



Washingmachine

Model BA

Operating instructions



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1 Introduction

As operator, before commencement of operations, please carefully study these instructions in order to ensure the safe operation of the dishwashing machines, as well as a competent and safe carrying out of maintenance and repair works.

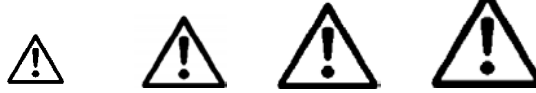
Your safety and that of your environment as well as the safe operation of the machine, without endangering other assets, is only guaranteed by following these operating and warning instructions, as well as f. ex. the applicable local safety and working regulations.


MEIKO will not be held responsible for any malfunction or indirect damages caused by improper handling of the equipment.

These instructions do not replace, and are complementary of all local regulations and regulations in regards to operating safety and healthy and safe working parameters which are to be monitored and respected by the user.


All commitments and liabilities of MEIKO are entailed in the sales contract which in turn includes all warranty regulations.


2 Hazard indications



-  After installation, setting in operation and commissioning of the dishwasher no further modifications may be made (f. ex. at the electrical- , water- , steam- or waste water connections or location.)

Any modifications to the dishwashing machine, in particular technical modifications, undertaken by unauthorized persons without the prior written permission of the manufacturer will invalidate any guarantee and product liability.

-  Please ensure that the machine is only used for the purpose it was intended for. Misuse or abuse of the equipment can lead to damages or hazards for which we cannot be held liable.

-  Misuse or faulty operation of the dishwasher could lead to various potential hazards such as:

- injuries to the operator
- material damage




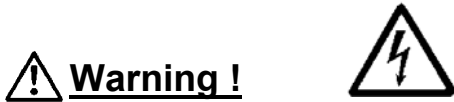
Such hazards can be caused by parts moving, rotating or under tension.

The dishwasher must be operated by sufficiently qualified and trained personnel instructed in safe operation of the machine.

‘Qualified personnel’ is defined as follows:

- These are persons - authorized by the operators responsible for safety to take the necessary actions - knowing the hazards and avoiding them because of their formation, experiences and instructions and their knowledge regarding standards, regulations, safety rules and operating conditions. (Definition of specialists acc. to VDE 105 or IEC 364).
- Persons with knowledge about first aid and the local rescue service,
- Persons who read the safety regulations and observe them
- Persons who read the operating instructions (resp. the part concerning the work to be executed)

-  The machine operates with hot water. Please avoid any contact with the wash leach. Scalding hazard!
The washtank temperature is 60 to 65°C. Consequently the surface temperatures of the washware and of the metals in contact with the wash leach are equally high.
Therefore, proper caution measures are to be taken.



Warning !


During the operation of electrical appliances, certain parts of the appliance are under hazardous voltages.


Before removing the machine cladding or opening electrical components, please ensure that the complete machine is isolated from the mains.


TURN THE MAIN SWITCH TO THE „OFF“ POSITION.


Works or repairs on electrical parts of the machine are to be performed only by specialists according to VDE 0106 regulations.

Respect the safety rules according to VBG 4.

 Do not spray the electric cabinets and other electro-technical parts with a water hose or high pressure hose. (DIN57700 / VDE0700 part 58 / 231 and safety rules-UW).

 The dishwasher should only be operated under the surveillance of properly trained personnel.

 If something is unclear, do not use the dishwasher.

 Doors and flaps must always be closed.

 Remove paneling on loading and off-loading zones only when machine is fully stopped.

 Works and remedies at the steam installation must be executed by specialists.


 Only detergents and final rinse agents specifically designed for mechanical dishwashing are to be used.

Please ask your chemical supplier for further information.

Detergents and final rinse agents can present health hazards.

Please follow the users instructions and hazard warnings of the manufacturer.

Respect the safety rules of the manufacturers on the original packing as well as on the safety data sheets.

 Please turn off the main switch at end of operations.

 For your own safety and to avoid any danger do only use original MEIKO spare parts!



