

metos

STEAMER

MARVELT

Type: E1

Installation and Operation Manual



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MG4222860, MG4222861

SISÄLLYSLUETTELO

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1. General

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

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

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

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

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

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

1.1. Symbols used in the manual



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



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

2. Safety Instructions

2.1. General

The appliance is CE marked, which means that it complies with the requirements of the EU machinery directive with regard to product safety.

Product safety means that the design of the appliance will prevent personal injury or damage to property.



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.



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



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. Changing the settings and adjustments



Technical adjustments to the appliance must be performed by a qualified and well trained person.

2.3. Safety instructions in the event of malfunction



In case of a serious emergency, all functions of the appliance must be stopped by turning the mains switch to the OFF position. In case the reason for using the stop switch is a serious malfunction jeopardizing safety at work, contact an authorized service provider immediately.

2.4. Disposal of the appliance

Once the appliance has reached the end of its useful life, it must be disposed of in compliance with local rules and regulations. The appliance may contain substances/materials which potentially have an adverse impact on the environment as well as recyclable materials. The best way of dealing with such substances is to dispose of them through a proper waste company.

2.5. Other prohibitions (dangerous methods and procedures)



Deliberate disregard of safety devices is prohibited, as it jeopardizes safe work in the kitchen. The manufacturer does not take responsibility for damage caused by deliberate use of a defective appliance, disregard of the safety precautions by modifying the designed operation of the appliance, or neglect of the technical condition, maintenance or service of the appliance.

3. Operation instructions



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

3.1. General

3.1.1. Intended use of the appliance

Metos Marvel T is a steamer for cooking, warming up processed and convenience food and defrosting frozen food with/without pressure.



USE OF THE APPLIANCE FOR OTHER PURPOSES THAN STATED ABOVE IS PROHIBITED.

The manufacturer of the appliance takes no responsibility for situations that might occur if warnings and instructions in this manual are neglected.

3.1.2. Function principle

The steamer comprises one steam generator, one cooking chamber, accessory equipment and safety devices. The device has a stand option with 2x7 GN guide rails.

The steam generator is producing saturated steam using electric heating elements.



The steam is led through the control valve into the cooking chamber where the steam condenses on the cold surface of the foodstuff giving away its heat of vaporization. The temperature of the food rises and the condensed steam goes through the condenser to the drain.

The temperature of the chamber is set within the range of 40-120°C and the cooking time within the range of 1sec. - 99h 59min 59 sec.

3.2. Before use

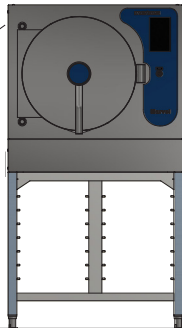
3.2.1. Preparations

Set the time, date and language (see section 4 "Adjustment instructions").

3.3. Use

**In order to avoid burns:**

- Notice that the top cover and the chamber door gets hot during long time operation.
- Beware of discharging steam and the hot surface of the inside of the door when opening the chamber door
- Use heat protective gloves when handling hot pans and look out for the condensate generated on the pans with lid.
- Due to raw material composition of certain foodstuffs, for example pasta, very strong after boiling (foaming) may appear even after the chamber door has been opened! Special caution should be taken when preparing this kind of products. In such cases, wait a moment before opening the door, although pressure in the chamber has already come down.
- It is recommended to first open the door ajar.



WARNING: Containers containing liquids or food that becomes fluid after cooking should not be placed at a height beyond which the user has no direct view. Risk of burns!

3.3.1. Buttons on the control touch screen



Cooking time. Push the button to set the desired cooking time. If time cooking is selected, the cooking ends after set time.



Cooking temperature. Push the button to set the desired cooking temperature.



Core temperature. For core temperature cooking, push the core temperature button. If core temperature cooking is selected, cooking ends when the target core temperature is reached.



Cooking. Push the button to start cooking.



Favorites. Push the button to choose a favorite cooking program.



Programs. Push the button to choose a program for cooking or edit / add programs. In order to edit / add programs you need to log on with an access code.



Settings. Push the settings to enter the settings page. Log on with an access code and language settings are examples of what you can do from the settings page. When logged on with an access code, you have more options available.



Power. Push the button to go to standby. Standby is an energy saving mode.



Home. On any page, push the button to go to the main view.



Help. On any page, push the button to get help about the page.



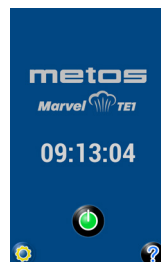
Skip. By pressing the button, the rinsing of the steam generator can be bypassed. However, bypassing is not recommended.

3.3.2. Start

Connect the appliance to the mains, open the feed water tap.

Push the power button  when the appliance is in stand-by mode. The appliance starts and fills the steam generator if needed and warms up. In stand-by mode the touch screen will turn off after a certain time. By touching the screen it will turn on again showing the stand-by page.

By pushing the settings button  the settings can be altered, see "Adjustment instructions".



The blue circle segment shows how the preparation is proceeding.

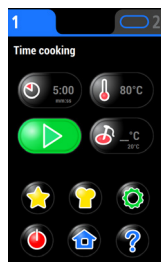
You can return to standby by pushing the power button .



When the appliance is ready for use the main view appears on the screen.

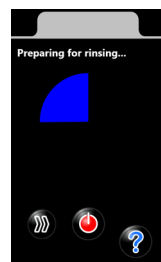
Screen lock can be used in all displays where help-button is available:

Click  to show help. Keep  pressed to lock the screen. To unlock, keep  pressed.



Rinsing the steam generator

When the start button  is pressed while the appliance is in standby mode, the appliance may ask you (if certain conditions are met) to rinse the steamer. The rinse can be skipped by pressing the  button, in which case the request will be repeated the next time it is started. Flushing is highly recommended. The rinsing takes about 10 minutes, during which the steam generator is emptied and water is drained through it.



If necessary, the rinsing interval can be adjusted to prevent the accumulation of lime and other slag in the boiler and its heating elements.

Possible error situations and messages at start up

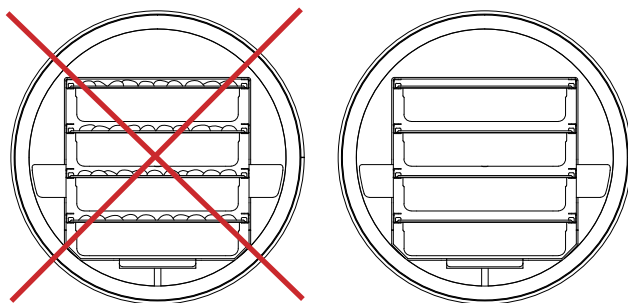
-  Water tap closed.
-> Make sure that the feed water tap is open.
- Advice to carry out a safety valve test.
-> See "Regular maintenance. You can also reset this notification and continue without carrying out the test.

3.3.3. Cooking



Place the foodstuff into perforated pans or if you wish to retain the cooking juice use non-perforated pans. Place ready meals on grids and cover them with lids to avoid excessive moisture absorption.

Pans should be placed on the runners clearly apart leaving sufficient distance in between for steam passage.



