

Operating instructions

MEIKO TopLine

Cleaning and disinfection machine

Translation of the original operating instructions



Read operating instructions before using machine!



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1. Symbols


1.1 Warnings

Warning categories

Warnings are characterised by the following signal words depending on the type of danger:

- **Caution** warns against material damage.
- **Warning** warns against injury.
- **Danger** warns against risk to life.

Structure of the warnings

| | |
|-----------------------------------------------------------------------------------|-------------------------------------|
|  | Type and source of danger! |
| Signal word | ⇒ Measures to take to avoid danger. |

1.2 Other symbols

Instructions for operation

Structure of the operation instructions:

- ⇒ Introduction to operation.

Results, if required.

2. Safety instructions, warnings and dangers

- ⇒ Only use cleaning and disinfection machine according to instructions.
- ⇒ Only use the cleaning and disinfection machine in its original condition without independent changes and in a technically perfect condition.
- ⇒ The electrical safety of this machine is only ensured if it is connected to a properly grounded electrical system. It is very important to verify this fundamental safety feature. If in doubt, have the wiring checked by an electrician. The manufacturer cannot be held liable for damage caused due to the protective conductor being missing or disconnected (e.g. electric shock).
- ⇒ Do NOT place the cleaning and disinfection machine in a potentially explosive atmosphere or in areas subject to frost.
- ⇒ If the cleaning and disinfection machine is damaged or leaking, this may be dangerous and pose a safety hazard. Immediately decommission the cleaning and disinfection machine and inform the MEIKO service.
- ⇒ The water in the wash chamber and in the water container is NOT safe to drink.

- Take care when handling dosing agents (water softeners/rinsing aids and detergents). They are irritants substances. Observe the applicable safety regulations! Use safety glasses/goggles and protective gloves. Observe the manufacturer's safety instructions and safety data sheets when dealing with dosing agents.
- Do not stand or sit on the open wash chamber door. This could damage the cleaning and disinfection machine and cause injury.
- Retain the instructions for using the cleaning and disinfection machine in a legible condition in full.
- Make sure that the instructions are available to all persons who operate the cleaning and disinfection machine.
- Note instructions for accessories and integrated third-party products.
- Do not put any objects on the cleaning and disinfection machine.
- Note the assembly conditions (see 13 Technical data sheet).

2.1 Non-ionizing radiation

The cleaning and disinfection machine does not generate targeted non-ionizing radiation. For technical reasons, only the electric appliances emit non-ionizing radiation.

Outside the cleaning and disinfection machine, effects on active implants (e.g. pacemakers, defibrillators) can be excluded with great probability.

2.2 Staff training

- The responsibilities of the personnel must be clearly determined, reg. operation, maintenance and repair.
- Make sure that only trained and experienced staff operate the cleaning and disinfection machine.
- Personnel who have not been briefed or trained must not handle the cleaning and disinfection machine.
- Make sure that staff learning to use the cleaning and disinfection machine are supervised by a trained and experienced operator at all times.
- Clearly define the staff's responsibilities.
- Confirm training in writing.

| Staff | Experienced staff | Trained technicians | Authorized technicians and fitters (Medical Products Advisor) |
|---------------------------|-------------------|---------------------|---------------------------------------------------------------|
| Work | | | |
| Installation and assembly | | | ● |
| Setting in operation | | | ● |
| Operation, use | ● | ● | ● |
| Cleaning | ● | ● | ● |
| Check safety fittings | | ● | ● |
| Trouble shooting | | ● | ● |
| Remedy, mechanical | | ● | ● |
| Remedy, electrical | | | ● |
| Repair works | | | ● |

2.3 Electromagnetic compatibility

- MEIKO cleaning and disinfection units, built as per CISPR 11:2009, Section 5, are class A units.


The following applies to said units:

Important: this unit may cause radio frequency interference or may interfere with nearby devices when in operation. It may be necessary to take suitable remedial action, such as re-adjusting, re-aligning or shielding.

- MEIKO cleaning and disinfection units with additional network filter, built as per CISPR 11:2009, Section 5, are class B units. No further measures are required for said units.

2.4 Designation of the machine model

- Please provide the following information on any query and/or when ordering spare parts:

| | |
|-------------------------------------------------------------------------------------|-------|
| Type: | |
| SN: | |
|  : | |

Note

This information can be found on the plate on the electrical switch cabinet

3. Correct use

The cleaning and disinfection device is intended solely for use in a commercial environment. It is intended that the cleaning and disinfection device is only operated by qualified, trained personnel, older than 14 years of age (see chapter 2.2 Staff training).

The cleaning and disinfection device may only to be applied and used according to the purpose intended.

- Only use the cleaning and disinfection machine for emptying, cleaning and disinfecting:
- Bed-pans, commode pans and their covers
 - Urine bottles
 - Urine collection jugs
 - Kidney bowls
- Only use rinse / water softening agents and detergents in our cleaning and disinfection machines for which MEIKO have given their written approval.
- Approved products:
- Refill rinse /water softening agent: Doyen SK22E
 - Cleaner: Doyen R100, Doyen RS120
- Note rinse agent warnings (see accompanying safety datasheets).

3.1 Foreseeable incorrect use

- Do not use cleaning and disinfection machine:
- To heat food or keep food warm.
 - To clean and disinfect rubber boots or OP shoes.
 - To clean and disinfect incorrectly used care equipment.

4. Function

4.1 Function

The cleaning and disinfection machine serves the emptying, cleaning and disinfecting of:

- Bed-pans, commode pans and their covers
- Urine bottles
- Urine collection jugs
- Kidney bowls

With the wash chamber door open, the utensil holder positions the items to be cleaned in the appropriate cleaning position.

Closing the wash chamber door

- Empties the vessel.
- Positions the item to be cleaned in the rinse position.
- Locks the wash chamber door.

Activating the program button starts the cleaning and disinfection procedure.

After the intended end of the program the wash chamber door unlocks.

