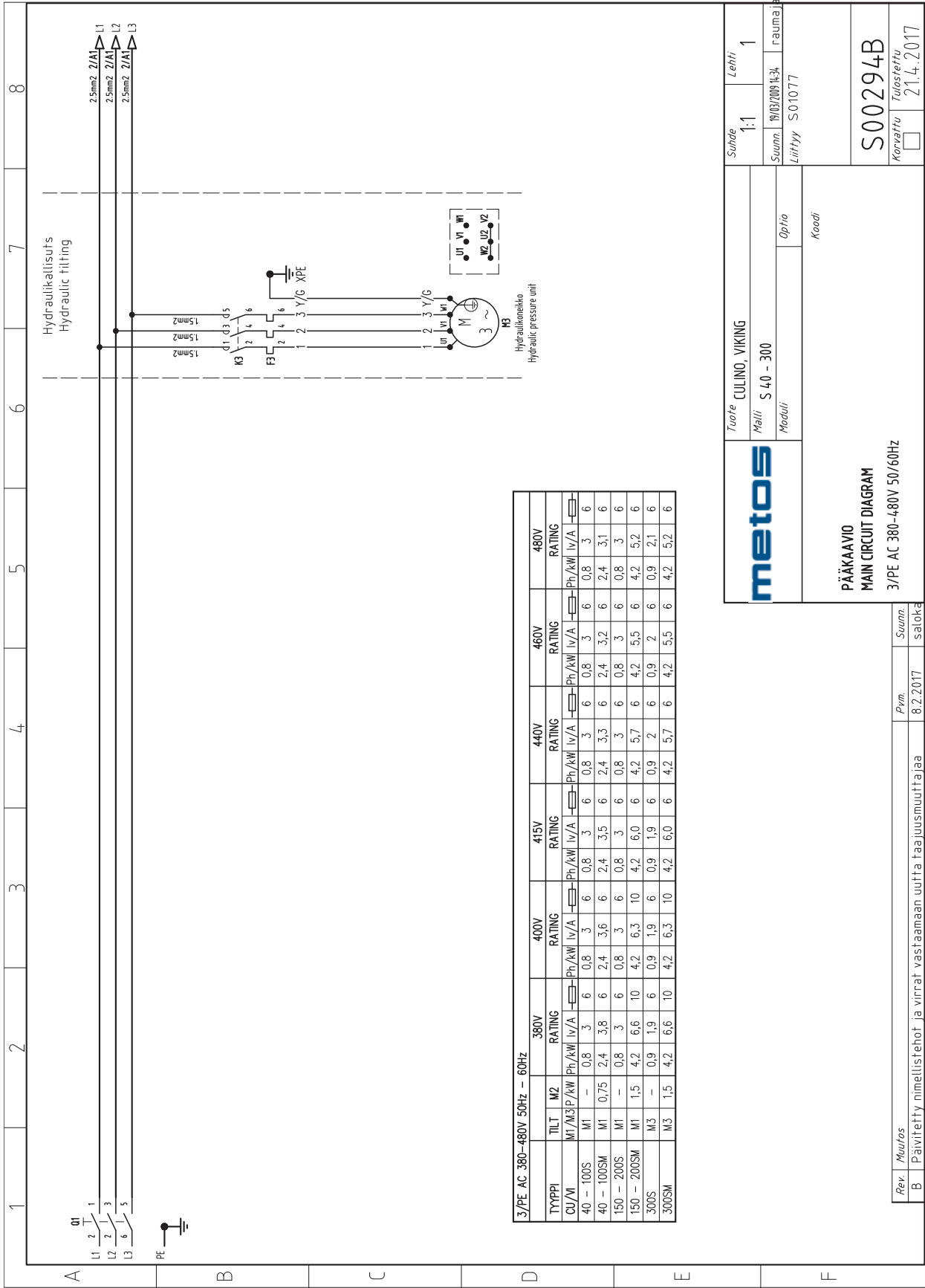
**PÄÄKAAVIO**  
**MAIN CIRCUIT DIAGRAM**  
1/N/PE, 2/PE, 3/PE 200 - 230V;  
3/N/PE 400/230V

Sheet: 1 of 1  
Date: 19/03/2009 14:16  
Location: rauma18  
Drawing: Liittyy S01075

Koodi

**S00293B**  
Korvattu Tuostettu  
21.4.2017





**metos**

Tuote: CULINO, VIKING  
 Malli: S 4.0 - 300  
 Moduuli

Subide: 1:1  
 Lehti: 1

Suunn. 19/03/2016 R34  
 Liittyy: S01077

Koodi

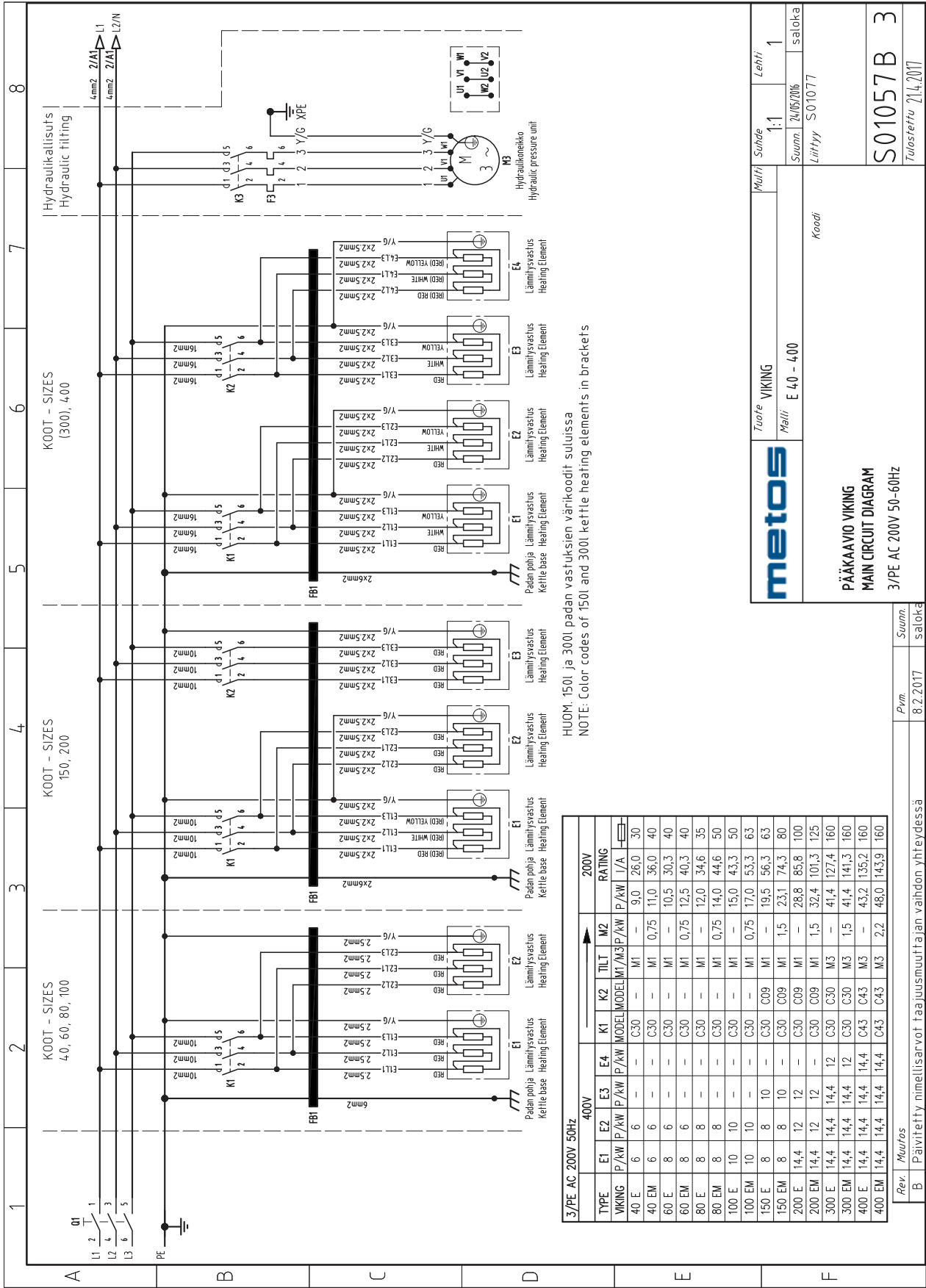
**S00294B**  
 Tuositietu  
 21.4.2017

**PÄÄKAAVIO**  
**MAIN CIRCUIT DIAGRAM**  
 3/PE AC 380-480V 50/60Hz

Rev. Muutos

B Päivitetty nimellistehot ja virrat vastaamaan uutta laajuusmuutajaa

Pvm. 8.2.2017  
 Suunn. saoka



HUOM. 150L ja 300L padan vastukset värnikoodit sulussa  
 NOTE: Color codes of 150L and 300L kettle heating elements in brackets

TYPE	400V				200V					
	E1	E2	E3	E4	K1	K2	TILT	M2		
VIKING	P/kW	P/kW	P/kW	P/kW	MODEL	M1/M3	P/kW	P/kW	I/A	RATING
40 E	6	6	-	-	C30	-	M1	-	9.0	26.0 30
40 EM	6	6	-	-	C30	-	M1	0.75	11.0	36.0 40
60 E	8	8	-	-	C30	-	M1	-	10.5	30.3 40
60 EM	8	8	-	-	C30	-	M1	0.75	12.5	40.3 40
80 E	8	8	-	-	C30	-	M1	-	12.0	34.6 35
80 EM	8	8	-	-	C30	-	M1	0.75	14.0	44.6 50
100 E	10	10	-	-	C30	-	M1	-	15.0	43.3 50
100 EM	10	10	-	-	C30	-	M1	0.75	17.0	53.3 63
150 E	8	8	10	-	C30	C09	M1	-	19.5	56.3 63
150 EM	8	8	10	-	C30	C09	M1	1.5	23.1	74.3 80
200 E	14.4	12	12	-	C30	C09	M1	-	28.8	85.8 100
200 EM	14.4	12	12	-	C30	C09	M1	1.5	32.4	101.3 125
300 E	14.4	14.4	14.4	12	C30	C30	M3	-	41.4	127.4 160
300 EM	14.4	14.4	14.4	12	C30	C30	M3	1.5	41.4	141.3 160
400 E	14.4	14.4	14.4	14.4	C43	C43	M3	-	43.2	135.2 160
400 EM	14.4	14.4	14.4	14.4	C43	C43	M3	2.2	48.0	143.9 160

