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Notes about these instructions

Important warnings

⚠️ Information which is important for safety is highlighted in a thick framed box with a warning symbol. This alerts you to the potential danger of injury to people or damage to property. Read these warning notes carefully and observe the procedural instructions and codes of practice they describe.

Notes

Information of particular importance that must be observed is highlighted in a thick framed box.

Additional information and comments

Additional information and comments are contained in a simple frame.

Operating steps

Operating steps are indicated by a black square bullet point.

Example:

■ Select an option using the arrow buttons and save your choice with OK.

Display

Certain functions are shown in display messages using the same font as that used for the function itself in the display.

Example:

Settings menu.
Intended use

This Miele washer-disinfector is a Class IIb medical device (Directive 93/42/EEC).

This Miele washer-disinfector can be used to clean, rinse and thermally disinfect reusable medical devices such as those used in surgeries, hospitals, outpatient clinics and nursing homes. Follow the manufacturer’s instructions (according to EN ISO 17664), and local and national regulations and guidelines, on how to process their items by machine as well as instructions provided by the manufacturer of any chemical agents used.

Examples of application areas:
- Surgery
- Anaesthetics and intensive care
- Ear, nose and throat surgery
- Gynaecology and urology
- Baby bottles and teats
- Ward end utensils such as kidney dishes, bowls and theatre shoes

Anaesthetic and intensive care instruments as well as baby bottles and teats must be allowed to dry thoroughly after reprocessing.

Medical devices for reprocessing are referred to as the wash load if they are not more closely defined.

Processing items by machine achieves reproducible results and should be used in preference to processing them by hand. Where disinfection is required for the protection of staff and/or patients, a thermal disinfection programme, e.g. the Vario TD programme should be selected.
- Heat-sensitive theatre shoes are an exception to this. They should be reprocessed using a chemo-thermal disinfection programme.

According to the \( A_0 \) concept described in EN ISO 15883-1, thermal disinfection occurs at 80°C (+ 5 °C, - 0 °C) with 10 minutes holding time (\( A_0 \ 600 \)), or at 90°C (+ 5 °C, - 0 °C) with 5 minutes holding time (\( A_0 \ 3000 \)), depending on the disinfection result required. The efficacy standard \( A_0 \ 3000 \) is suitable for deactivating the HBV virus.

Regional and/or other official directives may apply (e.g. CFPP 01-01 or CFPP 01-05 in the UK). Refer to your country’s local and national health and safety regulations and guidelines.

The cleaning programme must be chosen according to the type of soiling and load being processed.

The agents used for reprocessing the products should be selected to suit the level of cleaning required.
The cleaning result must ensure that items can be disinfected correctly, that subsequent sterilisation can be carried out and that the items can be used again safely. Medical devices are best processed using the Vario TD programme where applicable.

The use of a suitable carrier (basket, module, insert, etc.) is important to ensure the adequate cleaning of the load. Examples are given in the section "Areas of application".

This washer-disinfector complies with EN ISO 15883 for validation purposes.

**Spray arm pressure and monitoring**

This machine has a sensor for monitoring wash pressure during active cleaning process phases.

Spray arm pressure monitoring is carried out in accordance with the general validation guidelines of the German Society for Hospital Hygiene (DGKH), the German Society for Sterile Supply (DGSV) and the Working Group for Instrument Preparation (AKI) for the validation and routine monitoring of machine cleaning and disinfection processes for thermally stable medical devices in accordance with EN ISO 15883.

Wash pressure monitoring results are recorded in the process documentation.

Spray arm speed can also be monitored, e.g. for prompt detection of blockages due to misloading or foam in the water circulation system. Spray arm monitoring can be activated or deactivated by Miele Professional Service.
**Intended use**

### User profiles

**Daily operators**

Daily operators must be instructed in operating and loading the washer-disinfector and trained regularly to guarantee safe daily use. They require knowledge of machine reprocessing of medical devices.

Tasks for daily routine operation are located in the Settings menu. This menu is freely accessible to all users.

**Administration**

More advanced tasks, e.g. interrupting or cancelling a programme, require more detailed knowledge about the machine reprocessing of medical devices.

Alterations or adaptations of the washer-disinfector, e.g. accessories used or on-site conditions require additional specific knowledge of the washer-disinfector.

Validation processes assume specialised knowledge about machine reprocessing of medical devices, the processes involved and applicable standards and legislation.

Administrative processes and settings are allocated to the Further settings menu. This is protected from unauthorised access by a code.
Overview

1. Comfort door locking mechanism
2. Module slot for a communication module (Back, top right)
3. Test point for validation (Top, front right; only visible with lid removed)
4. Upper machine spray arm
5. Rails for baskets and mobile units
6. Lower machine spray arm
7. Data plate
8. Rinse aid reservoir
9. Salt reservoir
10. Dispenser for powder cleaning agent
11. Filter combination
12. Plinth facing
13. On the back:
   - Second data plate
   - Electrical and plumbing connections
   - Connections for external dispensing modules (DOS modules)
14. Plumbing connections for mobile units and baskets
Guide to the appliance

Control panel

1. On/Off sensor
   For switching the machine on and off.

2. Programme selection buttons
   Programme selection buttons.
   Can be configured.

3. Programme list button
   For accessing the list of all programmes.

4. Display
   User interface and programme sequence display.

5. Arrow buttons
   For navigating within the display.

6. Cancel button
   For cancelling a process (not for cancelling programmes).

7. Settings button
   For accessing the system settings menu.

8. Start/Stop button
   For starting or cancelling a programme.

9. Door release button
   For opening the door before or after a programme.

10. button (Drying assistance)
    For switching Drying assistance on and off.

11. OK button
    For selecting or confirming entries in the user interface.

12. PC / Optical interface
    This is used by Miele Professional Service technicians to run diagnostic checks and can also be used to update programming data in the future.
**LEDs in the buttons**

The buttons on the control panel have LEDs (Light Emitting Diodes) that indicate the status of the machine.

<table>
<thead>
<tr>
<th>Button</th>
<th>LED</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>⚪ button</td>
<td>ON</td>
<td>The machine is switched on.</td>
</tr>
<tr>
<td></td>
<td>FLASHES</td>
<td>The machine is ready for use.</td>
</tr>
<tr>
<td></td>
<td>OFF</td>
<td>The machine is switched off.</td>
</tr>
<tr>
<td>Programme selection buttons 1, 2 and 3</td>
<td>ON</td>
<td>The respective programme has been selected. At the end of the programme the LED will remain lit until a different programme is selected.</td>
</tr>
<tr>
<td></td>
<td>OFF</td>
<td>The programme is not selected or the programme settings are being changed.</td>
</tr>
<tr>
<td>📚 button</td>
<td>ON</td>
<td>A programme has been selected from the programme list. At the end of the programme the LED will remain lit until a different programme is selected.</td>
</tr>
<tr>
<td></td>
<td>OFF</td>
<td>No programme has been selected from the list or the programme settings are being changed.</td>
</tr>
<tr>
<td>☀ button</td>
<td>ON</td>
<td>The additional “Drying assistance” function has been activated for the selected programme (not available for all programmes; see “Programme chart”).</td>
</tr>
<tr>
<td></td>
<td>OFF</td>
<td>The additional “Drying assistance” function has been deactivated.</td>
</tr>
<tr>
<td>Start/Stop button</td>
<td>ON</td>
<td>A programme is running.</td>
</tr>
<tr>
<td></td>
<td>FLASHES GREEN</td>
<td>A programme has been selected, but not yet started.</td>
</tr>
<tr>
<td></td>
<td>FLASHES RED</td>
<td>A fault has occurred (see “Problem solving guide”).</td>
</tr>
<tr>
<td></td>
<td>OFF</td>
<td>A programme has finished.</td>
</tr>
<tr>
<td>⛔ button</td>
<td>ON</td>
<td>The door is closed (locked) and there is no programme running.</td>
</tr>
<tr>
<td></td>
<td>FLASHES</td>
<td>A programme has finished and the door is closed (locked).</td>
</tr>
<tr>
<td></td>
<td>OFF</td>
<td>A programme is running or the door is open (unlocked).</td>
</tr>
</tbody>
</table>
This washer-disinfector complies with all statutory safety requirements. Inappropriate use can, however, lead to personal injury and material damage. Read these instructions carefully before using it for the first time to avoid the risk of accidents and damage to the machine. Keep these instructions in a safe place where they are accessible to users at all times.

Correct application

- This washer-disinfector is designed for use with the applications described in these operating instructions only. Alterations or conversions to the machine, or using it for purposes other than those for which it was designed, are not permitted and could be dangerous. This washer-disinfector must only be used for cleaning and disinfecting instruments or medical devices if the manufacturer has stated that they are suitable for machine reprocessing. The manufacturer’s cleaning and maintenance instructions must also be observed. Miele cannot be held liable for damage caused by improper or incorrect use or operation of the machine.

- This washer-disinfector is intended for indoor use in a stationary location only.

Risk of injury

Please pay attention to the following notes to avoid injury

- This washer-disinfector must be commissioned, serviced and repaired by a Miele authorised and trained service technician only. To ensure compliance with the Medical Device Directive, Miele repair and maintenance contracts are recommended. Unauthorised repairs can pose considerable risks to the user.

- Do not install the washer-disinfector in an area where there is any risk of explosion or of freezing conditions.

- In order to reduce the risk of water damage, the area around the washer-disinfector should be limited to furniture and fittings that are designed for use in commercial environments.

- Some metal parts pose a risk of injury/being cut. Wear cut-resistant protective gloves when transporting and setting up the machine.

- If the washer-disinfector is built under, it must only be installed under a continuous worktop run which is firmly secured to adjacent units to improve stability.
The electrical safety of this washer-disinfector can only be guaranteed when it is correctly earthed. It is essential that this standard safety requirement is met. If in any doubt, please have the on-site wiring system tested by a qualified electrician. Miele cannot be held liable for the consequences of an inadequate earthing system (e.g. electric shock).

A damaged or leaking washer-disinfector could be dangerous and compromise your safety. Disconnect the washer-disinfector from the mains immediately and call the Miele Professional Service Department.

Personnel operating the machine should be trained regularly. Untrained personnel must not be allowed access to the washer-disinfector or its controls.

Only use chemical agents which have been approved by their manufacturer for use in the application you are using. The chemical agent manufacturer is responsible for any negative influences on the material the load is made from and for any damage they may cause to the machine.

Take care when handling chemical agents. These may contain irritant, corrosive or toxic ingredients. Please observe the chemical agent manufacturer's safety instructions and safety data sheets. Wear protective gloves and goggles.

The washer-disinfector is designed for operation with water and recommended additive chemical agents only. Organic solvents and flammable liquid agents must not be used in it. This could cause an explosion, damage rubber or plastic components in the machine and cause liquids to leak out of it.

The water in the cabinet must not be used as drinking water.

Take care not to inhale powder agents. Chemical agents can cause chemical burns in the mouth and throat or lead to asphyxiation.

Do not lift the washer-disinfector by protruding parts such as the control panel or the opened service flap as these could be damaged or torn off.

Do not sit or lean on the opened door. This could cause the washer-disinfector to tip up and be damaged or cause an injury.

Be careful when sorting items with sharp pointed ends and positioning them in the machine that you do not hurt yourself or create a danger for others.

Broken glass can result in serious injury when loading or unloading. Broken glass items must not be processed in the washer-disinfector.
When operating the washer-disinfector, bear in mind the possibility of high temperatures. If the door is opened while bypassing the safety lock, there is a danger of burning, scalding and chemical burns.

Where there is a risk of toxic or chemical substances occurring or leaking in the suds solution (e.g. aldehyde in the disinfecting agent), it is essential to regularly check door seals and make sure that the steam condenser is functioning correctly. Opening the machine door during a programme interruption carries particular risks in such circumstances.

Should personnel accidentally come into contact with toxic vapours or chemical agents, follow the emergency instructions given in the manufacturer's safety data sheets.

Mobile units, baskets, modules, inserts and the load must be allowed to cool down before they are unloaded. Any water remaining in containers could still be very hot. Empty them into the wash cabinet before taking them out.

Never clean the machine or near vicinity with a water hose or a pressure washer.

The washer-disinfector must be disconnected from the mains electricity supply before any maintenance or repair work is carried out.

Quality assurance

The following points should be observed to assist in maintaining quality standards when processing medical devices, in order to protect patients, and to avoid damage to the loads being cleaned.

If it is necessary to interrupt a programme in exceptional circumstances, this may only be done by authorised personnel.

The standard of cleaning and disinfection in the disinfection programmes must be routinely confirmed by the user. The process should be validated on a regular basis, and checked against documented control results. Chemical disinfection procedures should also be validated using bio indicators.

For thermal disinfection, use temperatures and temperature holding times to achieve the required infection prophylaxis in accordance with current health and safety regulations.

Make sure items being washed are suitable for machine reprocessing and are in good condition. Plastic items must be thermally stable. Nickel plated items and aluminium items can be machine processed using special procedures only. Items containing iron, and soiling containing residual rust must not be placed in the cabinet.
Medical products are processed by means of thermal disinfection. Disinfection of heat-sensitive items, e.g. theatre shoes, can be carried out using a chemical disinfecting agent. Miele Professional Service will set up a special programme for this purpose. The range of effective disinfection is based on claims made by the producer of the disinfecting agent. Their instructions on handling, use and effectiveness must be observed. The use of chemical disinfection procedures is the responsibility of the operator. Chemical disinfection processes are not suitable for the reprocessing of medical products.

Chemical agents can, in certain circumstances, cause damage to the washer-disinfector. Always follow the recommendations of the chemical agent manufacturer. In case of damage or doubt about compatibility, please contact Miele.

Instrument care products based on paraffin oils (white oils) can damage the elastomers and plastic in the machine. Such care products must not be dispensed as chemical agents in this machine even if they are recommended for machine use by the care product manufacturer.

Abrasive substances must not be placed in the washer-disinfector as they could cause damage to the mechanical components of the water supply. Any residues of abrasive substances on items to be washed must be removed without trace before reprocessing in the washer-disinfector.

Pre-treatments with cleaning or disinfecting agents can create foam, as can certain types of soiling and chemical agents. Foam can have an adverse effect on the disinfection and cleaning result.

Processes must be set up such that foam cannot escape from the wash cabinet. It would hinder the correct functioning of the machine.

The process used must be monitored on a regular basis by the supervisor to check foaming levels.

To avoid the risk of damage to the washer-disinfector and any accessories used with it caused by chemical agents, soiling and any reaction between the two, please read the notes in "Chemical processes and technology".