When the program is running:

- The indicator lamp of the selected key is illuminated.
- Pre-cleaning with cold water.
- Rinsing with hot water.
- Disinfecting after cleaning.

The arrangement of the washer jets guarantees perfect cleaning if the utensils are used correctly.

The thermal disinfection disinfects the cleaned items by heating them to a pre-set A_0 value. Cleaning and disinfection machines with thermal disinfection have a cooling process just before the end of the program.

During the cooling:

- The utensils are cooled with air to reduce the high temperature achieved during disinfection.
- Dries the cleaned items.

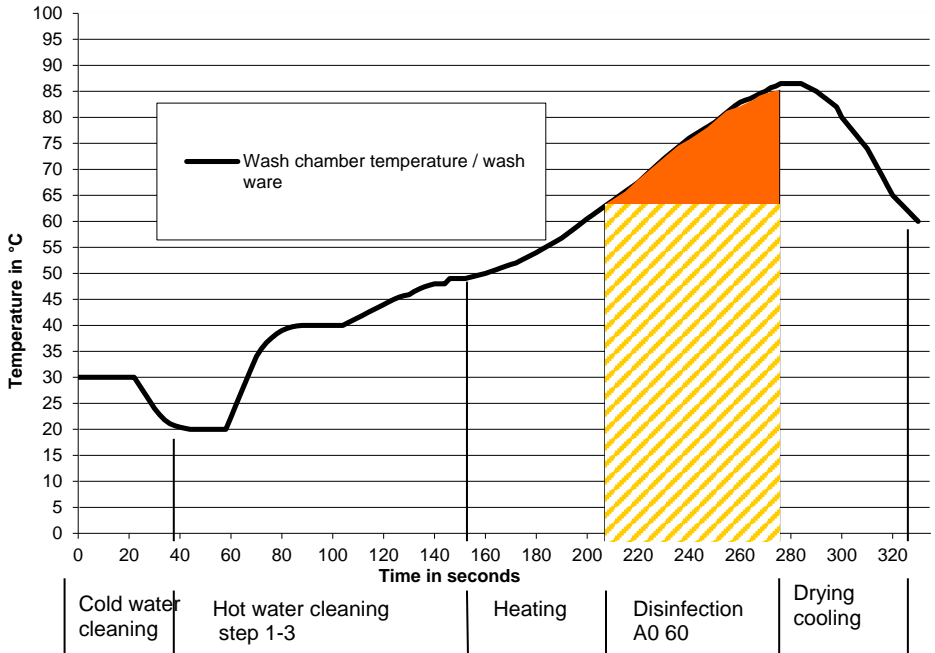
After the program end:

- The wash chamber door unlocks.
- It is possible to remove the cleaned items.
- A visual inspection of the cleaned dishes must be performed.

For the sequence of the individual displays, see 6.9 Displays

During the heating phase until the end of the program, the operation field also shows the A_0 value. If the wash-chamber door is not opened after the end of the program, the cooling fan continues to run for a pre-set time and dries the utensils further.

The disinfection capability complies with the capability required DIN ISO 15883 Part 3, "Requirements for and Testing of Cleaning/disinfection machines using Thermal Disinfection for Containers for Human Excreta" which specifies a minimum A_0 value of 60.



4.2 Model and options

The cleaning and disinfection machine is available in the following models and design options.

Models:

- MEIKO TopLine 10 (wall-mounted)
- MEIKO TopLine 20 (standing)
- MEIKO TopLine 30 (Built-in model)
- MEIKO TopLine 40/40E (Cabinet model)

Equipment variants:

- DT-NDV Thermal disinfection with fitted low-pressure steam generator
- DT-NDD Thermal disinfection with building's installed low-pressure steam

All models are available for different operating voltages.

Other possible additional equipment:

- Dispenser for liquid cleaner (DR), e.g. Doyen R100
- AT - Automatic door
- Rim flushing

4.3 Structure

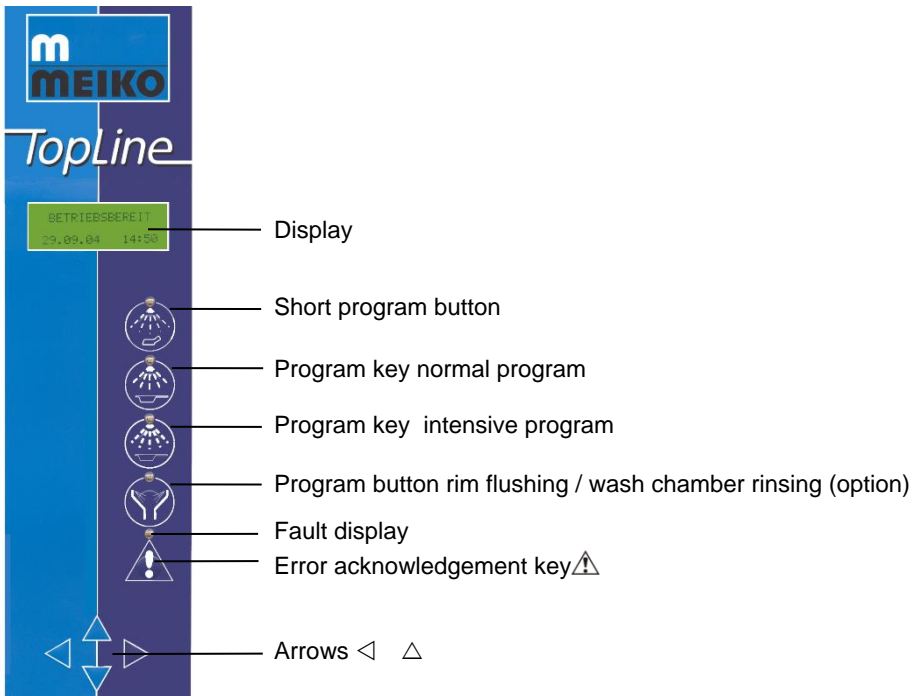
MEIKO Topline 20





MEIKO Topline 40/40E



Operating display




Fault display


| Fault status display | Meaning |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Fault display off | The cleaning and disinfection machine is ready for use. |
| Fault display flashes | The cleaning and disinfection machine: <ul style="list-style-type: none">• Has detected a fault.• Emits an acoustic signal. Display shows the error message. To switch off the acoustic tone, acknowledge the fault: ➤ Press the error acknowledgement button  . |
| Fault display illuminated | The cleaning and disinfection machine has detected a fault. Fault has been acknowledged. ➤ Correct fault. ➤ Press the error acknowledgement button  . |


5. Setting in operation

➤ To set up the cleaning and disinfection machine, see Service Instructions.

