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Professional warewashing technology

MEIKO
The clean solution

Operating Instructions

UPster H 500 / H 500S

Dishwashing machine

Translation of the “Original operating instructions“



EN

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1 Introduction and general instructions

Dear customer,
we are delighted about the confidence you have shown in our products.
It is very important to us that you should obtain a great deal of pleasure and usefulness from MEIKO products and that they should make your work easier.

If you follow the instructions in this document carefully, your washing machine will always give you total satisfaction and will have a long service life.

After assembly at our factory, this machine was put through a thorough inspection. This helps us make sure, and gives you the guarantee that you always receive a mature product.

We would therefore ask you to read these operating instructions carefully before using the installation. Any further related operating instructions for accessories and incorporated third-party products must be strictly observed!

These operating instructions are designed to familiarise the owner/operator of this system with its installation, modes of operation, use, safety instructions and servicing.

This information will help you to get to know the installation fully and to use it properly. It will also enable you to avoid repairs and the concomitant loss of productive work.
In the event of any damage caused by non-observance of these operating instructions, any guarantee claims are invalid. We accept no liability for any additional damage caused as a result.

MEIKO operates a policy of continuous development on all its appliances.

As a result of this, please understand that we thus reserve the right to make changes to the scope of supply concerning the design, equipment and technical features at any time.

No claims may therefore be based on the details, the images or the descriptions contained in these operating instructions.

Should you require any further information, or in case any particular problems not dealt with in great detail in the operating instructions should arise, you may contact the relevant MEIKO branch to obtain the information you require.

Further, we draw your attention to the fact that the content of these instructions does not form part of a former or existing agreement, promise or legal relationship and does not modify such a point.

All MEIKO's obligations arise from the relevant purchase contract which also contains the entire and only valid guarantee provisions.

The operating instructions must exist in the local language for each EU country. If this is not the case, the washing machine must not be commissioned.

The original operating instructions in German and all operating instructions in all languages for EU countries can be downloaded from the following address: https://partnernet.meiko.de

You receive all this technical documentation free of charge.
Any additional copies required are available for a nominal fee.

These contractual guarantee rules shall be neither extended nor restricted as a result of any explanations given in the instructions.

MEIKO wishes you much pleasure and success!

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1.1 Storage

Always store the operating instructions close to the system!
The operating instructions must always be kept ready to hand!

1.2 Name and address of manufacturer

In case of further questions, technical problems, etc. contact directly:

MEIKO Maschinenbau GmbH & Co. KG
Englerstr. 3
D - 77652 OFFENBURG
Phone + 49 / 781 / 203-0
http://www.meiko.de
info@meiko.de

or:

Name and address of the MEIKO branch, manufacturer's agent or dealer.

(Enter company's stamp or address)

1.3 Authorisations for Service Partners' Service technicians

MEIKO exclusively authorises authorised Service Partners for commissioning, inductions, repairs, maintenance, assembly and installation of the corresponding product groups within MEIKO devices.

1.4 Designation of machine type

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

Model: _____

SN: _____

_____

This information can be found on the type plate.

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2 Explanation of the safety symbols used

The following safety symbols will appear throughout these operating instructions. These symbols are designed to draw the reader's attention to the text next to the safety instructions.

 CAUTION!	This symbol warns that there is danger to human life and health.
 DANGER!	This symbol warns that there is danger to the installation, to material or to the environment.
	This symbol denotes information that helps you to understand the installation's operation.
	Warning against dangerous electric voltage!
	Warning against hand injuries!
	**No splashing water:** prohibits the use of a pressure cleaner.
	**Danger of explosion:** indicates a potential explosion hazard.
	**Non-potable water:** The water is not for drinking. Health can be endangered by drinking.
	**Danger of burning:** indicates possible hazard due to hot surfaces or media.

3 Intended use


DANGER!

The dishwashing machine UPster H 500 has exclusively been designed for the washing of dishes, cutlery, glasses and containers.



The warewashing machine must only be deployed and operated only for its intended use. Other uses are prohibited. The items to be washed must be suitable for industrial dishwashing.

This warewashing machine is intended solely for use in a commercial environment.

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4 EC Declaration of Conformity

Muster / Example / Exemple / Esempio / Ejemplo / Voorbeeld

EG-Konformitätserklärung

EC Declaration of Conformity / Déclaration de conformité CE / Dichiarazione di conformità CE / Declaración de conformidad CE / CE-conformiteitsverklaring

Firma / Company / Société / Ditta / Empresa / Fabrikant
Adresse / Address / Adresse / Indirizzo / Dirección / Adres

MEIKO Maschinenbau GmbH & Co. KG
Englerstraße 3
77652 Offenburg
Germany

Kontakt
Contact / Contact / Contatto / Contacto / Contact

Internet: www.meiko.de
E-mail: info@meiko.de
Telefon: +49(0)781/203-0

Auftrag Nr.
Order no. / No. de commande / No. d'ordine / No. de pedido / Opdracht nr.

Spülmaschine Typ
Dishwasher model / Lave-vaiselle modèle / Lavastoviglie modello / Lavavajillas modelo / Vaatwasmachine model
UPster H 500 **UPster H 500S**

Konformitätserklärung
Declaration of Conformity / Déclaration de conformité / Dichiarazione di conformità / Declaración de conformidad / Conformitetsverklaring

Hiermit bescheinigen wir in alleiniger Verantwortung die Konformität des Erzeugnisses mit den grundlegenden Anforderungen der folgenden EG-Richtlinien, harmonisierten Normen, nationalen Normen.

We hereby declare at our sole responsibility that the product conforms to the essential requirements of the following EC Directives, harmonized standards, national standards.

Par la présente nous certifions sous notre seule responsabilité la conformité du produit avec les exigences fondamentales des directives CE, normes harmonisées et normes nationales suivantes.

Con la presente dichiariamo sotto la nostra responsabilità la conformità del prodotto con i regolamenti basilari delle seguenti direttive CE, normative armonizzate e normative nazionali.

Por la presente declaramos bajo nuestra sola responsabilidad que nuestros productos están en conformidad con las exigencias básicas de las siguientes directivas de la CE, normas homologadas y normas nacionales.

Hiermee verklaren wij onder geheel eigen verantwoordelijkheid de conformiteit van het product met de fundamentele en gestelde eisen volgens EG-richtlijnen, geharmoniseerde normen en nationale normen.

EG-Richtlinie / EC Directive / Directive CE / Regolamento CE / Directiva CE / EG-richtlijn

2006/42/EG / 2014/30/EU

Dokumentationsbevollmächtigter
Responsible for documentation / Responsable de la documentation / Responsabile della documentazione/ Responsable de la documentación / Voor deze documentatie verantwoordelijk

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ppa.
(per procura)

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CE

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5 General safety instructions

5.1 Operator's duty of care



This dishwashing machine has been constructed and designed based on a risk assessment and careful selection of the applicable harmonised standards, as well as additional technical specifications. It is therefore state of the art and guaranteed to provide maximum safety.
Safety can only be guaranteed during operation if all necessary measures are taken. The operator of the machine has an obligation of care to ensure that these measures are planned for, and also to check that they are correctly implemented.

Measures to ensure the safe machine operation



The operator must ensure in particular that ...

... the washing machine is only used in accordance with the regulations
in case of other use or operation, damage or risks may arise for which we accept no liability (cf. chapter "Intended use").



… in order to guarantee functionality and safety, use only original parts supplied by the manufacturer when needed.
Any potential claims by the user shall be rendered void if the system was altered using parts other than original spare parts.



... only appropriately qualified and authorised employees use, maintain, and repair the machine.



… staff is regularly trained in all questions relating to occupational safety and environmental protection and, in particular, that staff is familiar with the Operating Instructions as well as with the safety instructions they provide.



... the washing machine is only operated in a perfect, operationally efficient condition and, in particular, that the safety systems and switch elements are checked on a regular basis for their operational efficiency.



... machines accessible only from behind may be operated only with rear panel cladding.



... the required personal protective equipment is made available to and used by maintenance and repair personnel.



.... a functional test on all safety systems of the machine / installation is carried out during every regular maintenance.



... the operating instructions are always in a legible state, complete, and available at the machine's location of use.



.... any necessary regular checks on supply parts are carried out. More detailed information, if required, can be found in the relevant operating instructions.



After installation, commissioning and handing over of the washing machine to the customer/operator, no modifications may be made (e.g., electrical system or location). Modifications to the warewashing machine, and in particular technical modifications carried out without the manufacturer's written authorization, or any modifications carried out by unauthorized persons, will lead to the complete loss of any guarantee claims and will invalidate any liability for the product.



... equipment for optimising energy consumption must not be used to reduce essential operating temperatures, as set out in DIN 10511, 10512 and 10522. If you, the client, install equipment for optimising energy consumption, any possible reduction in the quality of the wash and hygiene is your responsibility.

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5.2 Basic safety measures



Danger can arise from the improper use of the machine or if it is used for purposes for which it was not intended.

Parts carrying electric current as well as moving or rotating parts can cause·dangers to the user's life and limb and material damage.





The warewashing machine may only be operated by adequately qualified staff who have been trained by the operating company and who have been trained about the hazard and safety instructions.
Qualified staff, as defined by the Operating Instructions, are persons:

- over 14 years of age
- who have read and who observe the safety instructions,
- who have read and who observe the operating instructions (or the part applicable to the work to be carried out).



The machine is working with hot water. Temperature of wash water = 58-60°C. Avoid all contact with the rinse water Danger of scalding! The washed items as well as the components in contact with the wash water have the same temperature. Please observe appropriate protective measures. Allow machine components and washware to cool down before touching.
Observe all the instructions posted on the machine.