Where a chemical agent is recommended on technical application grounds (e.g. a cleaning agent), this does not imply that the manufacturer of the machine accepts liability for the effect of the chemical on the items being cleaned. Please be aware that changes in formulation, storage conditions etc. which may not be publicised by the chemical manufacturer, can have a negative effect on the cleaning result.
Warning and Safety instructions

- When using a chemical agent it is essential that the manufacturer's instructions are followed. The chemical agent must only be used for the application it is designed for and in the situation specified to avoid material damage and such dangers as a severe explosive chemical reaction (e.g. an explosive oxyhydrogen gas reaction).

- Always follow the relevant manufacturer's instructions on storage and disposal of chemical agents.

- Particles \( \geq 0.8 \text{ mm} \) are removed by the filters in the wash chamber. Smaller particles may find their way into the circulation system. For this reason, processing of wash loads with narrow openings requires additional filtering of the wash water.

- In critical applications where very stringent requirements have to be met, it is strongly recommended that all the relevant factors for the process, such as chemical agents, water quality etc. are discussed with the Miele Application Technology specialists.

- The carts, baskets, modules and inserts that hold the wash load must be used only as intended. Hollow items must be thoroughly cleaned, internally and externally.

- Secure small and light items with cover nets or place in a mesh tray for small items, so that they do not block the spray arms.

- Empty any containers or utensils before loading them.

- The amount of residual solvents and acids on items going into the cabinet should be minimal. There should be no more than a trace of any solvents with a flash point of below 21 °C.

- Chloride solutions, in particular hydrochloric acid, must not be placed in the cabinet.

- Ensure that solutions or steam containing chlorides or hydrochloric acid do not come into contact with the stainless steel outer casing of the machine in order to avoid any damage through corrosion.

- After any plumbing work the water pipework to the washer-disinfector will need to be primed. If this is not done, components can be damaged.

- The gaps between a built-in machine and adjacent cabinetry must not be filled with silicone sealant as this could compromise the ventilation to the circulation pump.

- Follow the installation instructions in the operating and installation instructions.
Warning and Safety instructions

Using accessories

▶ Only Miele accessories should be connected to this machine. They must be suitable for the application they are required for. Consult Miele for details on the type of accessories that can be used.

▶ Only use Miele mobile units, baskets, modules and inserts with this washer-disinfector. Using mobile units, baskets, modules and inserts made by other manufacturers, or making modifications to Miele accessories can cause unsatisfactory cleaning results, for which Miele cannot be held liable. Any resultant damage would not be covered by the warranty.

Symbols on the machine

⚠️ Warning:
Observe the operating instructions!

⚠️ Warning:
Danger of electric shock!

⚠️ Warning:
Hot surfaces:
It can be very hot inside the wash chamber when the door is opened!

⚠️ Risk of being cut:
Wear cut-resistant protective gloves when transporting and setting up the machine!

Disposing of your old appliance

▶ Please note that the machine may have contamination from blood, bodily fluids, pathogenic germs, facultative pathogenic germs, genetically modified material, toxic or carcinogenic materials, heavy metals etc. in it and must be decontaminated before disposal.

For environmental and safety reasons, ensure the machine is completely drained of any residual water, chemical residues and cleaning agent. Observe safety regulations and wear safety goggles and gloves.

Make the door lock inoperable, so that children cannot accidentally shut themselves in. Then make appropriate arrangements for its safe disposal.

Miele cannot be held liable for damage caused by non-compliance with these Warning and Safety Instructions.
Operation

Control panel
The washer-disinfector is operated exclusively by the buttons located on the stainless steel surfaces either side of the display. The display is not a touch screen.

A light touch on the relevant button is sufficient to operate the functions. The buttons can also be pressed and held for approx. 20 seconds.

Display illustrations
All display illustrations shown in these operating instructions are examples which can be different from the actual display screens shown.

The control buttons are shown next to the display. The ⏰, ⬅️ and Start/Stop buttons are not shown.
Switching on

The washer-disinfector must be connected to the electrical supply.

- Press the button until the LED lights up.

After that, the display will show the following:

As soon as the washer-disinfector is ready for operation, the display changes to show the last selected programme, e.g.

If the washer-disinfector is being used for the first time, or if the factory settings have been reinstated, some basic parameters, e.g. language, date, time of day etc. must first be set. To enable this, the display automatically changes to the relevant screen.

Switching off

- Press the button.

Auto-Off function

To save energy, the machine has an automatic switch-off function (Auto-off function). If the machine has not been used for a specific time period, it switches itself off automatically; see "Further Settings/ Switch off after".

- Use the button to switch the machine on again.

Standby

When it is ready for use, the machine remains switched on, the button flashes and the time is shown in the display. Pressing any button reactivates the machine. The automatic switch-off function can be switched on and off as required (see "Further settings/Switch off after").
Display interface

The washer-disinfector is controlled by menus. The menus are displayed in a 3-line display on the control panel.

The name of the menu (top line) and up to two options are shown. The currently selected option is highlighted, e.g.

![Display interface example]

Menu operation

Settings button

For accessing the system settings menus.

Arrow buttons

The arrow buttons are used to navigate up and down by row within a menu. Press and hold the button to automatically scroll through the list to the end of the menu. Press the button again to continue navigating.

Parameter values can also be altered in defined increments using the arrow buttons. Instructions for this can be found in the relevant sections.

OK button

The OK button is used for confirming (acknowledging) a selection or for saving input. The display then moves to the next menu or, when entering parameter values, to the next input position. Instructions for this can be found in the relevant sections.

Cancel button

Before the OK button has been pressed, a process can be cancelled at any time by pressing the button. The menu is then ended early and the display changes to the next menu level up. Any setting changes made will not be saved.
Symbols in the display

Navigation arrows
If a menu consists of more than two options, two navigation arrows are shown at the side of the menu options.

Use the ∧ and ∨ arrow buttons on the control panel to navigate through the menu.

Dotted line
If a menu contains more than two options, the end of the option list is marked by a dotted line. The last entry appears above the line, the first entry below it.

Tick
If there are several options available, the current setting is marked with a tick.

System messages
The  symbol denotes system messages. These give information, such as a notification of an excessively low level in the supply containers or a reminder for the next service.

System messages are displayed at the start and end of a programme and have to be confirmed (acknowledged) individually with OK or all together at the end of the programme by opening the door. If the  symbol is shown in the display, the system messages can be opened by pressing the OK button.

Fault messages
In the event of a fault a warning triangle is shown in place of the  symbol. See "Problem solving guide" and "After sales service" for more information.
Settings in the menu

All menu descriptions in these operating instructions are structured as follows:

Input procedure

The input procedure describes the complete sequence required to reach a particular menu level. The menu options shown must be selected individually using the arrow buttons and then confirmed with OK.

Example

’s button
  ▶ Settings ▼
  ◀ Time of day
  ▶ Clock format

If a menu level is already displayed, the path does not need to be input completely. If, for example, the Settings ▼ menu is already displayed, you do not need to press the ’Ξ button again. In this case, simply follow the sequence from Settings ▼ onwards.

Display view

When selecting a menu, the last menu used is generally opened.

Example

12 h
24 h

Extras

All available menu options are listed together with a short description.

Example

– 12 h
  Time of day display in 12-hour format (am/pm).

– 24 h
  Time of day display in 24-hour format.

Method

Then further instructions are given.

Example

■ Select an option using the ▲ and ▼ arrow buttons.
■ Press OK to save the setting.
Electronic door locking
The washer-disinfector is equipped with a Comfort door lock. When the door is closed, the Comfort door lock automatically pulls the door into the correct position, electronically locking the door.

Opening the door
An electronically locked door can only be opened if:

- the washer-disinfector is connected to the electrical supply and is switched on (the LED for the button is lit up),
- there is no programme running,
- the temperature in the wash cabinet is less than 60 °C and
- the LED is lit up.

Press the button to open the door.

The Comfort door lock opens the door slightly. The LED goes out as soon as the door is unlocked.

The control panel of the washer-disinfector is also a door handle.

Grasp the handle underneath the control panel and lower the door to open it.

Closing the door

Ensure that there are no objects or items in the load obstructing the door.

⚠️ Do not put your hand inside the door as it is closing.
Danger of injury!

Lift the door until it engages with the door lock. The door is automatically pulled into the correct position by the Comfort door lock.
Opening and closing the door

Opening the door using the emergency release

The emergency release may only be used when it is no longer possible to open the door normally, e.g. in the event of a power cut.

⚠️ If the emergency release is operated during a programme cycle, hot water and cleaning agents can escape. Risk of scalding, burning and chemical burns!

- Push against the door so that less force is needed to operate the emergency release.

- Push the tool supplied in the accessory pack horizontally into the gap between the door and the lid or worktop. The right-hand edge of the tool must align with the outer right-hand edge of the display.

- Press against the unlocking mechanism with the tool until you hear the door unlock. The door can now be opened.

If the washer-disinfector is switched on, the activation of the emergency release will be recorded in the process documentation and the following message will appear in the display:

Switch the washer-disinfector off and on again with the button.

- Acknowledge the fault message by entering your lock code.
Water hardness

In order to achieve good cleaning results, the washer-disinfector needs to operate with soft water. Hard water results in the build-up of calcium deposits on the load and in the washer-disinfector.

Mains water with a water hardness of more than 0.7 mmol/l (4 °dH) must be softened. This occurs automatically in the integrated water softener during a programme sequence.

The water softener must be set to the exact hardness of the mains water (see "Water softener/Setting the water hardness").

Your local water authority can give you information about the exact water hardness in your area.

In the event of a fault, it will help the service technician if you know the hardness of your local water supply. Therefore please enter the hardness level of your tap water here:

________________________mmol/l or _______ °dH.

The water softener must also be reactivated at regular intervals. This requires special reactivation salt (see "Water softener/Filling the salt reservoir"). Reactivation is carried out automatically during a programme sequence.

If the hardness level of your water is consistently less than 0.7 mmol/l (= 4 dH), it is not necessary to fill the salt reservoir. However, the water hardness level must still be set.
Setting the water hardness level

Water hardness can be set between 0 and 12.6 mmol/l (0 - 70 °dH).

Open the menu as follows:

- Press the button

  - Further settings

    - Water hardness

The bottom line of the display shows the possible input range. Water hardness input values can be found in the chart on the next page.

Where the water hardness fluctuates, e.g. between 1.4 - 3.1 mmol/l (8 - 17 °dH), always programme the washer-disinfector to the higher value, 3.1 mmol/l (17 °dH) in this example.

Set the water hardness level using the arrow buttons (▲ = higher and ▼ = lower).

Press OK to save the setting.
## Water softener

### Settings

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* Factory default setting
**Filling the salt reservoir**

Use only special, coarse-grained reactivation salt with a granule size of approx. 1 - 4 mm. Do not under any circumstances use other types of salt such as table salt, agricultural or gritting salt. These may contain insoluble additives which can impair the functioning of the water softener.

⚠️ Inadvertently filling the salt reservoir with cleaning agent will cause serious damage to the water softener. Before filling the salt reservoir make sure that you have picked up the right packet of reactivation salt.

- Open the door to an angle of approx. 45°. This ensures that the salt flows into the reservoir more easily.

- Press the yellow button with the ⬇️ symbol on the salt reservoir in the direction of the arrow. The flap will spring open.

- Lift up the funnel.

The reservoir takes approx. 1.4 - 2 kg of salt, depending on the type of salt and how much is remaining in the reservoir.
Do not fill the reservoir with water. The reservoir could overflow when filled with salt.

- Add salt only until the funnel of the salt reservoir is full, so that it can close properly. Do not add more than 2 kg of salt.

As the salt reservoir is being filled, displaced water (saline solution) may run out.

- Clean any excess salt from the area around the salt reservoir and especially from the seal. Do not use running water as this can cause the salt reservoir to overflow.

- Close the reservoir.

- Run the Rinsing programme after refilling salt.

This will ensure that any traces of salt and saline solution are dissolved and rinsed away.

Salt and saline solution which has overflowed can cause corrosion damage if they are not rinsed away.
Add salt reminder

If the salt level in the reservoir is low, the following reminder will appear:

- Confirm the message with the OK button and
- fill the reservoir as described.

When the message first appears, there may be sufficient salt for a further programme, depending on the water hardness level set.

If there is no saline solution left in the water softener, a relevant message will appear in the display and the washer-disinfector will be locked for further use.

The machine can be used again a few seconds after the salt has been refilled.
Mobile units, baskets, modules and inserts

This washer-disinfector can be equipped with an upper and lower basket or a mobile unit which can be fitted with different inserts and modules or exchanged for special accessories depending on the items to be washed.

Select accessories which are appropriate for the application.

Information on the individual areas of application can be found on the following pages, as well as in the operating instructions for the mobile units, baskets, modules and inserts (if available).

For all areas of application defined in "Intended use" Miele offers suitable accessories such as mobile units, baskets, modules, inserts and special fittings. Contact Miele for more information.

Water supply

Mobile units and baskets with spray arms or other rinse fittings are equipped with one or more connection points to the water supply. When loading baskets, mobile units etc. into the washer-disinfector, connect these to the water connection points in the back panel of the wash cabinet. The mobile units and baskets are held in place by the wash cabinet door when closed.

Any free connections in the back panel are closed mechanically.

Older models of mobile units and baskets

Only use older models of mobile units and baskets in this washer-disinfector in consultation with Miele. In particular, mobile units and baskets with water supply pipes for spray arms and injector manifolds must be converted to the new type of water connector. Conversion must be carried out by Miele Professional Service and is only available for selected models.

⚠️ The fitting of connectors for the water supply of mobile units and baskets must be carried out by Miele Professional Service. Fitting faults on mobile units and baskets can cause damage to the washer-disinfector.

Following conversion, mobile units and baskets can no longer be used in older models of the washer-disinfector.
Guide to the appliance

Adjusting the upper basket

Height-adjustable upper baskets can be adjusted between three positions with 2 cm between each position to accommodate items of different heights.

To adjust the height, the brackets with rollers on the side of the upper basket and the water connector at the back of the basket have to be moved. The roller brackets are each secured to the upper basket by two screws. The water connector consists of the following components:

- A stainless steel plate with 2 apertures
- A plastic connection piece
- 6 screws

Only adjust the upper basket horizontally. The baskets are not designed to be positioned on a slant (one side up, one side down). Altering the height will alter loading heights for both the upper and lower baskets.

To adjust the upper basket:

- Remove the upper basket by pulling it out until a resistance is felt and lifting it off the runners.
- Unscrew the roller brackets and the water connector.

To adjust the upper basket to the ...