6. Operation

| | |
|----------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|  Danger | Risk of explosion from solvent! ➤ Never place solvents in the wash chamber. |
|----------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|

| | |
|-------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
|  Warning | Scalding due to high temperatures! ➤ Let care utensils cool sufficiently before removal. ➤ Wear rubber gloves. |
|-------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|

| | |
|-------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
|  Warning | Trapping in wash chamber door! ➤ When opening and closing the wash chamber door, make sure no limbs are trapped in the door. |
|-------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|



Caution

Blockage due to foreign matter!

- Make sure that no pulp or similar and no utensils enter the wash chamber.








Caution

Corrosion from foreign iron!

- Make sure that no foreign iron or other metal particles (e.g. copper filings) enter the cleaning and disinfection machine through the clean water supply.

- Make sure that only trained and authorized staff operate the cleaning and disinfection machine.
Qualified persons as defined in these Operating Instructions are persons:
 - who are over 14 years of age,
 - who have read and who observe the safety instructions in the chapter Safety instructions, warnings and dangers.
 - who have read and who observe the Operating Instructions (or the part applicable to the work to be carried out).
- Make sure that the inspection door and cover are closed during use.
- Do not sit or stand on the opened wash chamber door.

6.1 Cleaning programs

| TopLine type | Cleaning program Key | Use |
|---------------------------------|-----------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| TopLine – Standard model | Short program  | Cleaning and disinfection of slightly soiled care utensils, such as urine bottles. |
| | Normal program  | Cleaning and disinfection of soiled care utensils. |
| | Intensive program  | Cleaning and disinfection of heavily soiled care utensils. |
| TopLine with options (optional) | Rim flushing  | Cleaning the separate slop sink. |
| | Wash chamber rinsing  | Cleaning the wash chamber |

Utensil holder

The utensil holder holds the care utensils and positions it in the optimum position for disinfecting and cleaning.



Utensil holder SUH 1



Utensil holder SUH 2



Caution

Unsatisfactory cleaning results due to defective utensil holder!

- Make sure that the utensil holder is not bent or deformed (e.g. due to unforeseen care utensil).
- Place care utensils according to picture.



Damage to the machine due to sticking or blocking of the drain outlet!

- Place care utensils according to picture.
- Make sure that care utensils do not slide out of the utensil holder.

How to insert the care utensils in the utensil holder SUH 1

➔ Place care utensils in utensil holder SUH 1 as follows:



How to insert the care utensils in the utensil holder SUH 2

➔ Place care utensils in utensil holder SUH 2 as follows:



How to insert the care utensils in the SPECIAL utensil holder

➔ See separate care utensil image

6.2 TopLine – Standard model



- Put on rubber gloves.
- Open wash chamber door



- Insert care utensils in the prescribed positions in utensil holder.



- Close wash chamber door.



- Remove rubber gloves.
- Select cleaning program corresponding to dirt (see 0
- Cleaning programs).
- Start cleaning program by pushing the corresponding program button.

LED above pushed button illuminates.

The cleaning and disinfection program starts and automatically runs through to the program end.

During the program sequence, the wash chamber is locked.

After the program ends:



Put on rubber gloves.


- Open wash chamber door
- Remove rubber gloves.



- Remove care utensils.

6.3 To interrupt the program

To interrupt a program:

- Press the error acknowledgement button .

The wash-chamber door will remain locked.

- Select correct cleaning program corresponding to dirt (see 0 Cleaning program).
- Start cleaning program by pushing the corresponding program button.

The cleaning and disinfection program starts and automatically runs through to the program end.

During the program sequence, the wash chamber is locked.

6.4 TopLine with rim flushing for a separate slop sink (option)



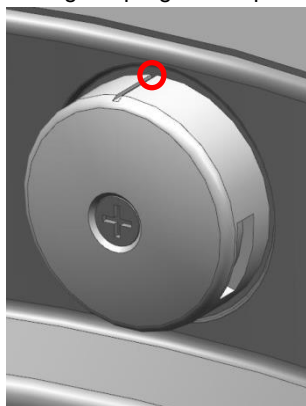
- Put on rubber gloves.
- Empty the contents of the bucket into the slop sink.



- Remove rubber gloves.
- Start the rim flushing for the slop sink by gently pressing the "rim flushing" button

The rim flushing for the separate slop sink starts and automatically runs through to the program end.

During the program sequence, the wash chamber is locked.



Please note:

- The nozzle groove must be aligned to the grain-ing in the funnel.

Possible consequences when nozzles are incor-rectly aligned:

- Poor washing results.
- Water can spray on or over the drain screen.

Measures to be taken when nozzles are incor-rectly aligned:

- Use a Phillips screwdriver to loosen the fixing screws and align the nozzles.
- Then manually re-tighten the screws.

6.5 TopLine with wash chamber rinsing (option)



- Put on rubber gloves.
- Open wash chamber door



- Empty the contents of the bucket into the wash chamber.



- Close wash chamber door.



- Remove rubber gloves.
- Start the wash chamber flushing by pressing the *Wash chamber flush* button.

LED above pushed button illuminates.

The wash chamber flushing starts and automatically runs through to the program end. During the program sequence, the wash chamber is locked.