Warning !
When electrical equipment is in operation, it is inevitable that some parts of this equipment are live with dangerous current.
Before opening the machine or electrical equipment, it is essential to de-energise the entire machine via the connected mains disconnecting device and secure it from switching back on using appropriate measures.
Work and troubleshooting on electrical parts of the washing machine must be performed by specialists only. Observe accident prevention regulations.
The operator must not restart the maschine until **all cover panels** have been put back in place.



The warewashing machine may not be sprayed with a water hose or high-pressure cleaner.



The warewashing machine may only be operated under the supervision of trained personnel.



The water in the wash-up area is non-potable and must not be used for food preparation!



Do not use the washing machine if you are unsure about system operation.



Do not place any solvents or other easily flammable substances in the wash-up area, as this increases explosion hazard



The maschine must not be used to transfer waste water from other sources into the drain.

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CAUTION!

Steel scrub pads are not to be used for the pre-scouring nor for cleaning the items to be washed.

Do not wash any metal items in the warewashing machine which are not made of stainless steel.

The operator must reliably prevent metal parts (especially iron, tinplate, copper) entering the machine.

The machine must not be used to transfer waste water from other sources into the drain (Warning: risk of corrosion and blockage).

Only use suitable products for cleaning the stainless steel surfaces. They must not attack the material, form any deposits, or cause any discolouration.

CAUTION!

The hood must be closed!
There must be no body parts between dishwashing machine hood and dishwashing machine tank as the hood is being closed.
Open the hood very carefully during the programme cycle, as otherwise wash water could splash out.

The tank heating element may still be hot after the tank has been emptied. As a result, there is a risk of burns or scalding when cleaning the machine manually!

CAUTION!

Wear suitable work clothing

Loose clothing and jewellery increases the risk of being caught on protruding parts.

- Wear tight-fitting work clothing. Wear trousers down or an apron.
- Do not wear rings, necklaces or other pieces of jewellery.
- Wear protective gloves and goggles.

Wear secure, suitable shoes. (We recommend wearing safety shoes with steel toe caps)

CAUTION!

Only use detergents and rinse aids suitable for commercial dishwashing machines.

Please contact the manufacturers of these products für information.

Detergent and rinse aid may contain hazardous substances.

Observe the manufacturers' hazard warnings on the original containers and safety data sheets.

CAUTION!

On completing operation, switch off the warewashing machine completely using the local circuit breaker.
The accompanying Operating Instructions must be observed for accessory devices, e.g. water treatment installations.

CAUTION!

WE DO NOT ACCEPT NO LIABILITY FOR DAMAGE OR INJURY ARISING FROM FAILURE TO OBSERVE AND ABIDE BY THESE SAFETY INSTRUCTIONS!!!!

5.2.1 Working on the electrical equipment

CAUTION!

Any repair work and troubleshooting on the machine's electrical equipment must be carried out by a qualified electrician!

Check the electrical equipment regularly! Tighten any loose connections! Replace any damaged leads/cables immediately!

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6 Delivery, transport, installation and assembly

6.1 Delivery

Check that the delivery is complete immediately after receiving it by comparing it to MEIKO's contract confirmation and/or the delivery note.

If necessary, complain about any missing parts immediately to the shipping company and notify MEIKO.

Check the entire scope of delivery for any damage that may have occurred during shipping.

In the event of any transport damage please inform MEIKO immediately in writing, and also send a photo of the damaged parts to MEIKO.

CAUTION!

Damaged machines must not be commissioned under any circumstances.

6.2 Transport, installation and assembly

In order to avoid damage or life-threatening injuries during shipping of the installation, the following points must be observed:

CAUTION!

- Transport works must only be performed only by qualified persons observing the safety instructions.
- Observe transport instructions on the packing.
- Handle with care.
- Unpack the machine.

For safe transport, the machine parts are supported by a special square-timber frame.

The machine must only be transported on the supplied wooden frame. The packing is specifically designed to allow the appliances to be moved safely and securely using a pallet truck.

The enclosed dimensional drawing states the connected load and consumption specifications of the warewashing machine.

CAUTION!

Small quantities of steam may escape from the hood of the machine. Furniture and equipment situated near the hood must be protected.

On request, an engineer from your local MEIKO representative is available to install the machine. This includes setting up the machine at the location of use and connecting the tables as necessary.

Dishwashing machine installation steps:

- The complete unit must be levelled in both directions using a water level.
- Compensate for an uneven floor by adjusting the feet.
- Table joints must be sealed with detergent-resistant sealing compound (e.g. silicone).

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6.3 Operating conditions

It is assumed that the planning of the system, as well as installation, setting in operation and maintenance works are executed by sufficiently instructed staff and that these works are checked by responsible specialists. The details on the machine's type plate must match those of the standard drawing and the local connection conditions.

Conditions to be provided by the customer:

- Frost free storage and installation area
- Electrical connection in accordance with the dimensional drawing
- Fresh water connection in accordance with the dimensional drawing
- Waste water connection in accordance with the dimensional drawing
- Anti-slip floor coverings should be provided around the dish-washing appliance.

6.3.1 Requirements to the installation area

- Ensure that the storage and installation area is permanently frost free.



The machine is only frost-proof in as-delivered state or if equipped with special features (option: frost drainage).

If the machine is installed in an area where the surrounding temperatures are below 0° C, water freezing inside the machine damage the internal water circuit components (pump, solenoid valve, boiler, etc.).

6.4 Requirements for the electrical connection



Work on the electrical part of the machines may only be undertaken by specialist personnel.

The customer must guarantee the following points relating to the connection:

- The correct voltage and type of current must be available
- Safeguard the power supply cable according to regulations and provide it with a power disconnection device in the fixed electrical installation.
- The machine must be connected to a potential equalisation system!
- If an unearthed neutral (N) is used with alternating current, the power disconnection device must have 4-poles (with alternating current 2-poles).
- For connection to three-phase current a 5-pole terminal strip (L1, L2, L3, N, PE) must be used.
- Electricity supply without neutral conductor (N): when connecting to three-phase current, use a 4-pole clamping strip (L1, L2, L3, PE).
- Conductor colours: live conductor L1 = black/1, L2 = brown/2, L3 = grey/3, neutral conductor N = blue/4, ground wire conductor PE = green-yellow.



Current applicable standards and requirements of local utility companies are to be adhered to with regard to protective measures and connection of the potential compensation system.

The products are intended for permanent connection to the on-site power supply and have been tested for the market accordingly. Any other form of electrical connection is to be established by a licensed electrician.

Do not connect any additional consumers to the fuse protecting the machine.

- Re-tighten all terminal fixing screws before the setting in operation.



The wiring diagram is behind the warewashing machine's front panel. The enclosed wiring diagram must remain in the machine.

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Note to the customer

Warewashing machines, bedpan washers and systems are provided for the permanent connection to the electrical power supply and the connection to the on-site potential equalisation system and are accordingly equipped with a connection option.

The operator can decide at his/her own discretion and under his/her own responsibility to alternatively implement personal protection in collaboration with a licensed electrician company using:

- Fault current protection switch sensitive to universal current with max. 30mA EN 62423

or

- Automatic switching off of the supply when the protective earth conductor for the consistency is lost (EN 60204-1 Chap. 8.2.8.c)

6.5 Requirements for the fresh water connection

The machine is DVGW-complaint test symbol and does not require an extra safety valve in the water supply.

- The fresh water connection must be effected as per EN 1717 or local regulations.



The minimum flow pressure of the clean water supply upstream of the solenoid valve must be 2.5 bar.

The minimum flow pressure of the clean water supply upstream of the solenoid valve must be 2.5 bar with the booster pump option.

The maximum pressure must not exceed 5 bar.

- If the minimum flow pressure is not reached, increase the flow pressure with a booster pump; if the maximum pressure is exceeded, limit it with a pressure reducer.
- Suitable protective measures must be taken to ensure that no iron particles can enter the appliance via the mains water supply. Similarly, precautions must be taken to prevent the entry of other metal particles, for example copper turnings. Corresponding instructions are contained in the installation drawing. Appropriate measures must be taken.
- A dirt trap must be fitted into the fresh water supply to protect the solenoid valve.

6.6 Requirements for the waste water connection

- Build an odour trap into the waste water connection if this is not already built-in (further information about this is in the installation drawing / dimensional drawing).
- The drain hose must be connected to the waste water pipe in the building.
- A grease trap may be needed, depending on the warewashing machine application.

6.7 Emergency-off

- Switch the machine off completely via the on-site circuit breaker.

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6.8 Chemicals for the operating the machine

CAUTION!

Only alkali detergents and acid rinse agents suitable for use in commercial warewashing machine may be used. Relevant information is provided by the manufacturers of these products.

MEIKO recommends brand cleaning products from leading manufacturers. - cleaning and hygiene products MEIKOLON are an excellent choice. Using unsuitable products can considerably reduce the service life of the dosing units. Observe the manufacturers' dosing instructions.

Detergents and rinse aids can present a health hazard if they are not correctly used. Observe the manufacturers' indication on the original containers and safety data sheets.

"Items for rinsing are tribologically influenced in particular by chemicals and increased temperatures during the process, as well as mechanical stresses caused by handling and transporting."

If a descaling agent is used, please strictly observe the manufacturer's handling and safety instructions. After having used such an agent, the product must be completely removed from the machine, as even small residues are sufficient to destroy plastic parts and packing materials.