... upper position:

- Move the roller brackets on both sides to the lower position and secure them firmly.
- Position the stainless steel plate over the openings in the water supply pipe so that the upper aperture is covered. Secure the stainless steel plate at the top with 2 screws. Place the water connector in the lower aperture of the stainless steel plate so that the middle aperture is covered. Secure the water connector with 4 screws.
... middle position:

- Move the roller brackets on both sides to the middle position and secure them firmly.
- Position the stainless steel plate over the openings in the water supply pipe so that one of the outer apertures is covered. Secure the stainless steel plate at the top or bottom with 2 screws. Place the water connector in the middle aperture of the stainless steel plate so that the outer aperture is covered. Secure the water connector with 4 screws.

... lower position:

- Move the roller brackets on both sides to the top position and secure them firmly.
- Position the stainless steel plate over the openings in the water supply pipe so that the lower aperture is covered. Secure the stainless steel plate at the bottom with 2 screws. Place the water connector in the upper aperture of the stainless steel plate so that the middle aperture is covered. Secure the water connector with 4 screws.

Then check:

- Replace the upper basket on the rails and push it in carefully to check that the water connection is positioned correctly.
Wash pressure measurement

The water pressure can be measured on all carts and baskets with spray arms, injector bars or other wash connections, e.g. during performance tests and validations in accordance with EN ISO 15883.

On carts and baskets with spray arms and additional injector bars or other wash connections, there is a connection on the injector bar or a wash connection for water pressure measurement. The exact location is described in the respective operating instructions for the cart / baskets.

On carts and baskets with spray arms and no additional wash connections, access for the wash pressure measurement is provided on the side of the water supply pipe.

To measure water pressure, replace the blind stopper with a Luer Lock adapter, e.g. E 447.

Under no circumstances may items to be washed, washing attachments etc. be connected to the test point. After the measurement, the test point must be closed again with the blind stopper.
Preparing the load

⚠️ Only items which have been declared by their manufacturer as suitable for machine reprocessing may be processed. The manufacturer’s specific reprocessing instructions must be observed. Processing of disposable items is not allowed.

Special injector nozzles, irrigation sleeves or adapters may be required for appropriate internal cleaning, depending on the load. These, together with other accessories, are available from Miele.

Protective measures for personal safety must be observed. Wear protective gloves when handling contaminated loads or use appropriate tools, e.g. tweezers.

– Arrange the load so that water can access all surfaces. This ensures that it gets properly cleaned.

– Do not place items to be cleaned inside other pieces where they may be concealed. Do not place items so close together that cleaning is hampered.

– Hollow items must be thoroughly cleaned, internally and externally.

– Ensure that items with long narrow hollow sections can be flushed through properly before placing them in a fitting or when connecting them to a water connection.

– Hollow vessels should be inverted and placed in the correct mobile units, baskets, modules and inserts to ensure that water can flow in and out of them unrestricted.

– Deep-sided items, e.g. trays, should be placed at an angle to make sure water runs off them freely.

– Take apart any items which can be dismantled according to the manufacturer’s instructions and process the individual parts separately from each other.

– Lightweight items should be secured with a cover net (e.g. the A 6 or the A 810) and small items placed in a mesh tray to prevent them from blocking the spray arms.

– The spray arms must not be blocked by items which are too tall or hang down into their path.

– Broken glass can result in serious injury when loading or unloading. Broken glass items must not be processed in the machine.

– Nickel and chrome plated items and items made of aluminium require special procedures and are not generally suitable for machine reprocessing. They require special processing conditions.

– It is advisable to use only instruments made of special application steel which are not susceptible to corrosion.
Guide to the appliance

- Only reprocess small items and micro components in special inserts, mesh trays with lids or mesh inserts.
- Heat-sensitive items must only be reprocessed using a chemothermal programme.

For validation purposes it is essential to follow the loading instructions given on the template.

Observe the further information given in the following sections as necessary depending on area of application.

Preparing the load

■ Empty the load before sorting

⚠️ Ensure that no acid or solvent residues, especially hydrochloric acid or chlorides, get inside the wash cabinet.

■ Dismantle the items for washing where possible according to the manufacturer’s instructions and open any valves or taps.

■ Follow the instructions of the manufacturer regarding pre-cleaning and pre-treatment as necessary.

■ Thoroughly rinse items which have been pre-treated with chemicals (see "Wet loading")

Dry loading

Contaminated medical products should be placed directly into baskets and inserts in the washer-disinfector after use without pre-treatment.

Dry loading is preferable for contaminated medical items.

Wet loading

Chemically pre-treated items must be rinsed thoroughly by hand or using the Rinsing programme before reprocessing in the washer-disinfector to avoid a significant build-up of foam.
Guide to the appliance

Carry out a visual check before starting every programme:
- Is everything correctly loaded/connected for cleaning?
- Was the recommended loading template followed?
- Can the lumen / narrow sections of hollow items be accessed by the wash fluid?
- Are the spray arms clean and do they rotate freely?
- Are the filters clean?
  Remove any coarse soiling and clean them if necessary.
- Are the removable modules, injector nozzles, irrigation sleeves and other rinsing fittings securely connected?
- Are the baskets and modules or mobile units correctly connected to the water supply and are the water connectors undamaged?
- Are all chemical containers sufficiently filled?

The following must be checked at the end of every programme:
- Carry out a visual check of the load for cleanliness.
- Check that all hollow items are still securely located on their injector nozzles.

⚠️ Any hollow items that have become disconnected from their fittings during reprocessing must be re-processed.

- Check that the lumen of hollow items are free of obstruction.
- Check that injector nozzles and connectors are securely held in position in the baskets or inserts.

Recontamination Take appropriate measures to prevent recontamination of processed items, e.g.:
- Wear clean gloves when removing the wash load.
- Remove the entire wash load from the carriers before reloading them.

Protein test Cleaning results should be subjected to periodic protein tests, e.g. weekly with the Miele test kit or the Miele ProCare Protein Check.
Guide to the appliance

**General notes**

The soiling drying on time until reprocessing is carried out should be kept to a minimum and be no longer than 6 hours.

Thermal disinfection is the preferred method of disinfection. If the process water used contains more than 100 mg chloride/litre, there is a risk of corrosion for stainless steel instruments.

Hinged instruments should be opened up and placed in mesh trays. They must not cover each other.

⚠️ To avoid injury from instruments with upward-facing probes, the washer-disinfector should be loaded from rear to front, and unloaded from front to rear.

Instruments should be dismantled in accordance with their manufacturer’s instructions and any caps or seals removed and taps opened to ensure that suds solution can access lumen and hollow sections.

Instruments with very narrow lumen must be manually pre-rinsed where necessary. Follow the instrument manufacturer’s instructions on how to handle them.
Operating theatre shoes

⚠️ Theatre shoes should be cleaned and disinfected in a machine installed specifically for this purpose only. This is to ensure, for example, that any fluff or soiling cannot settle inside the lumen of hollow instruments. Theatre shoes can only be reprocessed together with other items if a risk assessment has been carried out by the user.

Heat-sensitive theatre shoes and insoles should be cleaned and chemo-thermally disinfected at 60 °C. A special programme has to be uploaded by Miele Professional Service, and a special DOS module installed for dispensing chemical disinfectant. To establish the effectiveness of chemical disinfection agents for disinfection, please consult the manufacturer of the chemical agent.

A thermal disinfection programme, e.g. the Ward end utensils programme, can be used as long as the manufacturer has confirmed that the theatre shoes are thermo-stable to 80 °C.

- Remove insoles before reprocessing theatre shoes.

Please equip the upper and lower carriers with the following inserts for reprocessing theatre shoes:

- A 151 with A 307 insert for theatre shoes up to size 48 (European sizing).
- A 101 with A 308 insert for insoles up to size 45 (European sizing).

A large amount of fluff can build up in the machine when cleaning theatre shoes. The filters in the wash cabinet should therefore be checked regularly, and cleaned when necessary (see "Cleaning and care").
Anaesthetic instruments (AN)

The Vario TD AN programme with thermal disinfection is intended for the reprocessing of anaesthetic instruments.

⚠️ To protect instruments from material damage, please observe the instrument manufacturer's instructions regarding permitted disinfecting and drying temperatures. This will be below 85 °C for some elastomers used in respiration bags.

Anaesthetic instruments should only be reprocessed in mobile injector units designed for them.

Mobile units are supplied with their own operating instructions.

⚠️ If the process is not to be followed by sterilisation, the load should be dried completely to avoid the development of water-borne bacteria. A drying cabinet can be used for this purpose.
**Ear, nose and throat instruments (ENT)**

The reprocessing of ENT instruments is carried out thermally.

Please use a special insert such as the E 417/1 for reprocessing ear and nasal specula.

- To ensure coverage of all surfaces by the wash fluid please open specula and place in the insert.

Lightweight ENT instruments e.g. ear specula can be reprocessed in a lockable E 374 insert.

Please be aware that thin chrome plating can be very sensitive to neutralising agent.

**ENT fibre optics**

The reprocessing of ENT fibre optics is carried out thermally.

⚠️ To avoid mechanical damage, only process rigid fibre optics in inserts made by the rigid fibre optic manufacturer or in a special insert such as the E 460.

- Instruments should be pre-cleaned, e.g. with a cloth dipped in a non-fixing disinfecting agent or ethanol, prior to machine reprocessing.
Gynaecology (GYN)

The disinfection of gynaecological instruments is carried out thermally.

Please use a special insert, e.g. the E 416, for reprocessing gynaecological specula.

Load the insert as illustrated.

Single piece specula:
- Open and place in between the supports in the insert.

Two piece specula:
- Place the lower parts in the narrow supports in the insert, shown on the left in the illustration.
- Place the upper parts in the wide supports, shown on the right in the illustration.

Arrange the specula between two rails in such a way that they do not touch each other or conceal each other.
Baby bottles

Baby bottles can be cleaned and disinfected in containers, e.g. the E 135, and teats in special inserts, e.g. the E 364 for wide necked teats, and the E 458 for screw cap teats.

- Highly alkaline cleaning agents can etch and erase the graduated markings on baby bottles. Please only use baby bottles with dishwasher-proof level markings.

- If there is a delay of 4 hours or more before bottles can be washed, fill them with water to prevent residues from drying on.

If the process is not to be followed by sterilisation, the load should be dried completely before storage, e.g. in a drying cabinet, to avoid the development of water-borne bacteria.

Containers and inserts for baby bottles and teats are supplied with their own operating instructions.
In this section you will find a description of the causes of common chemical reactions which can occur between different types of soiling, chemical agents and the components of the washer-disinfector, along with their remedies as necessary.

This section is intended as a guide. If unforeseen interactions occur during reprocessing, or if you have any queries on this subject, please seek advice from Miele.

<table>
<thead>
<tr>
<th>General information</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Problem</strong></td>
</tr>
<tr>
<td>If elastomers (hoses and seals) and plastics in the machine are damaged, this can lead to, for example, swelling, shrinking, hardening or brittleness of materials leading to the development of tears and cracks. Components can then not function correctly and this generally leads to leaks.</td>
</tr>
<tr>
<td>Heavy foaming during a programme affects cleaning and rinsing results. Foam escaping from the wash cabinet can cause damage to the washer-disinfector. Cleaning processes cannot be regulated and validated where there has been a build-up of foam.</td>
</tr>
<tr>
<td>Corrosion to stainless steel in the wash cabinet and to accessories can give them a different appearance: – rust (red marks / discolouration), – black marks / discolouration, – white marks / discolouration (etched surface). Corrosive pitting can lead to the washer-disinfector not being watertight. Depending on application, corrosion can influence cleaning and rinsing results or cause corrosion to stainless steel items in the cabinet.</td>
</tr>
</tbody>
</table>
## Chemical processes and technology

### Chemical agents

<table>
<thead>
<tr>
<th>Problem</th>
<th>How to resolve it</th>
</tr>
</thead>
</table>
| The ingredients in chemical agents have a strong influence on the longevity and functionality (throughput) of the dispensing system. | - Follow the chemical agent manufacturer’s instructions and recommendations.  
- Carry out a regular visual check of the dispensing system (siphons, hoses, dispensing containers etc.) for any damage.  
- Regularly check the flow rate of the dispensing system.  
- Ensure that the regular cycle of maintenance is observed.  
- Please contact Miele Professional Service for advice.                                                  |
| Chemical agents can damage elastomers and plastics in the machine and accessories.                          | - Follow the chemical agent manufacturer’s instructions and recommendations.  
- Carry out a regular visual check of any accessible elastomers and plastics for damage.                                                                     |
| The following chemical agents can cause large amounts of foam to build up:                                    | - Process parameters in the wash programme, such as dispensing temperature, dosage concentration etc. must be set to ensure the whole process is foam free or very low foaming.  
- Please observe chemical agent manufacturer’s instructions.                                                                                                  |
| Cleaning agents and rinsing agents containing tensides.                                                        |                                                                                                                                                                                                                       |
| Foam can occur:                                                                                               |                                                                                                                                                                                                                       |
| - in the programme block in which the chemical agent is dispensed,                                             |                                                                                                                                                                                                                       |
| - in the following programme block if it has been spilled,                                                     |                                                                                                                                                                                                                       |
| - in the following programme with rinsing agent if it has been spilled.                                        |                                                                                                                                                                                                                       |
| De-foaming agents, especially silicone based ones can cause the following:                                      | - De-foaming agents should be used in exceptional cases only, for instance when absolutely essential for the process.                                                                                               |
| Deposits to build up in the cabinet,                                                                              | - The wash cabinet and accessories should be periodically cleaned without a load and without de-foaming agent using the Medium or Long programme.                                                                 |
| Deposits to build up on the load,                                                                                  | - Please contact Miele Professional Service for advice.                                                                                                                                                               |
| Damage to elastomers and plastics in the machine,                                                               |                                                                                                                                                                                                                       |
| Damage to certain plastics (e.g. polycarbonate and plexiglass) in the load being processed.                     |                                                                                                                                                                                                                       |
## Chemical processes and technology

### Soiling

<table>
<thead>
<tr>
<th>Problem</th>
<th>How to resolve it</th>
</tr>
</thead>
<tbody>
<tr>
<td>The following substances can lead to a heavy build-up of foam during washing and rinsing:</td>
<td>✽ Thoroughly rinse items in water beforehand.</td>
</tr>
<tr>
<td>- some disinfecting agents and dishwashing detergents,</td>
<td>✽ Select a cleaning programme with at least one short pre-rinse in cold or hot water.</td>
</tr>
<tr>
<td>- active foaming agents such as tensides.</td>
<td></td>
</tr>
<tr>
<td>The following substances cause corrosion to stainless steel in the wash cabinet on accessories:</td>
<td>✽ Thoroughly rinse items in water beforehand.</td>
</tr>
<tr>
<td>- hydrochloric acid,</td>
<td>✽ Put the drip-dry items to be washed into the mobile units, baskets, modules and inserts and start a programme as soon as possible after placing in the machine.</td>
</tr>
<tr>
<td>- other substances containing chlorides such as sodium chloride etc.,</td>
<td></td>
</tr>
<tr>
<td>- concentrated sulphuric acid,</td>
<td></td>
</tr>
<tr>
<td>- chromic acid,</td>
<td></td>
</tr>
<tr>
<td>- particles of iron and swarf.</td>
<td></td>
</tr>
</tbody>
</table>

### Reaction between chemical agents and soiling

<table>
<thead>
<tr>
<th>Problem</th>
<th>How to resolve it</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soiling containing high protein levels such as blood can cause a heavy build-up of foam when processed with alkaline chemical agents.</td>
<td>✽ Select a cleaning programme with at least one short pre-rinse in cold water.</td>
</tr>
<tr>
<td>Non-precious metals such as aluminium, magnesium and zinc can release hydrogen when processed with very acidic or alkaline chemical agents (oxyhydrogen reaction).</td>
<td>✽ Please observe chemical agent manufacturer's instructions.</td>
</tr>
</tbody>
</table>
Adding and dispensing chemical agents

Using chemical agents

⚠️ Only use chemical agents designed specifically for use in washer-disinfectors and follow the manufacturer’s instructions on their application. Please observe carefully any instructions relating to non-toxic residues.

