

# metos

## VIKING KETTLE

VIKING MARINE

ELECTRICALLY HEATED  
40E SW, 60E SW, 80E SW, 100E SW

## Installation and Operation Manual

Original instructions



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4215815, 4215816, 4215817, 4215819

## TABLE OF CONTENTS

<b>1.</b>	<b>General.....</b>	<b>4</b>
1.1.	Symbols used in the manual .....	4
1.2.	Symbols used on the appliance.....	4
1.3.	Checking the relationship of the appliance and the manual .....	5
<b>2.</b>	<b>Safety .....</b>	<b>6</b>
2.1.	Safety features .....	6
2.2.	Warnings .....	7
<b>3.</b>	<b>Functional description .....</b>	<b>8</b>
3.1.	Operating principle .....	8
3.2.	Construction and control panel.....	9
3.2.1.	Control panel .....	9
<b>4.</b>	<b>Operating instructions .....</b>	<b>10</b>
4.1.	Before use .....	10
4.1.1.	After the installation .....	10
4.1.2.	Before the first use.....	10
4.1.3.	Daily.....	10
4.1.4.	Quarterly.....	10
4.1.5.	Yearly .....	11
4.1.6.	Checking the water level of the steam generator .....	11
4.1.7.	Total emptying of the steam generator .....	12
4.2.	Operation.....	12
4.2.1.	Cooking .....	12
4.2.2.	Tilting the kettle.....	13
4.2.3.	Filling water into the kettle .....	13
4.3.	After use.....	14
4.3.1.	Cleaning the kettle.....	14
4.3.2.	Treatment of stainless steel .....	15
4.3.3.	Notes on service work .....	16
<b>5.</b>	<b>Installation .....</b>	<b>17</b>
5.1.	Before use .....	17
5.1.1.	Transport and reception.....	17
5.1.2.	Storage .....	17
5.1.3.	Facilities.....	17
5.1.4.	Unpacking the unit.....	17
5.1.5.	Industrial safety during installation .....	18
5.2.	Installation .....	18
5.2.1.	Installation on subsurface frames cast into the floor .....	18
5.2.2.	Installation on surface installation frames .....	19
5.3.	Electrical and water connections.....	19
5.3.1.	Electrical connection .....	19
5.3.2.	Water connection .....	20
5.4.	Ventilation.....	20

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5.5.	Adjusting the tilting .....	21
5.6.	Testing the kettle .....	22
5.6.1.	Filling the steam generator.....	22
5.6.2.	Preventing the scale build-up .....	23
5.6.3.	Checking the safety valve.....	23
<b>6.</b>	<b>Troubleshooting.....</b>	<b>25</b>
<b>7.</b>	<b>Spareparts.....</b>	<b>26</b>
7.1.	Voltage codes .....	27
7.2.	Product codes .....	27
<b>8.</b>	<b>Technical specifications .....</b>	<b>44</b>

## 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 English is the primary language regarding the information content.

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

- electrically heated Viking Marine kettles 40, 60, 80 and 100 with separate water faucet SW

## 2. Safety

### 2.1. 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.

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 and a safety valve. The safety valve opens if the steam pressure exceeds 1,5 bar.

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.

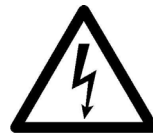
The water level probe in the steam generator operates as a boil dry protector. In case of insufficient water level in the steam generator the heating element power is cut off until water is added to the kettle jacket. In addition, a limit switch which is attached to the tilting axle turns off the heating during tilting.

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

The control panel of the kettle is on the control pillar and the water faucet on the support pillar.



### 3.2. Construction and control panel

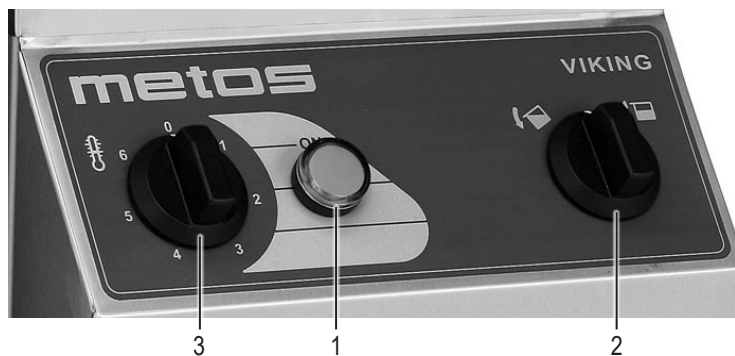
The main features of the Viking kettle are described in the following pictures.



1. safety block
2. lid
3. control panel
4. control pillar
5. support pillar
6. peg for hanging tools
7. water faucet
8. control valve of steam generator

#### 3.2.1. Control panel

The control panel and its functions are described in the following picture.



1. green indicator light "kettle ON"
2. tilting switch
3. power regulator



After switching off the heating, you should wait about 5 seconds before tilting the kettle. Immediate tilting will shorten the life of the heating element.

## 4. Operating instructions

### 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 and water) 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

Check that

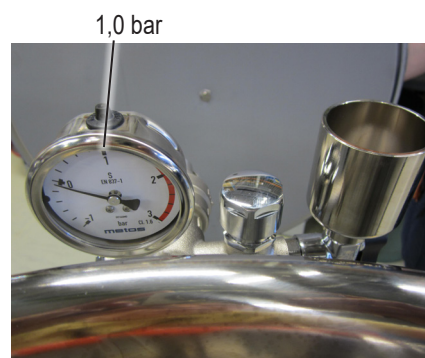
- the kettle is in its upright and horizontal position. The kettle does not heat if it is tilted.
- the steam generator has the right amount of water (normally water must be refilled a few times per year).

#### 4.1.4. Quarterly

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 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.**



1 safety valve relief lever

#### 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. When doing the first descaling the technician can estimate when the following descaling must be done.

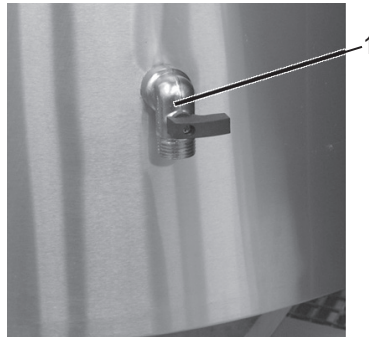


Fill out the form "Notes on service work" with information on service work which has been done according to the instructions. Maintenance work ensures the safe and reliable function of the kettle.

#### 4.1.6. Checking the water level of the steam generator

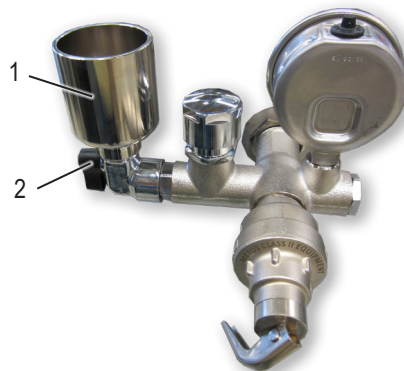


It is not allowed to open the control valve of the steam generator if the temperature of the steam jacket of the kettle is over +100°C. Watch out for releasing hot steam and water when you open the control valve or the water inlet valve.



1 control valve of steam generator

- Check that the kettle is in its upright position.



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.

#### 4.1.7. Total emptying of the steam generator



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 control valve.

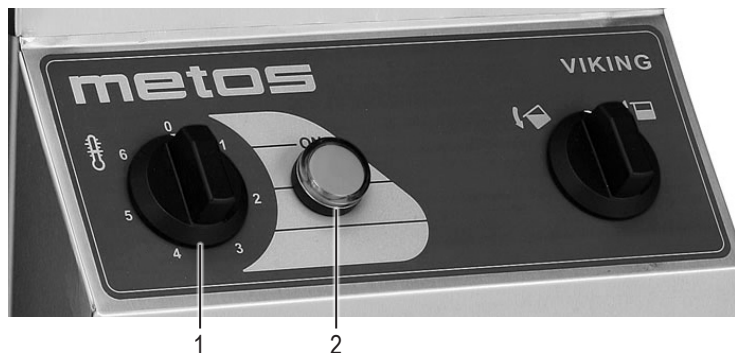
1. Open the control valve.
2. Tilt the kettle approximately 45°.
3. When water stops to flow out, tilt the kettle slightly forwards and backwards until water no longer flows out.
4. Return the kettle to the cooking position.
5. Close the control valve.