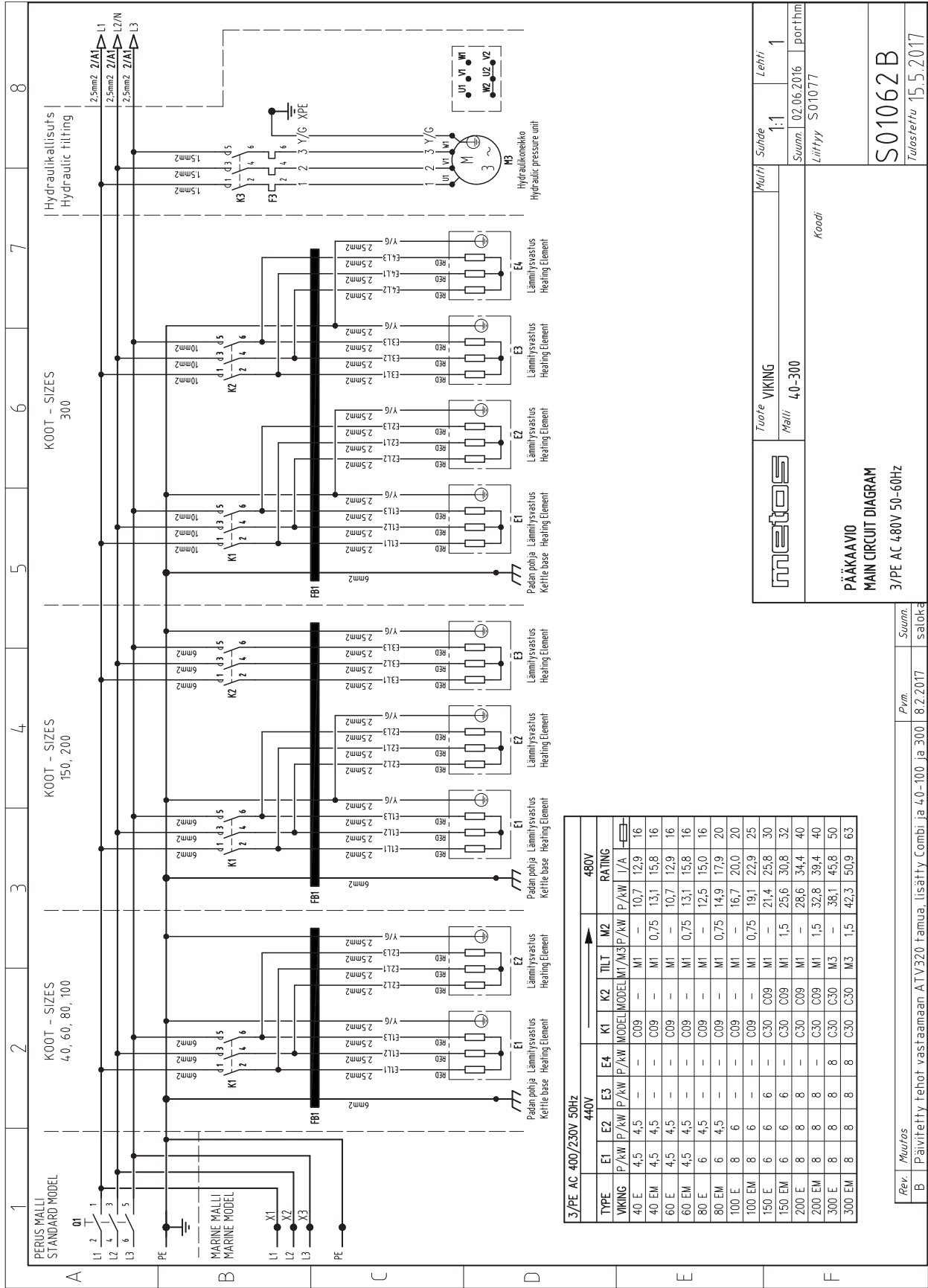
**metos**

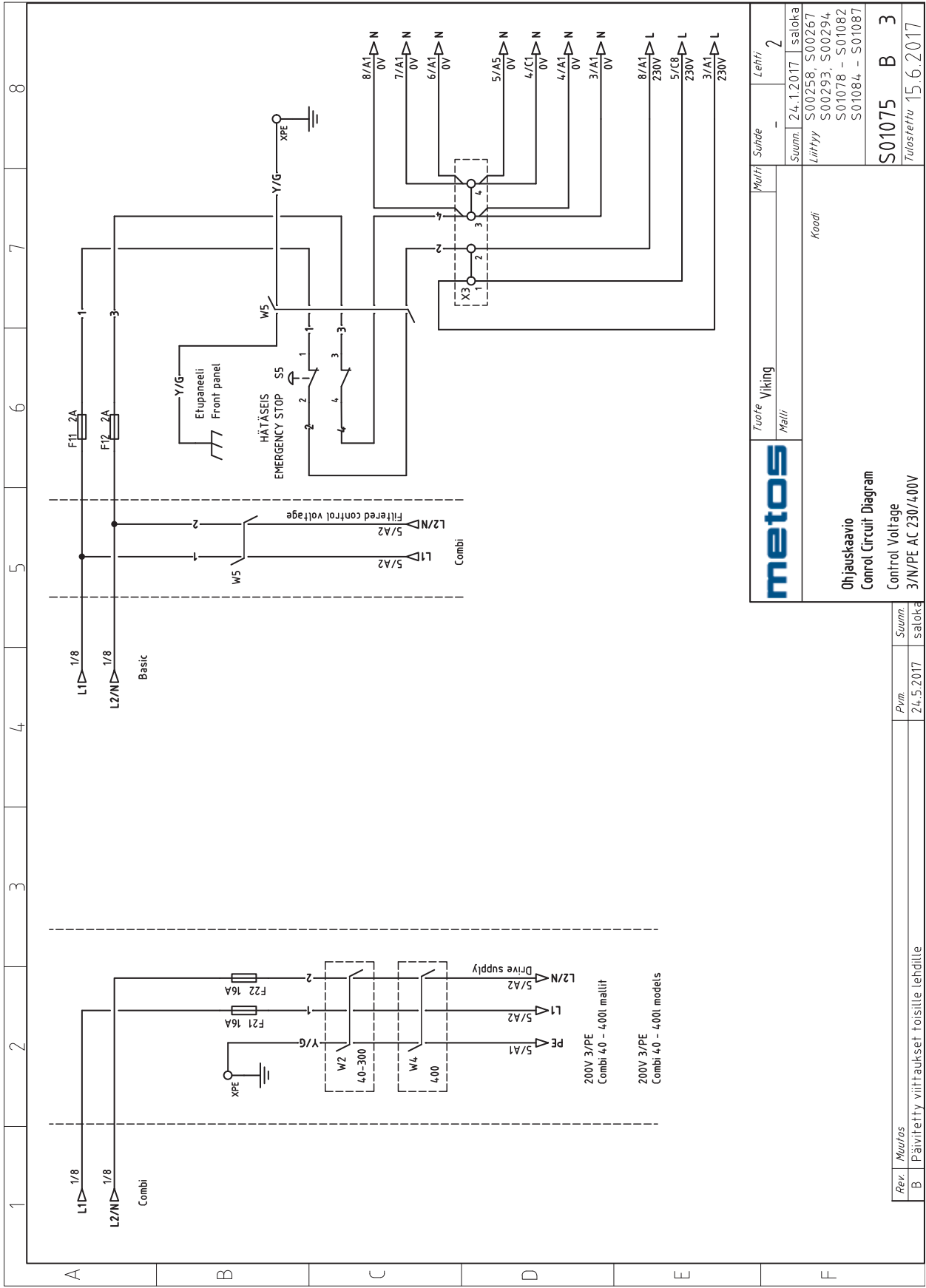
**PÄÄKAAVIO VIKING  
 MAIN CIRCUIT DIAGRAM  
 3/PE AC 200V 50-60Hz**

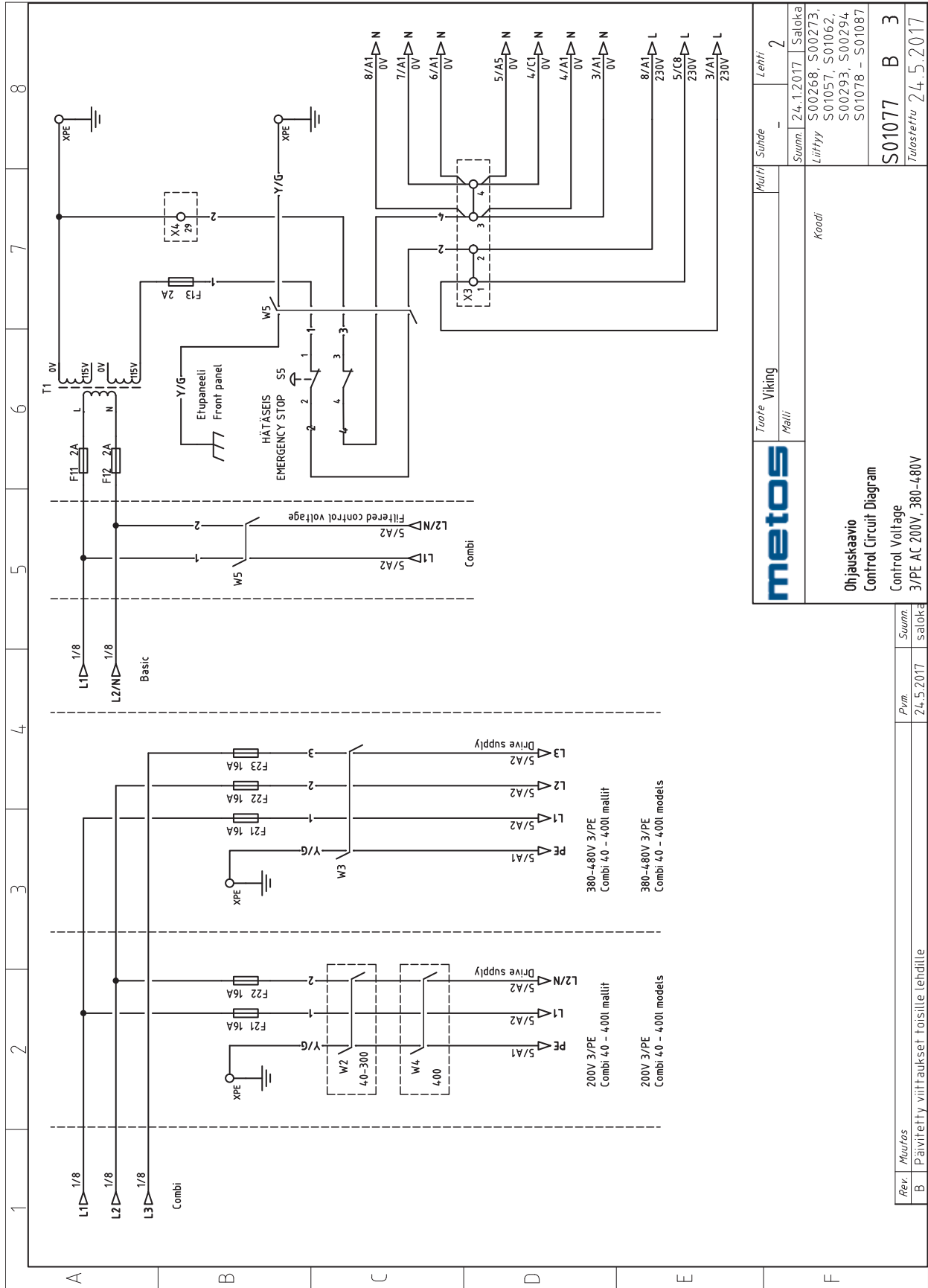
Mahti: **VIKING** / Suhte: 1:1 / Lehti: 1  
 Malli: **E 40 - 400** / Suunn. 24/05/2016 / saloka  
 Koodi: S01077 / Lititty S01077