⚠️ Caution when using chemical agents. Some agents may be corrosive and irritant. The relevant safety regulations and the chemical agent manufacturer’s safety data sheets must be observed. Wear protective goggles and gloves.

Contact Miele for information about suitable chemical agents.

Dispensing systems

The washer-disinfector is equipped with a number of internal dispensing systems for chemical agents:

- Rinsing agent
  This is dispensed via a storage reservoir ⚪ in the door.

- Powder cleaning agent
  This is dispensed via a detergent dispenser 🧼 in the door.

If required, up to two additional, external DOS modules for liquid agents can be fitted retrospectively.

Labelling the siphons

Liquid chemical agents from external containers are dispensed by siphons. Colour coding the siphons can be helpful for correct dispensing.

Miele uses and recommends the following:

- Blue: for cleaning agent
- Red: for neutralising agent
- Green: for chemical disinfection agents or an additional second cleaning agent
- White: for acidic chemical agent
- Yellow: for free choice
Adding and dispensing chemical agents

**DOS modules**
If required, up to two additional, external DOS modules for liquid agents can be fitted retrospectively.

External DOS modules are fitted by Miele Professional Service. Internal dispensing systems cannot be retrospectively fitted.

**Connecting DOS modules**
DOS modules are supplied with their own installation instructions.

⚠️ Before fitting the DOS module, compare the connection data (voltage and frequency) on the data plate with that on the data plate of your machine. If the data does not match, the modules could sustain damage. If in any doubt, consult an electrician.

![Diagram of DOS module connections]

1. Power supply for DOS 1 cleaning agent.
2. Power supply for DOS 3 neutralising agent.
3. Connections for dispensing hoses.

- Connect the module to the electricity supply.
- To connect the dispensing hose, release the hose clip on a free connector and remove the safety cap.
- Push the dispensing hose onto the connector and secure it with a hose clip.

Unused connectors must be blanked off with safety caps to prevent the leakage of wash fluid.
Adding and dispensing chemical agents

Rinsing agent

Rinsing agent is necessary to ensure water does not cling to and leave marks on items, and to help items dry faster after they have been washed.

⚠️ Residues of rinsing agent remain on the surface of items after they have dried.
It is important to check the suitability of the rinsing agent being used.

Rinsing agent is dispensed in the Final rinse phase. The reservoir must be filled for this to occur.

⚠️ Do not fill with cleaning agent.
This would damage the reservoir.
Only fill the rinsing agent reservoir with rinsing agent for washer-disinfectors.

- Open the door fully.
- Unscrew the yellow lid with the 🌟 symbol in the direction of the arrow.

The rinse aid reservoir holds approx. 300 ml.

- Add the rinse aid until it reaches the "max." mark in the funnel.
Adding and dispensing chemical agents

- Close the reservoir.
- Wipe up any spilled rinsing agent to prevent over-foaming occurring during the next programme.

**Refill indicator**

When the fill level is low in the (DOS 2) supply container for rinsing agent you are reminded to refill it.

- Confirm the message shown with OK and refill the rinsing agent as described.

**Dispensing rinsing agent**

The dispensing concentration is set by Miele Professional Service.

- If there are spots of water left on items after reprocessing, then the dispensing concentration is set too low.
- If clouding or smearing appears on items, the dispensing concentration is set too high.

- In either case contact Miele Professional Service and have the dispensing concentration reset.
Adding and dispensing chemical agents

Dispensing neutralising or chemical disinfection agent

The DOS 3 module connection can be used for dispensing either neutralising agent or chemical disinfection agent.

<table>
<thead>
<tr>
<th>It is programmed at the factory for neutralising agent.</th>
</tr>
</thead>
</table>

The machine's controls have to be reprogrammed by Miele Professional Service if you wish to change product, e.g. from neutralising agent to chemical disinfection agent. If the controls are reprogrammed to a chemical disinfection agent, neutralising agent dispensing is omitted from all programmes.

Neutralising agent

Neutralising agent is dispensed via an external DOS module. DOS modules are fitted by Miele Professional Service and can be retrospectively fitted at any time.

For certain programmes, neutralising agent is dispensed in the interim rinse phase after washing to help prevent discolouration and corrosion spots on the instruments (especially around jointed areas).

Neutralising agent (pH setting: acidic) neutralises any residues of alkaline cleaning agents on the surface of the load.

Neutralising agent is dispensed automatically in the Interim rinse phase after the main wash (see Programme charts). The reservoir must be filled and the dispensing system vented for this to occur.

Chemical disinfectant

Heat-sensitive items, e.g. theatre shoes, can be disinfected using a chemical disinfecting agent.

The disinfecting agent must be suitable for machine use and must be low-foaming.

Disinfecting parameters are based on claims made by the disinfecting agent manufacturer. Please observe, in particular, their instructions on handling, conditions of use and effectiveness.

⚠️ Chemo-thermal procedures are not suitable for the reprocessing of medical products.

These must be reprocessed in a washer-disinfector which has a special programme set up by Miele Professional Service and which is equipped with a suitable DOS module. The DOS module is connected externally.
Adding and dispensing chemical agents

Refilling the reservoir for neutralising / chemical disinfection agent

- Place the neutralising agent container (red marking) or the chemical disinfection agent container (green marking) on the open cabinet door or on a surface which is robust and easy to clean.

- Unscrew and remove the siphon. Place the siphon on the open cabinet door.

- Replace the empty container with a full one.

![Image of siphon and container]

- Push the siphon into the opening of the container and screw it back on tightly. Observe the colour coding.

- Wipe up any spilled process chemical thoroughly.

- Place the container on the floor beside the dishwasher or in an adjacent cupboard. The container must be at the same level as the machine and not be placed on top of or above the machine. Make sure that the dispensing hose is not kinked or trapped.

- The dispensing system must then be vented (see "Settings / Venting DOS").

Checking consumption

Check consumption regularly by checking the fill levels in the supply containers and replace containers in good time to avoid the dispensing system being sucked completely dry.
Adding and dispensing chemical agents

Refill indicator

When the fill level is low in the DOS 3 supply container, you are reminded to refill it.

⚠️ When refilling the reservoir make sure you are using the correct chemical agent.

- Confirm the message shown with OK and
- refill the chemical agent as described above.

If it has run out, the washer-disinfector will be locked for further use.
It will be ready for use again when the supply container has been replaced.

Setting the dispensing concentration

The dispensing concentration is set by Miele Professional Service.

Instrument care products

⚠️ Instrument care products based on paraffin oils (white oils) can damage elastomers and plastic in the machine.
Such care products must not be dispensed as chemical agents in this machine even if they are recommended for machine use by the care product manufacturer.

If required, paraffin oil based instrument care products can be used after machine reprocessing within the scope of instrument care.
Observe the specifications of the manufacturers of the instruments and care products.
It is acceptable to reprocess instruments which have been treated with such care products in this machine.
Adding and dispensing chemical agents

Cleaning agent

⚠️ Only use cleaning agent which is suitable for commercial dishwashers.
Do not use detergent for domestic dishwashers.

This machine can be used with powder cleaning agent or with liquid cleaning agent via an external DOS module.

DOS modules are fitted by Miele Professional Service and can be retrospectively fitted at any time.

Miele recommends the use of liquid cleaning agent.

For environmental reasons it is important to always consider the following factors when selecting a cleaning agent:

– How alkaline does the cleaning agent need to be for the cleaning application involved?
– Are protein-removing enzymes required and is the programme sequence suitable for this?
– Are tensides required for proper dispersion and emulsification?
– A suitable, mildly alkaline, active chlorine-free cleaning agent should be used for thermal disinfection programmes.

For cleaning specific types of soiling, and for information on the optimum cleaning agents and additives to use for liquid dispensing, please contact the Miele. The Miele Professional Service Department will be able to advise you.

Refilling liquid cleaning agent

Liquid cleaning agent is dispensed from an external supply container e.g. a canister.

- Place the liquid cleaning agent container (blue marking) on the open cabinet door or on a surface which is robust and easy to clean.
Adding and dispensing chemical agents

- Unscrew and remove the siphon. Place the siphon on the open cabinet door.
- Replace the empty container with a full one.

- Push the siphon into the opening of the container and screw it back on tightly. Observe the colour coding.
- Wipe up any spilled process chemical thoroughly.
- Place the container on the floor beside the dishwasher or in an adjacent cupboard. The container must be at the same level as the machine and not be placed on top of or above the machine. Make sure that the dispensing hose is not kinked or trapped.
- The dispensing system must then be vented (see "Settings / Venting DOS").

Checking consumption

Check consumption regularly by checking the fill levels in the supply containers and replace containers in good time to avoid the dispensing system being sucked completely dry.

Refill indicator

When the fill level is low in the DOS 1 supply container for liquid cleaning agent, you are reminded to replenish it.

- Confirm the message shown with OK and
- refill the liquid cleaning agent as described.

If the liquid cleaning agent has run out, the washer-disinfector will be locked for further use. It will be ready for use again when the supply container has been replaced.

Dispensing liquid cleaning agent

The dispensing concentration is set by Miele Professional Service.
Adding and dispensing chemical agents

Dispensing powder cleaning agent

Avoid inhaling powder cleaning agent.
Swallowing chemical agents can cause chemical burns in the mouth and throat or lead to asphyxiation.

Add powder cleaning agent to the dispenser in the door with the symbol before starting the programme. Do not dispense powder cleaning agent in the Rinsing and Drain programmes.

Press the yellow button on the dispenser with the symbol.
The flap will spring open. The flap is always open at the end of a programme.
The level markers in the powder dispenser with the door in the horizontal position equate to the amount dispensed in ml. The max. capacity is approx. 60 ml of cleaning agent.
The amount in ml equates to approx. the amount normally recommended in grams for proprietary powder cleaning agents. Powder density can affect this amount.

Dispensing example:
Approx. 10.5 l of water are taken into the machine for the main wash. With a cleaning agent concentration of approx. 3 g/l you will need approx. 30 g of cleaning agent. Please observe manufacturer's recommendations which may vary!
Adding and dispensing chemical agents

Add powder agent to the dispenser.

Close the flap.

⚠️ Make sure that all of the cleaning agent has dissolved at the end of the programme.
Repeat the programme if residual agent is present.
Check whether any items of the load have obstructed the flushing out of the dispenser and rearrange the load if necessary.
Operation

Selecting a programme ...

... using the short-cut buttons

Select a programme using short-cut buttons 1, 2 or 3.

... from the programme list

Press the button and

use the ° and ç arrow buttons to highlight a programme and confirm your selection with OK.

The LED in the button selected will light up and the relevant programme will appear in the display. The LED in the Start/Stop button also starts to flash.

Another programme can be selected at any time before a programme has started. Once it has started, programme selection is locked.

Always select the programme depending on the type of load and degree and type of soiling, or on infection prevention issues.

The programmes and their areas of application are described in the Programme overview at the end of these operating instructions.

Starting a programme

Close the door.

When the door is closed, the LED in the ç button will light up.

Press the Start/Stop button.

The LED in the Start/Stop button will light up constantly and the LED in the ç button will go out.

Starting a programme using Delay start

The start of a programme can be delayed; for example, to benefit from economy rates of electricity at night. Starting from the programmed time, a delay start time between 1 minute and 24 hours can be selected in one minute increments (see "Settings ç/Time of day").

Delay start must be switched on in the Settings menu (see "Settings ç/ Delay start").

If soiling is left to dry on the load for longer, the processing result can be adversely affected and there is also a risk of corrosion for stainless steel items.
Setting the start time

- Select a programme.
- Press the OK button before starting the programme.

Use the arrow buttons (higher) and (lower) to set the time and confirm your selection with the OK button.

When the OK button is pressed, the display jumps automatically to the next input position. You cannot go back to the previous entry. If a mistake is made, the process must be cancelled using the button and repeated.

- Set the minutes using the arrow buttons (higher) and (lower) and save your entry with OK.

The start time is now saved and can be changed as described at any time up to activation of Delay start.

Activating Delay start

- Delay start is activated with the Start/Stop button.

The selected programme with the set start time set is then shown in the display. When the automatic switch off after function is activated (see "Further settings / Switch off after"), the washer-disinfector switches itself off after the set time until the programme start time set is reached.

Deactivating Delay start

- Press the button or switch the washer-disinfector off using the button.
Drying assistance

The additional "Drying assistance" function accelerates the drying process at the end of the programme.

If drying assistance has been activated, the door will automatically open a few centimetres at the end of the programme to release steam from the cabinet. The load will then be dried using passive heat given off by the residual heat in the cabinet.

This method of drying does not correspond to the requirements of EN ISO 15883-1/-2. For this reason, items must be dried separately before further processing (sterilisation) or storage.

The drying function can be pre-selected for all programmes with a drying phase or can be retrospectively switched on or off every time a programme is selected (see "Settings / Drying").

The drying function is switched on or off by pressing the button before starting the programme. The LED in the button indicates whether the additional function is on or off. The drying time of the programme can also be changed.

When the drying function is activated, the programme duration will be approx. 2 minutes longer.

Activating and deactivating drying

- Select a programme.
- Press the button before starting the programme. The LED in the button will indicate whether the drying function is switched on or off.
Programme sequence indicator

After the programme has started, the programme sequence can be followed in the three-line display.