Chemical product settings

The correct settings for the quantity of detergent and rinse aid depend on the product used. The relevant chemical product supplier can install the correct setting.

6.9 Instructions for disposal of packing material

- The four-sided wooden frame consists of untreated, raw wood.
- Special country-specific import regulations may also stipulate the use of wood which has been treated against pests.
- The plastic sheeting (PE sheeting) can be recycled.
- The cardboard packaging material used to protect the edges can also be recycled.
- The steel strap from the packaging can be recycled as steel scrap.
- The plastic tensioning strap (PP) can be recycled.

7 Settings for initial commissioning by the service engineer

7.1 Commissioning

To avoid damages or dangerous injuries during the setting in operation of the washing machine, please observe the following points:
Perform any required initial checks on supplied parts. More detailed information, if required, can be found in the relevant operating instructions.

CAUTION!

- The warewashing machine may only be commissioned by suitably qualified persons observing the safety instructions.
- Before the first start, check if all tools and foreign parts are removed out of the installation.
- Check any escaped fluids have been removed.
- Activate all the safety systems and hood switch before commissioning.
- Check that all screw connections are tight.
- Please also read the chapter "General safety instructions".
- Commissioning and training will be handled and provided by MEIKO-trained service engineers. The operator must not use the installation before completing training.

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8 Washing dishes with the washing machine

The appliance must not be used without a thorough knowledge of the Operating Instructions. Incorrect operation may result in personal injury or material damage.

8.1 Operating panel

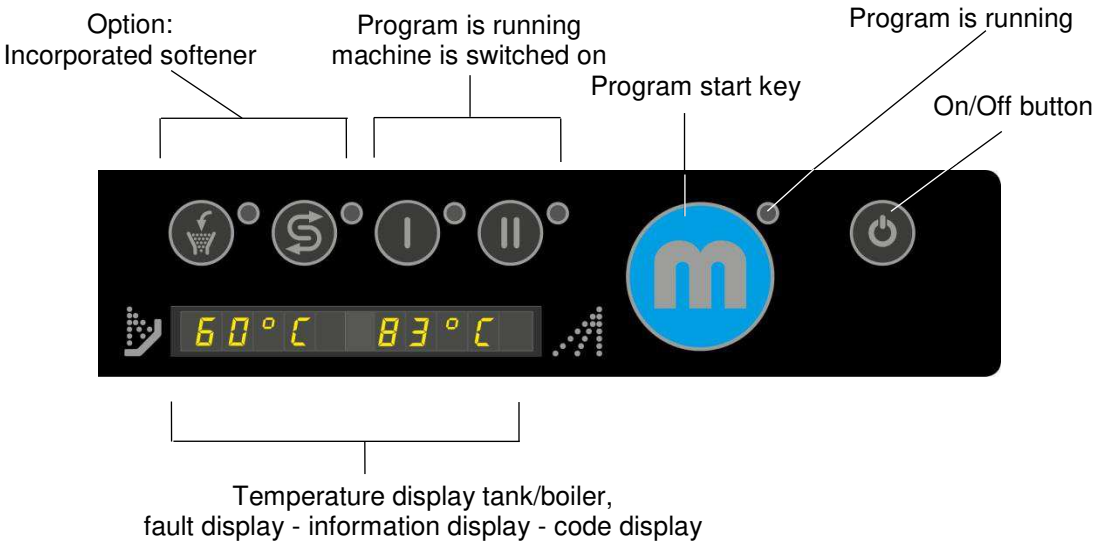


Figure 1; Operating panel

Key/display	Meaning
	Short programme – Wash programme I
	Normal programme – Wash program II
	Intensive programme – Wash program III
	Wash temperature
	Final rinse temperature
	Regeneration necessary (option)
	Regeneration (option)
	Programme start Drain tank Self-cleaning programme
	Switch on / off the machine / cycle interruption

Table 1; Program key function / items to be washed

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8.2 Preparation for washing and rinsing

The following preparatory work must be carried out at every startup

- Open the hood.
- Insert the eco-filter, stand pipe and tank cover screen.
- Close the hood.



Danger of crushing.

Close the hood with both hands.



- Press the on/off button to switch on the machine.

During the filling and heating phase, the light above the preselection key will flash. When the light remains constantly lit, the machine is ready for operation.

The time required to reach operation readiness depends on supply water temperature and the installed boiler or tank heating capacity.

If using a cold water connection, this process takes approx. 25 minutes.

8.3 Manual dosing of detergent

If there is no detergent dosing pump, the detergent must be added manually to the washing water. To obtain a concentration of 2 g/l, an initial amount of 40 g and a later addition of 30 g after each of 5 cycles should be added.
If the detergent is in powder form, the powder should be scattered evenly on the water in the tank and dissolved after the tank has been filled. This will prevent discolouration of stainless steel parts.

8.4 Automatic dosing

The required detergent (detergent dosing pump: option) and rinse aid is transported out of the containers into the tank, resp. boiler, via electronically controlled dosing units. The dosing is effected automatically acc. to the requirements arising during the wash process.



Use of unsuitable products will significantly impact the service life of the dosing equipment.

We therefore recommend that detergents should have a pH value greater than 7 and that rinse agents should have a pH value between 7 and 2.

8.5 Operation during washing and rinsing cycle

The following fundamental principles must be observed when placing the items to be washed in the baskets:

- All hollow containers must always to be **loaded upside down**. Otherwise the water will be trapped inside and they will not dry to a brilliant finish.
- Plates, trays and big plates should always stand at a **slight angle** in the basket. The inside faces pointing upwards.
- When using cutlery baskets, ensure that cutlery is always inserted handle down.
- Load the cutlery baskets with a **mixture** of spoons, knives and forks, as identical items of cutlery can be too close together.
- Do **not overload** the cutlery baskets.
- **Do not stack** the dishes in the wash basket directly on top of each other. As the wash water could not strike the items directly and unnecessarily long wash times would have to be selected. Short wash times with baskets which are not overloaded are much more economical.

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8.5.1 Start the wash cycle

Program start key



- Pre-wash the dishware (major food residues, serviettes, tooth picks, etc.) and place in the basket.
- Place the basket in machine, ensuring that it is correctly centred in the basket holder.
- Close the hood.
- Press the program start key or press down the hood rod.

The machine cleanes and rinses automatically and switches off the wash program after completion. The program cycle is indicated by a light on the program start key.

The wash time can differ from the set program time if the boiler heating capacity is not sufficient for heating up the fresh water to the pre-set boiler temperature during the program time. In this case, the automatic wash time extension is activated.

8.5.2 Remove the cleaned items

- When the light goes out, open the door and remove the basket.
  Allow the washware to cool down before emptying, if necessary. We recommend that you wear protective gloves.

In case of Airbox *AktivAir*:
After the wash is finished the extraction fan is switched on for three minutes.
The steam coming from the tank partially condensates and goes back into the tank. The rest mixes into the air so that steam formation is minimised.

9 Shutting down the machine



- Press the On/Off button. The machine is switched off when all the lights are out.
- Remove and clean the tank cover screens
- Remove the stand pipe.
- Remove and clean the eco-filter

Machines with built-in drain pump:



- Press the program start key to drain the tank.
- The tank interior is sprayed with clean hot water after the tank water has been drained. The hood must remain closed. The waste water pump switches off automatically.

10 Maintenance and care

10.1 Care, general

The machine has been designed to keep the need for cleaning, care and maintenance to a minimum.

However, for reliable, safe and long-term function of the machine, and in the interest of hygiene and cleanliness, correct care and maintenance is necessary.

10.2 Refill detergent

External storage container

The container is located in the immediate vicinity of the machine.

- Check the filling level of the container and if necessary, replace it with a full one.

CAUTION!

Only non-foaming alkali detergents (pH > 7) suitable for commercial dishwashers may be used.

Detergent dosing units must be checked to see if they are functioning properly if there is reason to believe that they are malfunctioning. Visual inspection!

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10.3 Refilling with rinse aid

External storage container

The container is located in the immediate vicinity of the machine.

- Check the level and, if necessary, replace the container by a full one.



Only non-foaming acid rinse aid (pH < 7) suitable for commercial dishwashers may be used.

If you suspect a malfunction, check the final rinse dosing unit. Visual inspection!

10.4 Cleaning

After emptying the tank, proceed as follows:

- Do not use a foaming detergent for dish-washing by hand for pre-cleaning close to the warewashing machine. Foam can cause malfunctions in the warewashing machine and a poor wash.
- Food residues sticking to the tank, tank heating element and sieves must be removed with a brush.
- Disassemble the wash arms and rinse them with flowing water.
- Wash nozzles must be cleaned daily.
- The cleanliness of final rinse nozzles must be checked weekly and if necessary clean under running water.



The inserts for the final rinse nozzles must be inserted with the prongs facing the water flow.

10.4.1 Safety instructions for cleaning



The tank heating element may still be hot after the tank has been emptied. As a result, there is a risk of burns or scalding when cleaning the machine manually!

Machine, switch cabinet and other electrical components may not be sprayed with a water hose or high-pressure cleaner.

10.5 Care of stainless steel surfaces

We recommend cleaning the stainless steel surfaces only when needed with cleaner and care products suitable for stainless steel.
Lightly soiled parts can be wiped with a (possibly damp) cloth or sponge.
Be sure to wipe dry after cleaning to avoid traces of scale. Use demineralised water if possible.
Do not use aggressive cleaning or scouring agents.
The care products must not attack the stainless steel, form deposits, or cause discoloration.
Never use cleaning agents that contain hydrochloric acid or bleaches based on chlorine.