6.6 TopLine with automatic door opening - AT (option)

Automatic door-opening with infra-red proximity switch (standard)

All AT models are fitted with an infra-red proximity switch which allows the wash-chamber door to be open and shut automatically.

Open or close the wash chamber door



- ➡ Hold hand 2 – 8 cm in front of the display on the foil keypad for a short time.

Depending on the settings of the parameters of the cleaning and disinfection machine, the cleaning program starts automatically after the wash chamber door is shut.

Automatic door opening with foot pedal (option)

Open or close the wash chamber door



- ➡ Depress the foot pedal.

Depending on the settings of the parameters of the cleaning and disinfection machine, the cleaning program starts automatically after the wash chamber door is shut.



Warning

Risk of crushing hands and fingers in the wash chamber door!

- When opening and closing the wash chamber door, make sure that nothing is trapped in the door.
- If you are unsure about how to remove blockages, call service engineer or service technician to remove the blockage.

Wash chamber door blockage during closing

Wash chamber door blocks upon automatically closing due to incorrectly inserted or unsuitable care utensils:

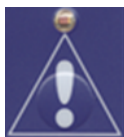
- Reverse mode is activated with the block – the wash chamber door automatically opens slightly and releases the blockage.
 - Activate infrared proximity switch or pedal.
 - Wash chamber door opens completely.
 - Remove blockage.
 - Cleaning and disinfection machine once again operates normally.

Attention: if there is no blockage, inform service engineer or service technician.

Blockage of the wash chamber door when opening after programme end

Activate the infrared proximity switch or pedal after programme end to open the wash chamber door. The wash chamber door blocks upon opening due to care utensils that have fallen from the utensil holder:

- Blockage does not activate reverse mode – the wash chamber door stops.
 - The display shows error message 702. Infrared proximity switch and pedal are deactivated.
 - Remove blockage
- Attention:** if you are unable to remove the block, notify service engineer or service technician.
- Confirm the error after having removed the block.



Press  twice.

- Cleaning and disinfection machine once again operates normally.

6.7 TopLine with CODE input (option)

Note

It is possible to set the code for opening the wash chamber door individually (see Service Instructions). The default code is 1.



- Put on rubber gloves.
- Open wash chamber door



- Insert care utensils in the prescribed positions in utensil holder.



- Close wash chamber door.



- Remove rubber gloves.
 - Select cleaning program corresponding to dirt (see 0
 - Cleaning programs).
 - Start cleaning program by pushing the corresponding program button.
- LED above pushed button illuminates.

The cleaning and disinfection program starts and automatically runs through to the program end.

During the program sequence, the wash chamber is locked.

After the program ends, the display shows a request for the code to be entered.



Enter the code to open the wash chamber door as follows:

- Set value with arrow Δ or ∇
- Select the previous or next position with arrow \triangleleft or \triangleright .
- Confirm the entered code by pressing the Fault acknowledgement key \triangleup .
- Put on rubber gloves.
- Open wash chamber door
- Remove rubber gloves.
- Remove care utensils.



6.8 Display

The display shows the following details:

- Information
- Operating information
- Warnings
- Error messages

Note

For warnings and error messages, see 0.

Information

Irrespective of the current process status, it is possible to access information about the cleaning and disinfection machine in the display.

Navigation between the individual views:

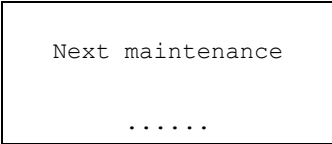
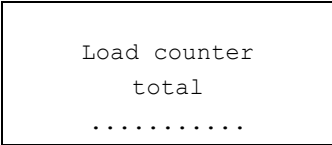
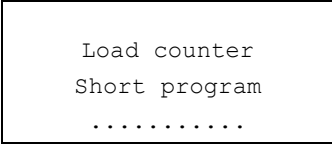
- Select the previous or next view with arrow ◀ or ▶.

Leave the information output:

- In the first view, press arrow △.
- In the last view, press arrow ▽.

Note

If no button is pressed for a longer period, the information display automatically closes.

| Indication | Meaning |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
|  | <ul style="list-style-type: none">• Number of program cycles until the next maintenance |
|  | <ul style="list-style-type: none">• Total loads: all programs |
|  | <ul style="list-style-type: none">• Total loads: short program |

Indication

Meaning

Load counter
Normal program
.....

- Total loads: normal program

Load counter
Intensive program
.....

- Total loads: intensive program

Load counter
External program but-
ton
.....

- Total loads: External program button (Option)

Load counter
Start after time
.....

- Total loads: Start after time (Option)

Load counter
PRS/WKS - Program
.....

- Total loads:
 - PRS program (Option) (PRS = pump rim flushing)
 - WKS program (option) (WKS= wash-chamber rinsing)

Serial number
.....

- Serial number of the cleaning and disinfection machine

AU - number
.....

- Order number of the cleaning and disinfection machine

Indication**Meaning**

Operating hours

- Number of cleaning and disinfection machine operating hours

Operating information

The operating messages show the progress during the program run.

Indication**Meaning**

Ready for operation

- The cleaning and disinfection machine is ready for use.
- Loading with care utensils possible.

Cold water filling
 >>

- Cleaning and disinfection machine filling cold water in the tank.

Filling
 >>>

- Cleaning and disinfection machine filling cold water in the tank.

Cold water cleaning
 >>>

- Wash pump starts
- Cleaning with cold water

Filling with hot water
 >>>>>

- Cleaning and disinfection machine filling hot water in the tank.