S01057B 3  
 Tulostettu 21.4.2017

Rev.	Muutos	Pvm.	Suunn.	saloka
B	Päivitetty nimellisarvoit-taajuusmuuttajan vaihdon yhteydessä	8.2.2017		

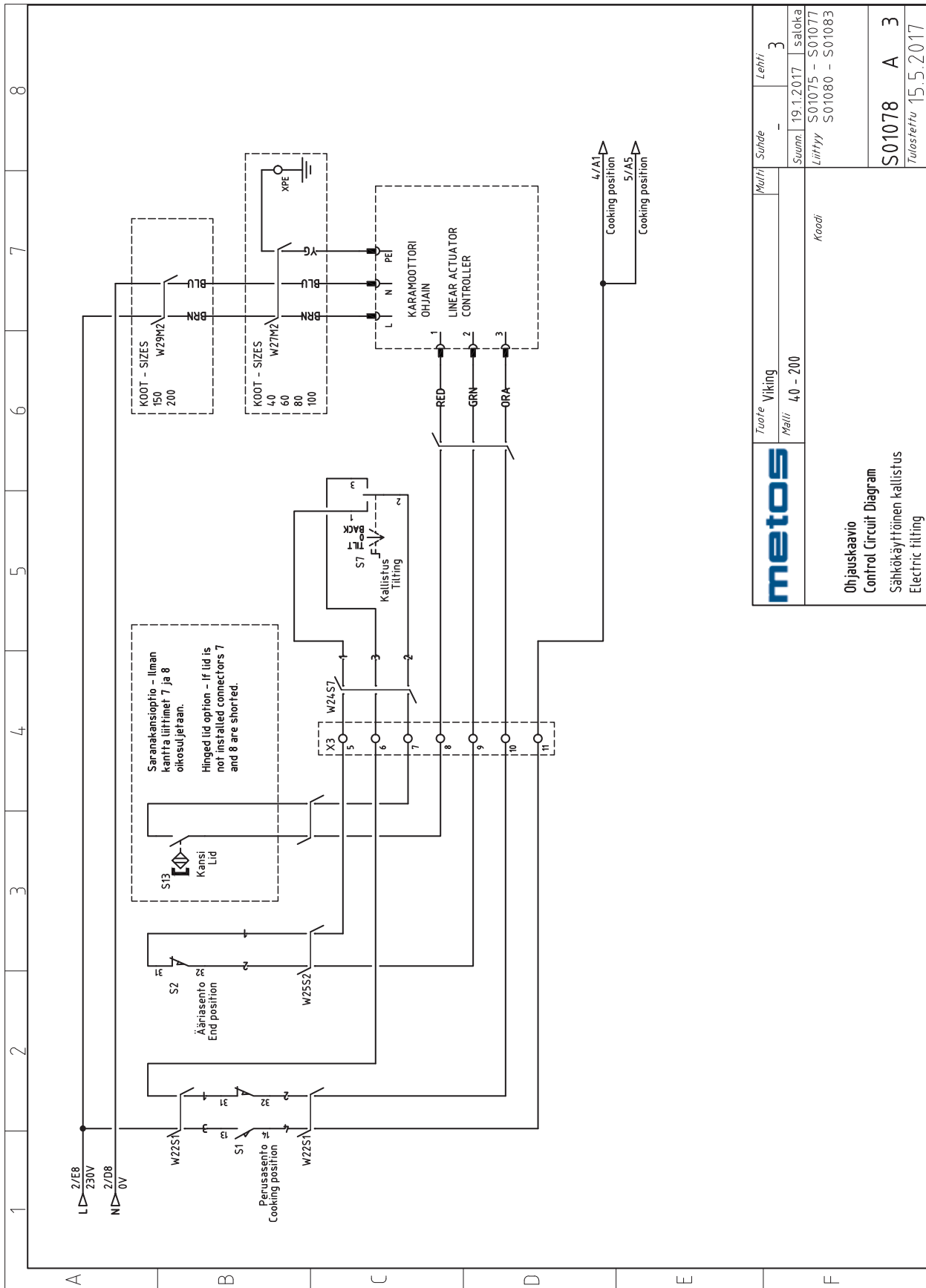




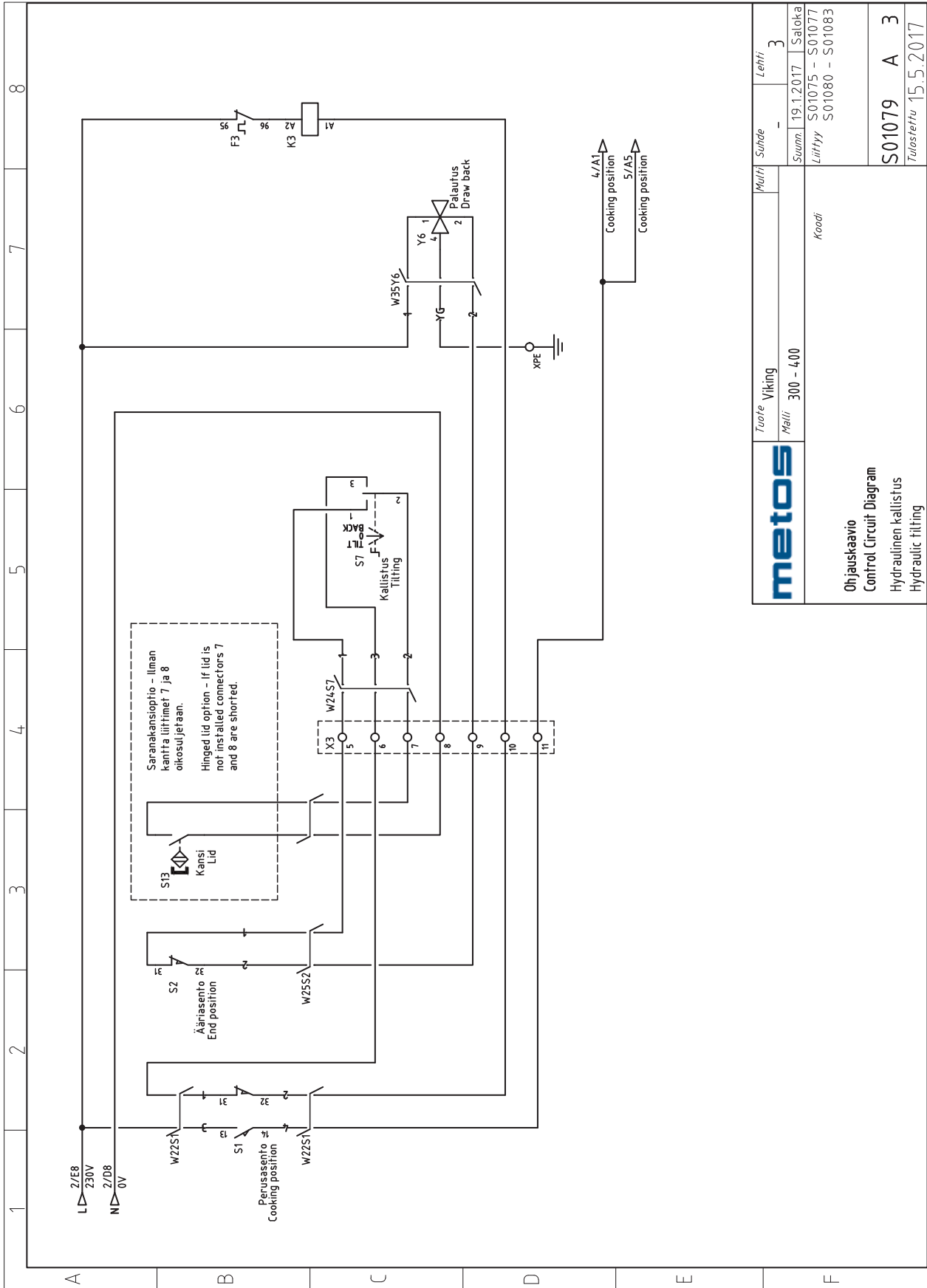


<b>metos</b>		Tuote Viking	Lehti 2
		Malli	
		Koodi	
Ohjaukskaavio Control Circuit Diagram		S01077 B 3	
Control Voltage 3/PE AC 200V, 380-480V		Tulostettu 24.5.2017	