WE WILL NOT BE HELD RESPONSIBLE FOR ANY DAMAGES CAUSED BY NON ADHERANCE AND NON OBSERVANCE OF THESE INSTRUCTIONS!!!

3 Preparation, Operation and Cleaning

1. Close the drain valve.
2. Check the wash arms, pump suction sieves, sieve baskets, curtains and fixing sheets of the belt for completeness and correct positioning.
3. Close all the doors.
4. Open the main stop valves for pressure, steam and water.
5. Unlock the emergency-off switch.
Switch on the main switch at the control panel.

6. Filling of the machine:

Press the button "FILLING/HEATING". The machine fills automatically up to the maximum water level of the tank.

The tankheating switches on automatically, and heat up the tank water. The tank water temperature will be adjusted and regulated by a thermostat.

7. Check the detergent and the wetting agent containers levels. If necessary, refill.

When the required tank temperature is reached :

8. Press the start button activating for the pump motors/ventilator motors and the transport.

Now the machine is ready for operation, and the goods to be washed can be inserted.

4 Setting the machine out of operation and cleaning

1. Turn off the main switch.
2. Open the drain valve.
3. Clean the tank covers and the tanks.
4. Remove the wash arms and clean the nozzles.
5. Remove and clean the pump suction sieves.
6. Inspect and clean the water level control electrodes.
7. Inspect and clean the tank heating elements.

A thorough and daily cleaning of the equipment is absolutely essential for an irreproachable function.

Note

The motors of the machine are protected against overcharge by thermal overload relays. Troubles are indicated through the corresponding pilot lamp "**Motor trouble**" on the control panel.

In case of any defects of the machine, only specially trained staff is permitted to interfere in the mechanical or electrical parts of the machine.

We decline any responsibility for damages caused by incorrect handling.

5 Trouble shooting

Faults	Remedies
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Machine does not fill !

1. No water present
2. Dirt collector clogged
3. Float switch dirty
4. Solenoid valve faulty

Final rinse does not spray !

1. No water present
2. Dirt collector clogged
3. Solenoid valve faulty
4. Starting switch of water saving element is faulty
5. Final rinse system is descaled

Escape of vapour !

1. Extraction system has failed
2. Curtains are missing
3. Temperatures too high



Trouble shooting

Faults	Remedies
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Stripes and smears on the crockery !

1. Excessive mineral content of the final rinse water
2. If only found at certain times, check water softening unit with a view to regeneration. This must not be done during the washing time. Possibly also different water, depending on the water works.
3. Unsuitable wetting agent or wrong dispensed quantity.
4. Wrongly mounted curtains.

Strong foaming in the wash tank!

1. Manual dishwashing agent enters the wash tanks on - prescouring, since dirt level in the tanks is too high.
2. Final rinse water quantity too low.
3. Unsuitable cleaning agent or wetting agent
4. Temperatures too low (below 40 deg. c)



Trouble shooting

Faults	Remedies
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Crockery not clean enough !

1. Wash pump not running
2. Spray nozzles clogged or wrongly fitted
3. Wash arms mixed up
4. Pump intake strainer clogged
5. Cleaning agent concentration too low or unsuitable
6. Temperatures too low
7. Marked foaming
8. Crockery placed wrongly into the conveyor belt
9. Excessive conveyor belt speed
10. Food residues dried on too long
11. Crockery not suitable to be cleaned in dishwashing machines



Trouble shooting

Faults	Remedies
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Crockery not drying !

1. Fan motor failed
2. Wetting agent concentration too low or wetting agent not suitable
3. Conveyor belt speed too high
4. New plastic
5. Crockery not suitable to be cleaned in dishwashing machines
6. Crockery placed wrongly into the conveyor belt.