Hot water cleaning
 >>>>>>

- Wash pump starts
- Cleaning with hot water

Indication

Meaning

| | |
|----------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <pre>Heating °C >>>>></pre> | <p>Only if a fixed waiting period and disinfection temperature is set.</p> <ul style="list-style-type: none">• Cleaning and disinfection machine heating low-pressure steam generator.• Display shows temperature in the wash chamber. |
| <pre>Disinfection ... °C ... s >>>>>>>>>>>>>>>></pre> | <p>Only if a fixed waiting period and disinfection temperature is set.</p> <ul style="list-style-type: none">• Cleaning and disinfection machine heating wash chamber and care utensils with steam.• Cleaning and disinfection machine disinfecting care utensils. |
| <pre>Heating NDV 50 °C >>>>>>>>>>>>>>>></pre> | <p>Only with A₀ value calculation.</p> <ul style="list-style-type: none">• Display shows the temperature in the low pressure steam generator (NDV) until the pre-set value has been reached. |
| <pre>Disinfection (A₀) 0 to 60 >>>>>></pre> | <p>Only with A₀ value calculation.</p> <ul style="list-style-type: none">• Cleaning and disinfection machine heating wash chamber and care utensils with steam until A₀ value is reached. |
| <pre>Filling for cooling °C >>>>>>>>>>>>>>>></pre> | <ul style="list-style-type: none">• Cleaning and disinfection machine filling cold water in the tank. |
| <pre>Cooling + drying</pre> | <ul style="list-style-type: none">• Drying blowers starts• Care utensils cools and dries. |
| <pre>Cooling and cleaning</pre> | <ul style="list-style-type: none">• Wash pump starts• Cleaning with cold water |

| Indication | Meaning |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Program end | <ul style="list-style-type: none"> • Cleaning program finished. • Display shows temperature in the wash chamber. • Opening the wash chamber door is possible. |
| To interrupt the program | <ul style="list-style-type: none"> • A program which has already started is interrupted. • Wash chamber door remains locked. • Re-start the program. |
| Door mechanism | <ul style="list-style-type: none"> • Wash chamber door will be automatically open or close. |
| Rim flushing | <ul style="list-style-type: none"> • Pump rim flushing program running |
| Special program | <ul style="list-style-type: none"> • Wash chamber rinsing in operation |

6.9 Setting the disinfection parameter A₀

The factory setting for the disinfection parameter for the A₀ value is 60.

To set another A₀ value if required:

- ➡ Inform Meiko Service.


6.10 Selectable disinfection performance (option)

As an option, the A_0 value can be selected up to 3000 in predefined increments. In the selection menu only values are displayed that are greater than/equal to the pre-set A_0 value of the program.



The selection menu is activated by pressing and holding a program key. If the program key remains pressed the predefined A_0 values pass through from right to left. The value displayed centrally [] is the selected value. By releasing the program key the selected value is taken over and the program starts.

Ready for operation
16-07-27 10:13

The device is ready for operation

- ➔ Insert the care utensils and close the wash chamber door.
- ➔ Press and hold one of the three program keys .

A_0
3000 [60] 600

- ➔ Hold the program key  until the desired A_0 value is displayed centrally in []. Then immediately release the program key .

A_0
3000

Selection value taken over, program starts.

6.11 Replace dosing agent



Warning

Risk of injury from dosing agent!

- ⇒ Wear safety glasses.
- ⇒ Wear rubber gloves.



Caution

Caution when handling dosing agents!

They are sometimes irritants substances.

- ⇒ Observe the manufacturer of the dosing agent's applicable safety regulations and safety data sheets.
- ⇒ Follow the manufacturer of the dosing agent's first aid measures in an emergency.

*) MEIKO recommends hanging up a description of the first aid measures near the machine



Caution

Malfunctions due to incorrect rinse agent/water softener!

- ⇒ Only use rinse agent / water softening agents in our cleaning and disinfection machines for which MEIKO have given their written approval.
- ⇒ Make sure that medium dosing containers are always upright.
- ⇒ Only use medium dosing containers in which the suction lance is vertical.



Caution

Malfunctions and damage due to include cleaning!

- ⇒ When changing product, clean the entire dosing agent with water.

Replace dosing agent as follows:

- ⇒ Open door to container for dosing agent (see 4.3 Structure) with key.
- ⇒ Remove suction tube from the dosing agent container.
- ⇒ Insert new dosing agent container, make sure that medium dosing containers are always upright
- ⇒ Connection suction tube to dosing agent container, suction tubes must be vertical in the medium dosing containers!
- ⇒ Close door to container for dosing agent (see 4.3 Structure) with key.

Vent metering system (see 7.3 Vent rinse agent or 7.4 Vent detergent inlet)

Note

It is possible that rinse agents/water softeners other than those approved by MEIKO are less effective at removing lime-scale. Unsuitable rinse agent/water softener can lead under some circumstances to lime-scale build-up on heating elements and wash nozzles. The cleaning result may be affected.

When using a detergent from another manufacturer or another type of dosing agent:

- Rinse the complete detergent metering system.


"In particular, chemicals and higher temperatures in the process, as well as mechanical loads when holding and transporting, can have a negative impact on the utensils."

7. Service level

The service level permits the following settings and functions in the display:

- Display or change the list of service parameters
- Ventilate rinse agent inlet
- Ventilate detergent inlet
- Set date and time
- Open door or unlock door
- Define first text line of the fault display (e.g. Service telephone number or number for house engineer)

7.1 Call service level

- Make sure that the cleaning and disinfection machine is ready for use and all cleaning programs have completed.
- Press arrow ▷ for 2 seconds.
- Enter access code.
 - 10000 = Display level 1
 - 10001 = Display and change level 1
- Press the error acknowledgement button .

Display shows service level.


Note

When the service level is shown in the display, all other functions of the cleaning and disinfectant machine are blocked.

If no button is pressed for 120 seconds, the cleaning and disinfection machine automatically closes the service level and activates the status Ready for use.

If a setting is being edited, the selected value flashes.