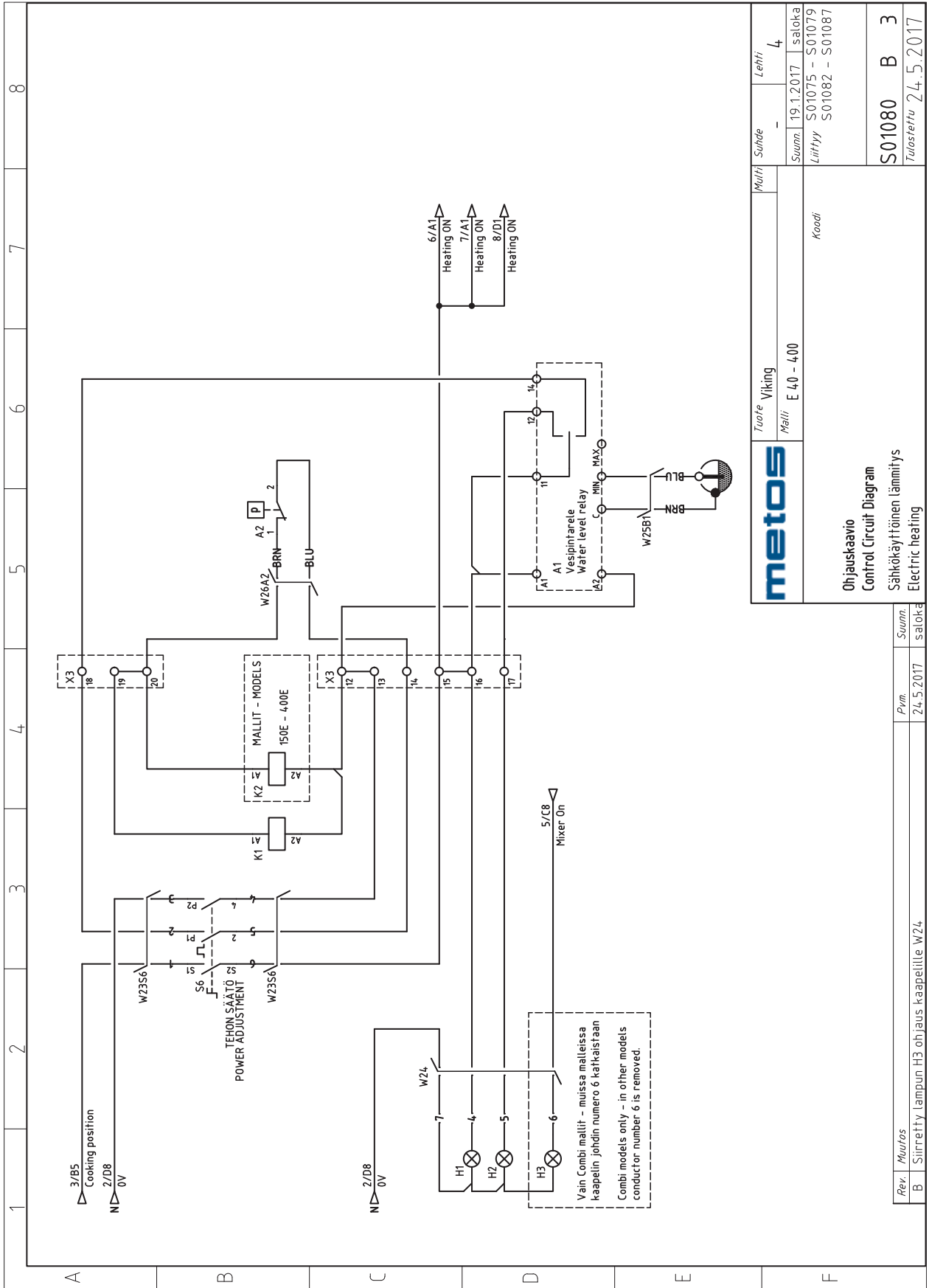
Rev.	Muutos	Pvm	Swann	Salokka
B	Päivitetty viittaukset toisille lehdille	24.5.2017		



<b>metos</b>	Tuote Viking Malli 40 - 200	Multi	Suhde -	Lehti 3
Ohjaukskaavio Control Circuit Diagram Sähkökäyttöinen kallistus Electric tilting		Koodi S01075 - S01077 S01080 - S01083		
		S01078 A 3 Tulostettu 15.5.2017		

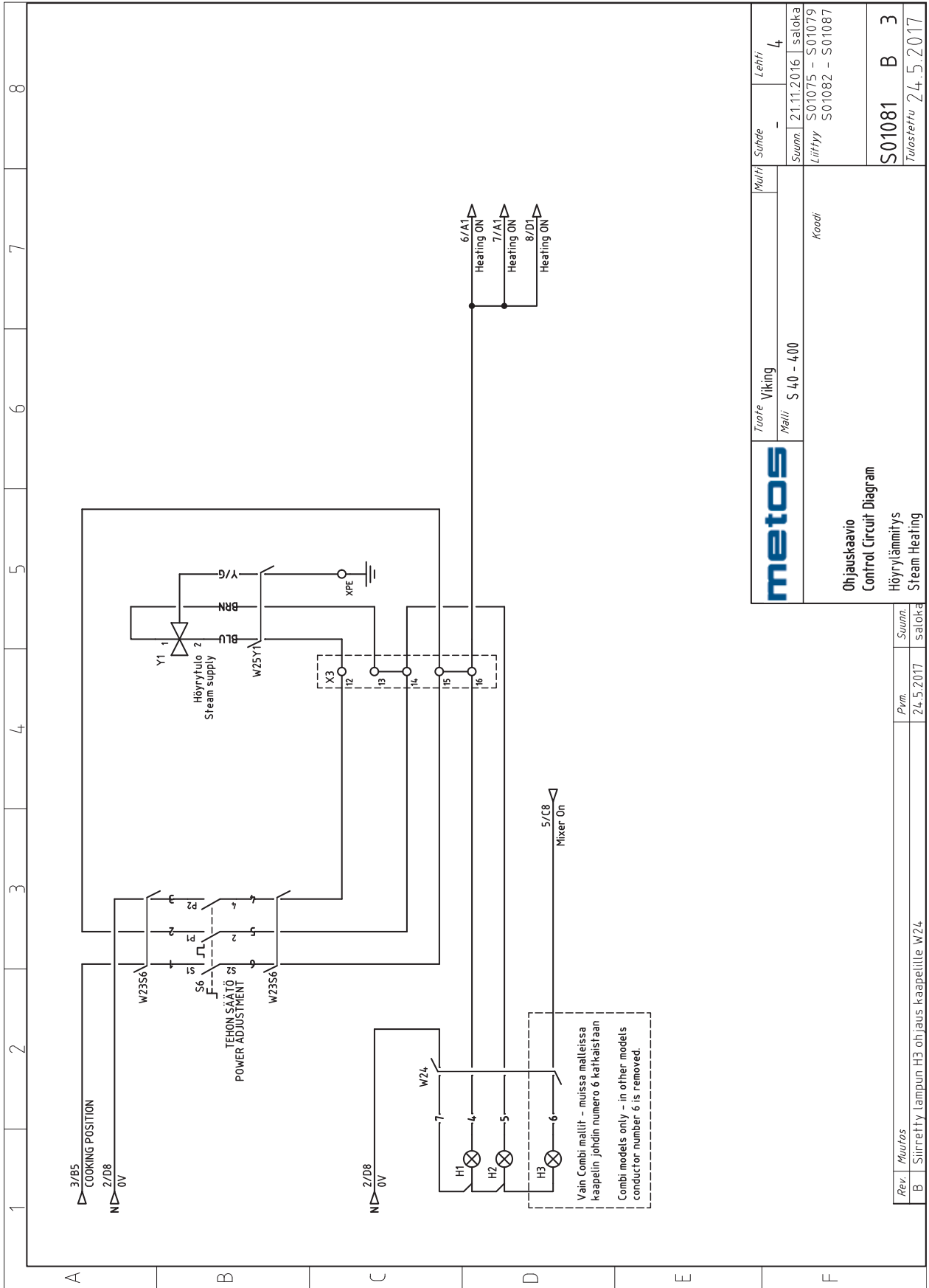


<b>metos</b>	Tuote Viking Malli 300 - 400	Malli -	Lehti 3
Ohjaukkaavio Control Circuit Diagram		Suunn. 19.1.2017 Saloka	
Hydraulinen kallistus Hydraulic tilting		Liihty S01075 - S01077	
		Liihty S01080 - S01083	
		S01079 A 3	
		Tulostettu 15.5.2017	



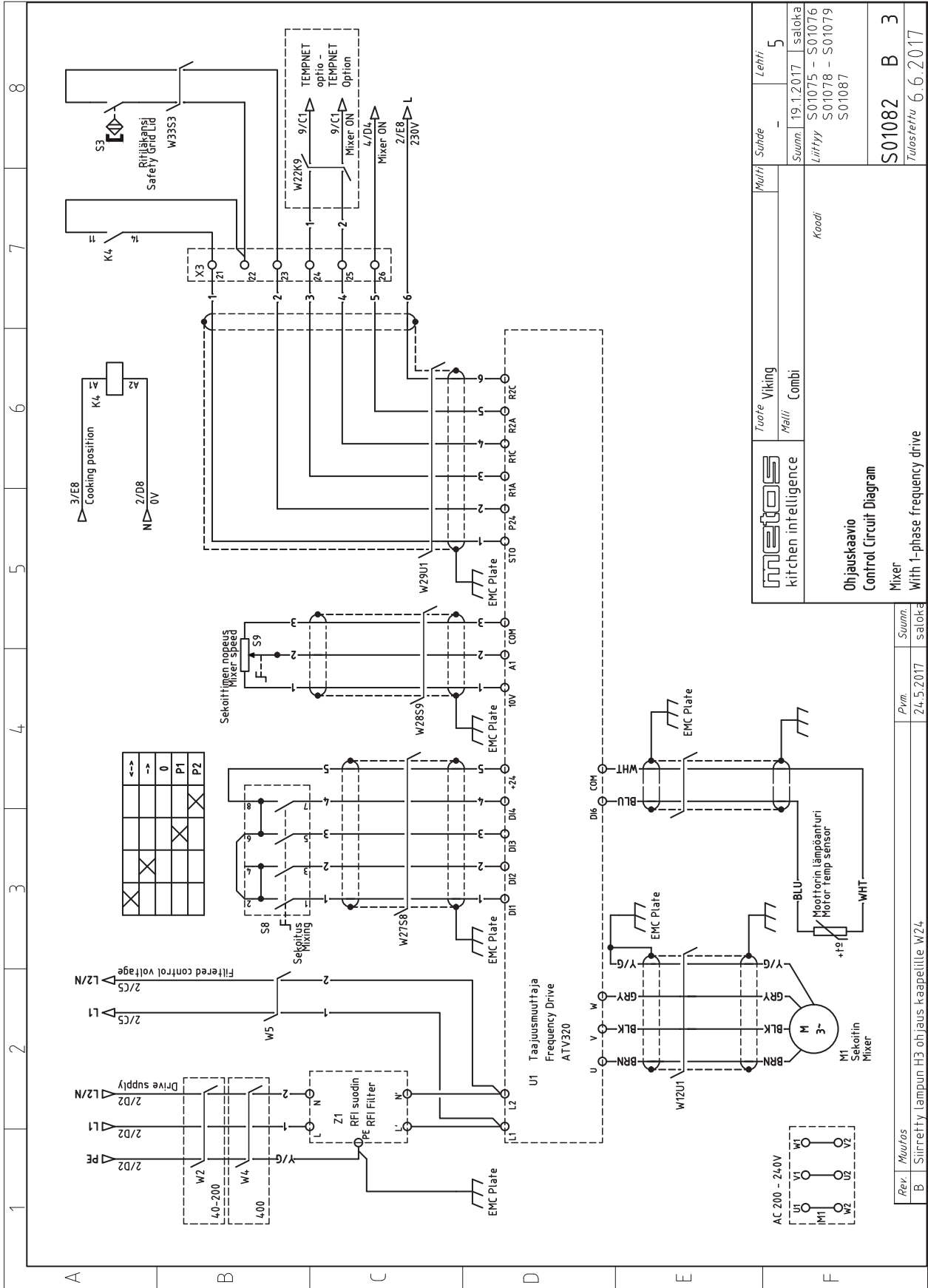
<b>metos</b>		Tuote Viking	Malli E 40 - 400	Koodi
Ohjaukskaavio Control Circuit Diagram		Mathi	Summe -	Lehti 4
Sähkökäyttöinen lämmitys Electric heating		Summe	19.1.2017	saloka
Rev. Mautos		Pvm.	24.5.2017	saloka
B Siirretty lampun H3 ohjaukskaapelille W24		Summe	S01075 - S01079	Lititty S01082 - S01087
S01080 B 3		Tuotoslehti 24.5.2017		