Loading the chamber



Opening and closing the door



Door locked



Door unlocked

Closing the door

1. Close the door by pushing the handle.



Close the door slowly if the chamber is hot.

2. Turn the handle down when the door is fully closed.

Opening the door

1. Turn the handle to horizontal position.
2. Push the handle.
3. Pull the door open.
4. If does not open, push the handle until you hear a "click".
5. Pull the door open.



Open the door carefully when the chamber is hot!. Beware of hot surfaces and steam coming from the chamber!



Make sure the door is properly open before placing or removing containers from the chamber!



Do not push the door open with the help of a container!

Timed cooking

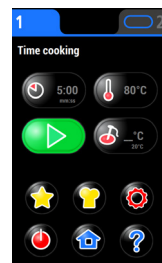
1. Set the cooking time.

- Push  and set the time using the number buttons.

Push the OK  -button to confirm. (for details see "Setting the cooking time and temperature").

2. Set the chamber temperature.

- Push  and set the temperature using the number buttons. Push the OK  -button to confirm. (for details see "Setting the cooking time and temperature").



The temperatures can also be set using the short-cut buttons:

 -sets the pressure to 0,5 bar and the temp. to 110°C.

 -sets the pressure to 1 bar and the temp. to 120°C.

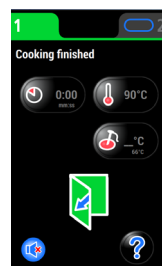
3. Place the products in the chamber according to the instructions.

4. Start the cooking by pushing the  -button. If the door is open the screen shows an indication that the door should be closed .

5. The process starts and the screen shows the remaining cooking time (the timer starts when the set temperature has been reached).

6. When the cooking time has elapsed and possible pressure dropped a ready-signal is heard. Mute the signal by opening the door or by pushing .

7. Remove the products from the chamber.



Open the door carefully. Beware of hot surfaces and steam coming from the chamber.



The cooking can be paused by pushing the  -button. In this case the door can be opened (after the pressure has dropped). Push  to continue cooking. The cooking can also be stopped by pushing the  -button.

Cooking using the core temperature probe (option)

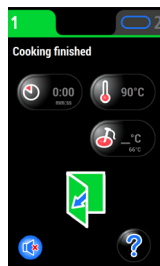
- Set the core temperature.
 - Push  and set the temperature using the number buttons. Push the OK  -button to confirm. (for details see "Setting the cooking time and temperature").
- Set the chamber temperature.
 - Push  and set the temperature using the number buttons. Push the OK  -button to confirm. (for details see "Setting the cooking time and temperature").
- Place the products in the chamber according to the instructions.
- Place the temperature probe in the product.
- Start the cooking by pushing the  -button. If the door is open the screen shows an indication that the door should be closed .
- The process starts.
- When the products core temperature has been reached and possible pressure dropped a ready-signal is heard. Mute the signal by opening the door or by pushing .
- Remove the products from the chamber.



Open the door carefully. Beware of hot surfaces and steam coming from the chamber.

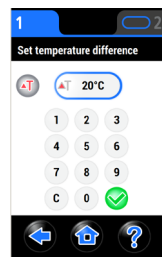
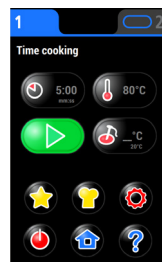


The cooking can be paused by pushing the  -button. In this case the door can be opened (after the pressure has dropped). Push  to continue cooking. The cooking can also be stopped by pushing the  -button.



Cooking using Delta-T temperature

- Set the core temperature.
 - Push  and set the temperature using the number buttons. Push the OK  -button to confirm. (for details see "Setting the cooking time and temperature").
- Set the Delta-T value.
 - Push  and then , after this the Delta-T value can be set using the number buttons. Push the OK  -button to confirm. (for details see "Setting the cooking time and temperature").
- Place the products in the chamber according to the instructions.
- Start the cooking by pushing the  -button. If the door is open the screen shows an indication that the door should be closed .
- The process starts.
- When the products core temperature has been reached and possible pressure dropped a ready-signal is heard. Mute the signal by opening the door or by pushing .
- Remove the products from the chamber.



Open the door carefully. Beware of hot surfaces and steam coming from the chamber.



The cooking can be paused by pushing the  -button. In this case the door can be opened (after the pressure has dropped). Push  to continue cooking. The cooking can also be stopped by pushing the .

Using an existing cooking program



If cooking programs have not yet been created, proceed to section 3.3.6.

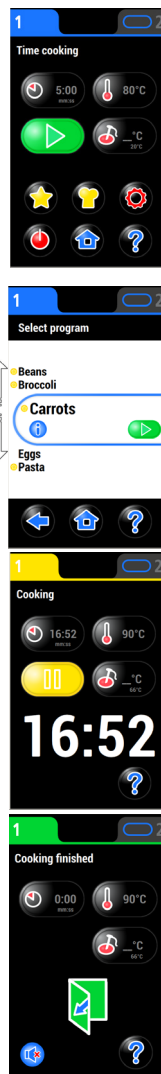
1. Select a cooking program by pushing the -button whereupon the screen will show the program page. Browse programs by scrolling the page with your finger (For details, see "Selecting an existing cooking program").
2. Place the products in the chamber according to the instructions.
3. Start the program by pushing the -button. If the door is open the screen shows an indication that the door should be closed .
4. The program starts.
5. When the program is done and possible pressure dropped a ready-signal is heard. Mute the signal by opening the door or by pushing .
6. Remove the products from the chamber.



Open the door carefully. Beware of hot surfaces and steam coming from the chamber.



The cooking can be paused by pushing the -button. In this case the door can be opened (after the pressure has dropped). Push to continue cooking. The cooking can also be stopped by pushing the -button.

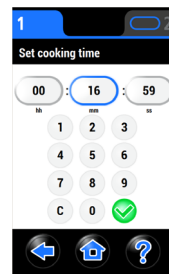


3.3.4. Setting the cooking time and temperature

Setting the cooking time

Push the time button  whereupon the the screen will show the set cooking time page. Push the desired field (hours, minutes or seconds) and set the time using the number buttons. Push the OK -button to confirm the setting.

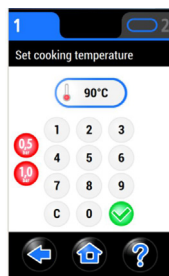
Push the back button  to return without confirming (cancel).



Setting the cooking temperature

Push the temperature button  whereupon the the screen will show the page for setting the temperature. Set the temperature using the number buttons. Push the OK -button to confirm.

Push the back button  to return without confirming (cancel).



The temperatures can also be set using the short-cut buttons:



-sets the pressure to 0,5 bar and the temp. to 110°C.

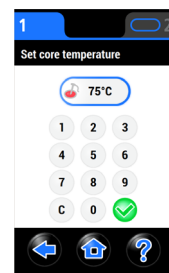


-sets the pressure to 1 bar and the temp. to 120°C.

Setting the core temperature

Push the core temperature probe button  whereupon the the screen will show the page for setting the core temperature. Set the temperature using the number buttons. Push the OK -button to confirm.