In the service level, the keys on the cleaning and disinfection machine have the following functions:

| Key | Meaning |
|------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Arrow \triangle or ∇ | <ul style="list-style-type: none">• Navigate in the menu. If a setting is being edited (selected value flashes): |
| Arrow \triangleleft or \triangleright | <ul style="list-style-type: none">• Increase or lower value.• Leave menu item. If a setting is being edited (selected value flashes): |
| Error acknowledgement key  | <ul style="list-style-type: none">• Select the previous or next position.• Access selected menu item. If a setting is being edited (selected value flashes): |
| | <ul style="list-style-type: none">• Confirm entry. |

7.2 Display or change the list of service parameters




Caution



Malfunction due to incorrect parameter!

Before changing parameter settings:

- ➔ Inform authorized house engineer or MEIKO service.
- ➔ Note service instructions.

- ➔ In the service level, call *Change parameter list*.
- ➔ Press the error acknowledgement button .
- ➔ Navigate in the parameter list with arrows \triangle or ∇ .


To change parameters:

- ➔ Call desired parameter.
- ➔ Press the error acknowledgement button .
- ➔ Use arrows to change parameter setting.
- ➔ Press the Error acknowledgement key  to save the setting.

- or -

- ➔ Press arrow \triangleright to cancel the setting and to return to the parameter list.



7.3 Ventilate rinse agent inlet

- In the service level, call *Ventilate rinse agent inlet*.
- Press the error acknowledgement button .


The cleaning and disinfection machine ventilates the rinse agent inlet.

Display shows time remaining.

To cancel the rinse agent inlet ventilation:

- Press the error acknowledgement button .
- or -
- Press arrow .



7.4 Ventilate detergent inlet

- In the service level, call *Ventilate detergent inlet*.
- Press the error acknowledgement button .


The cleaning and disinfection machine ventilates the detergent inlet.

Display shows time remaining.

To cancel the detergent inlet ventilation:



- Press the error acknowledgement button .
- or -
- Press arrow .

7.5 Set date and time

- In the service level, call *Set date and time*.
- Press the error acknowledgement button .

Display shows date and time.

To change the setting:

- Press the error acknowledgement button .
- Use the arrow keys to change the date and time settings.
- Press the Error acknowledgement key  to save the setting.

- or -


- Press arrow  to cancel the setting and to return to the service level.

Note

Changing between summer-time and winter-time is only possible manually.

7.6 Open door or unlock door

- In the service level, call *Open door*.

- Press the error acknowledgement button .


The cleaning and disinfection machine opens the wash chamber door and unlocks the wash chamber door automatically.

Note

Care utensils not disinfected.

7.7 Define first text line in the fault display

- In the service level, call *Change fault help text*.

- Press the error acknowledgement button .

Use arrow keys to enter numbers or text for the first line of the fault display (max. 20 characters).

- Press the Error acknowledgement key  to save the setting.

- or -

- Press arrow  to cancel the setting and to return to the service level.

8. Maintenance



Danger

Risk of fatal electric shock!

- Make sure the cleaning and disinfection machine is only serviced by an experienced expert trained and authorized by MEIKO.
- After switching off the repair switch, the network connections are energized.



Danger

Damage due to water!

- Never clean the cleaning and disinfection machine, switch cabinets and electronic components with a hose or high-pressure cleaner.

8.1 Maintenance

Regular maintenance is a prerequisite for the long-term reliable and safe operation of a cleaning and disinfection machine. Maintenance which is neglected or improperly carried out increases the residual risk of unforeseen damage to property and persons, for which no liability will then be assumed.

- Have MEIKO Service carry out maintenance
 - when the display shows the message *Carry out maintenance*,
 - after 5000 cleaning cycles,
 - at 1x a year (see label *Next maintenance* on the cleaning and disinfection machine).

Note

In order to guarantee regular and correct maintenance, MEIKO recommends concluding a maintenance contract with MEIKO Service.

Maintenance includes the following:

- Electrical safety to VDE 0701/0702
- Dosing units
- Wash nozzles
- Water container / Steam generator
- Utensil holder
- Water supply and drain
- Threaded joints and connections
- Drying/recooling
- Door mechanical system, locking and door seal

In the scope of maintenance, a functional check of the following items is performed:

- Program sequence as a functional check
- Temperature measurement
- Logging (as an option).
- Checking the measuring systems

"MEIKO supplies pressure-resistant, flexible connecting hose pipes with a manufacturer guarantee covering ten years worth of working hours."

8.2 Next maintenance label

If maintenance is not carried out by MEIKO Service, the *Next maintenance* label shows when the next maintenance of the cleaning and disinfection machine is necessary.



The month in which the maintenance is necessary is at the top (in the 12 o'clock position).

8.3 Process validation

The the operator must typically determine the appropriate output of the cleaning and disinfection process. In some countries, this is required by national laws, ordinances or recommendations.

8.4 Routine checks

The operator must perform routine checks daily before starting work. The following items must be visually checked:

- Wash nozzles in wash chamber (completeness and damage)
- Wash chamber (soiling)
- Basin holder (damage and dish holders)
- Chemical canister (level and suitable chemicals)
- Fault and warning indicator in the display (notify in case of fault)

8.5 Cleaning

- Clean the outside of the cleaning and disinfection machine once a day. Only clean stainless steel with detergents suitable for stainless steel.
- Make sure that detergents
 - Do not corrode the material,
 - Do not form deposits.
 - Do not discolour the material.
- Never clean the cleaning and disinfection machine, with water hose or high-pressure cleaner.
- Only clean wash chamber seal with water or soap.
- Scale deposits (discolouration) in the wash chamber; spray with a commercially available liquid scale remover (e.g., on the basis of 10 – 20% citric acid or phosphoric acid).
Mechanical treatment with a brush or cloth is required. Do not use steel brushes. Observe the manufacturer's safety instructions and take suitable precautions (safety gloves and eye protection, possibly a disposable apron). After a short exposure time (5 minutes) close the wash chamber door and immediately start a wash program. This flushes the wash chamber.

If cleaning and disinfection machine is not used daily:

- Start program once a day or run automatically with time switch (see service instructions).