Never use cleaning equipment that you have used previously by non-stainless steel to avoid external corrosion.

Aggressive external influences due to cleaning and care products that evaporate in the vicinity of the dishwashing machine, or caused by direct application, can lead to machine damage and put the material at risk (e.g., aggressive tile cleaners).

Caution!

Observe the manufacturers' hazard warnings on the original containers and safety data sheets.

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10.6 De-scaling

If the machine was operated with hard water, the boiler and wash tank could have lime scale deposits. De-scaling of the tank interior, boiler housing, tank heating, boiler heating and wash and final rinse system then becomes necessary.

CAUTION!

For de-scaling the appliance use only products suitable for industrial dishwashers. Please observe the product manufacturers' instructions.

After de-scaling the appliance:

- Completely flush the de-scaling agent out of the machine. 1 or 2 rinse cycles with fresh water are necessary to achieve this.

Even small residues of de-scaling agents can be sufficient to destroy plastic parts and sealing materials!

If the machine is heavily scaled, you should ask a service engineer from your local MEIKO representative to de-scale the boiler.

11 Warewashing machine with built-in water softening device EW10 (UPster H 500S)

11.1 General

If the red lamp lights up, the capacity of the water softener has been almost exhausted. About a further 10 program cycles are possible before the water softener is completely exhausted. It is therefore possible to delay the necessary regeneration until a time when the machine is not in use.

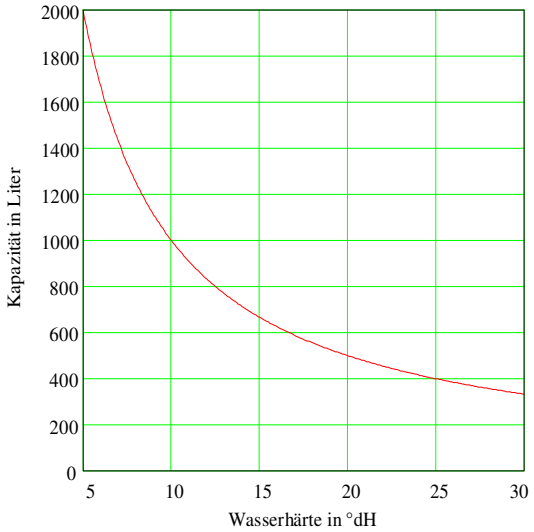
CAUTION!

It is important to note that if the machine continues to be used when the water softener is exhausted, capacity can be reduced and the machine may even become unusable.

11.2 Adjustment of water hardness

The water softening device is pre-set to 30°Gh in the factory. When the service engineer installs or commissions the appliance he should adjust this value depending on the actual water hardness. Should there be any further changes in the water hardness, this parameter must be adjusted accordingly as set out in the Short Programming Instructions.

11.3 Capacity of the built-in water softening device



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11.4 Regeneration



Switch off the machine.

Remove the stand-pipe, empty the tank.

Fill the salt solution container with 0.8 kg regenerating salt. A funnel can be used for this if necessary.



By regenerating salt we mean here sodium chloride with a grain size of 0.3-1 mm.



The seal and the thread of the salt solution container must be cleaned before closing the container. Carefully lock the salt solution container cover. The penetration of wash water can reduce the capacity of the built-in water softening device.



- Press the regeneration button.
- The regeneration process starts automatically and lasts for about 13 minutes.



The machine cannot be used during this time. The hood must remain closed.



The regeneration process is indicated by a yellow light. The machine can be filled again when the light has gone out.



- Even if the red light has not come on to indicate that the water softener is exhausted, the regeneration process can be started by pressing the regeneration button for at least 3 seconds.



We recommend that you fill the machine immediately after the regeneration process in order to dissolve and remove from the wash tank any salt particles that have been spilled.

If the salt remains in the wash tank for a lengthy period, this can result in corrosion and even pitting corrosion in the bottom of the tank.

12 Basic information about the warewashing machine



The dishwashing machine is manufactured according to the latest state of the art technology. Operation is safe.



Dangers could arise from this model, if it is not correctly operated by unsuitable operating staff or if it is not used acc. to it's purpose.

Liability

We accept no responsibility for damage of the machine and other objects caused by operating faults, resp. non-observance of the operating instructions. Modifications to the machine - in particular technical modifications internally - carried out without the manufacturer's written authorization, or any modifications carried out by unauthorized persons, will lead to the complete loss of any guarantee claims and will invalidate any liability for the product.

12.1 General description of the warewashing machine

12.1.1 Wash principle

The warewashing machine has one wash and one final rinse cycle.

The temperature regulator keeps the wash temperature. A centrifugal pump circulates the water out of the wash tank into the wash nozzles. The water jets reach the items to be cleaned out of differing directions. Therefore an even cleaning result can be guaranteed.

The cleaning cycle is followed by the fresh water final rinse. The items are rinsed via a separate nozzle system with hot fresh water 80 - 83° C. Thus heating up the items for the following drying process. At the same time the final rinse water serves for the regeneration of the wash water, the level of soil of the wash water thus being reduced.

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12.1.2 Detergent dosing

The detergent dosing unit is designed for the automatic addition of liquid alkaline detergent to the clean water.

The detergent is transported out of the container into the clean tank by means of a hose line. The dosing equipment is self-priming. Dosing occurs during each filling cycle and at the beginning of each program cycle via timer control.

Normally, a dosing of approx. 2 ml of detergent per liter of tank water is the correct concentration. This can be increased/reduced acc. to the water quality, items to be washed and degree of soiling to 5 ml/l or to1 ml/l.

12.1.3 Rinse aid dosing

The rinse aid dosing unit is designed to automatically admix liquid final rinse aid into the fresh water.

The rinse aid is pumped out of the storage container into the fresh water supply line through a hose. The dosing equipment is self-priming. Dosing takes place during each filling cycle.

The correct dosing results in a smooth, even water film.

In case of overdosing, there are bubble and stripe formations - reduce dosing.

In case of under-dosing, water drops remain on the washed items - increase dosing.

12.2 Noise emission

Work place noise level L_{pA} £ 70 dB

12.3 Electrical and hydraulic equipment data

See attached technical sheet

12.4 Dimensions, technical data, installation instructions

See attached technical sheet

13 Non-ionising radiation

Non-ionising radiation is not produced intentionally but unfortunately comes about due to electrical operating equipment (e.g. electrical motors, high-voltage cables and magnetic coils).
In addition the machine has no strong permanent magnet. There is a high possibility of eliminating any influence on active implants (e.g. pacers, defibrillators) by maintaining a safety distance of 30 cm (distance of the field source to the implant).

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14 Help yourself in case of faults

Malfunction:	Remedy
Machine does not fill!	• No water present • Dirt trap clogged • Level switch defective • Solenoid valve faulty • Hood safety switch defective
Final rinse does not spray!	• No water present • Dirt trap clogged • Solenoid valve faulty • Booster pump has failed • Final rinse system is scaled
Stripes and smears on the dishes!	• Rinse water mineral content too high (see operating instructions) • If only found at certain times, check water softening unit with a view to regeneration. This, however, must not be done during the washing time. • Water pre-treatment defective or not carried out • Different water type depending on the waterworks • Unsuitable rinse agent or wrong dispensed quantity.
Strong formation of foam in the wash tank!	• Detergent for dish-washing by hand enters the wash tank because of pre-cleaning the dishes • Daily cleaning is carried out with foaming cleansing agents which then enter the machine. • Improve pre-wash, as too much soiling is entering the tank. Alternatively, empty wash tanks between uses. • Final rinse water quantity too low • Detergent or rinse aid product not suitable • Temperatures too low < 40°C

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15 Staff training

Only trained and instructed personnel are allowed to work at the washing machine. Staff responsibilities for operation, maintenance and repairs must be clearly defined.
Any personnel undergoing training are only allowed to work on the warewashing machine under the supervision of an experienced person.

Persons / Activity	Trained operating personnel	,Trained in-house maintenance worker	Qualified in-house maintenance worker or intallation engi-neers
Installation and assembly			◆
Commissioning			◆
Operation, use	◆	◆	◆
Cleaning	◆	◆	◆
Check safety devices	◆	◆	◆
Troubleshooting		◆	◆
Troubleshooting, mechanical		◆	◆
Troubleshooting, electrical			◆
Maintenance			◆
Repairs		◆	◆

The instructions should be acknowledged in writing.

16 Authorised user of this documentation

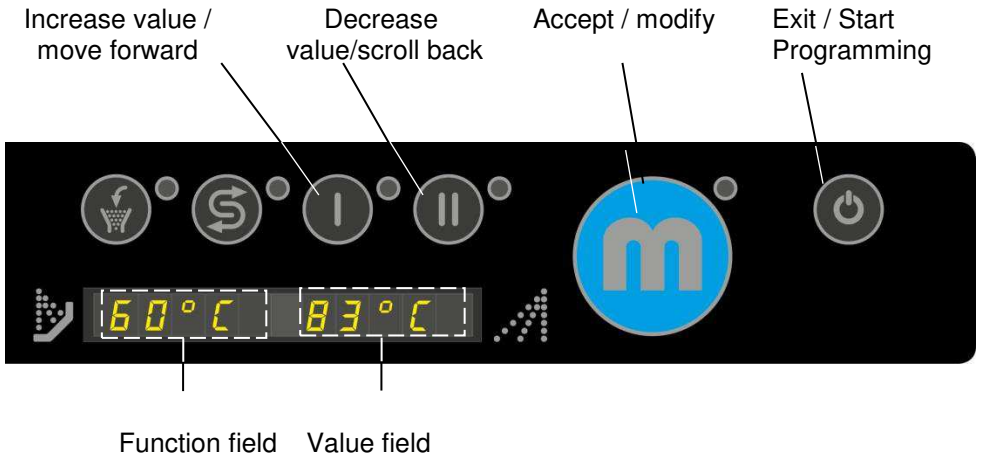


The works described in this booklet (chapter 17 - 20) may only be carried out by specialists of the manufacturer, the responsible agency or an authorized dealer.