## 4.2. Operation

### 4.2.1. Cooking

#### Starting to cook

- Check that the kettle is in the fully upright position
- Switch on the power by turning the power regulator to the right (green signal lamp illuminates). If the kettle does not start to heat up, check the water level of the steam generator according to instructions given in Chapter "Checking the water level of the steam generator".



1. power regulator
2. green light indicator "kettle ON"



Keep the valve of the water inlet funnel open until steam starts to come out of it. Then close the inlet funnel valve. This procedure ensures that air is eliminated from the steam jacket and the cooking is efficient

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

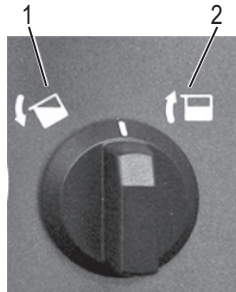
#### 4.2.2. Tilting the kettle



After switching off the heating, you should wait about 5 seconds before tilting the kettle. Immediate tilting will shorten the life of the heating element.



Remove the 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 (1).

The kettle goes back to its upright/cooking position by turning the tilting switch to the right to position (2).

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

#### 4.2.3. Filling water into the kettle

A cold and hot water faucet is situated on the left hand support pillar. Only cold water should be used for food preparation.



## 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, cooking baskets and the 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.

#### 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 colours"	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 carbonate 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. Installation

### 5.1. Before use

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.

#### 5.1.1. 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.

#### 5.1.2. 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.



#### 5.1.3. Facilities

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.

#### 5.1.4. 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.

### 5.1.5. 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.

## 5.2. 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.

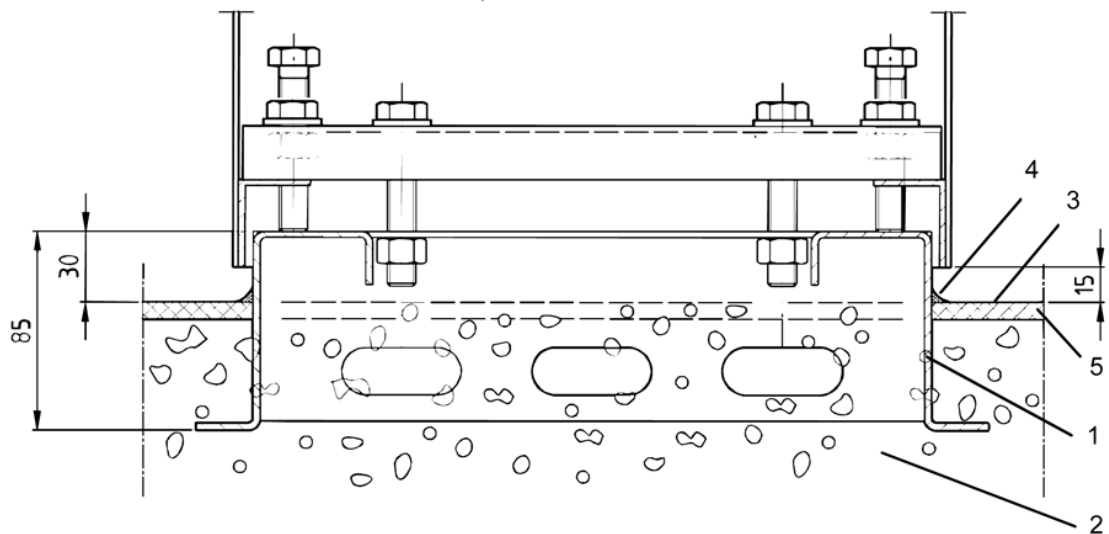
The kettle can be installed in the following two ways:

- 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.

### 5.2.1. 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.



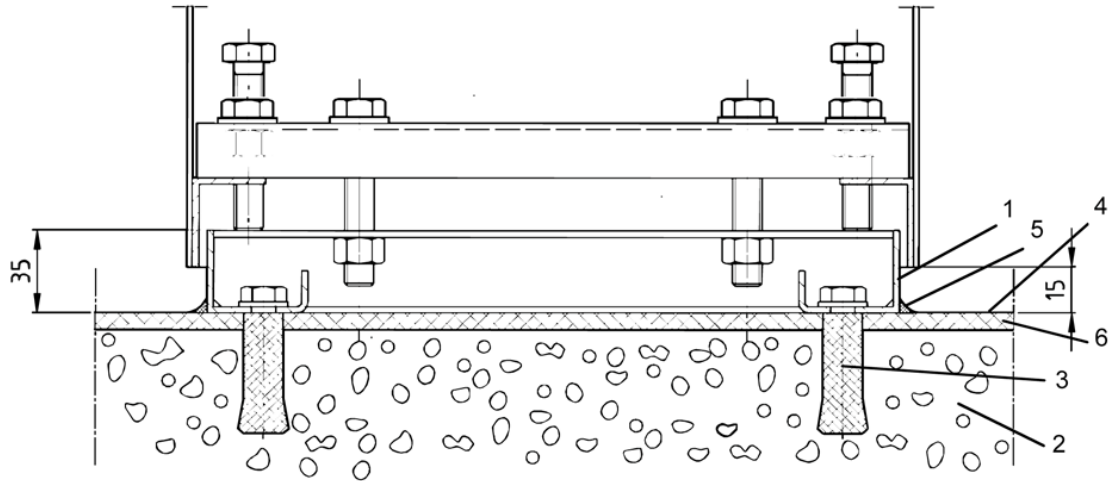
1. Installation frame
2. Concrete casting
3. Finished floor surface
4. Silicone mastic
5. Acrylic filler

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.

### 5.2.2. 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.

## 5.3. Electrical and water connections

The electrical connection is made to the right-hand kettle pillar according to the installation drawing.

### 5.3.1. Electrical connection

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



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

### 5.3.2. Water connection

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 water connection sizes are 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<sup>+</sup> Ion Exchanger or Kleensteam are recommended systems. Sodium ion exchangers must not be used because of problems caused by high salt content.

### 5.4. Ventilation

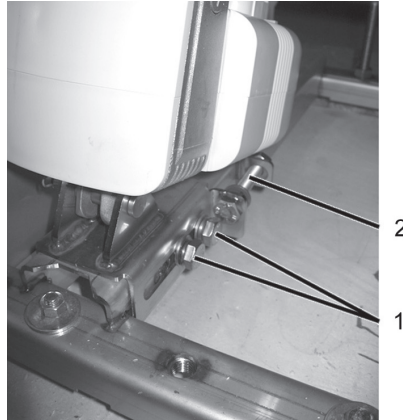
The heat and steam load of the kettle must be taken into account in the kitchen's ventilation plan. A ventilation hood must be installed above the kettle, because plenty of steam is released when the kettle lid is opened. When dimensioning the ventilation hood, the space requirement for opening the lid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

## 5.5. 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:

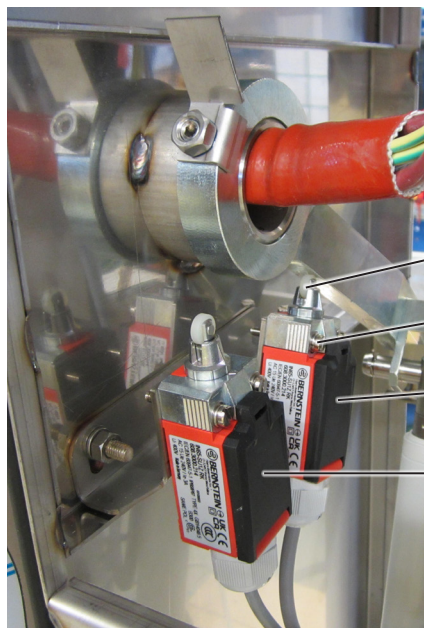
1. Open the locking screw
2. Open the locking nut.