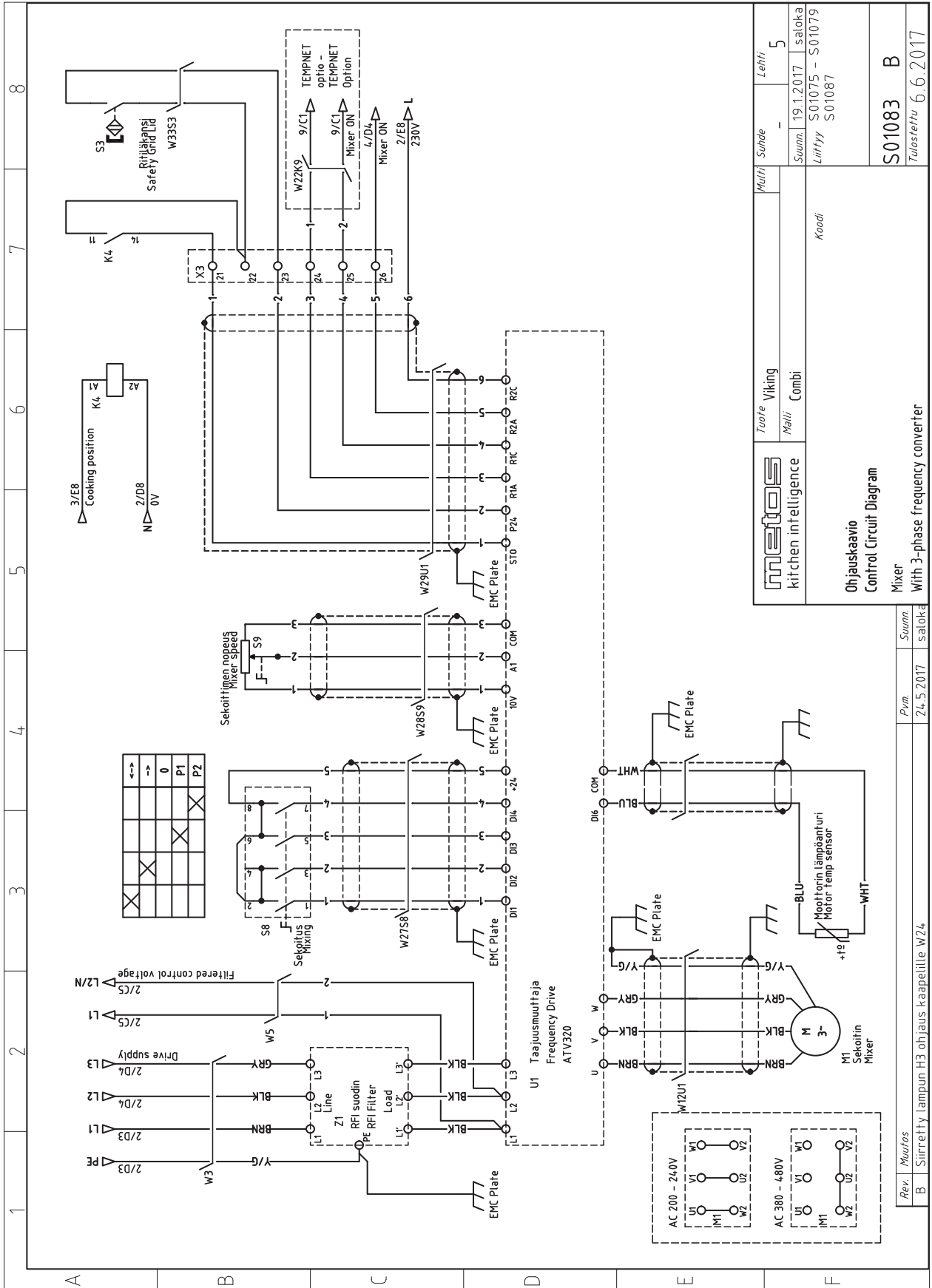




<b>metos</b>		Tuote Viking Malli S 40 - 400	Mathi - Sivide 4	Lehti 4
			Summ. 21.11.2016 saloka	
			Lititty S01075 - S01079	
			S01082 - S01087	
Ohjaukskaavio Control Circuit Diagram		Koodi		
Höyrylämmitys Steam Heating		S01081 B 3		
		Tulostettu 24.5.2017		

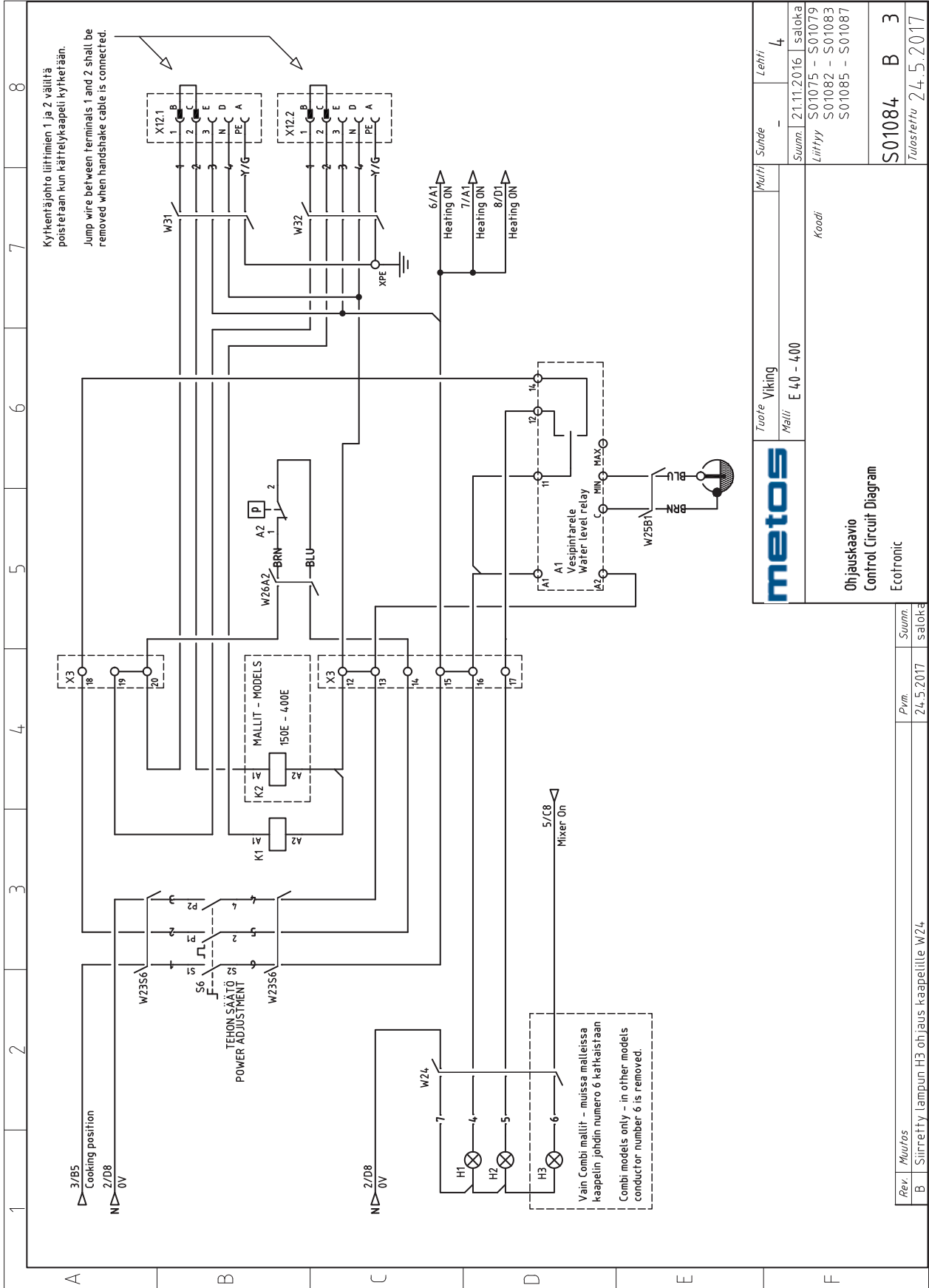
Rev. Muutos	Pvm.	Summ.
B Siirretty lampun H3 ohjaus kaapelille W24	24.5.2017	saloka





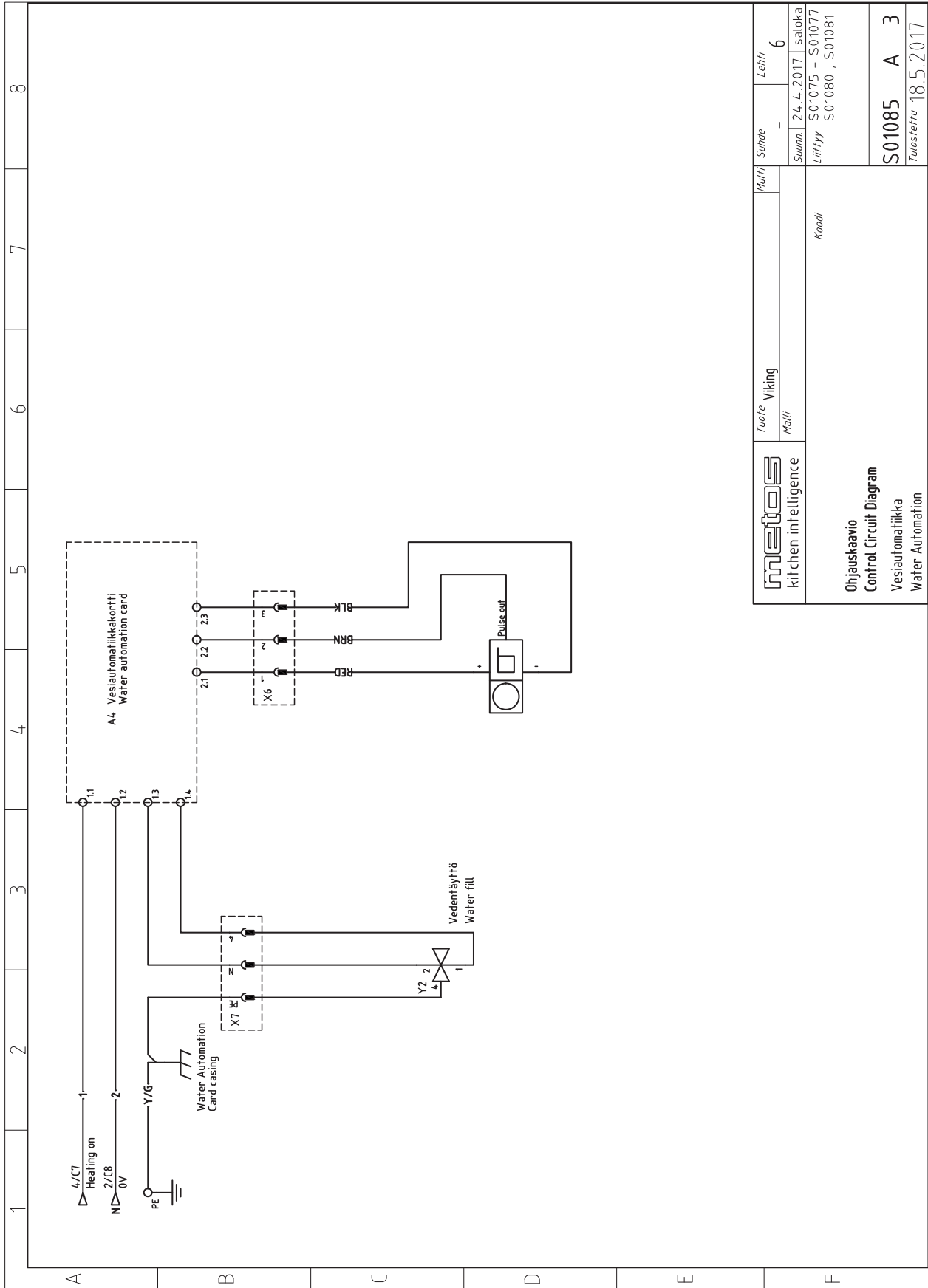
<b>metos</b> kitchen intelligence	Tuote Viking Malli Combi	Lehti 5
Ohjaukskaavio Control Circuit Diagram Mixer With 3-phase frequency converter		Summ. 19.1.2017 saloka Lisäy. S01075 - S01079 S01087
Koodi		
S01083 B		
Tuotesertifikaatti 6.6.2017		