Push the back button  to return without confirming (cancel).



If the product temperature probe is activated, the cooking time is switched off.

Setting the Delta-T -temperature

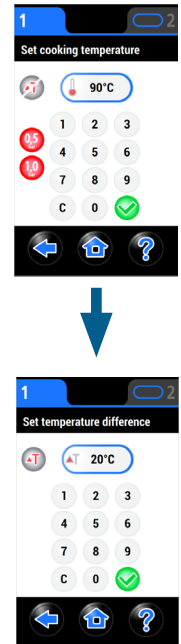
If the core temperature probe is in use you can set either the

- Chamber temperature
- or the
- Delta-T temperature. This constantly keeps the chamber temperature the delta-T value higher than the set core temperature.

When the core temperature probe is in use, push the  button whereupon the screen will show the page for setting the temperature. Push , now the Delta-T value can be set. Set the desired delta-T temperature with the number buttons.

Push the OK  -button to confirm.

Push the back button  to return without confirming (cancel).

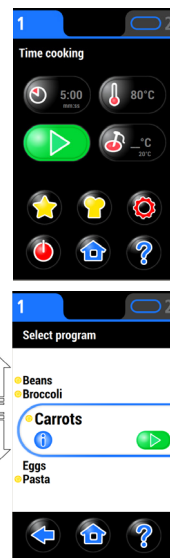


3.3.5. Selecting an existing cooking program

Select an existing cooking program by pushing the -button whereupon the screen will show the program page. Browse programs by scrolling the page with your finger. A star icon  before the program name indicates that the program is linked to one or more favorite pages.

- Push the info button  to show the detailed program information.
- Push the play button  to start the program.

Push the back button  to return without confirming (cancel).



3.3.6. Editing an existing cooking program or saving a new program

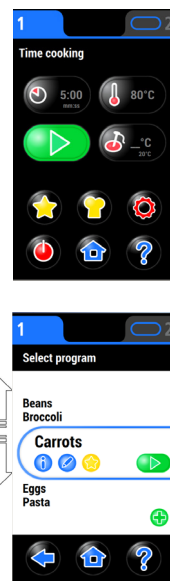


These measures requires logging in.

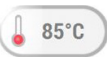
Select an existing cooking program by pushing the -button whereupon the screen will show the program page. Browse programs by scrolling the page with your finger. A star icon  before the program name indicates that the program is linked to one or more favorite pages.

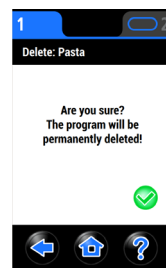
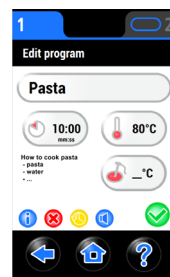
- Push the info button  to show the detailed program information.
- Push the edit button  to edit program settings and detailed information.
- Push the star button  to open up the select favorite pages page where the program can be added to one or more favorite pages. (See also "Selecting favorite pages").
- Push the play button  to start the program.
- Push the add button  to add a new program.

Push the back button  to return without confirming (cancel).



Editing a program

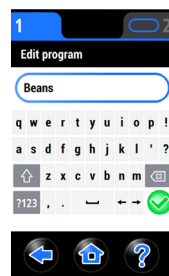
- Select the program according to the previous.
 - Push the program name frame to edit the program name, in this example **Pasta**. (See also "Adding/editing a program name").
 - Push the cooking time button  to change the cooking time.
 - Push the cooking temperature button  to change the cooking temperature.
 - Push the core temperature button  to change the core temperature.
 - Push the info button  to edit the detailed program information. (See also "Editing program information").
 - Push the delete button  to delete the program. Confirm by pushing the -button.
 - Push the history button  to select the settings from one of the last five cooking processes for the program.
 - Push the sound button  -to select a ready-signal for the program. (See also "Selecting the ready signal").
 - Push the OK -button to confirm the changes.
- Push the back button  to return without confirming (cancel).



Adding/editing a program name

- Push the  -button toggle between lowercase  , uppercase  and uppercase hold letters. .
- Push the backspace button  to erase characters.
- Push the special characters button  for numbers and special characters.
- Push the OK  -button to confirm.

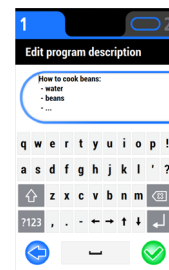
Push the back button  to return without confirming (cancel).



Editing program information

- Push the  -button toggle between lowercase  , uppercase  and uppercase hold letters. .
- Push the backspace button  to erase characters.
- Push the special characters button  for numbers and special characters.
- Push the OK  -button to confirm.

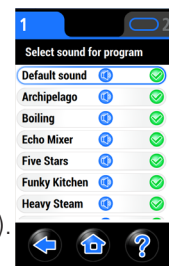
Push the back button  to return without confirming (cancel).



Selecting the ready signal

- Brows the sounds scrolling the page with your finger.
- Push the sound button  to listen to the sound.
- Push the OK  -button to confirm.

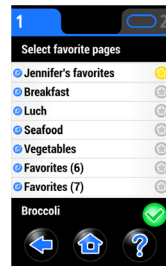
Push the back button  to return without confirming (cancel).



Selecting favorite pages

- Push the edit button  to edit the favorite page name.
- Push the star button   to select or unselect the program for the favorite page.
- Push the OK  -button to confirm.

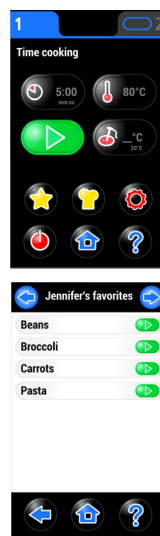
Push the back button  to return without confirming (cancel).



You can use, for example, the weekday as names of pages or give the pages names according to the type of food, for example, "pasta", "potato" etc.

Using the favorites

- Push . If there are more than one favorites page you can move from page to page using  and  -buttons
- Push the play button  to start the program.
- Push the back button  to return without starting the program (cancel).