1. Locking screw
2. Adjusting screw

*Viking Marine 40-100 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. mounting screws
3. tilting limit switch - cooking position
4. tilting limit switch - extreme position

## 5.6. Testing the kettle

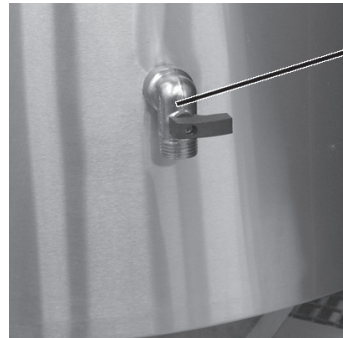
Do the following measurements and checks before taking the kettle into use.

### 5.6.1. Filling the steam generator

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.



1 1 control valve of steam generator

- 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.

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



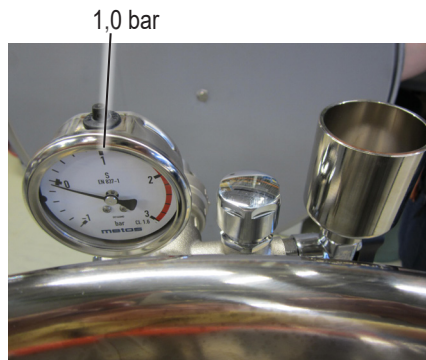
Do not leave the control valve of the steam generator, the safety valve and the water inlet valve open when the kettle heating is on. The discharging steam might cause burns or other damage.

### 5.6.2. 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.

### 5.6.3. Checking the safety valve

1. Do the following steps in order to check the safety valve:
2. Do the checking when the kettle is empty.
3. Check the water level of the steam generator.
4. Switch the kettle on by turning the power regulator to position 6.
5. Heat up the kettle until the pressure gauge shows 1,0 bar pressure.
6. 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.

1 safety valve relief lever



1. green light indicator "kettle ON"
2. 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. Troubleshooting

MALFUNCTION	POSSIBLE CAUSE	WHAT TO DO
The kettle does not heat	One or several fuses in the main fuse box are blown or triggered	Change or excite the fuse(s)
	The kettle is not returned to an upright position after tilting	Press the tilting button until the kettle is in a totally horizontal 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
	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	Electric kettle: Too much water in the steam generator	Check the water level of the steam generator according to the instructions by opening the control valve.
	There is air in the steam jacket.	Let the air out by keeping the inlet funnel valve open until steam flows out and then close the valve.
	One of the fuses in the main fuse box is blown or triggered	Change or excite the fuse
	Other technical fault	Contact qualified technical personnel
The kettle does not tilt	The mains switch is in the OFF position	Turn the mains switch to the ON position
	Other technical fault	Contact qualified technical personnel
	One or several fuses in the main fuse box are blown or triggered	Change or excite the fuse(s)

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

7. Spareparts

Lid .....28

Water supply .....30

Main switch panel .....32

Main switch panel .....34

Safety block .....36

Control valve .....38

Control box.....40

Kettle body .....42

## 7.1. Voltage codes

Voltage	Voltage code
A	3/N/PE~400/230V 50Hz
B	~250V 16A 50Hz
C	3/N/PE~380/220V 50Hz
D	3/PE~200V 50-60Hz
F	2/PE 220-240V 50Hz
G	3/N/PE~415/240V 50Hz
H	3/PE~230V 50Hz
I	3/PE~220V 60Hz
J	3/PE~380 50Hz
K	3/PE~400V 50Hz
L	3/PE~415V 50Hz
M	3/PE~440V 60Hz
N	3/PE~460V 60Hz
O	3/PE~480V 60Hz
P	1/N/PE~220-240V 50Hz
R	2/PE~220-230V 60Hz
S	3/N/PE~400/230V 50Hz
T	3/PE~230V 60Hz
U	1/N/PE~100V 50-60Hz

## 7.2. Product codes

Product code	Full name
Model codes	
E	ELECTRICALLY HEATED
SW	SEPARATE WATER FAUCET
Type codes	
40	40 l
60	60 l
80	80 l
100	100 l



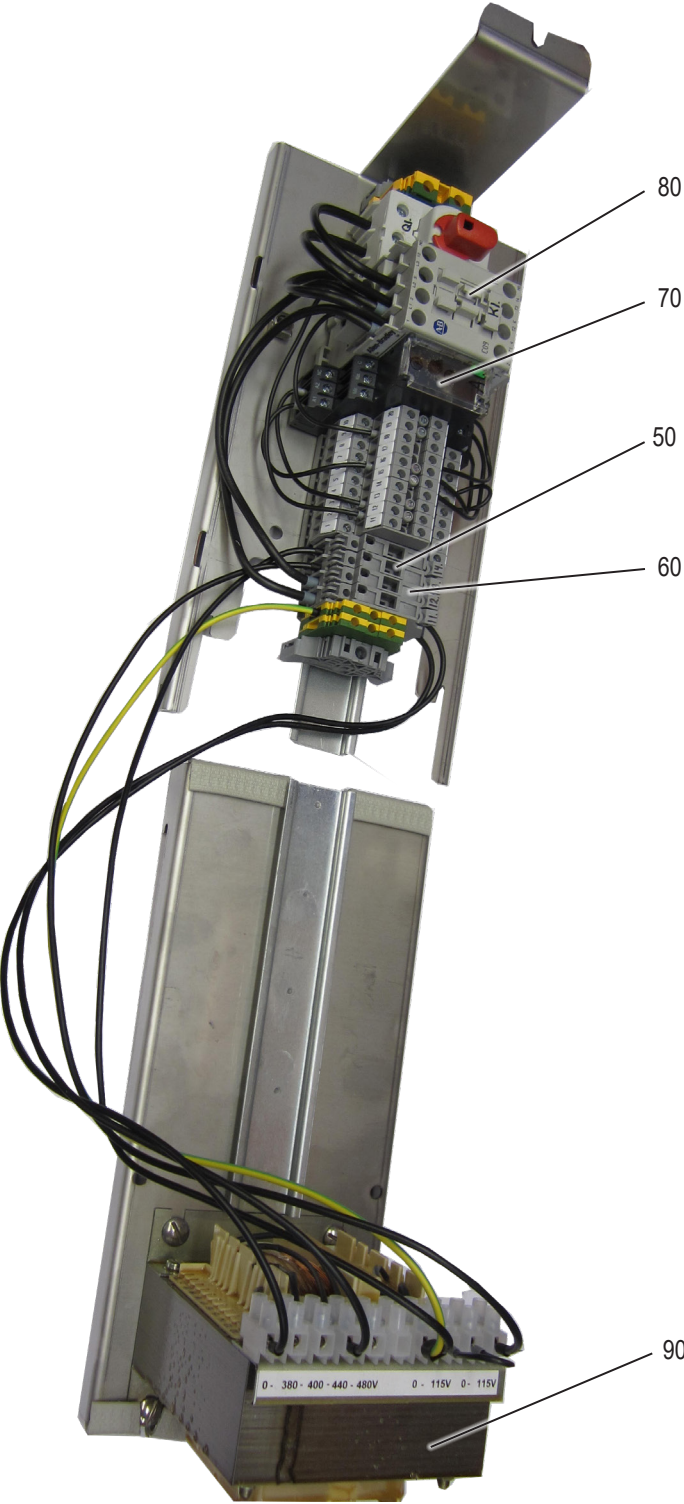
ID	Code	Type	Voltage	Description
Lid				
10	3603976	40, 60		Lid
10	3603979	80, 100		Lid
20	3023937			Knob

40=40l, 60=60l, 80=80l, 100=100l



ID	Code	Type	Voltage	Description
<b>Water supply</b>				
30	3604356			Tap
40	3604737			Swivel spout