- Programme name

The following parameters can be checked using the arrow buttons ▲ and ▼:

- Current programme block, e.g. Main wash 1
- Actual or required temperature (depending on the display set, see “Further settings / Display: Temperature”)
- A₀ value
- Batch number

- Time left (in hours; under an hour, in minutes)

At the end of the programme

A programme is usually finished when the following parameters and messages are shown in the display:

- Programme name

Continuously alternating between:

- Parameter met/not met
- A₀ value
- Batch number

- Programme finished

In addition, the LED in the Start/Stop buttons goes out and the LED in the button begins to flash. In the factory default setting, an acoustic tone also sounds for approx. 10 seconds (see "Settings / Volume").
Cancelling a programme

⚠️ If a programme is cancelled, the items in the washer-disinfector must be reprocessed again.

⚠️ Be careful when opening the door.
The wash load could be hot. Danger of scalding, burning, and chemical burns!

Programme cancelled due to a fault

The programme stops and an error message appears in the display. Take appropriate steps to resolve the fault, depending on its cause (see “Problem solving guide”).

Cancelling a programme manually

A programme which is already running should only be cancelled if strictly necessary, e.g. if the wash load is moving about significantly.

- Press and hold the Start/Stop button until the display changes to the following view:

  ![Programme Cancellation Interface]

- Select Yes using the ▲ and ▼ arrow buttons.

- The programme is cancelled when OK is pressed. Entry of a code may also be required (see “Further settings / Code”)

If no button is pressed for several seconds, or if the process is cancelled using the ★ button, the display will revert to the programme sequence display.

Restarting the programme

- Before starting the programme, check to see whether any more powder cleaning agent is required.

- Start the programme again or select a new programme.
The structure of the Settings menu is shown below. The menu incorporates all relevant functions to support daily routine tasks.

In the structure overview all options which can be permanently selected have boxes □ beside them. Factory settings are indicated by a tick ✓. You will find an explanation of how to change settings after the overview.

Settings

- Delay start
  - No ✓
  - Yes □
- Drying
  - No □
  - Yes ✓
- DOS venting
  - DOS
- Filter maintenance
  - Filter combination/Tubular filter
    - Reset (Yes/No)
    - Interval 10
- Language
  - deutsch □
  - english (GB) ✓
  - ...
- Time of day
  - Set
  - Display
    - On □
    - On for 60 seconds □
    - Do not display ✓
  - Clock format
    - 12 h □
    - 24 h ✓
- Volume
  - Keypad tone
  - Buzzer tones
    - Programme end
    - Warning
**Delay start**

This setting must be activated for Delay start to be available for use.

- Open the menu as follows:
  - Press the **Settings** button
  - Go to **Delay start**

  ![Delay start menu](image)

- **No**
  - Delay start is deactivated.

- **Yes**
  - Delay start is activated and can be used for all programmes.

- Select an option using the `>` and `<` arrow buttons.
- Press **OK** to save the setting.
**Drying**

The drying function can be preset or deactivated for all programmes with a drying phase (see Programme charts).

The additional "Drying assistance" function accelerates the drying process at the end of the programme.

If drying assistance has been activated, the door will automatically open a few centimetres at the end of the programme to release steam from the cabinet. The load will then be dried using passive heat given off by the residual heat in the cabinet.

This method of drying does not correspond to the requirements of EN ISO 15883-1/-2. For this reason, items must be dried separately before further processing (sterilisation) or storage.

- Open the menu as follows:

  '≡' button

  ▶ Settings

  ▶ Drying

- No

  The drying function is automatically deactivated for all programmes.

- Yes

  The drying function is activated for all programmes. The programme duration is lengthened if the drying function is activated.

- Select an option using the ∧ and ∨ arrow buttons.

- Press OK to save the setting.
DOS venting

The dispensing system for liquid chemical agents can only dispense reliably if the system has been purged of air.

The DOS system must only be vented:
– if the dispensing system is being used for the first time,
– if the liquid cleaning agent container has been replaced,
– if the dispensing system has been sucked completely dry.

Before venting, ensure that the liquid chemical agent container is sufficiently full and the siphons are securely screwed to the containers. Only one DOS system can be vented at a time.

Open the menu as follows:

'/button

 › Settings

   › DOS venting

     › DOS... (name of dispensing system)

Automatic venting will start when the dispensing system is selected. Once started, the automatic venting process can no longer be cancelled.

Select a dispensing system using the ▲ and ▼ arrow buttons.

Press OK to start the venting process.

Automatic venting is successfully completed when the following message appears in the display:
Filter maintenance

Cleaning the filters in the wash cabinet

The filters in the wash cabinet must be checked and cleaned daily, see "Maintenance/Cleaning the filters in the wash cabinet". A counter in the controls can be activated to remind you of the required cleaning at regular intervals.

Cleaning the A 800 tubular filter

The A 800 tubular filter can be used in special injector bars on various carts and baskets and must be cleaned at least once a week. Follow the cleaning instructions in the operating instructions for the tubular filter.

For the weekly cleaning, a counter in the controls can be activated to remind you of the required cleaning at regular intervals.

Activating and setting the interval

Open the menu as follows:

- Button
  - Settings
    - Filter maintenance
      - Filter combination or Tubular filter

- Active
  - The cleaning interval is activated.
  - The Active selection allows you to reset the counter or set the cleaning interval.

- Inactive
  - The cleaning interval is deactivated.

Select an option using the ▲ and ▼ arrow buttons and confirm your selection with OK.
Resetting the counter

The counter for the cleaning interval may be reset only after cleaning has been completed.

- Yes
  The counter is reset.
- No
  The counter will not be reset.

Select an option using the \( \text{\textarrow} \) and \( \text{\textarrow} \) arrow buttons and confirm your selection with \textit{OK}.

Setting the interval

The interval depends on the number of programme sequences and must be set on the basis of usage and the expected number of particles/solids in the soiling.

Example:
For weekly cleaning with 2 programme sequences per day and 5 workdays in the week, this corresponds to an interval of 10 \((2 \times 5 = 10)\). With a higher incidence of particles, a shorter interval should be selected in order to clean the tubular filter several times weekly. With a lower incidence of particles, weekly cleaning is sufficient.

\textit{Miele recommends that you clean the tubular filter after every 10 programme sequences.}

The value is set in increments of 5. The possible range is shown in the bottom line of the display.

- Use the arrow buttons \( \text{\textarrow} \) (higher) and \( \text{\textarrow} \) (lower) to set the Interval.
- Press \textit{OK} to save the setting.
Language

The language set will be used in the display.

- Open the menu as follows:
  - Settings
    - Language

The flag symbol after the Settings and Language menu options acts as a guide if a language which you do not understand has been set.

A list will appear in the display with all the languages available. The currently selected language has a tick beside it.

The factory default language is set as english (GB).

- Use the ▲ and ▼ arrow buttons to select the language you want.
- Press OK to save the setting.

The display will change immediately to the language selected.
**Time of day**

The time of day is required for process documentation, Delay start, the machine log book and the display. The date format and the current time of day have to be set.

There is no automatic adjustment between summer time (daylight savings) and winter time. You need to make this adjustment yourself as necessary.

**Selecting the time of day format**

To set the format for the time of day in the display:

- Open the menu as follows:
  - press the **≡** button
  - select Settings
  - select Time of day
  - select Clock format

- 12 h
  - Time of day in 12-hour format (am/pm).

- 24 h
  - Time of day in 24-hour format.

- Use the ∧ and ∨ arrow buttons to select the date format you want.
- Press OK to save the setting.
Setting the time of day

To set the format for the time of day:

- Open the menu as follows:
  - ‘≡’ button
    - Settings
      - Time of day
      - Set

- Use the arrow buttons (higher) and (lower) to set the hours and confirm your entry with the OK button.

  When the OK button is pressed, the display jumps automatically to the next input position. You cannot go back to the previous entry. If a mistake is made, the process must be cancelled using the button and repeated.

- Use the arrow buttons (higher) and (lower) to set the minutes and press the OK button to save the time of day.

  The time of day will be saved when the OK button is pressed for the last time.
If necessary, the machine can be set to standby mode during breaks in operation.

- An option to display the time of day must be selected for this purpose.

- Additionally, automatic shutdown must be activated and a standby duration set in "Further settings/Switch off after".

Once the set time has elapsed, the machine switches to standby mode. During standby, the machine remains switched on and the time is shown in the display. Pressing any button reactivates the machine.

- Select an option using the \( \uparrow \) and \( \downarrow \) arrow buttons.

- Press OK to save the setting.
Volume

A buzzer which is integrated into the control panel can give an acoustic signal in the following situations:

- When buttons are pressed (keypad tone)
- At the end of the programme
- System messages (information)

Open the menu as follows:

'≡' button
  ➔ Settings
    ➔ Volume

- Buzzer tones
  Setting the buzzer volume for programme end and system messages (information).

- Keypad tone
  Setting the buzzer volume for keypad tone.

Select an option using the ▶ (Louder) and ◀ (Quieter) arrow buttons.

Confirm your selection with OK.

When Keypad tone has been selected, you can adjust the volume immediately. When Buzzer tones has been selected, you must first select for which tone, Warning or Programme end, you would like to adjust the volume.

The volume level is represented by a bar chart. On the lowest setting the buzzer tone is switched off.

Use the arrow buttons ▶ (Louder) and ◀ (Quieter) to set the volume.

Press OK to save the setting.
Further settings

The Further settings menu incorporates all administrative processes and settings.

The Further settings menu can only be accessed by using a PIN code.
If you do not have the code, contact a user with appropriate access rights or cancel the process using the button.

In the structure overview all options which can be permanently selected have boxes beside them. Factory settings are indicated by a tick. You will find an explanation of how to change settings after the overview.

Further settings
- Code
  - Change code
- Date
  - Date format
    - DD:MM:YY ✓
    - MM:DD:YY □
  - Set
- Log book
  - Consumption: Water
  - Consumpt.: Cleaning agent
  - Consumpt.: Rinsing agent
  - Consumpt.: Neutra. agent
  -...
  - Operating hours
  - Programme cycle counter
  - Service interval
- Report
  - Short ✓
  - Long □
- Temperature unit
  - °C ✓
  - °F □
- Programme settings
  - Change programme
    - ...
  - Reset programme
    - ...
- Release programme
  - All ✓
  - Selection
    - ...

Further settings

- Move programme
  - 1 Vario TD Inst 4trays
  - 2 Vario TD Inst 6trays
  - 3 Vario TD AN

- Test programme
  - No
  - Laboratory
  - Validation

- Interface
  - Ethernet
    - Module status
  - DHCP
  - RS232
    - Print reports
    - Language
    - Mode
    - Baud rate: 9600
    - Parity: none

- Water hardness 19

- Display view
  - Actual temperature
  - Required temperature

- Display
  - Contrast
  - Brightness

- Switch off after
  - Yes
  - No

- Software version
  - EB ID XXXXX
  - EGL ID XXXXX
  - EZL ID XXXXX
  - EFU ID XXXXX
  - LNG ID XXXXX
Further settings

Code
The Further settings menu incorporates relevant functions and system settings which require an enhanced knowledge of machine reprocessing. Access to the menu is therefore protected by a four digit PIN code.

⚠️ If the code is lost, a new code must be issued by Miele Professional Service.

Entering the PIN code

When the Further settings menu is selected, you will be prompted to enter the code.

When the OK button is pressed, the display jumps automatically to the next input position. You cannot go back to the previous entry. If a mistake is made, the process must be cancelled using the button and repeated. Entered digits are replaced by a * symbol.

If all digits are entered correctly, the menu will be released.

If an incorrect entry is made, an error message will appear.

Confirm the message with OK.

Access remains blocked and the display reverts to the menu selection.
Further settings

Change the PIN code

The code consists of a four digit number and is set by the user. Each digit can be programmed freely between 0 and 9.

⚠️ When a new code is entered, the old code is overwritten and is permanently deleted. Therefore it cannot be reinstated. If the code is lost, a new code must be issued by Miele Professional Service.

- Open the menu as follows:
  - button
    - Further settings
      - Code
        - Change code

 Fellowship

- Use the arrow buttons (higher) and (lower) to enter the relevant digits.
- Confirm each digit individually with the OK button.

When the OK button is pressed, the display jumps automatically to the next input position. You cannot go back to the previous entry. If a mistake is made, the process must be cancelled using the button and repeated. Entered digits are replaced by a * symbol.

The code is saved to memory once you have confirmed the last digit.
Further settings

Date
The date is required e.g. for process documentation. The date format and the current date have to be set.

Selecting the date format
The selected date format appears in the display and in the process documentation.

- Open the menu as follows:
  - Advanced button
    - Further settings
      - Date
        - Date format

- DD = Day
- MM = Month
- YY = Year

- Use the ∧ and ∨ arrow buttons to select the date format you want.
- Press OK to save the setting.
**Setting the date**

The current date will be set in the selected date format.

- Open the menu as follows:

  - **button**
    - Further settings
    - Date
    - Set

- Use the arrow buttons \(\wedge\) (higher) and \(\vee\) (lower) to set the day/month and confirm your entry using the **OK** button.

When the **OK** button is pressed, the display jumps automatically to the next input position. You cannot go back to the previous entry. If a mistake is made, the process must be cancelled using the \(\leftrightarrow\) button and repeated.

- Use the arrow buttons \(\wedge\) (higher) and \(\vee\) (lower) to set the month/day and confirm your entry using the **OK** button.

- Use the arrow buttons \(\wedge\) (higher) and \(\vee\) (lower) to set the year and press the **OK** button to save the date.

The date will be saved when the **OK** button is pressed for the last time.
Further settings

Log book
The entire life cycle of the machine, including consumption data for water and chemical agents, as well as operating hours and programme cycles are recorded in the log book.

Miele Professional Service can also use the log book to calculate a recommendation for service intervals.

- Open the menu as follows:
  - ‘≡ button
    - Further settings
      - Log book

- Consumption: Water
  - Display the total amount of water used in litres (l).

- Consumpt.: Cleaning agent
  - Display the total amount of liquid cleaning agent used in litres (l).
  - Powder cleaning agent is not shown.

- Consumpt.: Rinsing agent
  - Display the total amount of rinsing agent used in litres (l).

- Consumpt.: Neutra. agent
  - Display the total amount of neutralising agent used in litres (l).

- Consumption: DOS 5
  - Display the total amount of liquid media that has been dispensed via the DOS module connection for DOS 5 in litres (l).

- Operating hours
  - Display the total number of operating hours.

- Programme cycle counter
  - Total of all completed programmes. There is no breakdown of individual programmes. Cancelled programmes are not included.

- Service interval
  - Date of the next service (entered by Miele Professional Service).

- Select an option using the ▲ and ▼ arrow buttons and confirm your selection with OK.

Values in the machine log book cannot be altered.

- Press the ← button to exit the menu.
Report
You can choose between two different report formats of process reports for the purpose of archiving.

More information on selecting these can be found in "Process documentation".