3.3.7. Cooking instructions

Raw material	Container	Container		Total charge /compartm.		Cooking time (min)		
		charge (kg)	water (l)	(kg)	(l)	0 bar	0,5 bar	1 bar
Fresh vegetables								
Potato whole	GN 1/1-100mm p)	7		21		40	20-25	15-20
Carrot whole	GN 1/1-100mm p)	4		12		30	15	10
Cauliflower	GN 1/1-100mm p)	3		9		10-12	5-6	4-5
Broccoli	GN 1/1-100mm p)	3		9		10-12	5-6	3-4
Cabbage	GN 1/1- 65mm p)	1		4		12	5-6	3-4
Beetroot	GN 1/1-100mm p)	4		12		60-80	40-50	30-40
Frozen vegetables								
Peas	GN 1/1- 65mm p)	3		12		4-5	2-3	1-2
Mixed vegetables	GN 1/1- 65mm p)	3		12		4	2-3	1-2
Bruss. sprouts	GN 1/1- 65mm p)	3		12		5	2-3	1-2
Canned vegetables								
Potato	GN 1/1- 65mm p)	4		12		4	2	1
Liha								
Chicken á 1 kg	GN 1/1-100mm p)	7		14		150	80	50
Meat cubes	GN 1/1- 65mm l)	3		12		90	30-40	25
Pork meat	GN 1/1- 65mm p)	12		12		3h30m		
	GN 1/1-100mm							
Tongue	GN 1/1-100mm p)	7		21		95	60	
Turkey	GN 1/1-100mm p)	7		7		60		
Fish								
Fish (cod fish)	GN 1/1- 65mm l)	4-5		16-20		15-20	7-10	5-10
Fish whole á 1 kg	GN 1/1- 65mm l)	4		16		15 15		
Rainbow trout á 1 kg	GN 1/1- 65mm p)	4		12		8		
Eggs								
Soft	GN 1/1- 65mm p)	3,5		14		10	6	
Hard boiled	GN 1/1- 65mm p)	3,5		14		13	8-9	
Cereals								
Rice long grd	GN 1/1-100mm	1,5	3	4,6	9	15-16	12	8
Macaroni	GN 1/1-100mm	2	10	6	30	15-16	10	8
Spaghetti	GN 1/1-100mm	2	10	6	30	15-16	10	8
Oat meal porridge	GN 1/1-100mm	2,5	8	7,5	24	7 5		

p) = perforated l) = with lid

Raw material	Container	Container		Total charge		Cooking time		
		charge	water	/compartm.		(min)		
		(kg)	(l)	(kg)	(l)	0 bar	0,5 bar	1 bar
Fruit								
Pealed oranges	GN 1/1- 65mm p)	5		20		2		1
Apple 1/2	GN 1/1- 65mm p)	3		12		15	7	4

Using low temperature 65-120°C range

Raw material	Container	Container		Total charge		Cooking time		
		charge	water	/compartm.		(min)		
		(kg)	(l)	(kg)	(l)	75°C	80°C	90°C
Fish								
Whole á 1 kg	GN 1/1- 65mm p)	3-4		12-16		50	35	20
Frozen vegetables								
Broccoli	GN 1/1-100mm p)	3		9		25		18-20

p) = perforated l) = with lid

3.4. After use

3.4.1. General

Stainless steel is composed of iron, chrome and nickel. Together with oxygen from the air chrome forms an oxide layer on the stainless steel surface which protects from corrosion.

Most often the corrosion attacks in areas where food, water, salt, crust etc. stays for a longer period without being removed. Most damaging are acid food residue and salt.



It is advisable to refrain from using salt when cooking in perforated containers in the steamer.

3.4.2. Cleaning

Daily cleaning

A soft brush, cloth, drier and a water hose or hand-shower are recommended as cleaning instruments. A slightly alkalic cleansing agent (pH 8-10) is most suitable.



Scrubbing cleansing tools and agents, strong acids, chloric agents or salt should not be used as they violate the preservative coating.



The use of a pressure cleaning jet is strictly forbidden.



Cleaning the touch screen (display) and the panel overlay with steam is prohibited!

1. Unlock the runners by lifting them off the hooks.



2. Clean the inner surfaces with a brush or cloth moistened with cleansing agent.
3. Wipe off the removed dirt.
4. Rinse the chamber with lukewarm water.

5. Dry the chamber using a cloth.
6. Clean the outer surfaces and door seal/seals with a cloth.
7. Clean the runners with a brush. Put them back into the chamber.
8. Leave the doors ajar for ventilation and to avoid unnecessary flattening of the door seals.

3.4.3. Periodic measures

Safety valve

Every 3 months the screen will show a prompt to perform the safety valve check:

- Push the  button open the safety valve test page.
- Start the test by pushing , the appliance heats up.
- When the appliance has warmed up,  appears on the page. Keep the button pressed until the safety valve opens.



A loud noise is heard when the safety valve opens.



4. Adjustment instructions

4.1. Changing the settings

The following settings can be altered without logging:

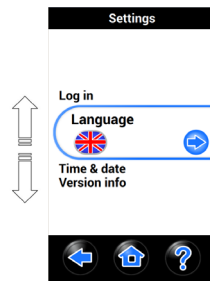
- Language
- Time and date
- Software version (info)



Browse the settings by scrolling with your finger.

Confirm your choice by pushing the -button.

Push the back button  to return without confirming (cancel).



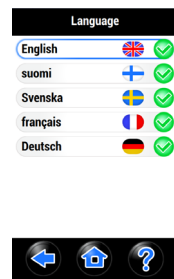
4.1.1. Language

Select "Language" in accordance with the above.

Select the desired language by pushing the language bar



Push the back button  to return without confirming (cancel).



4.1.2. Date and time

Select "time&date", see "Changing the settings"

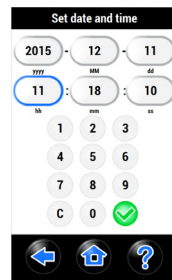
10 Push the date and time buttons to set the corresponding value.

1 2 Set the date and time with the number buttons.

C With the "C" button you can clear a set value.

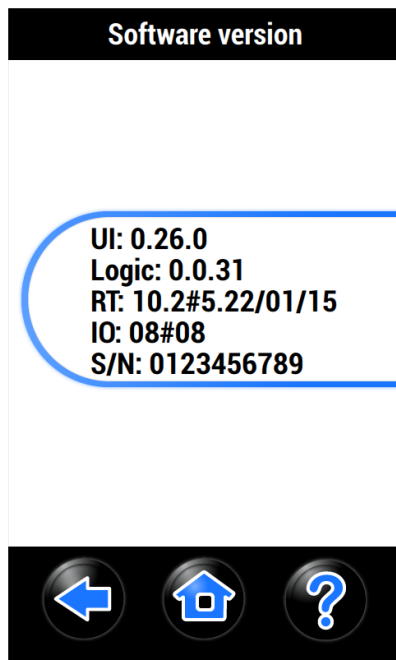
Push the OK  -button to confirm the changes.

Push the back button  to return without confirming (cancel).



4.1.3. Program version

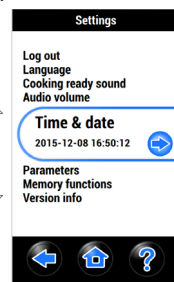
This page contains information that a service technician might ask for when a service call is made.



4.2. Changing the settings, "master chef"

The following settings can be modified when logged in as cook "Master chef". Default log in code for Master chef is "1234" and it can be changed with the parameters.

- Log out
- Language
- Cooking ready sound
 - Selects the sound played after finished cooking.
- Audio volume
 - Sets the volume of all played sounds, range 0 - 10 (no sound - loud)
- Time and date
- Parameters
 - Parameters are used to change Marvel's configurable features.
- Memory functions
 - Memory functions are used with a USB memory stick.
- Version info



Browse the settings by scrolling with your finger.

Confirm your choice by pushing the  -button.

Push the back button  to return without confirming (cancel).

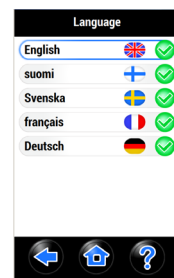
4.2.1. Language

Select "Language" in accordance with the above.