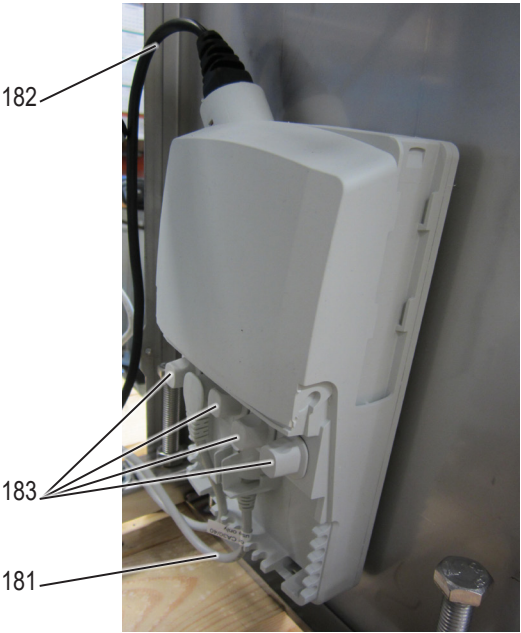
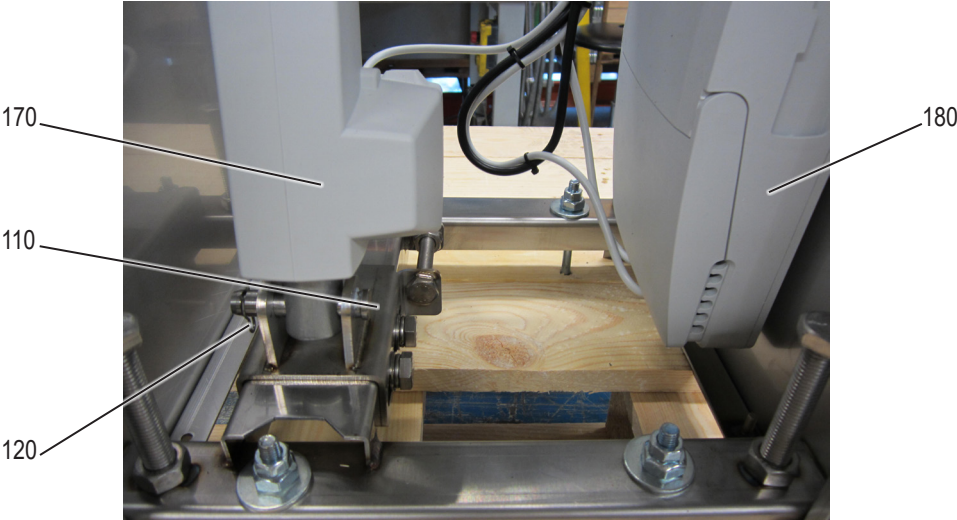
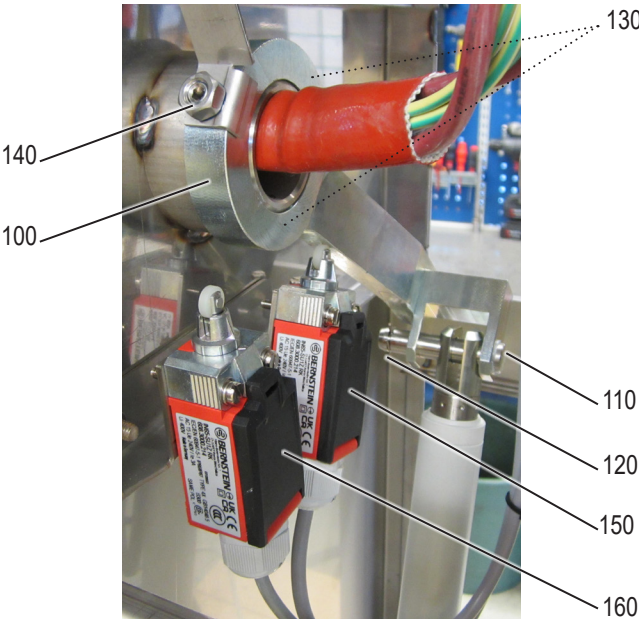
40=40l, 60=60l, 80=80l, 100=100l





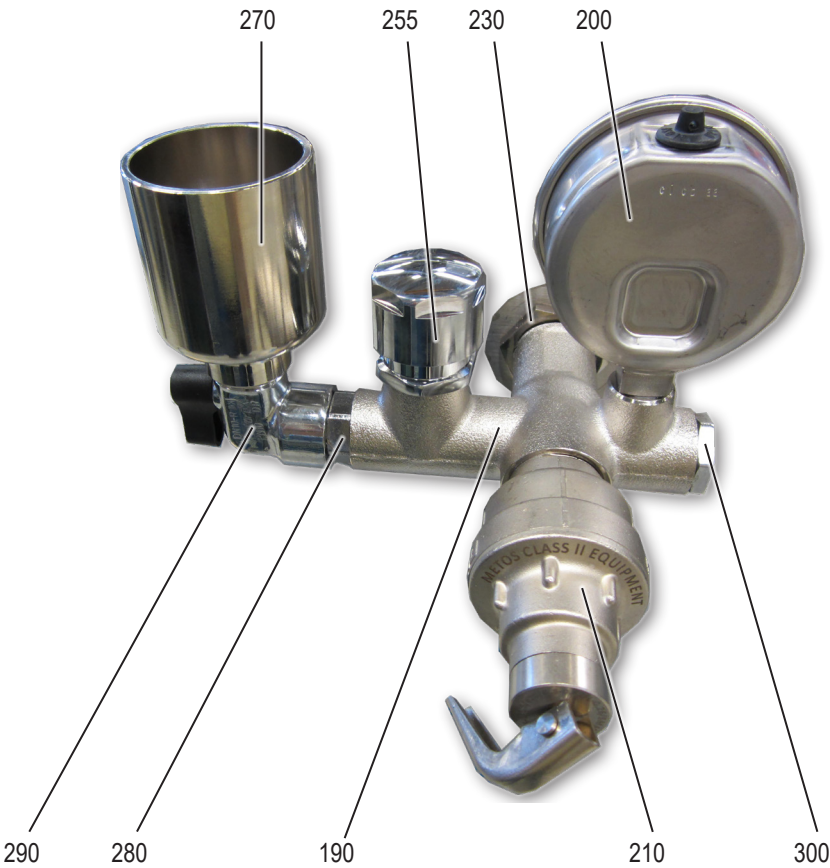
ID	Code	Type	Voltage	Description
<b>Main switch panel</b>				
50	3916537			Fuse 2A/250V 5x20
60	3912197			Fuse terminal
70	3908521			Water level relay (A1)
80	3438748			Contactor (K1)
90	3740060			Transformer

40=40l, 60=60l, 80=80l, 100=100l



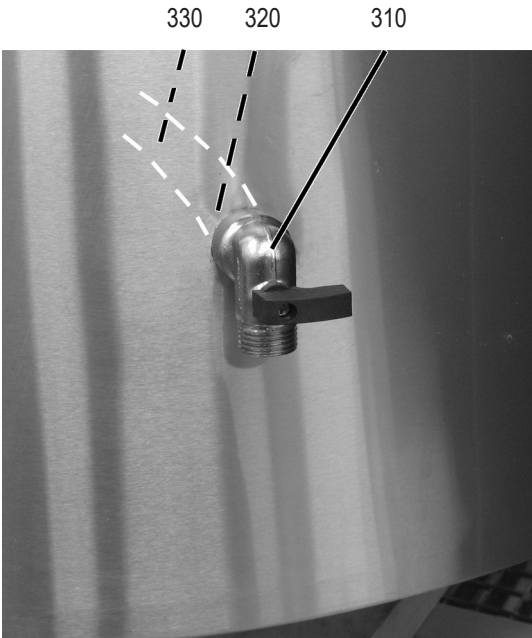
ID	Code	Type	Voltage	Description
<b>Main switch panel</b>				
100	3603238			Tilting arm
110	3601067			Shaft
120	3640143			Cotter pin
130	3603247			Stop screw
140	3603247			Stop screw
150	3916104			Limit switch (S1)
160	3916104			Limit switch (S2)
170	3922869			Tilting motor
180	3922872			Tilting control unit
181	3922878			Control cable for tilting control unit
182	3922040			Supply cable for tilting control unit
183	3921527			Blind plug for tilting control unit.