Temperature unit
During a programme the temperature display is refreshed every 2 to 5 seconds depending on the programme stage. The temperature can be displayed in degrees Celsius (°C) or Fahrenheit (°F).

The temperature unit is set at the factory to °C.

If the temperature unit is changed to °F, the temperature displayed is automatically recalculated.

Open the menu as follows:

• button
  – Further settings
    – Temperature unit

- °C
  Display temperature in degrees Celsius.

- °F
  Display temperature in degrees Fahrenheit.

• Select an option using the ∧ and ∨ arrow buttons.
• Press OK to save the setting.
Further settings

Programme settings

You can use this menu to customise the current programme to suit technical requirements and the wash load or to reset all programmes to the factory default settings.

Additional specialist knowledge is required to alter programme settings and this should therefore be undertaken only by experienced users or by Miele Professional Service.

More information can be found in "Programme settings".
Programme release

It is possible to block access to individual programmes. Blocked programmes are not available for selection, so that it can be ensured that only validated programmes are used.

Open the menu as follows:

Further settings
  ▶ Release programme

- All
  All programmes are released for use.

- Selection
  A selection of programmes are available for use.

Select an option using the ▲ and ▼ arrow buttons and confirm your selection with OK.

The Selection option displays a list of all programmes.

Programmes are selected by multiple choice. A box □ is shown next to all programmes in the list. If a programme is released, there is a tick ☑ in the box. An empty box indicates a blocked programme.

Programmes can be released or blocked using the arrow buttons ▲ and ▼ and by confirming with OK.

To save the selection, select the Accept option at the end of the list and confirm with OK.
Moving a programme: allocating programme selection buttons

You can sort the programme selection list to suit your requirements and therefore also allocate the programme selection buttons 1, 2 and 3.

- Open the menu as follows:
  - button
    - Further settings
    - Move programme

![Programme list]

All enabled programmes are shown in the programme list (see “Further settings/Enabling programmes”). A programme’s position in the programme list is the determining factor for assigning the programme selection buttons. Programmes are numbered from 1 - n. The first three programmes in the list are assigned to the programme selection buttons; for example:

- 1. Vario TD Inst 4trays on programme selection button 1
- 2. Vario TD Inst 6trays on programme selection button 2
- 3. Vario TD AN on programme selection button 3
- Vario TD Instr 8 mesh trays
- 5. Ward end utensils
- etc.

- Use the \( \uparrow \) and \( \downarrow \) arrow buttons to select the programme you would like to move.

- Confirm your selection with \( \text{OK} \).

Now you can move this programme within the list.

- Use the \( \uparrow \) and \( \downarrow \) arrow buttons to move the programme to the position you want.

- Press \( \text{OK} \) to save the programme to the selected position.

The programme which was previously saved to this position and all subsequent programmes are moved down by one position.

The process can be repeated as often as you wish.

- Press the \( \leftarrow \rightarrow \) button to exit the menu.
Test programme
Various programmes are available for monitoring cleaning performance in routine testing.
See "Maintenance" for more information on these programmes.

Interface
With Miele washer-disinfectors, cleaning processes can be documented. To enable this, Miele washer-disinfectors are equipped with a module slot on the back to take a Miele communication module. The communication module is available from Miele and comes with its own operating instructions.

Only use terminal devices (computers, printers etc.) which comply with EN/IEC/AS/NZS 60950.

Contact Miele for more information about communication modules, software, suitable printers and the Miele Remote Service.

Ethernet
The XKM 3000 L Med communication module enables the establishment of an Ethernet interface for digital archiving of process data via external software.
The module can be connected to a WLAN network via an existing wireless access point.

RS232
An XKM RS232 10 Med communication module is required for direct connection to a report printer.
The XKM RS232 10 Med module can also be used for connection to a terminal or terminal emulator. The data are transmitted in ASCII code.
Further settings

Configuring the interface

⚠️ The interface must only be configured by suitably qualified and competent persons.

- Open the menu as follows:
  - Press button
    - Further settings
      - Interface

- Ethernet
  - Configuration of an Ethernet interface.

- RS232
  - Configuration of a serial RS232 interface

- Select the type of interface and confirm your selection with OK.

Then the parameters for the interface must be configured.

Ethernet

- Module status
  - Connection status displayed (Active/Inactive)

- Address status
  - List of interface parameters, e.g. IP address, Subnet mask etc.

- DHCP
  - The Ethernet interface can either be implemented via a Dynamic Host Configuration Protocol (DHCP) or by setting the following parameters:
    - IP address
    - Subnet mask
    - Standard gateway
    - DNS Server automatic
    - DNS Server 1
    - DNS Server 2
    - Port type
    - Port
Further settings

RS232

- Print reports
  Subsequent selection of cycle reports (see "Process documentation").

- Language 🇧🇷
  Any one of the following languages can be set for the RS232 interface:
  German, English (GB), French, Italian, Spanish, Portuguese, Swedish or Russian.

- Mode
  - Terminal
    Connection to a terminal or terminal emulator.
    Cyrillic characters are not available as ASCII code. When Russian is selected as the language, the information appears in English (GB).
  - Printer
    Connection to protocol printer

- Baud rate
  Transfer speed of the interface
  - 2400, 9600, 19200, 38400, 57600, 115200.

- Parity
  Ensuring data transmission. The parity of the sender and receiver must match.
  - none, even, odd.

The following parameters are preconfigured:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baud rate</td>
<td>9600</td>
</tr>
<tr>
<td>Bit</td>
<td>8</td>
</tr>
<tr>
<td>Parity</td>
<td>none</td>
</tr>
<tr>
<td>Stop bits</td>
<td>1</td>
</tr>
</tbody>
</table>
Further settings

Water hardness
You can use this menu to set the water softener to the water hardness of the mains supply.

For more information see "Water softener".

Display: Temperature
The wash cabinet temperature can be viewed during a programme. Either the current actual temperature or the required temperature which has been preset for the current wash block is displayed.

- Open the menu as follows:
  - button
    - Further settings
      - Display view

- Actual temperature
  Display the current actual temperature in the wash cabinet.

- Required temperature
  Display the required temperature which has been preset for the current wash block. If a temperature has not been set, a dotted line --- is shown.

During a programme both settings are displayed together as Temperature. There is no breakdown of actual and required temperature.

- Select an option using the ∧ and ∨ arrow buttons.
- Press OK to save the setting.
Display brightness and contrast
You can use this menu to adjust the brightness and contrast of the display.

- Open the menu as follows:
  - ‘≡’ button
    - Further settings
    - Display

  1  2  | Display
  3  4  | Contrast
  5  6  | Brightness

- Contrast
  Set the contrast.

- Brightness
  Set the brightness of the display.

- Select an option using the ▲ and ▼ arrow buttons.
- Confirm your selection with OK.

Contrast and brightness are shown as a bar chart in the display.

- Use the arrow buttons ▲ (Higher/Brighter) and ▼ (Lower/Darker) to set the brightness and contrast you want.
- Press OK to save the setting.
Further settings

Switch off after
If the machine has not been used for a specific time period, it can be set to standby or switched off automatically.

Standby
During standby, the machine remains switched on and the time is shown in the display. Pressing any button reactivates the machine.
- To activate standby, the Auto-Off function must be enabled under Further settings/Switch off after and a standby time set.
- An option to display the time of day must be selected in Settings / Time of day/Display.
Once the set time has elapsed, the machine switches to standby mode.

Auto-Off function
To save energy, the Auto-Off function can be activated. If the machine has not been used for a specific time period, it switches itself off automatically.
- To activate the Auto-Off function, it must first be enabled under Further settings/Switch off after and a standby time set.
- Then, the Do not display option must be selected under Settings / Time of day/Display.
After the standby time has elapsed, the machine switches off.
- Use the button to switch the machine on again.
Further settings

Switching off after activating

- Open the menu as follows:
  - '≡' button
    - Further settings
      - Switch off after

- Yes
  The Auto-Off function is activated. A duration must be set after which automatic switch-off should occur.

- No
  The Auto-Off function is deactivated.

Select an option using the '▲' and '▼' arrow buttons.

Press 'OK' to save the setting.

Setting the standby duration

If the 'Yes' option has been selected, the standby duration after which automatic switch-off should occur must be set next.

The standby duration can be adjusted in 5 minute increments. The possible range is shown in the bottom line of the display.

- Use the '▲' (higher) and '▼' (lower) arrow buttons to set the standby duration.
- Press 'OK' to save the setting.

Software version

You can use this menu to call up the software versions of individual elements, e.g. when contacting Miele Professional Service.

For more information see "Service".
Programme settings

Adjusting programme settings
The programme settings should be adjusted to suit technical requirements and the load.

Additional specialist knowledge is required to alter programme settings and this should therefore be undertaken only by experienced users or by Miele Professional Service.

Programme and dispensing changes must be documented for validated processes. In Germany this is a requirement of the Medical Devices Operator Ordinance (MPBetreibV). The processes must be validated again as necessary.

Programme structure
Each programme is subdivided into programme blocks which run one after another. A programme consists of at least one and a maximum of 11 programme blocks. Each block can occur only once in a programme.

The so-called programme header is placed above the programme blocks and contains general programme settings. Individual wash block parameters are also globally activated or deactivated here.

- Change volume of water
  Each programme block is allocated a nominal water quantity. The water quantity can be raised or lowered incrementally for all blocks to the base value in the programme chart.

- Drain time
  If the on-site waste water system is insufficient to drain the waste water from the wash cabinet within the time allocated, the drainage time can be lengthened by a set amount.

Parameters for measuring water pressure and spray arm pressure can only be accessed by Miele Professional Service.
Programme settings

Programme blocks

Wash block sequence is predefined and is the same as in the programme chart (see "Programme chart").

- **Pre-wash 1 to 3**
  Pre-washing removes coarse soiling and foam-building substances.

- **Main wash 1 and 2**
  Depending on the wash load, cleaning generally occurs at temperatures between 45 °C and 65 °C with the addition of an appropriate cleaning agent.

- **Interim rinse 1 to 4**
  In the interim rinse stages the chemical agents from the previous wash blocks are rinsed away and neutralised where necessary by the addition of appropriate neutralising agents.

- **Final rinse 1 and 2**
  To reduce the risk of corrosion of stainless steel items, water with a chloride content lower than 100 mg/litre is preferred for the final rinse.

According to the A₀ concept of EN ISO 15883, disinfection occurs thermally at temperatures of 80 to 95 °C and with relevant holding times.

- **Drying**
  Adequate drying reduces the risk of corrosion by residual moisture on the load.

Programme block parameters are accessible only to Miele Professional Service, with the exception of the dispensing of rinsing agent and drying parameters.
Programme settings

Opening the menu

The menu for programme settings is locked for users by factory default. If required, this can be released by Miele Professional Service.

Open the menu as follows:

ʼ≡ button

▷ Further settings

▷ Programme settings

- Change programme

Programmes can be adapted to suit specific technical requirements.

- Reset programme

Reset a programme to factory default settings. Programmes newly installed by Miele Professional Service will be deleted with this option.
Programme settings

Resetting a programme

Programmes can be individually reset to factory default.

Programmes stored on a free memory location are irretrievably deleted.

...  ▶ Programme settings
     ▶ Reset programme

All programmes are then listed in the display.

- Use the \ and \ arrow buttons to select the programme and confirm your selection with OK.

- Yes
  The programme will be reset to factory default.

- No
  Programme parameters will not be changed.

- Use the \ and \ arrow buttons to select an option and confirm your selection with OK.
Programme settings

Changing a programme

A programme is altered in two steps:

– Altering the programme begins with a list of all wash blocks allocated to the programme. First this list must be confirmed.

– Then the programme parameters can be altered.

Use this option to document all changes to factory settings in case of a subsequent Service call requirement.

Programme and dispensing changes must be documented for validated processes. In Germany this is a requirement of the Medical Devices Operator Ordinance (MPBetreibV). The processes must be validated again as necessary.

...  

Programme settings

Change programme

Select the programme you want to alter.

For more information see "Allocating wash blocks".
Every programme change begins with a list of the wash blocks.

All wash blocks which are allocated to the programme are listed in the display. The allocation can be adapted as necessary by Miele Professional Service.

Select the option Accept and confirm with OK.

The further setting options will then follow. You can edit these in any order you want.
Programme settings

Changing water quantity

Increasing the water level is advisable if a large amount of water clings to items due to the structure of the wash load or if a heavy build-up of foam might occur due to the type of soiling (e.g. blood) and the chemical agents used. The additional amount of water required depends on the type of basket or mobile unit used, the type of soiling and the load.

If a lightly soiled load is being reprocessed which does not hold much water, the amount of water can be reset to the factory default amount to save water and energy.

... Change volume of water

The water quantity can be increased in 0.5 l increments, or set back to the factory default amount. The possible range is shown in the bottom line. The setting "0 l" equates to the factory default setting.

■ Use the arrow buttons ∧ (higher) and ∨ (lower) to alter the water quantity.