Rev. Maatros	Pvm.	Summ.
B	24.5.2017	saloka

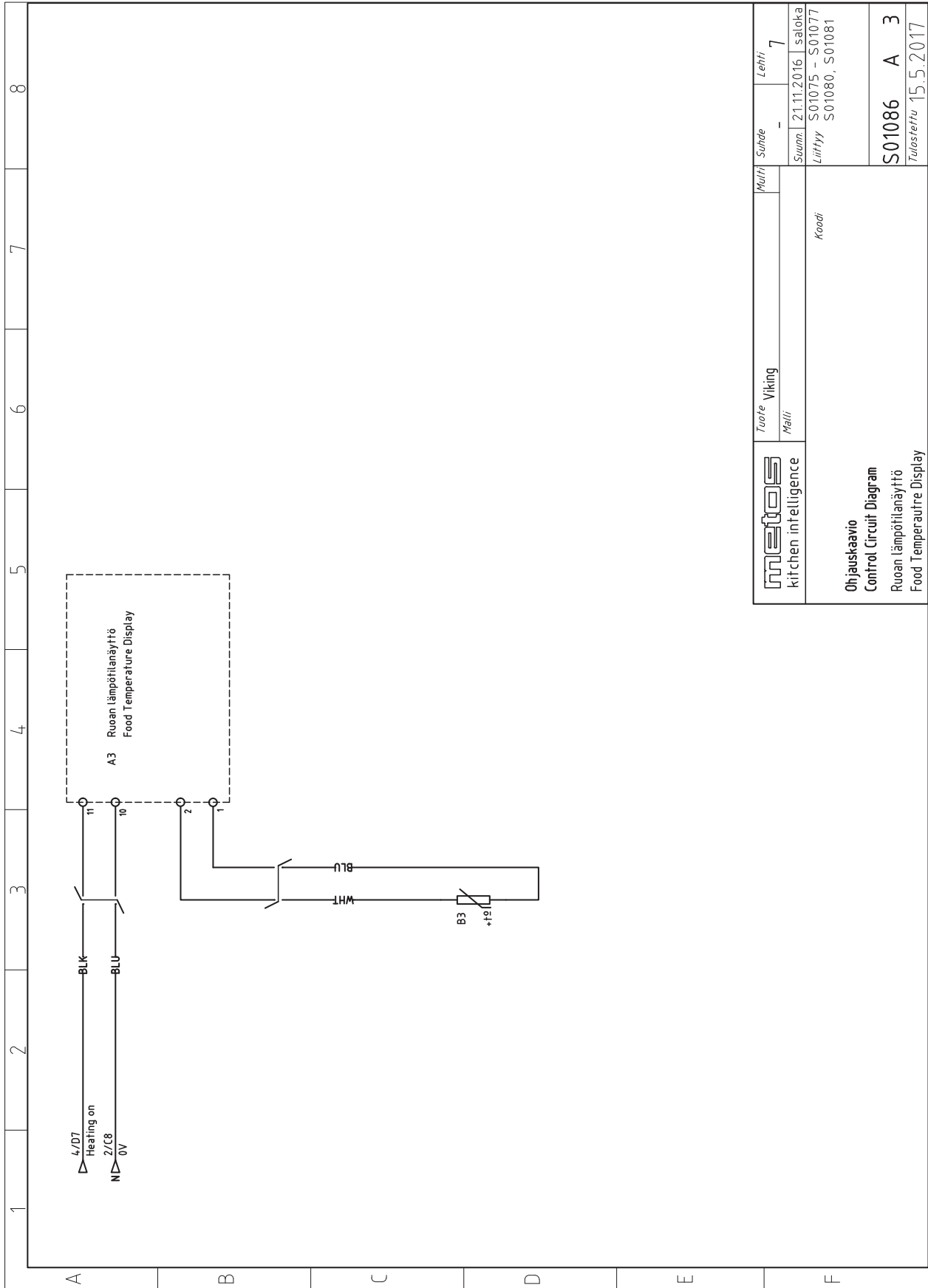


<b>metos</b>		Tuote Viking	Mathi	Surode	Lehti
Malli E 4.0 - 4.00		Koodi			
Ohjauksen		S01075 - S01079			
S01082 - S01083		S01085 - S01087			
S01084		B	3		
Tulostettu		24.5.2017			

Rev	Muutos	Pvm	Summ.
B	Siirretty lampun H3 ohjauksen kaapelitele W24	24.5.2017	saloka



<b>metos</b> kit chen intelligence	Tuote Malli	Viking	Malli	Lehti	6
	Koodi		Swann	24.4.2017	saloka
Ohjaiskaavio Control Circuit Diagram Vesiautomaattikka Water Automation		Littyy		S01075 - S01077 S01080 , S01081	
S01085 A 3		Tulostettu		18.5.2017	



<b>metos</b> kitchen intelligence	Tuote Viking Malli	Malli	Sivide	Lehti 7
Ohjaukskaavio Control Circuit Diagram Ruuan lämpötilä näyttö Food Temperature Display		Koodi		
S01086 A 3		Tulostettu 15.5.2017		

12345678

ABCDEF

LIITÄNNÄT TAKAOSIIN.  
ANSLUTNING BAKFRÅN.  
ANSLUSS VON HINTEN.  
CONNEXIONS D'ARRIÈRE.

LIITÄNNÄT ALHAALTA.  
ANSLUTNING NEDIFRÅN.  
ANSLUSS VON NEREN.  
CONNECTION SUR LE SOL.

\*) LISÄVÄRUSTE  
TILLÄGGSDRUTNING  
ACCESSORY  
ZUBEHÖR  
ACCESSOIRE

HUOMIOI MYÖS ASENNUSOHJE JA  
PIIRUSTUS L00137A4 + K02459B3.  
I AKTIGG ÄVEN INSTALLATIONS-  
ANVISNINGEN OCH RITNINGEN L00137A4 + K02459B3.  
THE INSTALLATION INSTRUCTIONS AND  
DRAWING L00137A4 + K02459B3 MUST ALSO BE FOLLOWED.  
BITTE AUCH DIE INSTALLATIONSANWEISUNGEN  
BEACHTEN UND ZEICHNUNG L00137A4 + K02459B3  
NOTER AUSSI DES INSTRUCTIONS  
D'INSTALLATION ET DESSIN L00137A4 + K02459B3.

ASENNUS valuuun upoteittavalle asemuskehyselle.  
Installation på ingjörningsram.  
Installation on subsurface frames casted into the floor.  
Die Installation auf Installationsrahmen der im Beton eingegossen ist.  
Installation sur socles coulés dans le béton.

ASENNUSPIRUSTUS / SÄHKÖ  
INSTALLATIONSRTNING / EL  
INSTALLATION DRAWING / ELECTRIC

CULINO/VIKING 4-10 E VCP MOD

1:20

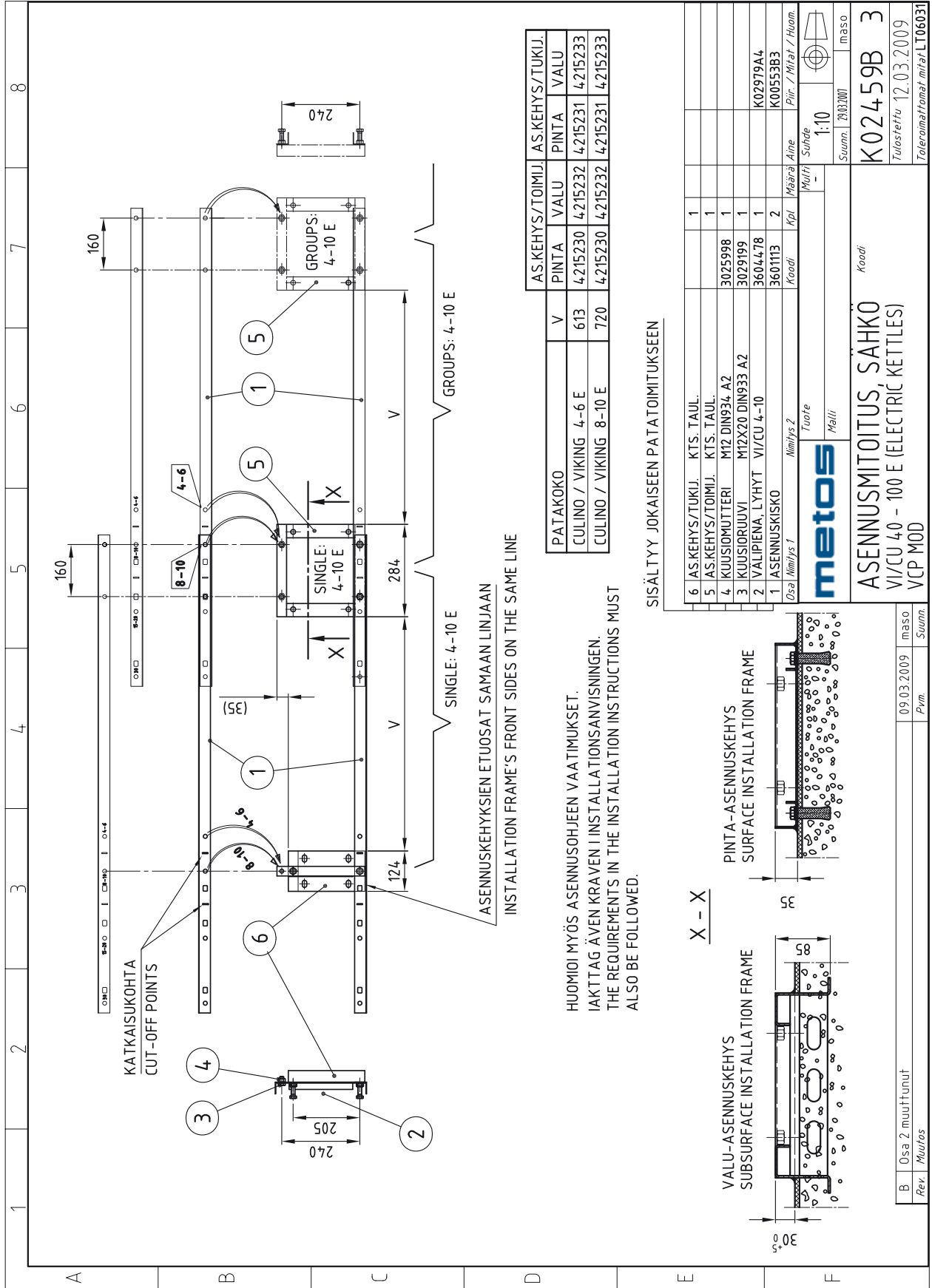
1) PERUSPATA 40-100E: AINOASTAAN PATAKOOT 40-100E LIITETTÄVISSÄ RYHKÄKSI PERUSPADAN OIKEALLE PUOLELLE.  
MAIN KETTLE 40-100E: ONLY KETTLE SIZES 40-100E POSSIBLE TO COMBINE INTO A GROUP ON THE MAIN KETTLE'S RIGHT SIDE.