40=40l, 60=60l, 80=80l, 100=100l



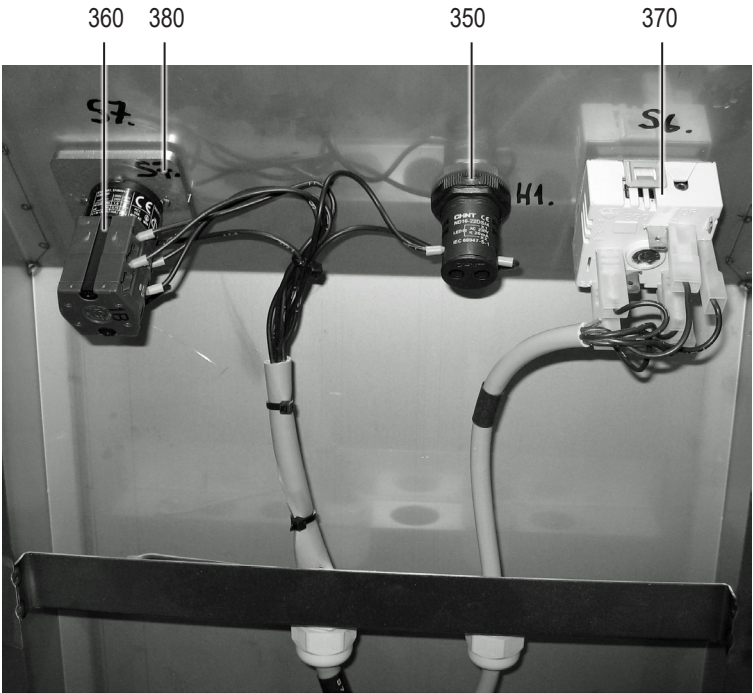
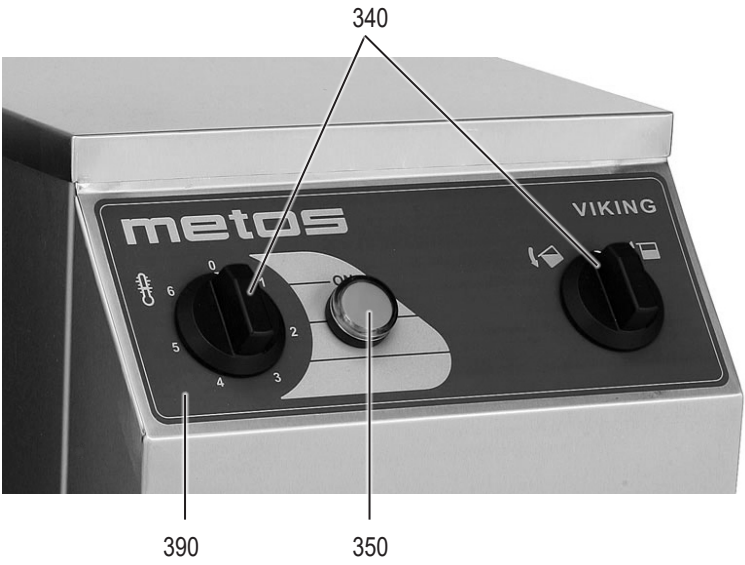
ID	Code	Type	Voltage	Description
<b>Safety block</b>				
190	3920948			Distribution block
200	3582822			Pressure gauge
210	3601405			Safety valve
230	3601473			Locking nut R3/4"
255	K421060			Suction protection
270	K215320			Water inlet funnel
280	K445920			Double nipple R1/2"
290	K422750			Corner valve
300	3193262			Plug 1/2"

40=40l, 60=60l, 80=80l, 100=100l



ID	Code	Type	Voltage	Description
<b>Control valve</b>				
310	K422750			Corner valve
320	3018486			Coupling
330	3602078			Metal hose

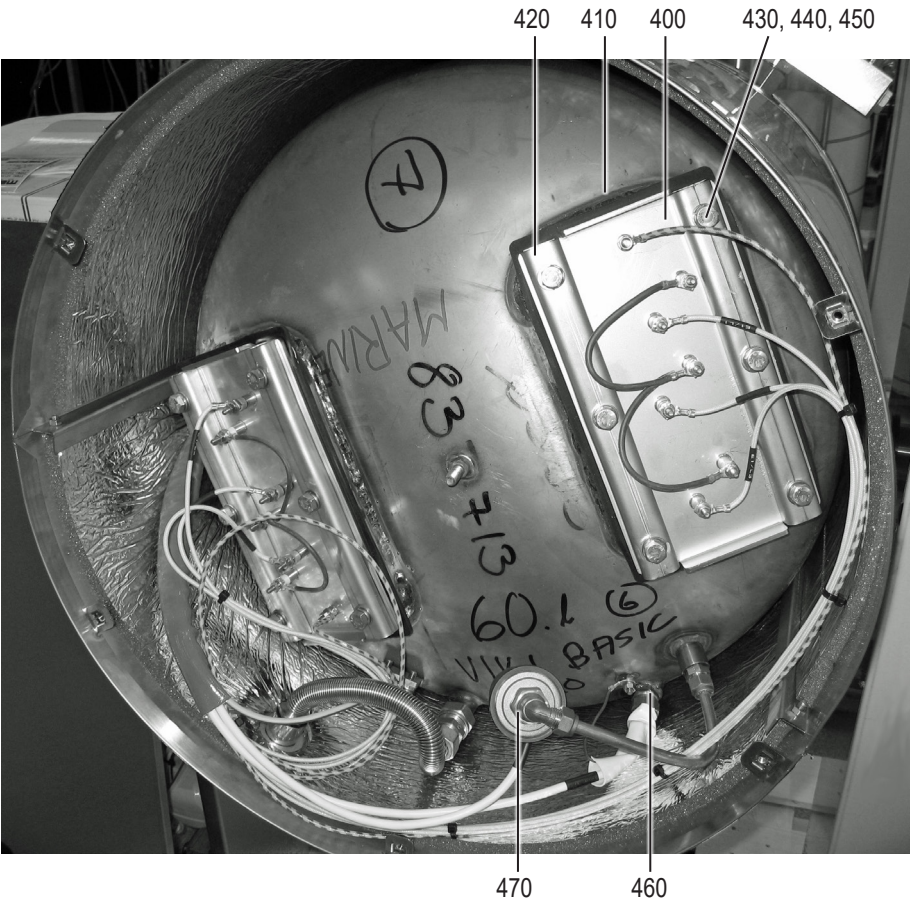
40=40l, 60=60l, 80=80l, 100=100l





ID	Code	Type	Voltage	Description
<b>Control box</b>				
340	3493234			Knob, black
350	3659109			Pilot lamp, green (H1)
360	3604050			Tilting switch (S7)
370	3016217			Power regulator (S6)
380	3215163			Gasket
390	3604031			Panel overlay

40=40l, 60=60l, 80=80l, 100=100l



ID	Code	Type	Voltage	Description
<b>Kettle body</b>				
400	3740021	40	K, L, O	Heating element 4,5 kW (E1, E2)
400	3740021	60	K, L	Heating element 4,5 kW (E1)
400	3601346	60	K, L	Heating element 6,0 kW (E2)
400	3601346	60	O	Heating element 6,0 kW (E1, E2)
400	3601346	80	K, L, O	Heating element 6,0 kW (E1, E2)
400	3601347	100	K, L, O	Heating element 8,0 kW (E1, E2)
400	3740055	40	M	Heating element 4,5 kW (E1, E2)
400	3740055	60	M	Heating element 4,5 kW (E1)
400	3740056	60	M	Heating element 6,0 kW (E2)
400	3740056	80	M	Heating element 6,0 kW (E1, E2)
400	3740057	100	M	Heating element 8,0 kW (E1, E2)
410	3601207			Heating element gasket
420	3601208			Fastening
430	3029907			Screw M8x30
440	3021739			Washer M8
450	3021129			Spring washer M8
460	3601732			Water level probe (B1)
470	3485402			Pressure switch (A2)