6 Maintenance

<u>Maintenance work</u>	After operation hours:					Measured values/ comment on word done
	100 h but at least 1x weekly	400 h but at least 1x monthly	1250 h but at least 1x quarterly	2500 h but at least 1x twice a year	5000 h but at least 1x yearly	

1. Belt drives

1.1 Inspection of the gear motor						
Check gear motor for external damage					◆	
Check gear motor for bearing noise					◆	
Check current input (see wiring diagram)					◆	
Check the gear oil level					◆	
1.2 Inspection of the drive chain						
Check the sprockets, chain and chain tensioner for wear				◆		
Check the function of the chain tensioner				◆		
Check the chain tension. Maximum deflection 2-3 cm				◆		
If required, lubricate the chain with a resin and acid free grease				◆		
1.3 Inspection of the safety fittings (sliding clutch). An EAS clutch is fitted to the tray machines						
Check the friction pads for wear. Replace if necessary.			◆			
Check operation: The machine belt has to stop when blocked mechanically (i.e. by wash arm or hammer handle) or allow the clutch to slip.			◆			
1.4 Inspection of correct function of belt end switch						
Check the electrical function of the switch		◆				
Check the switch for mechanical damage		◆				
Check the switch with regard to the belt run on distance The travel of the actuator must be greater than the belt run on distance (set for earlier switching)		◆				

2. Inspection of the belt tensioning device

Visually check the function of the pressure spring			◆			
Check the belt tension. It must be possible to lift the belt approx. 10 cm in the feeding and discharge sections.			◆			
Check the belt return wheels and setting ring for damage and location.			◆			

<u>Maintenance work</u>	After operation hours:					Measured values/ comment on word done
	100 h but at least 1x weekly	400 h but at least 1x monthly	1250 h but at least 1x quarterly	2500 h but at least 1x twice a year	5000 h but at least 1x yearly	

3. Inspection of the transport belt

3.1 Check the transport belt for sufficient tension see point 2 / 2			◆			
3.2 Check the split pins of the transport belt for wear, external damage and completeness.		◆				
3.3 Check the transport belt (including belt fingers, rollers, straps and belt rods) for wear, external damage and completeness.			◆			
3.4 Inspection of the smooth running of the transport belt						
The transport belt must run smoothly: - Observe the sides of the guide rails - Observe the sliding clutch				◆		
The transport belt must not touch the side guide rails at the return in the upper casing Correct with the belt on the return wheels.				◆		

4. Wash pumps

4.1 Inspection of the pump motors						
Check the motor for external damage				◆		
Check the current input (see wiring diagram)				◆		
Check the motor for running noise (check for bearing damage)				◆		
4.2 Inspection of wash pumps						
Check for leakage from the sliding ring seal (External visual check)			◆			
The sliding ring seal should be replaced annually (circa 5.000 hours of operation).					◆	
Inspect the pump rotor for damage (The pump rotor must be rebalanced after any welding repair)					◆	
Inspect the pump housing for damage			◆			
4.3 Pump suction sieve						
Inspect the pump sieve for damage			◆			
Clean the pump sieve inside (and <u>outside every day</u>)					◆	

<u>Maintenance work</u>	After operation hours:					Measured values/ comment on word done
	100 h but at least 1x weekly	400 h but at least 1x monthly	1250 h but at least 1x quarterly	2500 h but at least 1x twice a year	5000 h but at least 1x yearly	

5. Wash system

5.1 Inspect the vertical tubing for leakage						
Check the connection between the pump and the vertical tubing			◆			
Check the vertical tubing			◆			
Check the connection between the vertical tubing and the wash system			◆			
5.2 Inspection of the wash system						
Check the wash system for damage		◆				
Check that the nozzles are clean	◆					
Check the all endcaps are in place	◆					
Check the spray pattern (the spray pattern must cover the complete width of the belt). The pressure of the lower nozzles must be reduced so that the smallest part to be washed is not turned over.		◆				

6. Fresh water rinse system

6.1 Inspect the complete system for any leaks or damage. (Replace the O - ring seals).		◆				
6.2 Inspect the spray pattern of the system						
The final rinse nozzles are angled at about 15° to the axis of the final rinse tube.		◆				
6.3 Inspect the quantity of the the fresh water final rinse.						
Water meter				◆		
Volume measurement				◆		