CULINO VIKING	L1	L2	M	L	LM	H	T	D	N	V	KG
40E	1047	897	900	630	730	1710	400	730	455	613	155
60E	1047	897	1040	630	820	1710	400	730	455	613	165
80E	1154	1004	1080	710	850	1800	500	785	405	720	175
100E	1154	1004	1080	710	850	1800	500	785	405	720	185

xx) PERUSPATA 40-100E: AINOASTAAN PATAKOOT 40-100E LIITETTÄVISSÄ RYHKÄKSI PERUSPADAN OIKEALLE PUOLELLE.  
MAIN KETTLE 40-100E: ONLY KETTLE SIZES 40-100E POSSIBLE TO COMBINE INTO A GROUP ON THE MAIN KETTLE'S RIGHT SIDE.

2) Lisäty vaihtoehtoiset liitännät takaa/alhaalta sekä Viking padat

Rev.	Muutos	Pvm.	28.11.2007	maso
				Summ.



PATAKOKO	V	AS.KEHYS/TOIMIJJ	AS.KEHYS/TUKLJ.
CULINO / VIKING 4-6 E	613	4.215230	4.215231
CULINO / VIKING 8-10 E	720	4.215230	4.215231

HUOMIOI MYÖS ASENNUSOHJEEN VAATIMUKSET.  
IAKTTAG ÄVEN KRÄVEN I INSTALLATIONSANVISNINGEN  
THE REQUIREMENTS IN THE INSTALLATION INSTRUCTIONS MUST ALSO BE FOLLOWED.

SISÄLTYY JOKAISEEN PATATOIMITUKSEEN

6	AS.KEHYS/TUKLJ.	KTS. TAUL.	1
5 <th>AS.KEHYS/TOIMIJJ.</th> <th>KTS. TAUL.</th> <td>1</td>	AS.KEHYS/TOIMIJJ.	KTS. TAUL.	1
4 <td>KUUSIORUUTTI</td> <td>M12 DIN934 A2</td> <td>3025998</td>	KUUSIORUUTTI	M12 DIN934 A2	3025998
3 <td>KUUSIORUUVI</td> <td>M12X20 DIN933 A2</td> <td>3029199</td>	KUUSIORUUVI	M12X20 DIN933 A2	3029199
2 <td>VÄLPIENA. LYYHT</td> <td>VI/CU 4-10</td> <td>3604478</td>	VÄLPIENA. LYYHT	VI/CU 4-10	3604478
1 <td>ASENNUSKISKO</td> <td></td> <td>K02979A4</td>	ASENNUSKISKO		K02979A4
			K00553B3

Osa 1	Nimitys 1	Määrä	Aine	Per. / Mitat / Huom.
		Kpl	Kaodi	
Osa 2	Nimitys 2	Määrä	Aine	Per. / Mitat / Huom.
			Multi	
	Tuote		Subide	
	Malli			1:10
				Suunn. I 2003.2007
				maso
<b>metos</b>				
ASENNUSMITOITUS, SÄHKÖ				
VI/CU 40 - 100 E (ELECTRIC KETTLES)				
VCP MOD				
Koodi				
<b>K02459B 3</b>				
Tuloslehti 12.03.2009				
Toleranssit/omat mitat/LT06031				

B	Osa 2 muutettunut	maso
Rev.	Muutos	Suunn.
		Pvm.
		09.03.2009



12345678

**A1: 150-200L**  
-LITÄNNÄT TAKAAPÄIN.  
-ANSLUTNING BAKIFRÅN.  
-CONNECTIONS FROM REAR.

**A2: 300-400L**  
-ANSCHLUSS VON HINTEN.  
-CONNEXIONS DERRIÈRE.

**B: 150-400L**  
LITÄNNÄT ALHAALTA.  
ANSLUTNING NEDIFRÅN.  
CONNECTIONS FROM BELOW.  
ANSCHLUSS VON NEBEN.  
CONNECTION SUR LE SOL.

X 1:5

\*) LISÄVARUSTE  
TILLÄGGSDUTRUSTNING  
ACCESSORY  
ZUBEHÖR  
ACCESSOIRE

-HUOMIOI MYÖS ASENNUSOHJE JA  
PIRUSTUKSET L00137A4 + K02226C3.  
-IÄKTTAG ÄVEN INSTALLATIONS-  
ANVISNINGEN OCH RITNINGAR L00137A4 + K02226C3.  
-THE INSTALLATION INSTRUCTIONS AND  
DRAWINGS L00137A4 + K02226C3 MUST ALSO BE FOLLOWED.  
-BITTE AUCH DIE INSTALLATIONSANWEISUNGEN  
BEACHTEN UND ZEICHNUNG L00137A4 + K02226C3.  
-NOTER AUSSI DES INSTRUCTIONS  
D'INSTALLATION ET DESSIN L00137A4 + K02226C3.

L (without mixer)  
LM (With Mixer)

TÜR / DÖRR / DOOR D

	L1	L2	M	L	LM	H	S	T	D	N	V	KG
CULINO/VIKING -150E	1360	1210	1010	895	910	1980	800	600	945	420	926	250
CULINO/VIKING -200E	1360	1210	1130	895	980	1980	800	600	945	420	926	270
CULINO/VIKING -300E	1560	1410	1190	1135	1135	2100	800	600	1165	450	1126	420
CULINO/VIKING -400E	1560	1410	1190	1135	1135	2235	1200	600	1165	440	1126	480

PERUSPATA 150-200E: PATAKOOT 40-200E LIITETTÄVISSÄ RYHMÄKSI PERUSPADAN OIAALLE PUOLELLE.  
 PERUSPATA 300-400E: PATAKOOT 40-400E LIITETTÄVISSÄ RYHMÄKSI PERUSPADAN OIKEALLE PUOLELLE.  
 MAIN KETTLE 150-200E: KETTLE SIZES 40-200E POSSIBLE TO COMBINE INTO A GROUP ON THE MAIN KETTLE'S RIGHT SIDE.  
 MAIN KETTLE 300-400E: KETTLE SIZES 40-400E POSSIBLE TO COMBINE INTO A GROUP ON THE MAIN KETTLE'S RIGHT SIDE.

C	Lisätty 400L:n paita ja farkk. painoja	22.05.2008	maso
B	Lisätty vaihtoehtoiset liittännät takaa/alhaalta sekä Viking padat	28.11.2007	maso
Rev.	Mautos		Summ

Asennus valuaun upotefttavalle asennuskehyselle.  
 Installation på ingjufningsram.  
 Installation on subsurface frames casted into the floor.  
 Die Installation auf Installationsrahmen der im Beton eingegossen ist.  
 Installation sur socles coulés dans le béton.

Asennus pintakehykselle.  
 Installation på yttrem.  
 Die Installation auf einem Flächeninstallationsrahmen.  
 Installation directe sur socle en surface du sol.