40=40l, 60=60l, 80=80l, 100=100l

K=3/PE~400V 50Hz, L=3/PE~415V 50Hz, M=3/PE~440V 60Hz, O=3/PE~480V 60Hz

## 8. Technical specifications

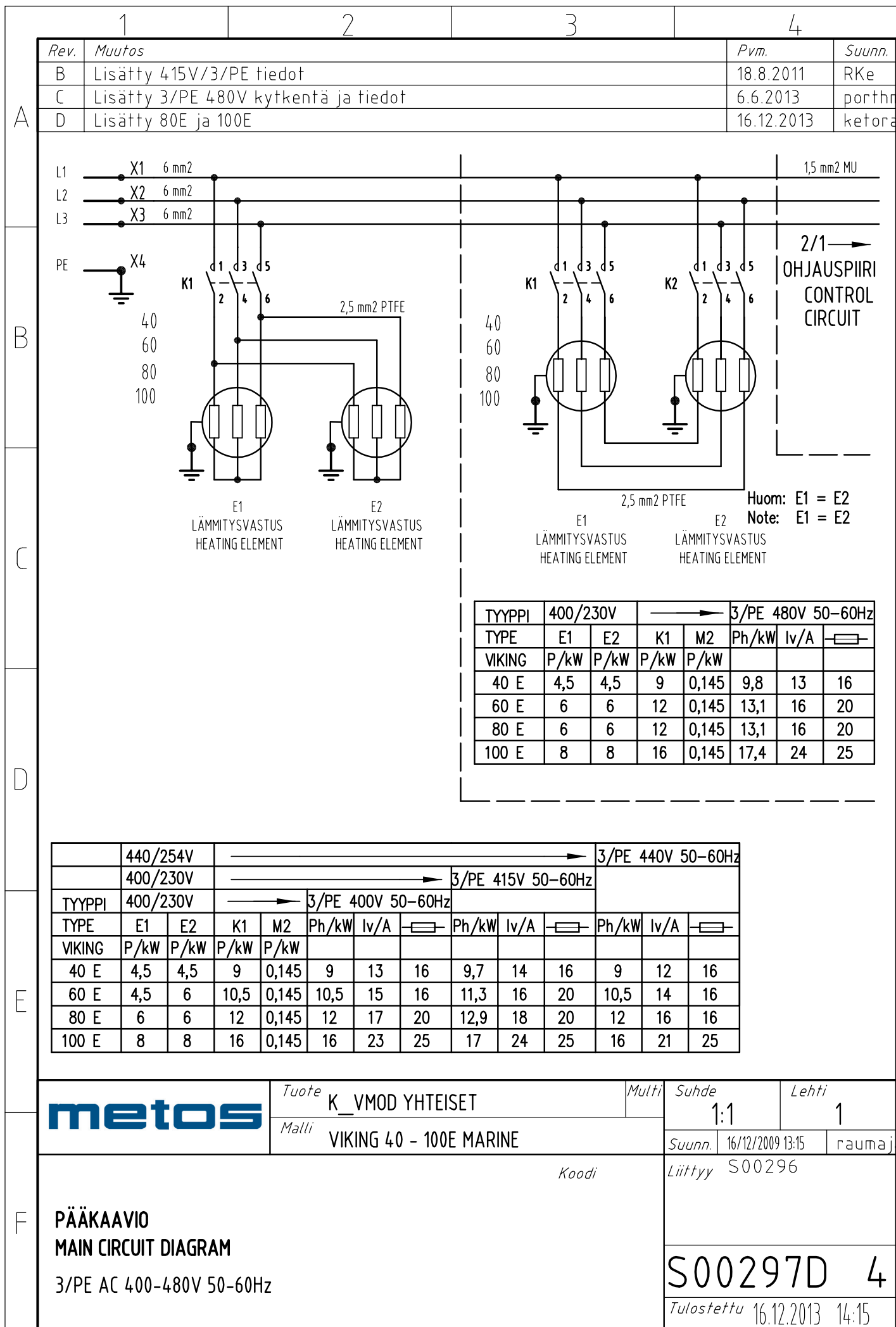
Main Circuit Diagram S00297 D4, Viking 40-100E Marine