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17 Settings / modifications / on-site adaptation

17.1 Using the keyboard for programming



Access codes for various user-levels have been defined. When the complete code has been entered, it is compared to an internal code table. The corresponding user level is then granted depending on the code that has been entered. 2 access codes are available for each user level; the first is for restricted access, i.e. no modification of parameters is possible (viewing mode), and the second gives access to the entire range of functions (viewing and modification).

This is described briefly in the short programming instructions that accompany every warewashing machine.

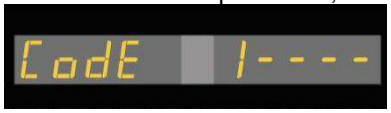
For control programming, the power supply must be available but the machine must be completely switched off (no LED must be illuminated).

Code input:

View service data:	CODE 10000
Modify service data:	CODE 10001
View configuration data:	CODE 20000
View dosing technology data:	CODE 40000
Modify dosing technology data:	CODE 40044

17.2 Code input

To access code input mode, hold down the "0" key (for about 3 seconds) until you see



in the display.

Pressing the “0” key again lets you quit programming at any time.

The digit to be modified will flash.

Press the “I” key to increase the value/code indicated on the display unit, or press the “II” key to decrease it, or press the “accept” key to save it. The next value will then flash and will be the only one visible.

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If your entry is incorrect code input is cancelled, and an information code of 122 is displayed.

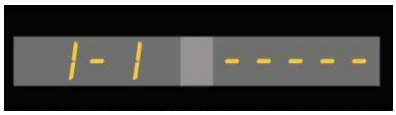


If you enter all the digits correctly you will arrive at the chosen level, either service, configuration or machine data.

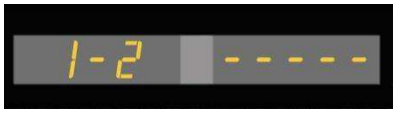
17.3 Service level

The list of service parameters can be found on this level (parameter numbers 1xx). You can view or modify the parameters here, or you can access the rinse aid and cleaner hose ventilation feature.

On the service level, you will first see the display below:



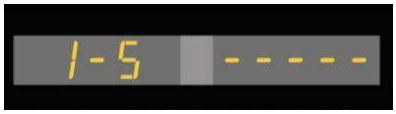
This corresponds to the viewing/modifying parameters (see 17.3.1)



This is equivalent to Ventilate rinse aid inlet (see 17.3.2)



This is equivalent to Ventilate detergent supply (see 17.3.3)



This corresponds re-setting partial demineralisation display (see 17.3.4)



This corresponds first-time-filling of boiler (see 17.3.5)

Press the “**I**” key to move forwards or the “**II**” key to move backwards or the “accept” key to make a selection. You are now at the current level.

You can leave this level by pressing the “0” key.

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17.3.1 View/modify parameters

Display



Press the “Accept” button to confirm.

Now, the first parameter is displayed with a value.



Press the “**I**” key to go forwards and the “**II**” key to go backwards, until the parameter you require is displayed.

Confirm the parameter to be modified by pressing the “accept” key, the value will flash. Increase the value using the "**I**" key or reduce it using the "**II**" key and confirm with the "Accept" key.

You can leave this level by pressing the “0” key.

See 17.4 for list of parameters.

17.3.2 Ventilating the rinse aid inlet



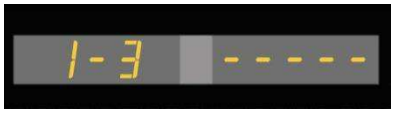
Press the “Accept” button to confirm.

This actuates dosing pump; the remaining running time is indicated.



You can leave this level by pressing the “0” key. Ventilation is cancelled.

17.3.3 Ventilating the detergent inlet



Press the “Accept” button to confirm.

This actuates dosing pump; the remaining running time is indicated.



You can leave this level by pressing the “0” key. Ventilation is cancelled.

Should the ventilation process be insufficient, repeat the process.

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17.3.4 Resetting the TE degree of depletion display

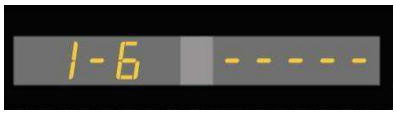


Press the “Accept” button to confirm.

If the option "Display degree of depletion" is active during operation with partial demineralization cartridges, the counter has to be reset using the function above after the cartridge has been changed

You can leave this level by pressing the “0” key again.

17.3.5 First-time-filling of boiler



Press the “Accept” button to confirm.

After emptying the boiler (repair of descaling) it must be filled with water again before the heater is switched on. This is achieved using this parameterization.

You can leave this level by pressing the “0” key again.

17.3.6 Configuration level

You will find a list of configuration parameters on this level.

(parameter numbers 2xx). You can view and modify the parameters. You can also access the input and output states, or set outputs for testing.

On the configuration level, you will first see the display below:



this corresponds to the viewing/modifying parameters.
This is equivalent to View/modify parameters (see 17.3.7)



This is equivalent to View input states.
This is equivalent to View/modify parameters (see 17.3.8)



This is equivalent to View and set output states.
This is equivalent to View/modify parameters (see 17.3.9)

Press the “**I**” key to move forwards or the “**II**” key to move backwards or the “accept” key to make a selection. You are now at the current level.

You can leave this level by pressing the “0” key.

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17.3.7 Viewing/modifying parameters: (depending on the code entered)

Display



Press the “Accept” button to confirm.

The first parameter is now displayed with a value.



Press the “I” key to move forwards or press the “II” key to move backwards, until the parameter you require is displayed.

Confirm the parameter to be modified by pressing the “accept” key, the value will flash. Increase the value using the "**I**" key or reduce it using the "**II**" key and confirm with the "Accept" key.

You can leave this level by pressing the “0” key.

See 17.4 for list of parameters.

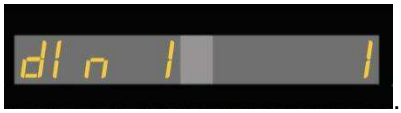
17.3.8 Viewing input status

Display



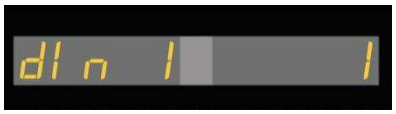
Press the “Accept” button to confirm.

Now, the first digital input will be shown, with status.

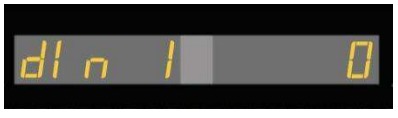


Use the “I“ to go forward and the “II“ to go backward until the desired input is displayed

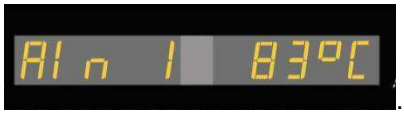
Display: input set



Display: input not set



You can leave this level by pressing the “0” key.



The direct value (here the boiler temperature) is displayed for the analog inputs.
Use the “I“ to go forward and the “II“ to go backward until the desired input is displayed.

Assignment details for the inputs are given on the assignment list for each machine. (see 17.5).

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17.3.9 Viewing/modifying output status (depending on code input)

Display



Press the “Accept” button to confirm.

Viewing:

Now, the first output is shown with its status.



Press the “**I**” key to move forwards and the “**II**” key to move backwards, until you reach the output you require.

Modifying:

Press the “Accept” key to confirm the modification of the output; the value flashes. Press the “**I**” key to modify the value and press the “accept” key to save it.

The output is now set.



You can leave this level by pressing the “0” key.

Assignment details for the outputs are given on the assignment list for each machine. (see 17.5)

17.3.10 Viewing/modifying the dosing technology level

By entering code 40000 (read only) or 40044 (read / enter), the user can access the 4th parameter level summarizing all the dosing technology parameters:

P104, P105, P218, P219, P224, P225, P321, P322, P326, P327.