**metos** Tuote / Product / Produit

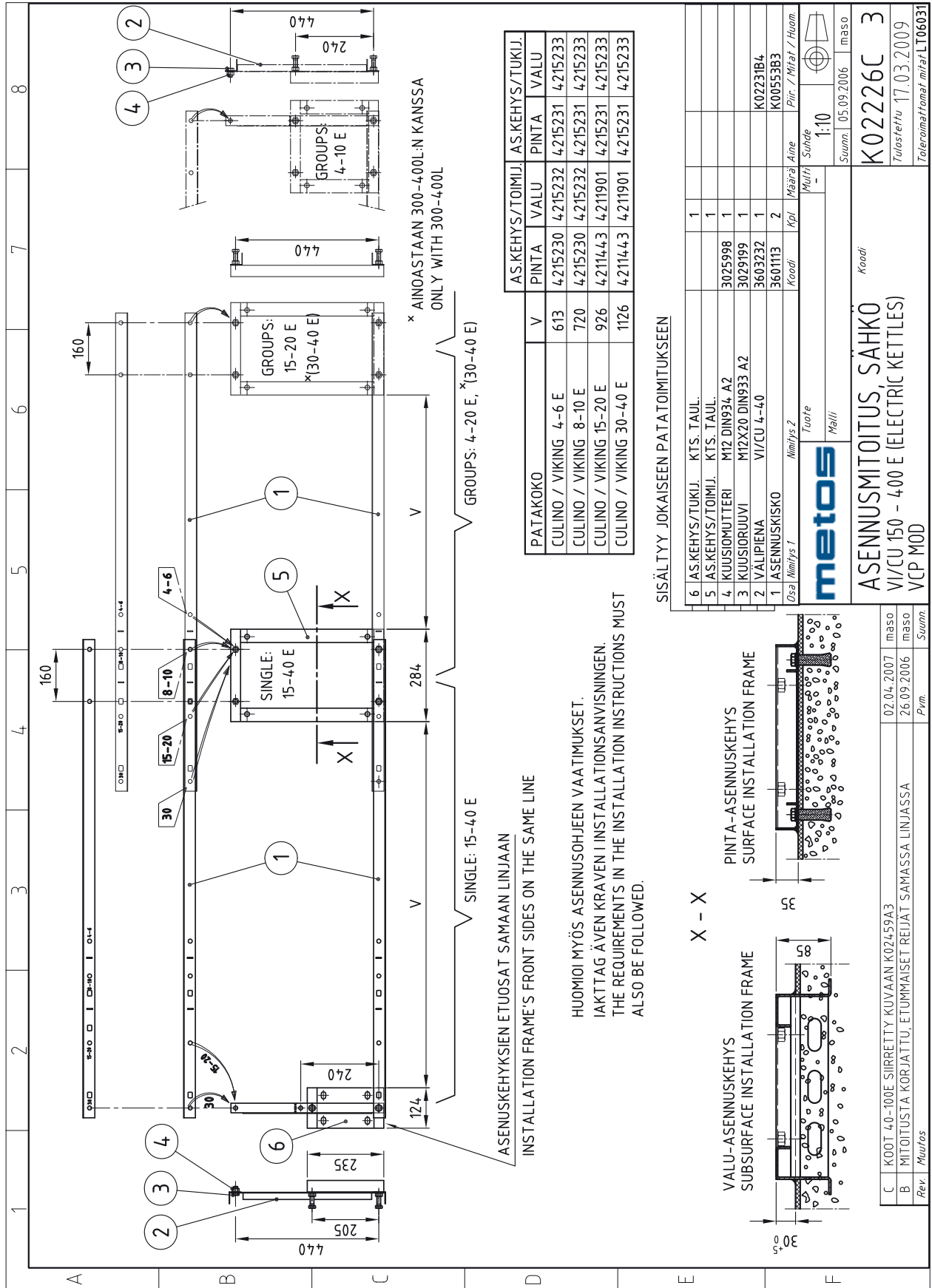
CULINO/VIKING 15-40 E VCP MOD


SCALE: 1:20

Summ. 25.09.2006 maso

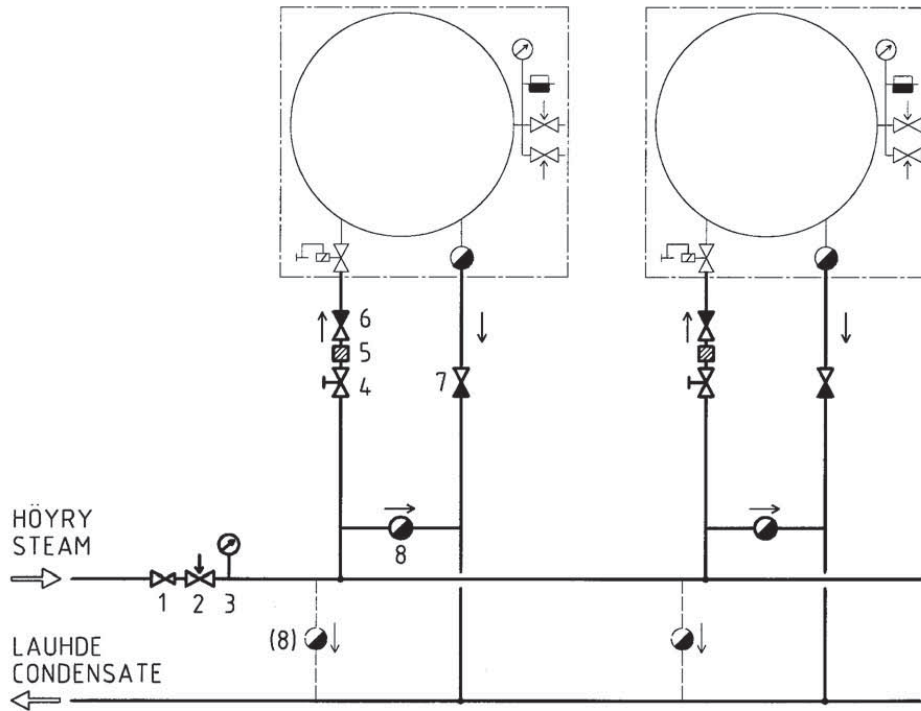
L00131 C 3

Tulosettu 12.03.2009



	1	2	3	4
A	<ol style="list-style-type: none"> <li>1. SÄHKÖLIITÄNTÄ, VARATTAVA LATTIASTA 1,5M SÄHKÖKAAPELIA.</li> <li>2. KYLMÄVESILIITÄNTÄ Ø15 (G1/2"), VARUSTETTAVA TAKAISKU- JA SULKUVENTTIILILLÄ.</li> <li>3. LÄMMINVESILIITÄNTÄ (MAKS. 60°C) Ø10 (G3/8"), VARUSTETTAVA TAKAISKU- JA SULKUVENTTIILILLÄ.</li> <li>x) 4. TIETOLIIKENNEKAAPELOINTI (HACCP), VARATTAVA 2 KPL MIN. 20 MM PUTKITUSTA.</li> <li>x) 5. OHJAUSKAAPELIT KIINTEISTÖÖN PADAN LÄMMITYSOHJAUKSELLE. VARATTAVA 2 KPL MIN 20 MM PUTKITUSTA.</li> </ol>			
B	<ol style="list-style-type: none"> <li>1. ELANSLOTNING, RESERVERA EL.KABEL 1,5M FRÅN GOLV</li> <li>2. KALLVATTENANSLOTNING Ø15 (G1/2"), BÖR FÖRSES MED ENVÄGS- OCH AVSTÄNGNINGSVENTIL.</li> <li>3. VARMVATTEN (HÖGST 60°C) Ø10 (G3/8"), BÖR FÖRSES MED ENVÄGS- OCH AVSTÄNGNINGSVENTIL.</li> <li>x) 4. DATA KABEL (HACCP), 2 ST MIN 20 MM SKYDDSRÖR BÖR RESERVERAS.</li> <li>x) 5. STYRKABLAR TILL FASTIGHET FÖR GRYTANS VÄRME-EFFEKTKONTROLL. 2 ST MIN. 20 MM SKYDDTUB BÖR RESERVERAS.</li> </ol>			
C	<ol style="list-style-type: none"> <li>1. RESERVE 1,5M OF POWER CABLE ABOVE THE FLOOR LEVEL.</li> <li>2. COLD WATER CONNECTION Ø15 (G1/2 "), ONE-WAY AND SHUT-OFF VALVES MUST BE FITTED.</li> <li>3. WARM WATER CONNECTION (MAX 60°C) Ø10 (G3/8"), ONE-WAY AND SHUT-OFF VALVES MUST BE FITTED.</li> <li>x) 4. DATA CABLE (HACCP), 2 PCS OF MIN. 20 MM COVER TUBES MUST BE RESERVED.</li> <li>x) 5. CONTROL CABLES TO BUILDING FOR HEATING CONTROL OF THE KETTLE. 2 PCS OF MIN. 20 MM COVER TUBES MUST BE RESERVED.</li> </ol>			
D	<ol style="list-style-type: none"> <li>1. ELEKTROANSCHLUSS, 1,5M EL.KABEL ÜBER FUSSBODEN FREI LASSEN.</li> <li>2. KALTWASSERANSCHLUSS Ø15 (G1/2"), SOLL MIT EINEM RÜCKSCHLAGVENTIL UND ABSPERRVENTIL VERSEHEN WERDEN.</li> <li>3. WARMWASSERANSCHLUSS (ALLER HÖCHSTENS 60°C) Ø10 (G3/8"), SOLL MIT EINEM RÜCKSCHLAGVENTIL UND ABSPERRVENTIL VERSEHEN WERDEN.</li> <li>x) 4. DATENÜBERTRAGUNGSKABEL (HACCP), 2 x MIND. 20MM VERROHRUNG ZU RESERVIEREN.</li> <li>x) 5. STEUERUNGSKABEL ZUM GRUNDSTÜCK FÜR HEIZUNGSKONTROLLE DES KESSELS. 2 x MIND 20 MM VERROHRUNG ZU RESERVIEREN.</li> </ol>			
E	<ol style="list-style-type: none"> <li>1. BRANCHEMENT ÉLECTRIQUE 1,5M DU CÂBLAGE SUR LE SOL À RÉSERVER.</li> <li>2. CONNECTION D'EAU FROIDE Ø15 (G1/2"), DOIVENT ÊTRE MUNIES DE SOUPAPE DE RETENUE ET VANNES D'ARRÊT.</li> <li>3. CONNECTION D'EAU CHAUDE (AU MAXIMUM 60°C) Ø10 (G3/8"), DOIVENT ÊTRE MUNIES DE SOUPAPE DE RETENUE ET VANNES D'ARRÊT.</li> <li>x) 4. CÂBLAGE INFORMATIQUE (HACCP). A RÉSERVER: TUYAUX 2 x À MIN 20 MM.</li> <li>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.</li> </ol>			
F	<p>x) LISÄVARUSTE TILLÄGGSUTRSUTNING ACCESSORY ZUBEHÖR ACCESSOIRE</p>			
		<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. Paineenalennusventtiili
- 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-ory	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-ory	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

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

**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**

- **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**

**HUOM: PED 2014/68/EU:n mukaisesti vaatimustenmukaisuusvakuutus ja CE-merkintä ei koske SEP luokiteltuja laitteita.**

**OBS: Enligt PED 2014/68/EU försäkran om överensstämmelse och CE-märkningen ej produkter i SEP kategorin.**

**ATT: According to PED 2014/68/EU the declaration of conformity and the CE-marking does not apply to SEP category products.**

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

**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**

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

**EN 13886:2005+A1:2010, EN 1717:2001**

Tuotteen suunnitelmatarkastustodistus ja laatu järjestelmää 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)

**RS 489-02 + Quality system**  
**Inspecta Tarkastus Oy, Helsinki, Finland**  
**0424**

**DA 30289-2008(400E), 30317-2009 (400S)**  
**Polartest Oy, Vantaa, Finland**

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

**Risto Koskelainen Metos Oy Ab, Ahjonkaarre, 04220 Kerava, Finland**

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

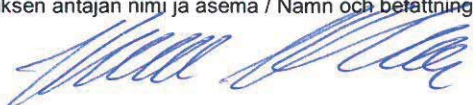
Denna EU-försäkran om överensstämmelse utfärdas på tillverkarens eget ansvar. Föremålet för försäkran ovan överensstämmer med den relevanta unionslagstiftningen om harmonisering.

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

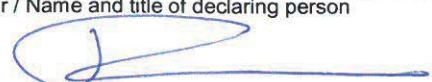
Antopaikka ja päivä / Utfärdad på ort och datum / Place and date of issue

**KERAVA 7.7.2017**

Vakuutuksen antajan nimi ja asema / Namn och befattning av personen som försäkrar / Name and title of declaring person



**Hannu Ahola – Director of Business Unit**



**Tero Kähärä – R&D Manager**