9. Decommissioning

- To decommission and dispose of the cleaning and disinfection machine, see Service Instructions.

10. What to do if not in use

The cleaning and disinfection machine uses and processes water. Non-use for several days leads to the pipe system becoming contaminated.

To avoid contamination:

- Activate time switch program.
- Program the time switch program to start a program every day.
- If not used for a longer period, manually empty the pipe system.
 - The pipe system should be emptied manually by the trained house engineer or by MEIKO-Service, see service instructions.

11. Warnings and error messages

11.1 Warnings

The display shows warnings, in order to prevent malfunctions.

After carrying out the stated measure, the display deletes the warning.

Omitted measures may lead to malfunctions.

| Indication | Meaning | Measure |
|--------------------------------------|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| Door open | Door contact not closed. | <ul style="list-style-type: none">• Close door correctly |
| Change rinse aid/water softener tank | Rinse aid/water softener or detergent storage tank alert | <ul style="list-style-type: none">• Provide rinse aid.• 25 wash cycles left. |
| Change detergent | | |
| Rinse aid/water softener empty | Rinse aid/water softener or detergent storage tank alert | <ul style="list-style-type: none">• Wash cycle not possible. Tank must be changed. |
| Detergent empty | | |
| Min.Impulse rinse agent not reached | Minimum rinse agent / softener dosing agent monitoring impulse not always reached. | <ul style="list-style-type: none">• No measures necessary. |
| Min.Impulse detergent not reached | Minimum detergent dosing agent monitoring impulse not always reached. | <ul style="list-style-type: none">• No measures necessary. |
| Maintenance needed | Carry out maintenance. | <ul style="list-style-type: none">• Arrange maintenance. |


| Indication | Meaning | Measure |
|----------------------|-----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| Please open the door | Cleaning program finished. | <ul style="list-style-type: none"> • Open door and remove care utensils. |
| Key switch | Device with key switch function | <ul style="list-style-type: none"> • Activate the key switch with the key before the program |
| Manual operation | Machine is remote-controlled via M-Commander (cable - PC-Palm). | <ul style="list-style-type: none"> • No measures necessary. • Not possible to operate using the membrane key-pad. |
| Wrong password | Wrong password entered | <ul style="list-style-type: none"> • Re-enter password correctly. |

11.2 Error messages

If a fault occurs:

- The display shows an error message.
- The cleaning and disinfection machine emits an acoustic tone.
- The fault display LED flashes.

To switch off the acoustic tone:

- ➡ Press the error acknowledgement button .

Fault is acknowledged.

Fault display LED permanently illuminated.

In the case of all error messages or malfunctions not listed below:

- ➡ Inform Meiko Service.

| Indication | Meaning | Measure |
|---------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| Error No. 103 Outlet blocked | Water will not drain through the odour trap | <ul style="list-style-type: none"> • Remove dirt or inform MEIKO-Service. |
| Error No. 401 Soft/rinse agt empty | Container with softener / rinse agent empty. Suction hose set but not connected. | <ul style="list-style-type: none"> • Insert a new container (see 6.11 Replace dosing agent). |
| Error No. 402 Soft/rinse agent dose monitoring | Rinse agent / softener no longer dosed in sufficient quantities | <ul style="list-style-type: none"> • Inform Meiko Service. |
| Error No. 501 Detergent empty | Tank with detergent empty; suction lance parameterised but not connected. | <ul style="list-style-type: none"> • Insert a new container (see 6.11 Replace dosing agent). |
| Error No. 502 Detergent dose monitoring | Detergent no longer dosed in sufficient quantities. | <ul style="list-style-type: none"> • Inform Meiko Service. |

| Indication | Meaning | Measure |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Error No. 210 Cold water temperature too high</p> | <p>Cold water inlet temperature too high. Cold water / hot water inlet swapped. Magnetic valve coils swapped. Temperature detection error.</p> | <ul style="list-style-type: none"> • Inform Meiko Service. • Open wash chamber via setting in service level (see 7.6 Open door or unlock door). |
| <p>Error No. 211 Hot water temperature too low</p> | <p>Hot water inlet temperature too low. Heatloss in inlet pipe. Cold water / hot water inlet swapped. Magnetic valve coils swapped. Temperature detection error. Temperature sensor placed incorrectly.</p> | <ul style="list-style-type: none"> • Inform Meiko Service. |
| <p>Error No. 311 Steam pressure from the building's supply is too high</p> | <p>NDD only: Steam is escap- ing at the air gap.</p> | <ul style="list-style-type: none"> • Close steam pipe valve. • Inform Meiko Service. |

12. Technical data sheet

| | |
|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| Degree of protection | TopLine 10/20/40: IP X 4 TopLine 30: IP X 5 |
| Protection class | Class I as per VDE 0750 / IEC 601 |
| Installation conditions | Max. altitude 2000 m, 5-40°C, 80% humidity only for indoor use |
| Fresh water connection | Air gap type AA according to DIN 1988/DIN-EN 1717 |
| Water supply | DN 15, cold water 5-25°C, warm water 45-60°C, From a biological perspective the fresh water must be of drinking water quality. |
| Water flow pressure | 100 kPa to max. 500 kPa, at the solenoid valve |
| Water flow | 18 l/min |
| Steam pressure DT-NDD | 10 – 50 kPa |
| Steam flow DT-NDD | approx. 5 kg/h |
| Boiler content DT- NDV | 2.1 l |