Select the desired language by pushing the language bar



Push the back button  to return without confirming (cancel).

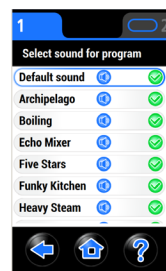


4.2.2. Selecting the cooking ready sound

Select the sound that will be played finishing cooking without using cooking program. This selection is used also as default sound for cooking programs, if the program's cooking ready sound selection is "Default sound".

- Brows the sounds scrolling the page with your finger.
- Push the sound button  to listen to the sound.
- Push the OK  -button to confirm.

Push the back button  to return without confirming (cancel).



4.2.3. Date and time

Select "time&date", see "Changing the settings"

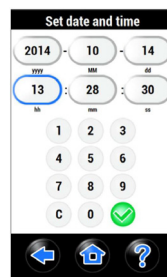
 Push the date and time buttons to set the corresponding value.

  Set the date and time with the number buttons.

 With the "C" button you can clear a set value.

Push the OK  -button to confirm the changes.

Push the back button  to return without confirming (cancel).



4.2.4. Parameters

Some of Marvel's features can be changed by parameters. You have to log in as "Master chef" to change the parameters.

Each parameter has the following features:

104: Master chef login time out	600 s
15 s - 36000 s (600 s)	

Parameters	
102: Master chef login time out enabled (Yes)	Yes
104: Master chef login time out 15 s - 30000 s (600 s)	600 s
105: Master chef login code (first digit non zero) 1 - 99999 (1234)	1234
121: Automatic screen lock activation time (0-disabled) 0 min - 1440 min (0 min)	0 min
131: Sound volume 0 - 10 (5)	5
132: Default cooking ready sound (Boiling)	Boiling
201: Time to keep boilers warm after last cooking 2 min - 1800 min (120 min)	120 min

104: Parameter number

Master chef login time out: Parameter description, currently only in English.

15s - 36000s (600s). Minimum value - maximum value (factory setting).

600s: The parameters current value.

To change a numeric parameter value, click on it.

-> the numeric keyboard appears:

Clicking a non numeric parameter does not show a keyboard, but simply toggles the parameter to next value, like:

103: Master chef login time out enabled (Yes)	Yes
103: Master chef login time out enabled (Yes)	No

Master chef login time out

600

1 2 3

4 5 6

7 8 9

C 0 ✓

← 🏠 ?

Description of parameters visible when logged as "Master chef"

103 Master chef login time out enabled

104 Master chef login time out

After master chef has logged in automatic log out will happen, if time out elapses without user touching the screen. Parameter 104 sets the automatic log out time for master chef. Master chef login time out can be disabled/enabled by parameter 103.

105 Master chef login code(first digit non zero)**min: 1, max: 999999, def: 1234**

This parameter sets the master chef's login code. Login codes of other users are available only for authorized persons.

121 Automatic screen lock activation time**min: 0, max: 1440, def: 0, unit: min**

Parameter 121 sets the time for automatic screen lock. If the user does not touch the screen for a time longer than the set value, the screen will be locked automatically. With parameter value 0 the automatic screen lock is disabled. Despite of this parameter value the screen can be locked by keeping the help button pressed for a longer time. When the screen is locked, the unlock button is shown. The screen can be unlocked by keeping the unlock button pressed for a longer time.

**131 Sound volume****min: 0, max: 10, def: 5****132 Default cooking ready sound**

Parameter 131 sets the volume for all played sounds. Parameter 132 selects the tune played at the end of cooking. Both these parameters can as well be set in the settings menu without using the parameters menu. The tune set by parameter 132 will be used only with cooking started directly from the chamber display, without using cooking programs. In the cooking programs it is possible to set a specific cook ready sound for each cooking program.

201 Chamber idle time out. Time to**min: 2, max: 1800, def: 120, unit: min**

If Marvel is showing chamber screen and if time since end of last cooking exceeds the set value of this parameter, Marvel will switch off the boilers and show the start screen.

4.2.5. Memory functions

Insert USB memory

To use the memory functions, insert USB memory stick in the connector.



USB connector



The following memory functions are available when logged in as "Master chef"

- **Save programs to USB**
Saves all cooking programs to a USB memory. All the Cooking programs on the USB memory will be removed.
- **Load programs from USB**
Reads cooking programs from a USB memory. Old programs are not deleted. If programs with the same name are found the user will be asked, which one to keep.
- **Save HACCP to USB**
Saves all collected HACCP data from last 31 days to a USB memory. Data for each day is stored to separate file in CSV-format.
Example of a file name: FumaHACCP_2015-10-21.CSV



Browse the settings by scrolling with your finger.

Confirm your choice by pushing the -button.

Push the back button  to return without confirming (cancel).

4.2.6. Load cooking programs

When loading cooking programs from a USB memory and the USB memory contains at least one program with a name that already exists in Marvel.

Keep existing Keep the program you already have in Marvel and don't load the program from USB memory.

Use new program Load the program from USB memory and delete in Marvel the program with the same name.

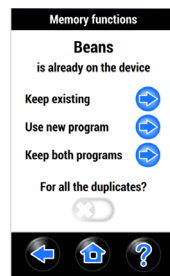
Keep both programs Keep both programs. A number, like "(1)" will be added to the end of the new program.



If you want to do decide separately for all the cooking programs with the same name.

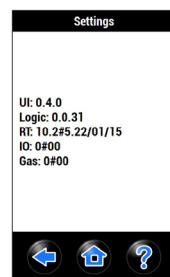


The same decision concerns all the remaining cooking programs with the same name.



4.2.7. Program version

This page contains information that a service technician might ask for when a service call is made.



5. Installation

5.1. General



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



The installation of this appliance must be carried out in the accordance with the manufacturers instructions and following local regulations. This installation manual must be used together with the installation drawing of the appliance.



THE CONNECTION OF THE APPLIANCE TO THE ELECTRICAL AND WATER SUPPLY MUST BE CARRIED OUT BY QUALIFIED PERSONS ONLY.

5.2. Moving the appliance to the installation site and unpacking

The best way to move the steamer is to keep it in its own package as long as possible while it also protects the steamer from outer damage. However, if it has to be removed from its packaging, the steamer must be lifted from the intermediate spacers of the stand during transfers, eg using wooden spacers.

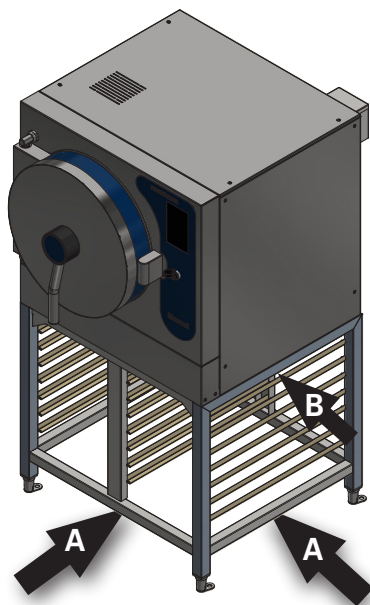


In order to ensure a safe moving without the packing base: when you choose the lifting points consider that the steamer has its main weight in the forepart.