<u>Maintenance work</u>	After operation hours:					Measured values/ comment on word done
	100 h but at least 1x weekly	400 h but at least 1x monthly	1250 h but at least 1x quarterly	2500 h but at least 1x twice a year	5000 h but at least 1x yearly	

7. Drying

7.1 Blower						
Check the housing for external damage and ensure the inlet is clean			◆			
Check the current input (see the wiring diagram).			◆			
Check the blower bearings (visual and audial check) Replace the blower bearings every <u>2 years</u> !				◆		
7.2 Heating element (only steam and hot water)						
Check that the heating elements are clean. Clean once a year with hot water					◆	
Check the heating elements for leakage.					◆	
7.3 Blowing chamber						
Inspect the nozzles of the blower system for damage The temperature from the nozzles remain constant. Constant between 80-100°C			◆			
7.4 Inspection of function						
The inlet temperature must not exceed 75°C					◆	

8. Heat Recycling

8.1 Blower						
Check the blower for external damage and ensure it is clean					◆	
Check the current input (see wiring diagram)					◆	
Check the blower for bearing noise.					◆	
8.2 Heat exchanger						
Check that the heat exchanger is clean. (clean once a year with hot water)					◆	
Check the heat exchanger for leaks					◆	
8.3 Function check						
Check the exiting air temperature (ca.35-40°C)					◆	
Check the final rinse water temperature - before the heat exchanger (circa 10-15°C) - after the heat exchanger (circa 40 - 45°C)				◆		

<u>Maintenance work</u>	After operation hours:					Measured values/ comment on word done
	100 h but at least 1x weekly	400 h but at least 1x monthly	1250 h but at least 1x quarterly	2500 h but at least 1x twice a year	5000 h but at least 1x yearly	

9. Machine housing and component parts

Inspect the machine housing, tank, steel structure, doors, side panels, feeding and discharge sections for damage. Ensure all component parts are secure and complete				◆		
Check all splash curtains are complete and fitted in their correct positions.			◆			
Check tank covering sieves and sieve basket are complete and fitted in their correct positions.			◆			

10. Installation

10.1 Temperature and consumption						
Measure the tank water temperature, the final rinse water temperature and the drying temperature and compare these results with the specifications.		◆				
Measure the actual values for tank fill, final rinse water and steam and compare these with the values in the specification..		◆				
10.2 Heating system						
Check the complete system for leaks			◆			
Clean the dirt trap			◆			
Check the function of the valves			◆			
Check the control system			◆			
10.3 Fresh water installation						
Check the complete system for leaks			◆			
Clean the dirt trap			◆			
Check the function of the valves			◆			
Check the control system			◆			
Check and clean the level regulator			◆			
10.4 CSS system pre rinse						
Thoroughly clean the inlet filter and spray arms	◆					
Inspect the circulation pump - Check for external damage - Check for leakage (sliding ring seal) - Check the current input (see wiring diagram)				◆		
Check the complete function (spray pattern)	◆					

<u>Maintenance work</u>	After operation hours:					Measured values/ comment on word done
	100 h but at least 1x weekly	400 h but at least 1x monthly	1250 h but at least 1x quarterly	2500 h but at least 1x twice a year	5000 h but at least 1x yearly	

(..... 10. Installation)

10.5 CSS Plus System						
Thoroughly clean the CSS Plus container				◆		
Inspect the pressure pump - Check for external damage - Check for leakage (Sliding ring seal) - Check the current input (see wiring diagram)				◆		
Check the function of the float valve				◆		

11. Waste water installation

Check drain valves and control them for tightness, tighten packings if necessary			◆			
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12. Electrical installation

Tighten all fuses and connections				◆		
Check wearing			◆			
Check all switches for function and damages			◆			

13. Detergent dosing

Check function and if necessary re-adjust it		◆				
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14. Rinse aid dosing

Check function and if necessary re-adjust it		◆				
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15. Check the function of the total machine

Check the machines with regard to the co-operation of all functions, make a test operation and check the cleaning results			◆			
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