Electrical characteristics DT-NDV

| Rated current | Nominal power | Mains voltage (± 10 %) |
|---------------|---------------|------------------------|
| 12,2 A | 2,8 kW | 1 N PE 230 V 50 Hz |
| 12,2 A | 2,8 kW | 1 N PE 230 V 60 Hz |
| 12,5 A | 3,0 kW | 1 N PE 240 V 50 Hz |
| 18,7 A | 4,5 kW * | 1 N PE 240 V 50 Hz |
| 12,5 A | 3,0 kW | 2 PE 240 V 50 Hz |
| 13,2 A | 3,6 kW | 3 PE 200 V 50 Hz |
| 13,2 A | 3,6 kW | 3 PE 200 V 60 Hz |

| Rated current | Nominal power | Mains voltage ($\pm 10\%$) |
|---------------------------------------------------------------|----------------------|----------------------------------------------|
| 11,5 A | 2,3 kW | 2 PE 200 V 50 Hz |
| 11,5 A | 2,3 kW | 2 PE 200 V 60 Hz |
| 14,2 A | 4,3 kW | 3 PE 220 V 50 Hz |
| 11,8 A | 2,6 kW | 1 N PE 220 V 60 Hz |
| 14,2 A | 4,3 kW | 3 N PE 220 V 60 Hz |
| 14,5 A | 4,6 kW | 3 PE 230 V 50 Hz |
| 10,0 A | 4,2 kW | 3 N PE 380 V 50 Hz |
| 10,0 A | 4,2 kW | 3 N PE 380 V 60 Hz |
| 10,3 A | 4,6 kW | 3 N PE 400 V 50 Hz |
| 10,7 A | 5,0 kW | 3 N PE 415 V 50 Hz |
| *fitting cross section 4,0 qmm | | |
| USA + Canada (Back-up fuse tripping characterisic "C") | | |
| 13,6 A | 3,9 kW | 3 Gnd 208 V 60 Hz |
| 14,6 A | 4,6 kW | 3 Gnd 230 V 60 Hz |
| 10,6 A | 4,5 kW | 3 Gnd 240 V 60 Hz |
| 10,1 A | 2,2 kW | 1 Gnd 208 V 60 Hz |
| 11,8 A | 2,8 kW | 1 Gnd 230 V 60 Hz |
| 12,5 A | 3,0 kW | 1 Gnd 240 V 60 Hz |
| 10,1 A | 2,2 kW | 2 Gnd 208 V 60 Hz |
| 11,8 A | 2,8 kW | 2 Gnd 230 V 60 Hz |
| 12,5 A | 3,0 kW | 2 Gnd 240 V 60 Hz |
| 12,5 A | 3,0 kW | 1 N Gnd 240 V 60 Hz |
| 7,5 A | 4,6 kW | 3 Gnd 480 V 60 Hz |
| Rated current | Nominal power | Mains voltage ($\pm 10\%$) |
| 4,8 A | 0,8 kW | 1 N PE 230 V 50 Hz |
| 4,8 A | 0,8 kW | 1 N PE 230 V 60 Hz |
| 4,8 A | 0,8 kW | 1 N PE 240 V 50 Hz |
| 4,8 A | 0,8 kW | 1 N PE 240 V 60 Hz |

Electrical characteristics DT-NDD

| Rated current | Nominal power | Mains voltage ($\pm 10\%$) |
|----------------------------------------------------------------|---------------|------------------------------|
| 4,8 A | 0,8 kW | 2 PE 200 V 50 Hz |
| 4,8 A | 0,8 kW | 2 PE 200 V 60 Hz |
| 4,8 A | 0,8 kW | 2 PE 220 V 50 Hz |
| 4,8 A | 0,8 kW | 1 N PE 220 V 60 Hz |
| 4,8 A | 0,8 kW | 1 N PE 230 V 50 Hz |
| USA + Canada (Back-up fuse tripping characteristic "C") | | |
| 4,8 A | 0,8 kW | 1 Gnd 208 V 60 Hz |
| 4,8 A | 0,8 kW | 1 Gnd 230 V 60 Hz |
| 4,8 A | 0,8 kW | 1 Gnd 240 V 60 Hz |
| 4,8 A | 0,8 kW | 2 Gnd 208 V 60 Hz |
| 4,8 A | 0,8 kW | 2 Gnd 230 V 60 Hz |
| 4,8 A | 0,8 kW | 2 Gnd 240 V 60 Hz |
| 4,8 A | 0,8 kW | 1 N Gnd 240 V 60 Hz |

Heat emission

At 10 cleaning cycles per hour:
total 0.7 kW sensible 0.45 kW
latent 0.25 kW

Noise emission

Workplace noise emissions: LpA = 48.2 dB
The emissions noise level at the workplace for the documented load has been determined on the basis of: DIN EN ISO 11204; precision class 3, measurement reliability ± 5 dB.

Net weight

TopLine 10: 72,5 kg
TopLine 20: 74,6 kg
TopLine 30: base frame 33,5 kg, 66 kg appliance
TopLine 40: 75,3 kg (c/w plinth and table top)
TopLine 40: 50 kg (without c/w plinth and table top)

Dimensions

| | TopLine 10 | TopLine 20 | TopLine 30 base frame | TopLine 40 | TopLine 40E |
|---------------|------------|------------|-----------------------|------------|-------------|
| Height | 1630 | 1730 | 2210 | 900 | 900 |
| Width | 500 | 500 | 650 | 900 | 700 |
| Depth | 450 | 450 | 450 | 600 | 600 |

measurements in mm

Note to customers

Dishwashing machines, bedpan rinsing units and systems are intended for fixed, electrical power supply installation as well as connection to the locally available equipotential bonding and have been equipped with a corresponding connection option.

Operators may decide at their own discretion and responsibility to implement personal protection in locally available services in collaboration with a specialist electrician registered at the corresponding energy supplier using the following:

- AC/DC sensitive fault current protection switch with at max. 30mA EN 62423

or

- Automatic shutdown of the supply in the event of loss of protective earth conductor conductivity (EN 60204-1, Section 8.2.8.c)

12.1 EC/EU Declaration of Conformity

➞ see separate EC/EU Declaration of Conformity

13. Further documents

According to the authorization level, additional documents are available for this operating instructions:

- Installation instructions
- Service instructions (only for authorised service technician or house engineer)
- Short operating instructions
- Specific list of suitable care utensils
- Installation and operation qualification



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Design and construction subject to change without prior notice!