The device can be lifted with a pump trolley from the lower bars (A) of the stand. If necessary, it is also possible to lift under the upper bar of the stand (B), eg with the help of lifting straps.

NOTE. DO NOT lift from the door or door handle. Lifting is only permitted at the points shown in the illustration.



5.2.1. Disposal of the package

In connection with unpacking, all packing material must be sorted and disposed of in accordance with local recycling regulations.

5.3. Positioning

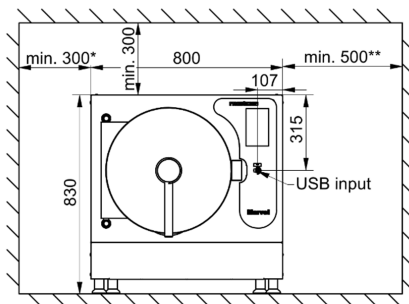
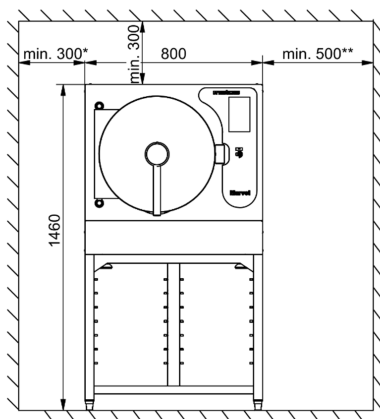


The installation is started by moving the steamer exactly to the right installation spot considering a possible floor drain. The distances needed are shown in the installation drawing. For servicing space is needed only in front and above the unit.

Thereafter the steamer is adjusted into a horizontal position by turning the adjustable legs.

For safety reasons, the device must only be installed on stands and worktops approved / manufactured by the manufacturer.

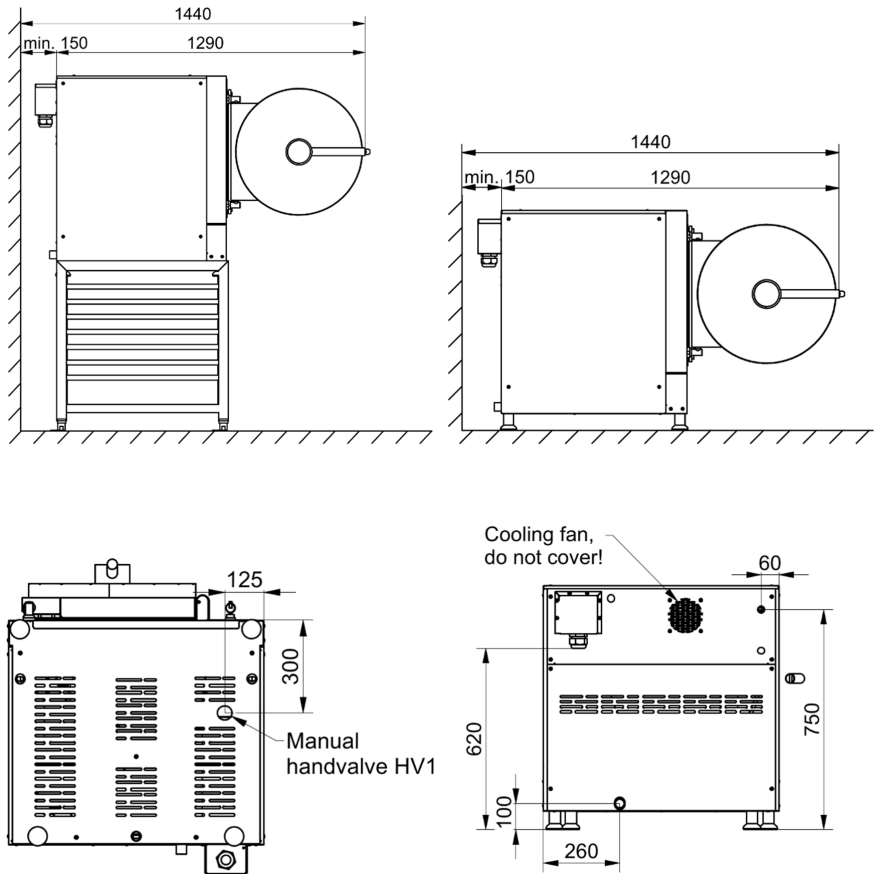
Installation drawings and recommended installation distances



*) Space reserved for opening the door

**) Space reserved for maintenance

NOTE: If the steamers are installed next to each other, the distance between them can be min. 0 mm but the right side plate of the unit being serviced must be able to be opened. When installing the cooker, the water hoses and the electric cable must therefore have an extra length of 1 m so that the appliance can be pulled out for maintenance. Another option is to disconnect the water hoses and electrical cable for the unit in the way and move the unit so that service can be performed on the other unit.



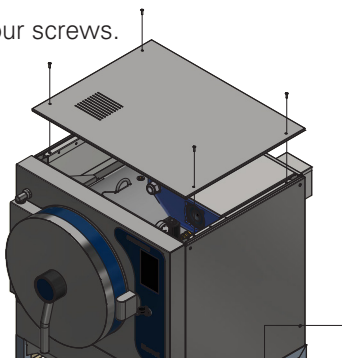
5.4. Electrical connection

Before making the connection to the mains, ensure that the voltage and frequency are as indicated on the appliance rating plate.

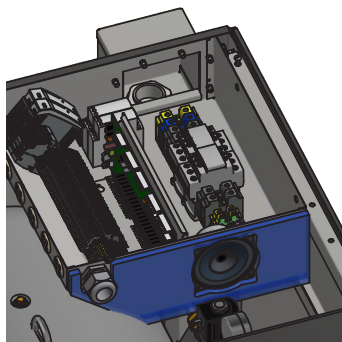
In order to make eventual future service easier and increase safety a mains switch must be installed near the appliance. This switch must disconnect the appliance completely from the electrical supply network.

The power supply cable pass-through to the electrical box is located at the top right of the back of the device.

- Open the roof panel, which is fastened with four screws.



- The electrical box is located in the right corner, the protective cover can be removed by pulling and lifting.
- Bring the mains supply cable through the sleeve into the electrical box.
- Connect the wires to the terminal block.
- Tighten the electrical box cable gland.



Leave the supply power cable at least 1 m "too long" so that the steamer can be moved during service.

5.5. Water connection and water and quality requirements

The unit is connected to cold water pipeline observing the rules of local waterworks.

For the connection the unit is equipped with R 1/2" outer thread, a mud separator and a back pressure valve.