See 17.4 for list of parameters

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17.4 Parameter list

Par. no.	Configuration options	Use as	Value range	Unit	Note
101	Wash program Key 1	Parameters	1 ... 50	-	Allocate the wash program to the key I Assignment adjustable
102	Wash program Key 2	Parameters	1 ... 50	-	Allocate the wash program to the key II Assignment adjustable
103	Wash program Key 3	Parameters	1 ... 50	-	Assign rinse programme -no. of the key I+II pressed together; Assignment adjustable
104	Rinse agent dosing quantity	Parameters	0.10 ... 1.00	ml/litre water	The value can be read from the rinse aid container label (depends on the water quality)
105	Detergent dosing quantity	Parameters	0.1... 20.0	ml/litre water	Value can be read from the deter-gent container label (dependant on water quality)
106	Degree of hard-ness	Parameters	0 ... 50	°dH (°KH)	The quantity of soft water available between two regenerations depends onthe hardness of the water; for partial demineralisation TE too
107	Beep ON/OFF	Parameters	0/1	-	Switch on/off acoustic ready mes-sage
109	Partial/full demi-neralisation available ?	Parameters	0,1,2	-	Partial/full demineralisation available? 0: no 1: partial demineralisation (TE) 2: full demineralisation (FD)
110	Hardness litres per cartridge type	Parameters	0 ... 250	1000 l	"Replace cartridge" is displayed when the cartridge's capacity is reached (hardness litres/degree of hardness) (INFO 725) (only for TE)
111	Total operation time indication	Display	5 figures	h	Operating time, query only
112	Total number of wash cycles	Display	5 figures	-	Wash cycles/loads, query only
113	Total number of wash cycles since last reset	Display	5 figures	-	Wash cycles/loads, resetting possible
114	Serial number	Display	8 figures	-	Option for calling the serial number
115	Condition remai-ning cartridge capacity	Display	0 ... 100	%	Only for partial / full demineralisa-tion: TE: indication in % VE: 100 = OK; 0 = replace
116	Pre-selected wash programme after switching on	Parameters	0 … 3	-	0 = program 1 1 = program 2 2 = program 3 3 = last selected program

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Par. no.	Configuration options	Use as	Value range	Unit	Note
119	IR communication	Parameters	0/1	-	It is possible to shut off communication via IR interfaces. (0)
120	Load factory setting service parameters	Parameters	0/1	-	Effective only upon power supply reset ON/OFF **Caution!** All changes to service parameters will be reversed. Power supply reset must be carried out within 5 minutes, otherwise factory settings will not be loaded. Without power supply reset, the information 123 will be displayed.
201	Machine type	Parameters	103	-	Setting for UPster
202	Setpoint tank temperature	Parameters	10 ... 82	°C	Standard for all the rinse programs on one appliance! Output dependent on definition
203	Pre-rinse time	Parameters	0 ... 8	Sec.	See pre-rinse process step
204	Rinse time	Parameters	4.0 ... 25.0	Sec.	Duration of final rinse time, running time limited by P306!!
205	Indication of operation	Parameters	0 ... 10	-	Definition of the information which is to be switched via the potential-free contact 0 – no information 1 – filling/Heating, ready for washing/washing or draining 2 – filling/Heating, ready for washing/washing 3 – filling / Heating 4 – ready for washing 5 – washing 6 – draining 7 – error 8 – not status machine OFF and draining 9 – EW active 10 – not status Machine OFF
218	Shortage of rinse aid	Parameters	0/1	-	Monitoring Display
219	Shortage of detergent	Parameters	0/1	-	Monitoring Display
224	Power supply mode rinse aid dosing pump	Parameters	0 ... 3	-	Definition: Energizing rinse aid pump: 0 – no signal 1 – energizing according to calculated running time 2 – energize as final rinse 3 – energize as wash pump
225	Detergent dosing pump activation mode	Parameters	0 ... 3	-	Definition energizing detergent pump: 0 – no signal 1 – energizing according to calculated running time 2 – energize as final rinse 3 – activate as per wash pump

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228	Water softener EW 10 incorporated?	Parameters	0/1	-	In case of incorporated water softener set to 1
240	Detergent pump activation mode	Parameters	0/1	-	Effective only upon power supply reset ON/OFF **Caution!** All changes to service parameters will be reversed. Power supply reset must be carried out within 5 minutes, otherwise factory settings are not loaded. Without power supply reset, the information 123 will be displayed.
241	Boiler system	Parameters	0/1	-	0: Pressure boiler, final rinse via solenoid valve and mains pressure 1: Pressureless boiler with plug connector and booster pump
242	Drain pump (LP) available?	Parameters	0/1	-	0: LP not incorporated 1: LP incorporated
243	Frost drainage (without FA)	Parameters	0/1	-	0: no effect 1: Tank filling before Heating
321	Final rinse pump output	Parameters	0.1 ... 10	l/h	Final rinse pump Output definition.
322	Detergent pump output	Parameters	0.1 ... 20	l/h	Detergent pump Output definition.
326	Rinse aid vent time	Parameters	0 ... 255	Sec.	Activate rinse agent pump temporarily to remove air from pipe.
327	Detergent vent time	Parameters	0 ... 100	Sec.	Activate detergent pump temporarily to remove air from pipe.
346	Display LED2 or LED1	Parameters	0/1	-	0: LED2 with LEDs 1: LED1 with temperature display

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17.5 Assignment list
View inputs / control outputs

Display			Input/output/other	Conditions
Left		Right		
dIn	1	0/1	Hood closed	none
dIn	2	0/1	Boiler level	none
dIn	3	0/1	Tank level	none
dIn	4	0/1	Hood start	none
dIn	9	0/1	Level rinse aid (option)	none
dIn	10	0/1	Detergent filling level (option)	none
dIn	12	0/1	Measure conductance VE (optional)	none
AIn	1	83°C	Boiler temperature	none
AIn	2	60°C	Tank temperature	none
out	1.1	0/1	Wash pump	no leak water
out	1.2	0/1	Booster Pump	no leak water
out	1.3	0/1	Drain pump	no leak water
out	2.1	0/1	Rinse aid – dosage pump	no leak water
out	2.2	0/1	Detergent – dosage pump	no leak water
out	2.3	0/1	Tank heating	no leak water
out	3.1	0/1	Filling valve	no leak water
out	3.2	0/1	Soft starter valve	no leak water
out	3.3	0/1	Boiler heating	no leak water
out	3.4	0/1	Indication of operation	no leak water
out	3.5	0/1	EW valve	no leak water

Leak water switch condition: Leak water switch must not have operated.

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17.6 Rinse program parameter update: 01.06.2012

Program no.:	Boiler temperature target value	Wash time target value	
		Washing	Total
1	83	44	60
2	83	74	90
3	83	104	120
4	83	134	160
5	83	164	180
6	83	194	210
7	83	224	240
8	83	254	270
9	83	284	300
10	83	344	360
11	65	44	60
12	65	74	90
13	65	104	120
14	65	134	160
15	65	164	180
16	85	44	60
17	85	74	90
18	85	104	120
19	85	134	150
20	85	164	180
21	85	194	210
22	85	224	240
23	85	254	270
24	85	284	300
25	85	344	360
26	75	44	60
27	75	74	90
28	75	104	120
29	75	134	150
30	75	164	180
31	75	194	210
32	75	224	240
33	75	254	270
34	75	284	300
35	75	344	360
36	65	224	240

The dosage times will be adapted to the rinse time, so that the correct concentration remains if the rinse time is modified.

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18 Operating errors

Despite being expertly designed, the machine may develop minor faults which are usually easy to eliminate. This section explains a number of possible problems and how you can deal with them yourself.

Always de-energise the system before carrying out work on the open machine. Switch the machine off completely via the on-site circuit breaker.

Should any of the operational faults described arise repeatedly, their cause must be established in each case.

Faults not described here can generally only be resolved by a technician or electrician. Please contact your factory representative or authorised dealer.

18.1 Information reporting and troubleshooting

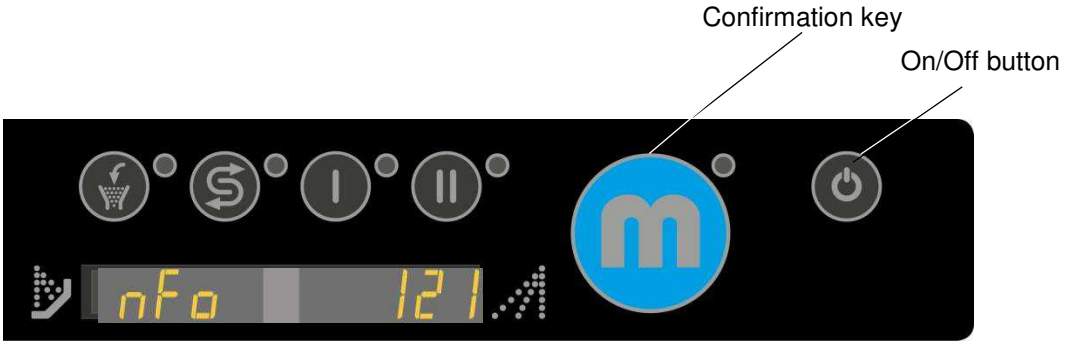


Figure 2: Information display

Information displays can be cleared by pressing the confirmation key.

Provided that the machine function is restored, the next program sequence will begin.

The information display can also be deleted by pressing the “Off” key.

Information indicator (extract)

Info No.	Description	Possible cause
120	Emergency program active Restricted washing possible.	No boiler / tank heating No fresh water supply Check system
121	Hood not closed	Check connection S1 Change microswitch Check microswitch adjustment Replacing a defective I/O circuit board
122	Incorrect password / no authorisation	Enter code once again
123	Factory setting parameter list	Switch the power supply on/off within 5 minutes to reset parameters to factory settings. This will be rejected and parameters will be retained. Information 123 will disappear
420	Shortage of rinse aid	If the warewashing machine is ready for operation, a shortage of rinse agent will be signalled (only if there is a built-in warning system).
520	Shortage of detergent	If the warewashing machine is ready for operation, a shortage of detergent will be signalled (only if there is a built-in warning system).

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Info No.	Description	Possible cause
720	Regeneration in progress	Regeneration program has started and is in progress. (It is possible to pause the program, but not cancel it.)
723	Regeneration necessary	The user must start the regeneration. (empty tank, add salt!)