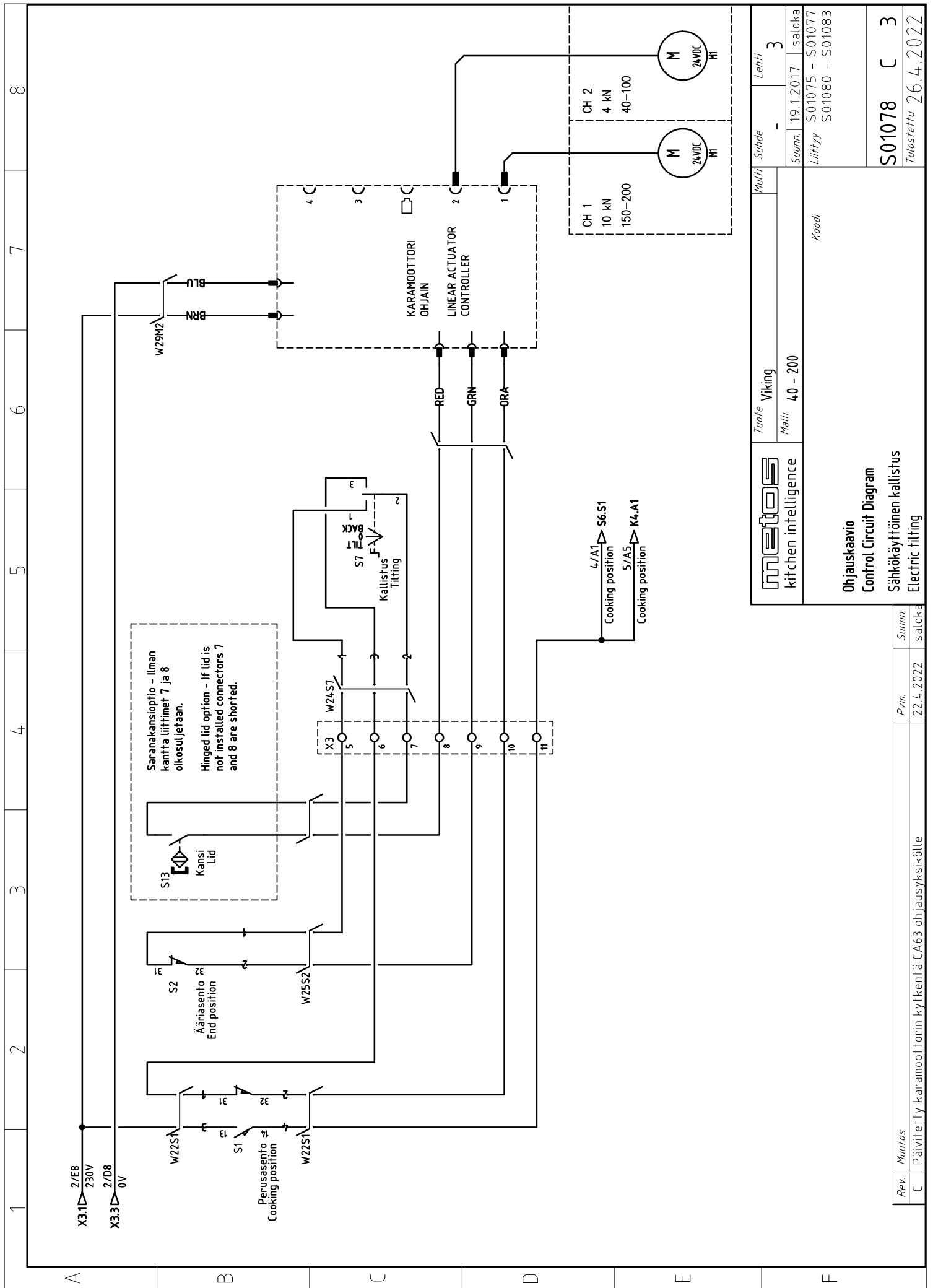
Control Circuit Diagram S01078 C3

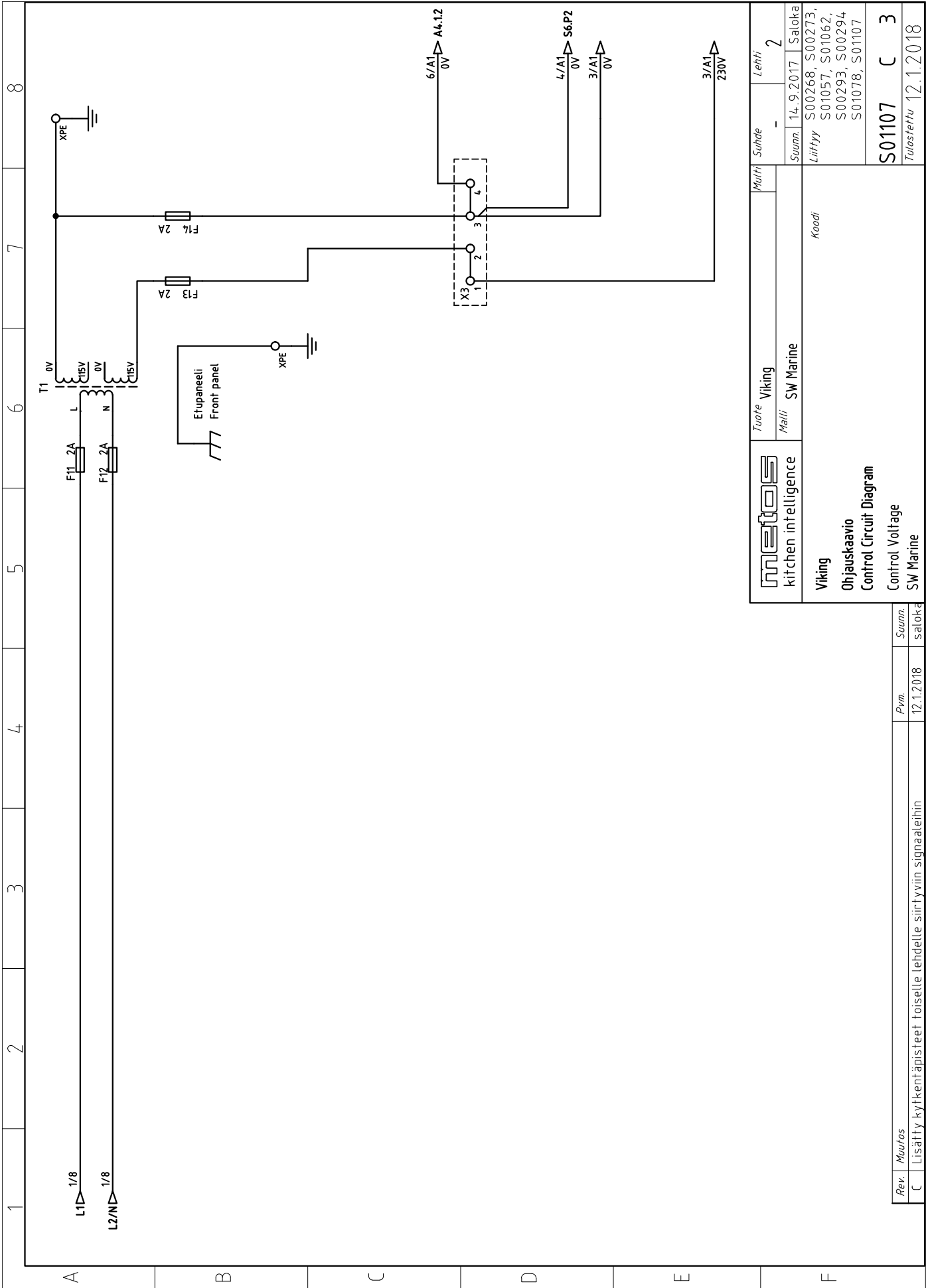
Control Circuit Diagram S01107 C3

Control Circuit Diagram S01108 B3

Installation Drawing / Electrical L00144 B3



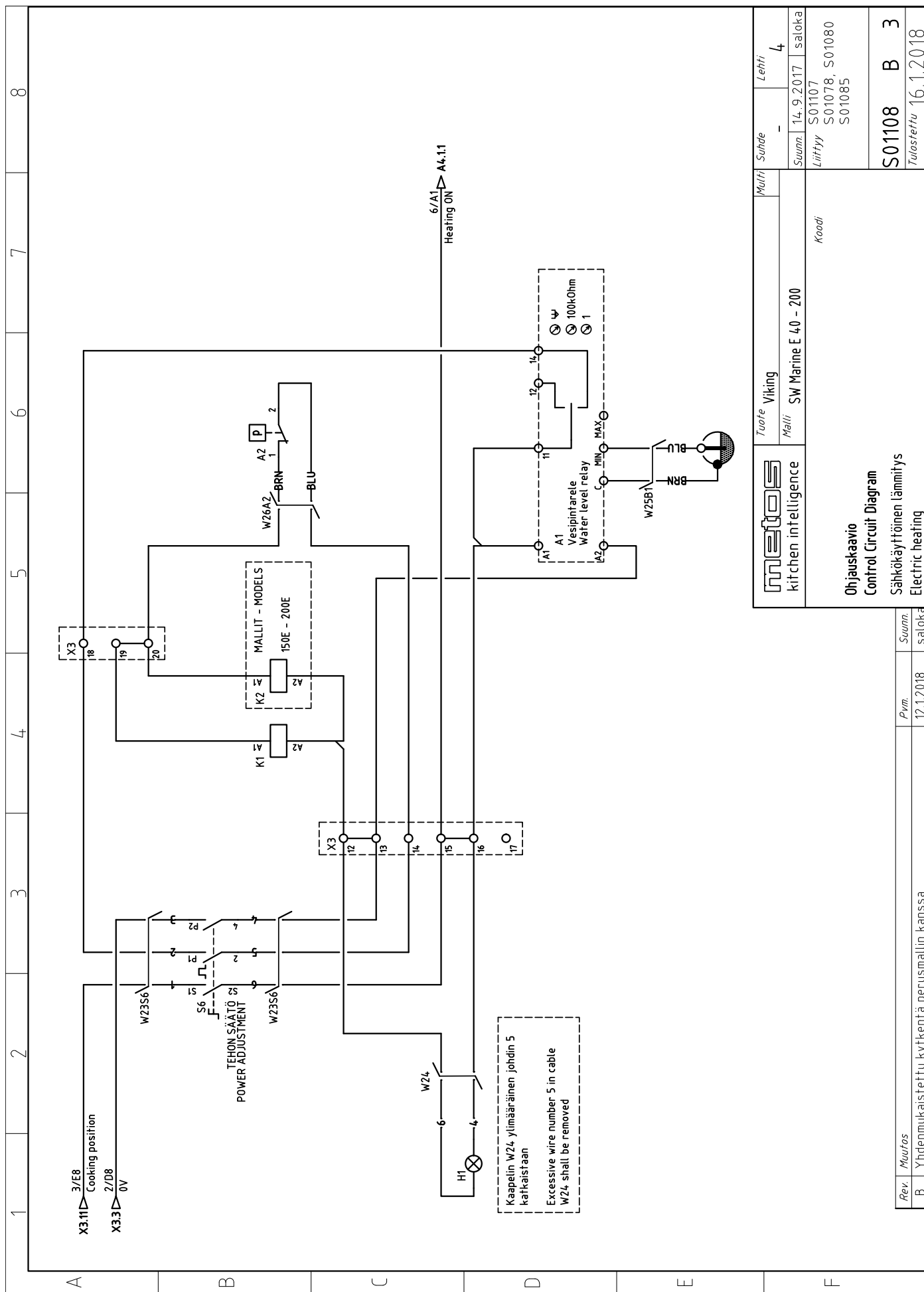





<b>notes</b> kitchen intelligence  <b>Viking</b> Ohjauskaavio Control Circuit Diagram Control Voltage SW Marine	<i>Tuote</i> Viking <i>Malli</i> SW Marine	<i>Multi</i>	<i>Suhde</i> -	<i>Lehti</i> 2
	<i>Suunn.</i> 14.9.2017 Saloka <i>Liittyy</i> S00268, S00273, S01057, S01062, S00293, S00294, S01078, S01107			
<b>S01107 C 3</b>				<i>Tulostettu</i> 12.1.2018

<i>Rev.</i> Muutos	<i>Pvm.</i> 12.1.2018	<i>Suunn.</i> saloka
C Lisätyt kytkentäpiirustet toiselle lehdelle siirtyviin signaaleihin		