- The steamer must be connected to the cold and warm water supply and, if fitted with a twin water connection option (T), also to the soft water supply.
- All water supply lines must be fitted with a one-way valve and a shut-off valve (not included in delivery).
- Before connection to the unit all water lines must be thoroughly rinsed from all loose particles.
- The water pressure range for optimum performance is 250 - 600 kPa.
- The minimum water pressure allowed for proper function of the unit is 250 kPa. If the pressure is lower, a pressure rise pump must be fitted by the customer.
- The minimum water flow rate in the steamer is 12 l/min. To ensure optimal operation of the unit, it is recommended cold water flow rate must be at least 20 l/min.
- All water connections are of size Ø15mm (R 1/2").
- The size of particles in the water must not exceed 15 µm.
- 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 60 mg/l.
- Maximum chlorine concentration allowed is 0,2 mg/l.
- The pH value of the water should be between 6,5 and 9,5.
- The water hardness should be less than 6 ° dH. Water hardness must not exceed 9 ° dH. If the hardness of the water is between 6-9 ° dH, it increases the need for cleaning the steam generator and shortens the lifespan of heating resistors.
- Unit damages caused by chloride, chlorine or pH values exceeding the stated limits are not covered by manufacturer warranty.

5.5.1. 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 function of the unit and avoid 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. A water softener is recommended when the water hardness exceeds 6 ° dH. Water hardness must not exceed 9 ° dH.

The optional twin water connection should be used if the water quality does not meet the above requirements and a water treatment appliance is used. The twin water connection reduces the consumption of treated water because raw water can be used for cleaning purposes and for preparing the food.

NOTE!

Several water treatment equipment will lower the flow of water. If the steamer is connected to a water treatment unit, care must be taken to ensure sufficient flow after the water treatment unit. Particular attention is needed when using a twin water connection. The branching of the water must always be done before the water treatment unit.

5.6. Sewerage

At the back of the device there is a Ø 32 mm drainage pipe from which the condensate is led to the floor drain, however absolutely above the water surface (for details see "Technical specification / installation drawings).

5.6.1. Test run



Besides the live electrical parts also look out for possible moving mechanisms in the lower part of the appliance if there is a need for testing during installation and the guards or cover plates are detached.



In order to avoid burns:

- Beware of the hot surfaces of the steam generator and the steam distribution piping.
- Use heat protective gloves when checking the function of the safety valve.
- Look out for steam discharging from the condenser when checking the function of the safety valve.

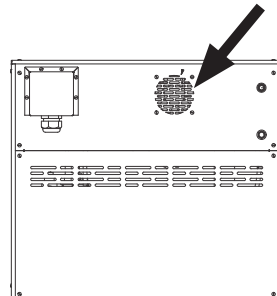
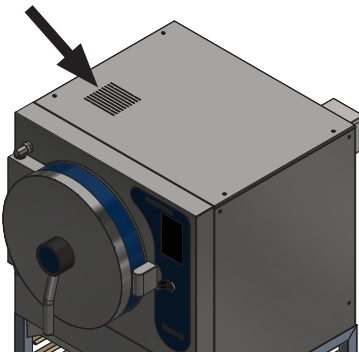
Connect the appliance to the mains and check

- The function of the touch screen.
- That water goes into the steam generator.
- That the heating is switched on and that it is switched off again when the set temperature has been reached.
- That the safety valve works.



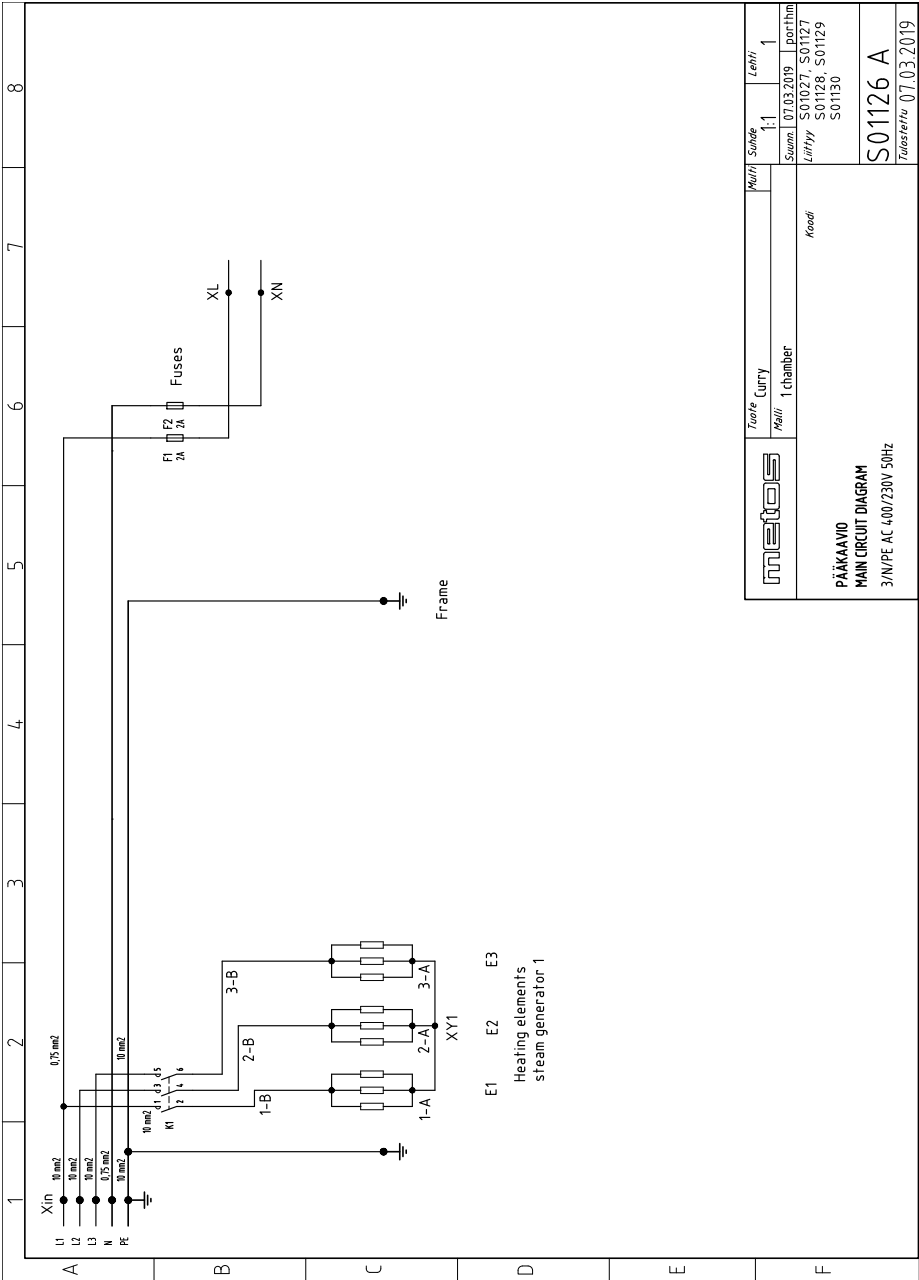
The device is equipped with a cooling fan.

DO NOT COVER the fan (on the back of the unit) or the exhaust vents on the roof of the unit.