Table 2: Information displays

18.2 Error messages and troubleshooting

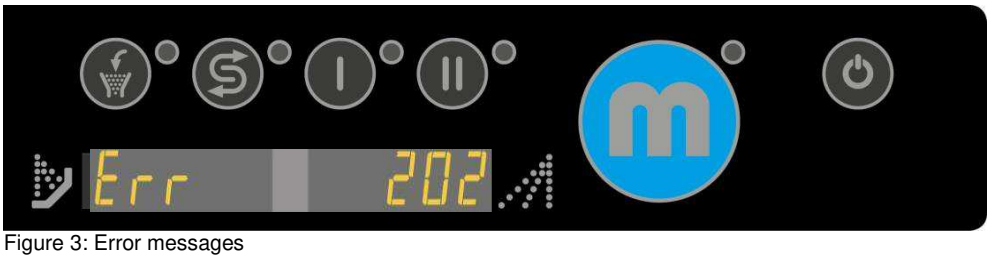


Figure 3: Error messages

Error messages will disappear automatically when the fault has been rectified.

Error messages (extract)

ERR.-No.	Description	Possible cause
001	EEPROM plug-in fault.	EEPROM not available / incorrectly plugged in / defective Empty or incorrect EEPROM Replace EEPROM with correct parameter set
201	Boiler level not reached during 1st filling (only machines with booster pump installed)	Fresh water inlet insufficient (water faucet closed) Entering supply hose kinked Inlet filter soiled Solenoid valve faulty Boiler switch defective
202	Boiler level not reached on time during filling (only machines with booster pump installed)	See 201
203	No change detected by the plug connector when emptying (only machines with booster pump installed)	Boost pump defective Booster pump plug connector loosened Start capacitor defective Plug connector loosened Plug connector loosened Boiler level switch defective No boost pump signal to - from input/output circuit boards Check boost pump DSP / S2 using manual control
204	No change yet detected by the plug connector (only machines with booster pump installed) after the rinse time expired.	See 203
205	Boiler temperature not reached after max. Heat time (P.310)	Boiler heating defective / thermal fuse radiator Temperature sensor defective, incorrect installation position Boiler contactor defective, performance switch loosened No signal from I/O board

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ERR.-No.	Description	Possible cause
210	Temperature sensor short-circuit	Check sensor cable (plug contacts) Replace sensor Install sensor correctly
211	Temperature sensor interruption	See 210
212	Actual boiler temperature too high(>95°C)	Contactor sticking Incorrect sensor / defective sensor Check sensor / cable
301	Number of final rinse cycles for tank filling exceeded. Tank level analysis disrupted	Feeding water pressure too low Sieve in feeding valve is dirty Rinse jets soiled Air trap soiled Condensate in level pipe Hose kinked / loose / not watertight
302	During the self-cleaning programme the tank level (S3) does not fall on time. (Only with built -in drain pump.)	Drain pump output insufficient Drain pump soiled/defective Impeller loose Drain pump plug connector loose Start capacitor defective Tank level analysis disrupted No signal from I/O board
304	Tank temperature not reached after max. heat time (P.314)	Tank heating defective / thermal fuse Radiator Temperature sensor defective, incorrect installation position Tank protection defective, performance switch loose
310	Temperature sensor short-circuit	See 210
311	Temperature sensor interruption	See 211
312	Actual Tank temperature too high (>85°C)	See 212

Table 3: Error messages

If the maximum temperatures are exceeded, the machine has to be disconnected from the power supply and a service engineer must be called.

Should information or fault numbers not shown in the tables be indicated, or should the suggested measure not lead to the elimination of the fault, please notify a customer service technician.

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19 Maintenance, servicing

Regular maintenance is a prerequisite for the long-term reliable and safe operation of a warewashing 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.
Maintenance work should only be conducted if the warewashing machine has been switched off completely via the on-site power disconnection device.

Existing safety systems must not be removed!



A functional test on all safety systems of the machine / installation is carried out during every regular maintenance

We recommend concluding a maintenance contract with our authorised distributor in order to ensure a long service life of the warewashing machine.

19.1 Basic safety measures during normal operation

Observe the maintenance intervals prescribed in the operating instructions!
Observe the maintenance instructions for the individual components!



Cordon off access to the operating area for unauthorised persons before starting maintenance or repair work. Display a sign drawing attention to the maintenance or repair work!



Before implementing any maintenance or repair work the warewashing machine must be switched off completely via the on-site power disconnection device and secured against reactivation by using appropriate measures (e.g. via a padlock whose key is in the possession of the person conducting the maintenance or repair work)!

Failure to observe these precautions can result in severe injury or damage to property.



Before maintenance or repair work, make sure that the machine's main cock is turned off! Check that all lines are securely connected.



Before maintenance and repair work, ensure that the machine is empty and cool down the boiler, pipes and washing chamber so that all parts of the machine that may be touched have cooled down to room temperature!

Carefully dispose of any cleaning products that could harm the environment!

19.1.1 Before putting back into operation following maintenance or repair work



Before starting operations following maintenance or repair work, all initial tests must be carried out as described in “Machine Settings for Initial Commissioning by the Service Engineer”.

19.1.2 Observe environmental protection regulations



For all work on or with the machine, observe legal requirements relating to the avoidance of waste materials and to their recycling/removal!

In particular, during installation, repair and maintenance work, materials that could pollute water such as: Grease and oils, Cleaning fluids containing solvents, must not pollute the ground or run into the sewerage system! These materials must be stored, shipped, collected and disposed of in suitable containers!

19.2 Dosing equipment

The dosing units themselves are maintenance free in principle but the working life of the wearing parts (peristaltic tube) is largely dependent on the chemical used.

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19.2.1 Change of products

Change of product means that one rinse aid or detergent product is replaced by another. The parallel use of different products can result in failures.

- Hose lines and dosing units must always be rinsed out with warm water.

19.3 Maintenance plan



NOTE

Maintenance work should **only** be conducted by authorised MEIKO personnel.

Maintenance procedures	UPster U 400 UPster U 500 / UPster U 500S	UPster H 500 / UPster H 500S	Component OK	Component faulty	Component re-
1. Pumps					
Check pumps for leak tightness, pump rotor noise, rotation direction and function					
Check pump suction					
Check pump sieves correctly fitting and operating correctly					
Check sliding seal/counter rotation ring					
2. Wash system					
Check water level in tank					
Check that wash water pipe is watertight					
Check washing system is complete and produces correct spray pattern					
Check wash arm hubs					
3. Fresh water final rinse					
Check flow-water pressure					
Check that the final rinse system is complete and produces the correct spray pattern					
Check that system is watertight					
4. Housing and mounting parts					
Check housing, tank, sheet metal cover, hood, doors and covering of machine base for damage and correct operation					
Check tank cover screens					
Check boiler, hoses, clamps, plastic parts and seals					
5. Fresh water installation					
Check level regulation					
Check valves, clean dirt trap					
Check that all fittings (incl. hand spray) are watertight					
For built-in water softener: Check settings					
For complete/partial water softener: Check functioning					
Check water hardness					
6. Waste water installation					
Check if watertight					
Check pressure hose position and operation of drain pump					

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Maintenance procedures	UPster U 400 UPster U 500 / UPster U 500S	UPster H 500 / UPster H 500S	Component OK	Component faulty	Component re-
7. Electrical installation					
Check of all fuses					
Tighten all electrical connections					
Check tank and boiler heating					
Check thermostat and stop switch					
8. Electrical safety check (certificate is optional)					
Visual inspection			at least 1 x year		
Check the protective conductor			at least 1 x year		
Measure insulation resistance			at least 1 x year		
Protection conductor current measurement			at least 1 x year		
9. Detergent dosing					
Check dosage, adjust if necessary					
10. Rinse aid dosing					
Check dosage, adjust if necessary					
11. Function test on the complete machine					
Check machine for correct interaction of all functions					
12. Test run					
Check results of test wash and rinse					
Brief instruction for new personnel					

20 Environmentally acceptable measures, Disposal of the installation

Each end-of-life machine must be immediately disabled - to avoid later accidents.

- Switch the machine off completely via the on-site circuit breaker.
- Completely empty the appliance's hydraulic system.

When you eventually dispose of the machine (removal/scrapping), its components should be recycled in line with their materials.

A list of all materials that frequently occur during disassembly follows below:

- Chromium-nickel steel
- Aluminum
- Copper
- Brass
- Electrical and electronic parts
- PP and other plastics

21 Documentation

Installation drawing/standard drawing

Technical data

Wiring diagram/programming instructions

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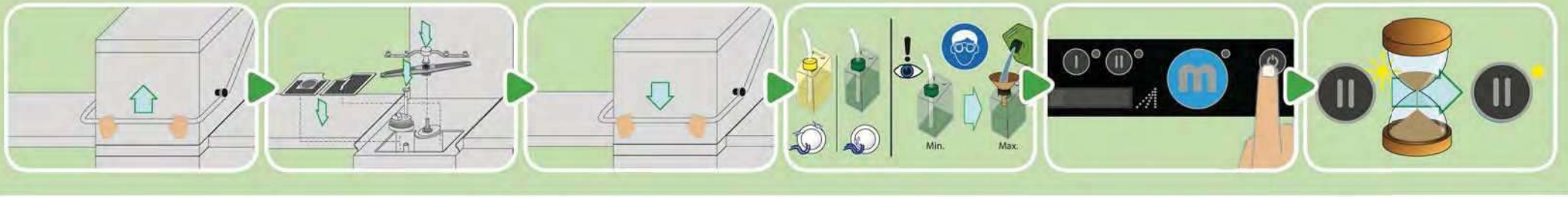
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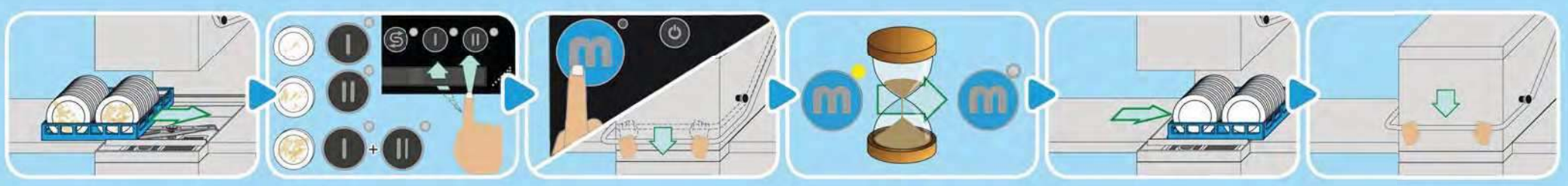
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START