Control Circuit Diagram S01107 C3



 kitchen intelligence		Tuote Viking		Multi	Suhde	Lehti
		Malli				
		SW Marine E 40 - 200				
		Koodi				
		Suunn. 14.9.2017 saloka Liittyy S01107 S01078, S01080 S01085				
		S01108 B 3				
		Tulostettu 16.12.2018				

Ohjauskaavio

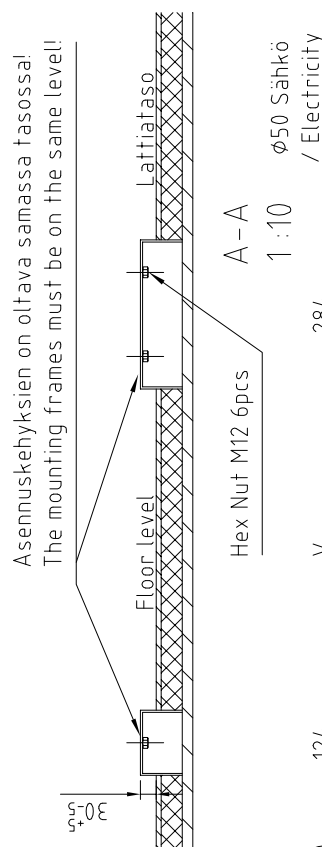
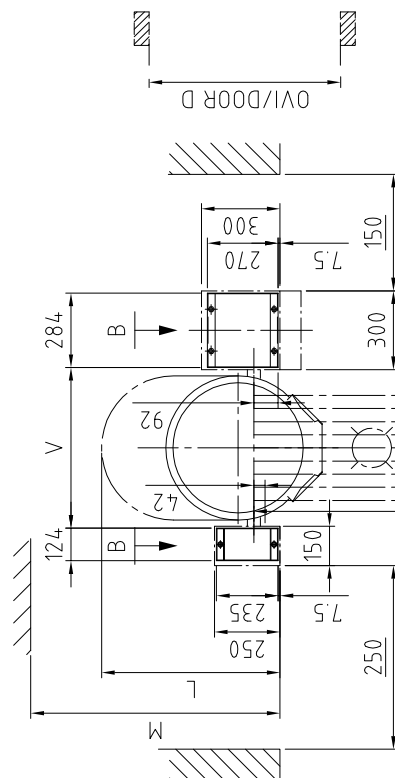
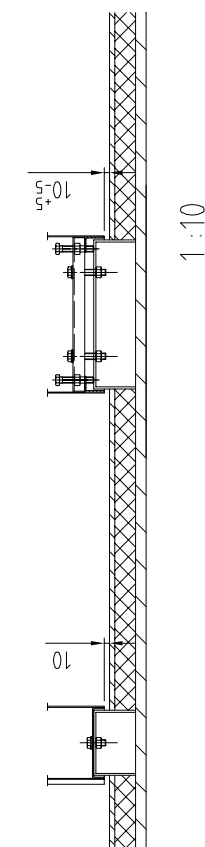
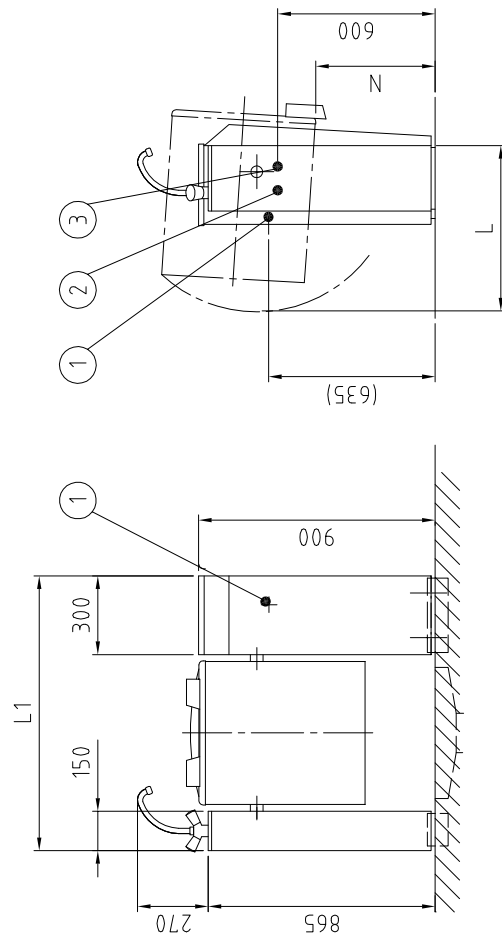
Control Circuit Diagram

Sähkökäyttöinen lämmitys

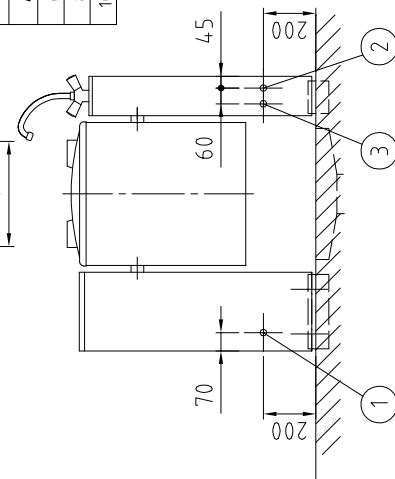
Electric heating

Control Circuit Diagram S01108 B3





	L1	M	L	T	D	N	V
40E	104.7	900	630	400	730	455	613
60E	104.7	104.0	630	400	730	455	613
80E	115.4	1080	710	500	785	405	720
100E	115.4	1080	710	500	785	405	720



Asennuskehyykset eivät kuulu toimitukseen.

The mounting frames are not included in the delivery.

metos

<i>Tuote</i>	VIKING 40 - 100E SW MARINE
<i>Produkt</i>	K_V_4 MOD PATA
<i>Product</i>	

Vaihtoehtoinen sähkön ja veden tuonti jalkalevyjen takapinnan Ø25 mm läpivientireikien kautta

Alternative routing of electricity and water trough  
Ø25 mm holes in the rear plates of the pillars.

Suhde	1:20
Skala	
Scale	

Suunn.	27.05.2009	RKE
--------	------------	-----

L00144B 3

*Tulostettu* 05.12.2013

Item	Type	Specification
Overall dimensions incl. support pillar WxDxH	40,60	1047x730x900/1070 mm
Overall dimensions incl. support pillar WxDxH	80, 100	1154x785x900/1070 mm
Support pillar dimensions LxDxH		150x250x865 mm
Distance needed behind the kettle	40, 60	730 mm
Distance needed behind the kettle	80, 100	785 mm
Tilting height from outer shell to floor	40,60	455 mm
Tilting height from outer shell to floor	80, 100	419 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	546
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	117 kg
Weight with package	60	127 kg
Weight with package	80	132 kg
Weight with package	100	147 kg
Weight	40	92 kg
Weight	60	102 kg
Weight	80	117 kg
Weight	100	132 kg
Transport volume	40,60	1,32 m3
Transport volume		1,45 m3
Electricity connections		see Wiring diagram
Water connections		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)

40=40 l, 60=60 l, 80=80 l, 100=100 l

Valmistajan nimi / Tillverkarens namn / Manufacturer's name

**METOS OY AB**

Osoite / Adress / Address

**04220 KERAVALA  
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 Viking Basic/Combi**  
**Mallit/ Modeller/ Models: 40, 60, 80, 100, 150, 200**

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 B + D**

- Cat I: 40 – 60 sähkö/el/electric
- Cat II: 80 – 200 sähkö/el/electric

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 61000-6-1:2019, EN 61000-6-3:2007**  
**EN 60204-1:2006, EN 13445:1...5:2014**

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 suunnitelmataarkastustodistus ja laatuvarmistusta 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 052-23 + Quality system (Module D)**  
**Inspecta Tarkastus Oy, Helsinki, Finland**  
**0424**

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

**Tero Kähärä Metos Oy Ab, Ahjonkaare, 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 9.5.2023**

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



**Hannu Ahola – Director of Business Unit**



**Risto Koskelainen – R&D Manager**



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