6. Technical information

Main circuit diagram



	Model
	E1
Chambers	1
Capacity	4xGN1/1-65 / 3xGN1/1-100
Temperature range	40°C ... 120°C
Connected power (kW)	20,7
Fuse (A)	32
Voltage (V)	400/230
Number of phases	3NPE
Frequency (Hz)	50
Starting current (A)	30
Enclosure class	X5
Water connection	1/2" outer thread, 250...600 kP, min flow 0,2 l/s
Water consumption	
Sewerage	Ø 32 mm pipe
Width (mm) without stand	805
Width (mm) with stand	805
Height (mm) without stand	835
Height (mm) with stand	1465
Depth (mm) without stand	985
Depth (mm) with stand	985
Gross weight (kg) without stand	170
Gross weight (kg) with stand	211
Net weight (kg) without stand	150
Net weight (kg) with stand	175



The crossed-out wheeled bin means that within the European Union the product must be taken to separate collection at the product end-of life. This applies to your device but also to any enhancements marked with this symbol. Do not dispose of these products as unsorted municipal waste.



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 Keittokaappi / Kokskåp / Steamer METOS MARVEL Mallit / Modeller / Models: TE1 / HP Varustepaketit / Optionspaket / Option sets: T, S3

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

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 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 1717:2001, Regulation (EC) No 1935/2004

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

Quality system Inspecta Tarkastus Oy, Helsinki, Finland 0424	Product design examination certificate DA-19-114255 DEKRA Industrial Oy, Vantaa, Finland 0875
--	--

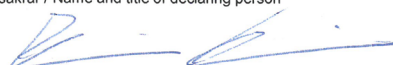
Alla mainittu henkilö on valtuutettu kokoamaan teknisen tiedoston / Nedan nämnda person är bemyndigad att sammanställa den tekniska dokumentfilen / The person mentioned below is authorized to compile the technical file

Tero Kähärä Metos Oy Ab, 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 31.12.2022
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

Manufacturer's name METOS OY AB
Address 04220 KERAVA FINLAND

Declare that the following product

Name, type or model Steamer METOS MARVEL Models: TE1 / HP Option sets: T, S3
--

is in conformity with the essential requirements and other relevant requirements of the UK legislation. The products are in conformity with the relevant UK legislation

Electrical Equipment (Safety) Regulations 2016, Machinery (Safety) Regulations 2008: Great Britain, The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012, Regulations: Waste Electrical and Electronic Equipment (WEEE), Pressure Equipment (Safety) Regulations 2016: Great Britain

furthermore declares that the following harmonized standards (or parts/clauses) have been used

BS EN ISO 12100:2010, BS EN 60204-1:2006, BS EN 13445:1...5:2014

and furthermore we declare that the following other standards (or parts/clauses) have been used

BS EN 1717:2001

According to **Pressure Equipment (Safety) Regulations 2016: Great Britain** (Updated 26 July 2022)

CE certification completed before 1 January 2023 can be used by manufacturers to declare existing product types as compliant with UKCA. Products must still bear UKCA marking. For ongoing production, they will need to undergo conformity assessment with a UK Approved Body once any of the relevant CE certification has expired, or after 5 years (31 December 2027). Referred CE Certification: Metos CE certification for Steamer METOS MARVEL. Dated 31.12.2022 Product design examination certificate and the notified body supervising the quality system (only pressure vessels), can be found in referred CE certification
--

The person mentioned below is authorized to compile the technical file

Tero Kähkölä Metos Oy Ab, Ahjonkaarre, 04220 Kerava, Finland

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 UK legislation

Place and date of issue KERAVA 31.12.2022
Name and title of declaring person  Hannu Ahola – Director of Business Unit
 Risto Koskelainen – R&D Manager

metos		Document type Review	Document ID DOC000866	Revision A	Page(s) 1(4)
Owner organization Metos Manufacturing		Created by	Date 2020-08-31	Status Ready	
Country FI	Department	Document title Installation/commissioning checklist for Metos pressure cooker		Approved by	
				Security level Confidential	

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Installation/commissioning checklist for Metos pressure cookers

To validate warranty enclosed checklist is to be completed and returned within 14 days from installation/commissioning. This document is to be completed individually for each Metos pressure cooker installation. Please send a copy or photos of this document (DOC000866, 4 pages) to email address: commissioning@metos.com

Customer information: *) Mandatory to fill in.

*Name:	
*Company:	
*Street:	
*ZIP code:	
*Country:	
Phone no.:	
*Email:	

*Pressure cooker serial no.:	
*Pressure cooker options:....	
*Commissioned by:	
*Commissioner's address: ...	
*Commissioner's email:	
Commissioner's phone no.: ..	
*Installation date:	DD – MM – YYYY

Installation meets the manufacturer's installation instructions: ☐ yes ☐ no

If the installation does not comply installation instruction values, customer and Metos have to be notified immediately about possible deviations.

We confirm the installation was done according to the attached installation checklist, the installation instructions and all national and local standards which ever may apply. The equipment was handed over free of defects. Operation and maintenance of the equipment was explained.

Sign/Date
Commissioner

Sign/Date
Customer

Owner organization
Metos Manufacturing

Created by

Date
2020-08-31

Status
Ready

Country Department
FI

Document title
**Installation/commissioning checklist
for Metos pressure cooker**

Approved by

Security level
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1. Physical installation:

Installation type: ☐ bolted to the floor
..... ☐ free standing

2. Electric connections

Measured voltages [V]:

L1-L2	L1-L3	L2-L3	L1-N	L2-N	L3-N	N-PE

.....

--

Breaker size/fuse rating [A]:

--

Measured amps per phase [A]: L1

--

 L2

--

 L3

--

(Full heating)

Pressure cooker connected to equipotential bonding: ☐ yes ☐ no
Indicated voltage on the rating plate corresponds with measured ☐ yes ☐ no
voltage:

3. Water connections

Cold/hot water supply equipped with non-return and shut-off valves: ☐ yes ☐ no
Cold-water dynamic pressure min. 250 kPa – max. 600 kPa;
(After any filters or other water treatment systems)
measured value:

--

 [kPa]
Max. chloride (CL⁻) < 60mg/l (if higher → deionization treatment): ☐ yes ☐ no
Max. chlorine (CL₂) < 0,2mg/l (if higher → carbon filter treatment): ☐ yes ☐ no
Ph between 6,5 – 9,5: ☐ yes ☐ no
Conductivity < 1000µS/cm: ☐ yes ☐ no
Water treatment system used: ☐ yes ☐ no
If yes, manufacturer/type:

--

Water total hardness calculated from calcium (lime) and magnesium rate.
Too low total hardness rate can cause corrosion < 0,5 d° if chloride rate is high.

4. Procedures after installation

Date and time (option) set and checked: ☐ yes ☐ no ☐ N/A
Safety valve test executed: ☐ yes ☐ no

5. Function test/commissioning:

All electrical connections and plugs are tight: ☐ yes ☐ no
All water connections tight and no leakages: ☐ yes ☐ no
All steam connections tight and no leakages: ☐ yes ☐ no



Document type

Review

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All standard functions operational: ☐ yes ☐ no
All additional functions/features operational (HACCP, hand shower etc.): ☐ yes ☐ no
Customer advised in daily cleaning routine: ☐ yes ☐ no
User/customer advised in preventative maintenance ☐ yes ☐ no
(safety valve test executed 4 times/year etc.):

Comments:

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Revision history

Revision	Page (P) Chapter (C)	Description	Date	Name/ Department
A	-	Original version	2020-09-07	



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