CLEAN



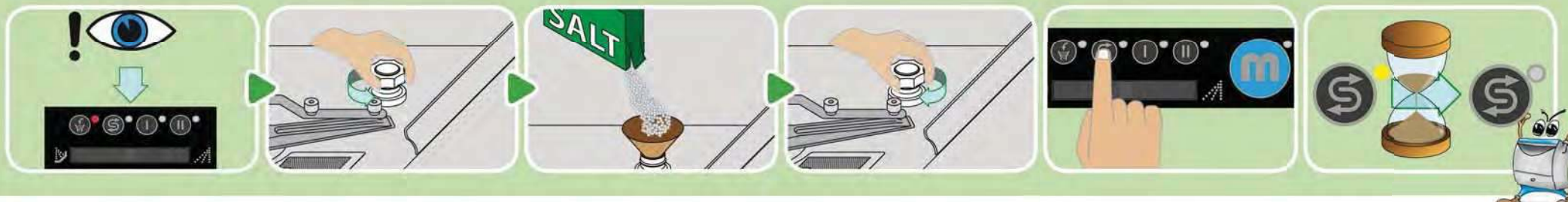
STOP



ERROR

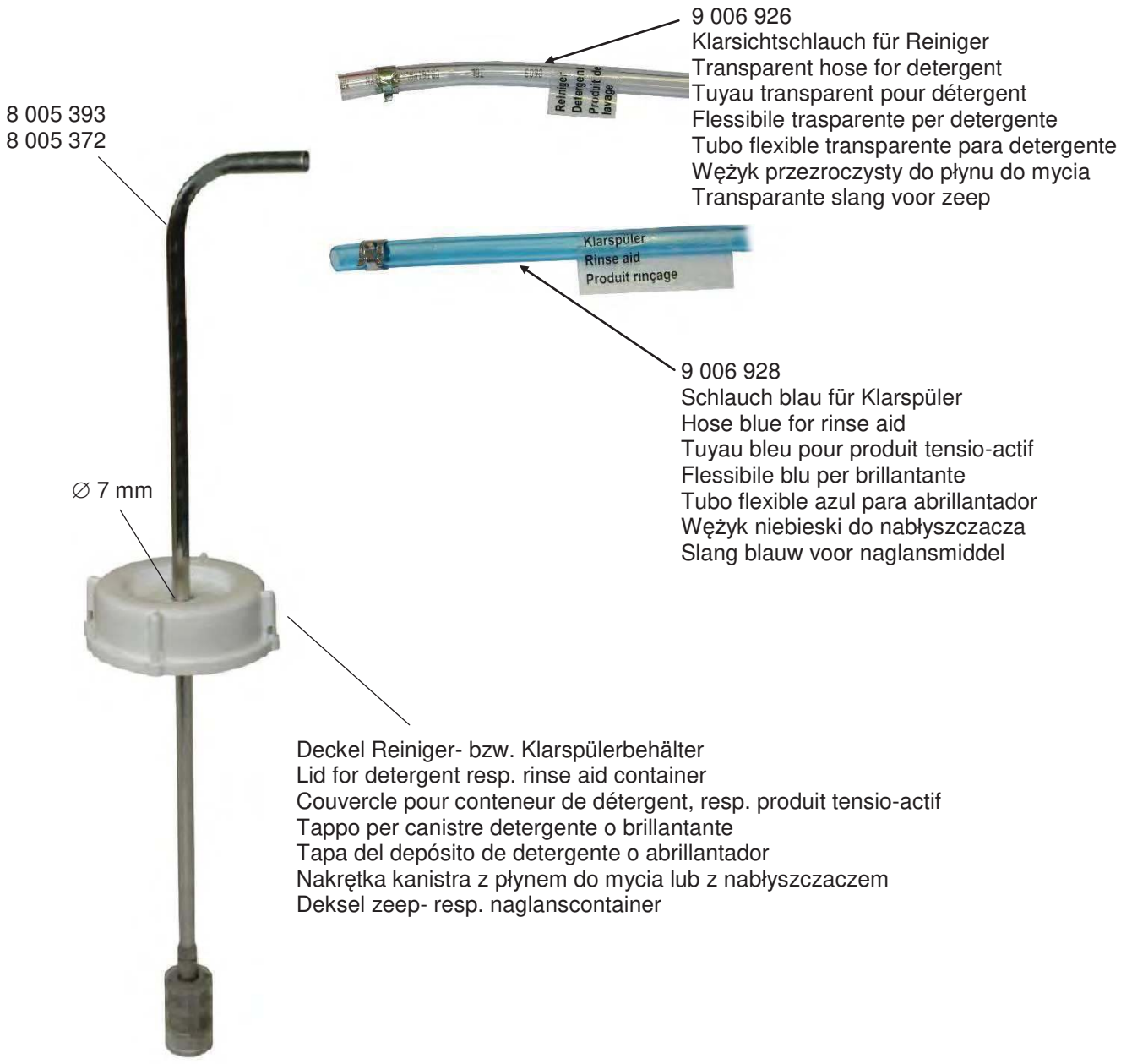


REFILL



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Saugleitung für Reiniger bzw. Klarspüler
Suction line for detergent resp. rinse aid
Conduite d'aspiration pour détergent, resp. produit tensio-actif
Tubo d´aspirazione per detergente e brillantante
Tubo de aspiración para detergente y abrillantador
Układ ssący płynu do mycia lub nabłyszczacza
Aanzuigleiding voor zeep- resp. naglansmiddel



ACHTUNG!	**Saugleitung von Wärmequellen fernhalten!**
ATTENTION!	**Keep away suction line from heating sources!**
ATTENTION!	**Ecartez la conduite d'aspiration de toute source de chaleur!**
ATTENZIONE!	**Tenere il tubo d´aspirazione lontano da fonti di calore!**
¡ATENCION!	**¡Mantenga el tubo de aspiración alejado de las fuentes de calor!**
UWAGA!	**Układ ssący należy trzymać z dala od źródeł ciepła!**
LET OP!	**Aanzuigleiding van warmtebronnen verwijderd houden!**

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2016-04-20 (Update)

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Adresse / Address / Adresse / Indirizzo / Dirección / Adres

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E-mail: info@meiko.de
Telefon: +49(0)781/203-0

Auftrag Nr.
Order no. / No. de commande / No. d'ordine / No. de pedido / Opdracht nr.

Spülmaschine Typ
Dishwasher model / Lave-vaiselle modèle / Lavastoviglie modello / Lavavajillas modelo / Vaatwasmachine model
UPster H 500 **UPster H 500S**

Konformitätserklärung

Declaration of Conformity / Déclaration de conformité / Dichiarazione di conformità / Declaración de conformidad / Conformitetsverklaring

Hiermit bescheinigen wir in alleiniger Verantwortung die Konformität des Erzeugnisses mit den grundlegenden Anforderungen der folgenden EG-Richtlinien, harmonisierten Normen, nationalen Normen.

We hereby declare at our sole responsibility that the product conforms to the essential requirements of the following EC Directives, harmonized standards, national standards.

Par la présente nous certifions sous notre seule responsabilité la conformité du produit avec les exigences fondamentales des directives CE, normes harmonisées et normes nationales suivantes.

Con la presente dichiariamo sotto la nostra responsabilità la conformità del prodotto con i regolamenti basilari delle seguenti direttive CE, normative armonizzate e normative nazionali.

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Offenburg, 13.12.2016

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ppa.
(per procura)

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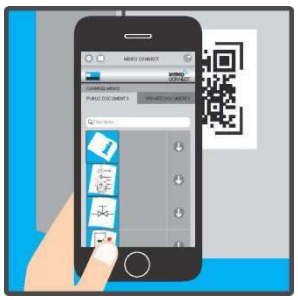
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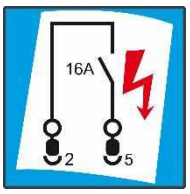
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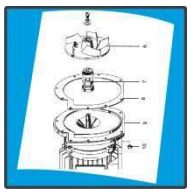
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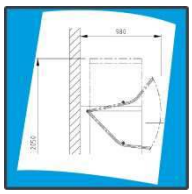
Betriebsanleitung
Operating instructions
Mode d'emploi
Instrucciones de uso
Gebruiksaanwijzing
Istruzione d'uso



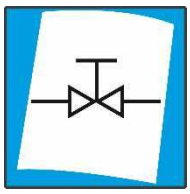
Elektroplan
Electrical wiring diagram
Schéma électrique
Diagrama eléctrico
Elektrisch schakelschema
Schema elettrico



Ersatzteile
Spare parts
Pièces détachées
Piezas de repuesto
Reserveonderdelen
Lista ricambi



Montageplan
Installation drawing
Plan d'installation
Plano de montaje
Montageplan
Disegno di montaggio



Installationsplan
Installation diagram
Diagramme d'installation
Diagrama de instalación
Installatiediagramm
Schema d'installazione



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