■ Press OK to save the setting.
### Increasing drainage time

If there is still water remaining in the wash cabinet at the end of a wash block, because e.g. the on-site drainage system is inadequate, the following error message will be displayed to enable water to be drained out of the wash cabinet within the designated time:

<table>
<thead>
<tr>
<th>Check drainage</th>
<th>OK</th>
</tr>
</thead>
</table>

In this case, the drainage time can be increased.

```
...>

Drain time

<table>
<thead>
<tr>
<th>Standard</th>
<th>Increased</th>
</tr>
</thead>
</table>

- Standard
  - The standard drainage time setting applies.

- Increased
  - Drainage time is increased by a strictly preset increment. Programme duration will increase with this setting.
  - Select an option using the ▲ and ▼ arrow buttons.
  - Press OK to save the setting.
Drying assistance

The additional "Drying assistance" function accelerates the drying process at the end of the programme.

If drying assistance has been activated, the door will automatically open a few centimetres at the end of the programme to release steam from the cabinet. The load will then be dried using passive heat given off by the residual heat in the cabinet.

This method of drying does not correspond to the requirements of EN ISO 15883-1/-2. For this reason, items must be dried separately before further processing (sterilisation) or storage.

Cooling down time

The wash phase is followed by a cool down pause. During this pause, water vapor is extracted from the wash cabinet and condensed by the steam condenser. This reduces the moisture level in the wash cabinet, which promotes drying. In addition, this cools the wash cabinet slightly.

...  

Cabinet cooling down time

The value is set in 1 minute increments. The possible range is shown in the bottom line of the display.

- Use the arrow buttons $\wedge$ (higher) and $\vee$ (lower) to set the cooling down duration.
- Press OK to save the setting.
Drying time

After the cool down time, the Comfort lock opens the door slightly to allow the moisture and heat remaining in the wash cabinet to dissipate. At this point, the door is unlocked and can be opened at any time. After the drying time elapses, the message Programme finished appears in the display. Opening the door before the drying time elapses ends the programme prematurely.

...  

- Drying time

The value is set in 1 minute increments. The possible range is shown in the bottom line of the display.

- Use the arrow buttons \( \text{\texttt{\textasciitilde}} \) (higher) and \( \text{\texttt{\textasciitilde}} \) (lower) to set the drying duration.

- Press OK to save the setting.
Documenting processes

Processes are documented per cycle. Required and actual values are always recorded.

During a programme sequence the following data is recorded, among other things:

- Machine type and serial no.
- Date
- Programme start and programme name
- Batch number
- Blocks used
- Dispensing system, dispensing temperature and required dispensing quantity
- Required values for temperatures and exposure times
- Maximum and minimum temperature during exposure time
- Wash pressure measuring results
- All error messages
- End of programme
- System messages, e.g. refill salt

Further data can be incorporated into the report as required. Contact Miele for more information on this.

Memory

Depending on scale, between 10 and max. 20 cycle reports are stored in an internal power failure safe memory within the machine. In the event of e.g. network or printer problems these can be subsequently recalled. If the memory is full, the oldest report is overwritten.

Raw data for a graphic output of process data from the last programme is also stored. These can be converted into graphics by external documentation software. The transmission of raw data requires an Ethernet interface. Graphic representations in the display or as output to a directly connected printer are not possible. There is no power failure safe memory for graphic information.

Adding cycle numbers

Miele Professional Service can add subsequent cycle numbers, e.g. in the event of software updates or if the machine controls are replaced.
Communication module for external archiving

A module slot is integrated into the back of the machine for a Miele communication module for permanent archiving of cycle reports. The module enables the installation of an Ethernet interface for documentation using documentation software or an RS232 interface for connection to a report printer.

Please contact Miele for further information on software and suitable printers.

Only use terminal devices (computers, printers etc.) which comply with EN/IEC/AS/NZS 60950.

The communication modules are available from Miele as an accessory and can be retrofitted at any time. The modules are supplied with their own installation instructions. The interface must only be configured by suitably qualified and competent persons. Follow the instructions in "Further settings/Interface".

Process documentation using external software

For digital archiving the process data is transmitted to external documentation software via an Ethernet interface. Transmission can optionally occur continuously during the process or as a single packet at the end of the process. The settings for this are modified by Miele Professional Service.

Information on wash pressure, $A_0$ value, conductivity and temperature in the wash cabinet can be archived graphically if required.

Installation of an Ethernet interface requires the retrospective fitting of an XKM 3000 L Med communication module.

For connection to a WLAN network the module can be connected via a cable to an existing wireless access point.

Problem with data transmission

If there is a network problem during a running process, e.g. due to a loose cable, a relevant fault message is displayed.

The process running will be continued without interruption and the process data will be saved in the meantime in the internal memory.

In the event of network or report software problems contact your system or network administrator.
Process documentation

Process documentation using a report printer

Process reports are printed via a directly connected report printer and archived on paper. Graphic representations are not included. An XKM RS232 10 Med communication module is required for direct connection.

Report formats

You can choose from two different report formats for paper archiving:

- Long format includes all recorded data.
- Short format includes only selected parameters.

The report format has no effect on the data stored in the washer-disinfector. All the data required for a long report is stored, so the report format can be changed for each new cycle.

■ Open the menu as follows:

⇒ button

▷ Further settings

▷ Report

1 2

3

Report

Short

Long

⇒ Short

Print in short format

⇒ Long

Print in long format

■ Select an option using the ∧ and ∨ arrow buttons.

■ Press OK to save the setting.
Retrospective output of cycle reports

Internally stored reports can be output retrospectively from the washer-disinfector.

External software

Data can be retrieved directly via the documentation software using an existing network connection. It is not necessary to input entries at the machine itself.

Report printer

The following options are available for printing reports retrospectively.

- Open the menu as follows:
  - button
    - Further settings
      - Interface
        - RS232
          - Print reports

- Last report
  - Output of the last cycle report.

- Current work day
  - Output of all cycle reports for the current working day.

- Last working day
  - Output of all cycle reports for the previous working day.

- All
  - Output of all saved reports.

- Select an option using the ▲ and ▼ arrow buttons.

- Data transmission is started by pressing the OK button.

Data transmission runs in the background so the washer-disinfector can go on being used.
Servicing

The washer-disinfector should be serviced every **1000 hours of operation, or at least once a year** by Miele Professional Service.

Maintenance covers the following:

- Electrical safety according to national regulations
- Door mechanism and door seal
- Any screw connections and connectors in the wash cabinet
- Water inlet and drainage
- Internal and external dispensing systems
- Spray arms
- Filter combination
- Sump including drain pump and non-return valve
- All mobile units, baskets, modules and inserts
- Steam condenser
- Wash pressure sensor

If there is a communication module:

- Connected printer
- Network connection

**External documentation software and the computer network will not be tested by Miele.**

The following operational tests will be carried out within the framework of the maintenance:

- A programme will be run as a test run
- Thermoelectrical measurements will be taken
- Seals will be tested for water tightness
- All relevant measuring systems will be safety tested, including fault displays
- Safety features
Routine checks
Before each day’s use, the operator must conduct a series of routine checks. A routine checklist is supplied with the washer-disinfector.

The following items must be checked:
- All filters in the wash cabinet
- The spray arms in the machine and in any mobile units or baskets
- The wash cabinet and the door seal
- The dispensing systems
- Mobile units, baskets, modules and inserts

Cleaning the filters in the wash cabinet
The filters in the floor of the wash cabinet prevent coarse soiling from entering the circulation system. Filters can become blocked by soiling, so they need to be checked every day and cleaned as necessary.

⚠️ The dishwasher must not be used without all the filters in place.

In the controls, it is possible to set a cleaning interval for the filters in the wash cabinet, see "Settings / Filter maintenance". The cleaning interval is not a substitute for the daily routine check of the filters in the wash cabinet!

⚠️ Danger of injury from glass shards, needles etc. which are retained in the filters.

- Turn the microfine filter in the direction of the arrow and remove it together with the coarse filter.
Press the catches towards each other and pull the coarse filter upwards to remove it.

Remove the fine filter which sits loosely between the coarse filter and the microfine filter.

Remove the flat filter last.

Clean the filters.

Re-insert the filter combination in the reverse order. Ensure ...
- ... that the flat filter sits flat in the base of the wash cabinet.
- ... that the coarse filter has securely clicked into place in the microfine filter.
- ... that the microfine filter is tightly screwed in as far as it will go.

If a cleaning interval was set for the filters in the wash cabinet, this interval must be reset after cleaning; see "Settings / Filter maintenance."
Maintenance

Cleaning the spray arms

The spray arms can become blocked, especially if the filters are not inserted correctly in the wash cabinet. This can cause coarse particles of soiling to get into the wash fluid circulation.

The spray arms must be visually checked daily for any soiling.

■ To do this remove the mobile unit and the baskets.
■ Visually check the spray arms for soiling and blocked jets.
■ Also check that the spray arms can turn easily.

⚠️ Immobile or blocked spray arms must not be used again.
In this case, contact Miele Professional Service.

Cleaning the spray arms

The spray arms in the machine as well as in the mobile units and baskets must be fully dismantled for cleaning:

■ Remove the mobile unit or baskets from the machine.

The upper spray arm of the machine is connected by a push-fit connector.

■ Pull the upper spray arm of the machine downwards to remove it.

The lower spray arm of the machine and the spray arms in the mobile units and baskets are secured with bayonet fittings.

■ To release the knurled bayonet fittings, turn them in the direction of the arrow as far as they will go.

■ Then the spray arms can be removed by pulling them upwards or downwards.

Mobile unit and basket spray arms with knurled nuts:
The spray arms of older types of mobile units and baskets are secured with knurled nuts. These must be unscrewed and the spray arms pulled downwards to remove them.
Metal knurled nuts have a left-hand thread.
Ceramic knurled nuts have a right-hand thread.
Use a pointed object to push food particles into the spray arm.

Rinse the spray arm thoroughly under running water.

⚠️ Do not allow any magnetic objects or wash items to stick to the magnets on the spray arms. Any metallic objects on the magnets can cause a false reading of spray arm pressure. Remove all metallic objects from the magnets.

Check the spray arm bearings for visible signs of wear.

Visible wear on the bearings can adversely affect the long-term functioning of the spray arms. In this case, contact Miele Professional Service.

Replace the spray arms after cleaning.

Make sure the spray arms can rotate easily after they have been fitted.

The spray arms and baskets each have a number e.g. 03, which is also embossed on the water supply pipes near the bayonet fittings. When refitting, ensure that the numbers on the spray arms correspond with the numbers on the water supply pipes.
Cleaning the washer-disinfector

Never clean the washer-disinfector or near vicinity with a water hose or a pressure washer.

Do not use cleaning agents containing ammonia or thinners on stainless steel surfaces! These agents can damage the surface material.

Cleaning the control panel

Do not use any abrasive materials or general-purpose cleaners to clean the control panel. These can cause considerable damage to the glass and plastic surfaces and to the onset control buttons.

- Clean the control panel with a damp cloth and a little washing-up liquid or with a non-abrasive stainless steel cleaner.
- Proprietary glass or plastic cleaning agents can also be used to clean the display.
- For surface disinfection, use a listed agent recommended by the manufacturer.

Cleaning the door and the door seal

- Wipe the door seal regularly with a damp cloth to remove soiling. Have damaged or leaking door seals replaced by Miele Professional Service.
- Remove any soiling from the door sides and hinges.
- Regularly clean the groove in the plinth panel under the door with a damp cloth.

Cleaning the wash cabinet

The wash cabinet is largely self-cleaning. However, if deposits should start to build up, contact Miele Professional Service.

Cleaning the door front

- To clean the stainless steel front, use a damp cloth with a solution of washing-up liquid and hot water, or with a non-abrasive cleaning agent for use on stainless steel.

Preventing re-soiling

- To help prevent re-soiling of stainless steel surfaces (fingerprints, etc.), a suitable stainless steel conditioner can be used after cleaning.
Checking powder agent dispenser

When using powder cleaning agent, the temperature at the point of dispensing must be tested every 14 days.

The dispensing temperature must be maintained within the scope of validation according to the validation report.

The test must read and document the temperature during the programme at the point when you can clearly hear the flap opening. The results must then be compared with those in the validation report.

⚠️ If the dispensing temperature measured deviates by more than +/- 2 °C from the temperature specified in the validation report, please contact Miele Professional Service.
Checking mobile units, baskets, modules and inserts

Mobile units, baskets, modules and inserts should be checked daily to make sure they are functioning correctly. The washer-disinfector is supplied with a check list.

Check the following points:

– Are the mobile unit or basket rollers in good condition, and are they securely attached to their mobile units or baskets?
– Are the water connectors present and undamaged?
– Are height-adjustable water connectors adjusted to the correct height and securely fixed?
– Are all injector nozzles, irrigation sleeves and hose adaptors securely attached to mobile unit, basket or module?
– Are all injector nozzles, sleeves, and hose adapters clear so that wash fluid can flow through unhindered?
– Are all caps and fasteners securely attached to the irrigation sleeves?
– Are end caps present and securely located for all modules and injector manifolds?
– Are the locking caps in the water connectors of mobile units and baskets working properly?

Where applicable:

– Make sure that the spray arms rotate freely.
– Make sure the spray arm jets are free of any blockages. See "Cleaning the spray arms".
– Make sure that the magnets integrated into the spray arms have no metallic objects sticking to them.
– Check whether the tubular filters need to be cleaned or filter plates, e.g. in an E 478/1, need to be replaced.

Maintenance of mobile units, baskets, modules and inserts

The washer-disinfector should be serviced every 1000 hours of operation, or at least once a year by Miele Professional Service.
**Maintenance**

**Process validation**

The standard of cleaning and disinfection in the disinfection programmes must be confirmed by the user as a routine matter.

Safety checks and performance validation must be carried out in accordance with the internationally recognised norm EN ISO 15883. In some countries national regulations, guidelines and recommendations also apply.

In the UK these are:

- The Medical Devices Directive (MDD)
- The Medical Devices Operation Ordinance
- National Health and Safety regulations regarding disinfection, e.g. CFPP 01-01 or CFPP 01-05 (depending on the machine) in the UK.
- The general guidelines of the German Society for Hospital Hygiene, the German Society for Sterile Supplies and the Instrument Preparation Working Group.

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**Test point for measuring sensors**

The sensor test point for validation is located at the front right on the top of the machine under the lid or the worktop. To reach the access point, the lid of the machine must be removed or the machine must be pulled out from under the worktop.

1. Open the door.
2. Un螺丝 the fixing screws.
3. Then remove the safety screws on the back of the machine from the **lid** and lift the **lid** to remove it.

Or

1. Pull the washer-disinfector out by approx. 15 cm from under the **worktop**.
Test programmes

Various programmes are available for monitoring cleaning performance in routine testing. The test programmes are not separate processing programmes. Rather, they are additional functions that can be activated prior to starting any processing programme.

The test programmes interrupt the programme sequence automatically at specified points. The interruption is indicated by an audible signal tone and message in the display. Miele Professional Service can set the duration of the interruption to between 10 seconds and approx. 42 min. During this time period, measurements can be made or the door can be opened to obtain a sample. To prevent cooling of the wash cabinet, do not keep the door open too long.

After the time period has elapsed, the programme sequence continues automatically. If the door has been opened, the programme cannot resume until the door has been closed again. If a measurement or sample is not needed, you can resume the programme sooner by pressing the Start/Stop button.

The following test programmes can be selected:

- Laboratory
  
  The programme sequence can be paused in each wash block immediately before the wash fluid is drained away.

- Validation
  
  The programme sequence is interrupted at the following points:
  - before the wash fluid is drained away in the final wash block and
  - after the interim rinse before the wash fluid is drained away, and
  - after water intake and before draining in the final rinse block.
Activating a test programme

Test programmes are valid for only one programme sequence each time. A test programme must be selected again for further tests.

- Open the menu as follows:
  - ‘≡’ button
    - Further settings
      - Test programme

- No
  - The menu is exited without selecting a programme.
- Laboratory
  - Activates the Laboratory test programme.
- Validation
  - Activates the Validation test programme.

Select and start a programme using the programme selection buttons or via the programme list.

The programme will be identified in the bottom line as Test programme during the programme sequence.

If you want to deactivate the test programme before the performance test you need to go to the next menu level up and select the No option.
The following guide may help you to find the reason for a fault, and to correct it. You should, however, note the following:

⚠️ Repairs may only be carried out by Miele Professional Service.
Repairs and other work by unqualified persons could be dangerous for the user.

To avoid unnecessary service call-outs, check that the fault has not been caused by incorrect operation when an error message first appears.

### Technical faults and messages

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible cause and remedy</th>
</tr>
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</table>
| The display is dark and all LEDs are out.                              | The washer-disinfector is not switched on.  
  - Switch the washer-disinfector on using the ✅ button.  
  - A fuse is defective or has tripped.  
  - Refer to the minimum fuse rating on the data plate.  
  - Reset the trip switch.  
  - If the mains fuse trips again, call Miele Professional Service.  
  - The appliance is not plugged in.  
  - Insert the plug and switch on at the socket. |
| The washer-disinfector has switched itself off.                        | This is not a fault.  
  - The Auto-Off function switches the washer-disinfector off automatically after a pre-set duration to save energy.  
  - Switch the washer-disinfector on using the ✅ button. |
| The time appears in the display.                                       | This is not a fault.  
  - The machine is ready for use.  
  - Press any button to reactivate the machine. |
| Interruption to the power supply during operation                     | If a temporary interruption to the power supply occurs during a programme sequence, no action is required.  
  - The programme will continue after the interruption.  
  - If the temperature in the wash cabinet drops below the minimum value required for the programme block during the interruption to the power supply, the programme block will be repeated.  
  - In the case of an interruption to the power supply of ≥ 20 hours, the entire programme will be repeated.  
  - Each interruption to the power supply is reported in the process documentation. |
| Next service due on:                                                   | This is not a fault.  
  - Miele Professional Service has recommended a date for the next service visit.  
  - Please contact Miele Professional Service to arrange a service visit. |
## Problem solving guide

### Dispensing / Dispensing systems

⚠️ Caution when handling chemical agents.
For all chemical agents, the chemical agent manufacturer's safety instructions as given on their safety data sheets must be observed.

<table>
<thead>
<tr>
<th>Problem</th>
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</thead>
</table>
| The dispenser for powder cleaning agent contains residual agent at the end of the programme. | The dispenser was still damp when cleaning agent was added.  
   - Make sure the dispenser is dry before adding powder cleaning agent.  
   The dispenser flap was blocked by items in the cabinet.  
   - Rearrange the load so that the flap can open. |
| The dispenser flap will not close.                                      | Residual cleaning agent is blocking the catch.  
   - Remove the cleaning agent.                                                                                           |
| DOS Refill                                                             | During a programme sequence a low level of liquid chemical agent in a container has been identified.  
   - Replace the empty container with a full one.                                                                             |
| Programme could not be started. Vent DOS                               | A programme cannot be started because ...  
   ... there is air in the dispensing system.  
   ... the dispensing system has been sucked completely dry.  
   - Check the level in the supply container. Replace an empty container with a full one, if necessary.  
   - Vent the dispensing system.                                                                                           |
| Dispensing system DOS venting                                          | This is not a fault. The dispensing system is automatically being vented.  
   Wait until the venting process is finished.                                                                               |
| Venting DOS cancelled. Venting must be repeated                        | Venting of the dispensing system was cancelled because an insufficient flow rate was identified. A dispensing hose may be kinked or the siphon blocked.  
   - Check the dispensing hose for kinks and leaks. Position it so that it cannot become kinked.  
   - Check the suction aperture of the siphon for blockages and remove these as necessary.  
   - Start the venting process again.                                                                                      |
<p>|                                                                        | Contact Miele Professional Service if there are leaks in the dispensing hose or a fault with the siphon.                                                 |</p>
<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible cause and remedy</th>
</tr>
</thead>
</table>
| Check container/lance DOS     | Little or no flow has been identified.  
|                               | ■ Check the level in the supply container. Replace the empty container with a full one, if necessary.  
|                               | ■ Check the suction aperture of the siphon for deposits.  
|                               | ■ Vent the dispensing system.  
|                               | The dispensing hose is kinked.  
|                               | ■ Remove any kinks from the dispensing hose. Position it so that it cannot become kinked.  
|                               | ■ Check the dispensing hose for leaks.  
|                               | ■ Vent the dispensing system.  
|                               | Contact Miele Professional Service if there are leaks in the dispensing hose or a fault with the siphon.  |

Highly viscous (thick) chemical agents can affect the dispenser monitoring and lead to inaccurate data. In this instance please contact Miele Professional Service for advice.
## Problem solving guide

### Insufficient salt / Water softener

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<th>Problem</th>
<th>Possible cause and remedy</th>
</tr>
</thead>
</table>
| Refill salt                                  | Salt is running low in the water softener.  
  - Refill the reactivation salt before starting the next programme. |
| Machine locking out.  Insufficient salt      | Salt in the water softener is completely used up and reactivation is no longer possible. The washer-disinfector is locked for further use.  
  - Refill with reactivation salt. |
| Salt container empty.  Programme locked out  | The water softener cannot reactivate because there is insufficient salt. The machine is locked for further use.  
  - Refill with reactivation salt.  
  - The lock is lifted a few seconds after refilling the salt reservoir. Reactivation is carried out automatically during the next programme sequence. |
| Salt container lid not correctly closed      | The salt container is not closed properly.  
  - Close the container properly.  
  - Salt residues are preventing it from closing.  
  - Remove the residues from the refilling funnel, the lid and the seal. **Do not use** running water as this can cause the salt container to overflow.  
  - Close the container properly.  
  - The salt container flap has sprung open during a programme.  
  - **⚠️ When the door is opened, hot steam and chemical agents can escape!**  
  - Open the door and close the container flap. |
Cancel with fault code

If a programme is cancelled and a fault code appears, e.g. Fault XXX (whereby XXX represents a number), there could be a serious technical fault.

In the event of a programme being cancelled and a fault number being shown:

- Switch the washer-disinfector off using the button.
- Wait approximately 10 seconds before switching the washer-disinfector on again with the button.
- Acknowledge the fault code by entering your PIN code.
- Start the previously selected programme again.

If the same message appears again:

- Make a note of the fault message.
- Switch the washer-disinfector off using the button.
- Contact Miele Professional Service.

Please also read the notes regarding the following fault numbers:

<table>
<thead>
<tr>
<th>Problem</th>
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</tr>
</thead>
</table>
| Fault 403-405 | A programme has been cancelled because the water intake by the washer-disinfector was insufficient or severely restricted.  
  ■ Turn on the taps fully.  
  ■ Follow the further information given in the Check water inlet message. |
| Fault 406-408 | A programme was cancelled because the water inlet volume is insufficient.  
  ■ Check whether the taps are fully turned on.  
  ■ Refer to the information regarding minimum flow pressure in "Connection to the mains water supply" and "Technical data".  
  ■ Check the filter in the water inlet.  
  ■ Contact Miele Professional Service for advice. |
| Fault 412-414 | A programme was cancelled because the water intake volume is too high.  
  ■ Refer to the information regarding recommended maximum flow pressure and maximum permissible static water pressure in "Connection to the mains water supply" and "Technical data".  
  ■ Contact Miele Professional Service for advice. |
| Fault 432   | The door was opened using the emergency release.  
  ■ See "Opening the door using the emergency release". |
## Problem solving guide

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible cause and remedy</th>
</tr>
</thead>
</table>
| Fault 433     | Protruding wash load items or other objects are preventing the door from being closed properly by the Comfort lock.  
- Remove all objects and arrange the wash load so that it does not obstruct the door.  
- Close the door. |
| Fault 440     | The float switch in the base of the machine has not been activated. The switch might be blocked.  
- Remove the filter combination.  
- Check the float switch to make sure it moves freely. The float switch is located in the base of the machine behind the spray arm. |
| Fault 460-462 | A programme was cancelled due to slow spray arm speed because ...  
- Items are obstructing the machine or basket spray arms.  
- Arrange the load so that the spray arms can turn easily and start the programme again.  
- The wash pressure is too low due to a heavy build-up of foam.  
- Follow the instructions regarding foam build-up in "Chemical processes and technology".  
- Spilled rinsing agent was not wiped away or rinsed with the Rinsing programme after refilling which caused a heavy build-up of foam during the next programme sequence.  
- Start the Rinsing programme in order to clean the wash cabinet.  
- Then reprocess the items again. |
| Fault 492, 504| A programme has been cancelled because there is not enough water pressure. The filters in the wash cabinet may be blocked.  
⚠️ Danger of injury from glass shards, needles etc. which are retained in the filters.  
- Check and clean the filters in the wash cabinet (see "Maintenance/Cleaning the filters in the wash cabinet"). |
### Problem solving guide

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible cause and remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fault 518-521</td>
<td>No flow was detected when dispensing from an external supply container.</td>
</tr>
<tr>
<td></td>
<td><strong>⚠️ Caution when handling chemical agents.</strong> For all chemical agents, the chemical agent manufacturer’s safety instructions as given on their safety data sheets must be observed.</td>
</tr>
<tr>
<td></td>
<td>- Check the level of the containers and refill or replace them as necessary.</td>
</tr>
<tr>
<td></td>
<td>- Check the suction apertures of the siphons and remove any deposits.</td>
</tr>
<tr>
<td></td>
<td>- Check the hose connections on the siphons, the washer-disinfector and any DOS modules.</td>
</tr>
<tr>
<td></td>
<td>- Remove any kinks from the dispensing hoses and check the hoses for leaks. Position the dispensing hoses so that they cannot kink.</td>
</tr>
<tr>
<td></td>
<td>- Vent the dispensing system.</td>
</tr>
<tr>
<td></td>
<td>If you identify any leaks in the dispensing hoses or defects on the siphons, contact Miele Professional Service.</td>
</tr>
</tbody>
</table>
## Problem solving guide

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible cause and remedy</th>
</tr>
</thead>
</table>
| Fault 526 | The flow pressure has dropped below the minimum value.  
- The wash pressure is too low due to a heavy build-up of foam. Spilled rinsing agent may not have been cleaned up after being added.  
  - Follow the instructions regarding foam build-up in "Chemical processes and technology".  
  - Start the **Rinsing** programme in order to clean the wash cabinet.  
- The carriers were loaded incorrectly or overloaded.  
  - Use only carts, baskets, modules and inserts suitable for the particular application.  
  - Arrange hollow or deep-sided wash load items so that water runs off them freely.  
- The water lines are clogged or leaking.  
  - Check and clean the filters in the wash cabinet and spray arms.  
  - Check the injector bars for possible leaks, e.g.:  
    - Are all caps and end caps in place?  
    - Are all connections fitted with nozzles, irrigation sleeves, hose adapters or other washing attachments?  
    - Are installed silicone hoses undamaged?  
  - Check the washers in the water connectors in the back panel of the wash cabinet and remove any blockages.  
- The amount of water may be insufficient for the application.  
  - Increase the amount of water (see "Programme settings"). If necessary, consult Miele Professional Service. |
| Fault 542 | A programme was cancelled because the water in the wash cabinet is only being pumped away slowly or not at all.  
- The drain hose is blocked.  
  - Remove any kinks or large loops in the drain hose.  
- The filters in the wash cabinet are blocked.  
  - **Danger of injury from glass shards, needles etc. which are retained in the filters.**  
  - Clean the filters in the wash cabinet.  
  - The drain pump or non-return valve are blocked.  
  - Clean the access to the drain pump and the non-return valve.  
- The drainage system cannot take in enough water because it is blocked.  
  - Contact a suitably qualified plumber. |
<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible cause and remedy</th>
</tr>
</thead>
</table>
| Fault 550 | The waterproof system has been activated. One of the water intake hoses might have a leak.  
  ■ Turn off the taps.  
  ■ Contact Miele Professional Service. |
| Fault 555 | Too much water has accumulated in the steam condenser.  
  ■ Restart the machine. Excess water is pumped out automatically. |
| Fault 559 | There is a problem with the process documentation interface. The machine has detected a module for an Ethernet interface, but only a serial interface is activated in the controls (RS232).  
  Deactivate the RS232 interface:  
  ■ Open the menu for configuring the interface Further settings/Interface and then select the option Ethernet.  
  ■ Wait approx. 90 seconds. The Ethernet module XKM 3000 L Med needs this time for initialization. It may be necessary to reconfigure the interface.  
  Or  
  ■ Replace the Ethernet module XKM 3000 L Med with a XKM RS232 10 Med module to set up a serial interface. |
| Fault 578 | The peak load cut-out has lasted longer than 3 hours.  
  ■ Have your electrical system and your energy management system tested by a suitably qualified electrician. |
## Problem solving guide

### Process-related faults and messages

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible cause and remedy</th>
</tr>
</thead>
</table>
| **Drying during programme deactivated**      | Drying cannot be selected at the start of a programme because drying is not available for the selected programme.  
                                                - Start the programme without drying.  
                                                or  
                                                - Have the drying parameters for this programme adjusted by Miele Professional Service. |
| **Wrong code entered**                       | The PIN code entered is not the same as the code saved.  
                                                - Enter the PIN code again.  
                                                - Report the loss of the PIN code to Miele Professional Service. |
| **Test programme: test object can now be removed** | This is not a fault.  
                                                A test programme is running to check performance. At certain points in the programme the sequence is interrupted so that samples can be taken.  
                                                - Take a sample.  
                                                or  
                                                - Wait. The programme will continue automatically in approx. 30 seconds.  
                                                or  
                                                - Continue the programme without delay by pressing the Start/Stop button. |
| **Programme cancelled**                      | This is not a fault.  
                                                A programme which was running was cancelled by the user.  
                                                - The wash cabinet interior can be very hot.  
                                                When the door is opened, hot steam and chemical agents can escape. Protective measures for personal safety must be observed. |
| **Programme continued**                      | This is not a fault.  
                                                The process of cancelling a programme was not completed.  
                                                The programme which was running continued without interruption. |
| **Peak load cut-out**                        | This is not a fault.  
                                                Individual components of the machine are paused while there is a peak load signal from your energy management system. |
| **All settings reset**                       | This is not a fault.  
                                                A user has restored factory default settings.  
                                                - Confirm the message with OK. |
## Problem solving guide

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible cause and remedy</th>
</tr>
</thead>
</table>
| All programme settings reset | This is not a fault.  
A user has restored the factory default setting for the programme.  
- Confirm the message with OK. |

### Door

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible cause and remedy</th>
</tr>
</thead>
</table>
| The door is open a fraction and cannot be closed using the \( \rightarrow \) button. | This is not a fault.  
The Comfort door lock has opened the door slightly at the end of the programme.  
- Open the door. The door can now be closed completely again using the \( \rightarrow \) button. |
| Door not closed properly | Slamming the door can result in problems with the Comfort door lock.  
- Open and close the door.  
If the same message appears again:  
- Contact Miele Professional Service. |
| Warning. Cabinet hot! Open anyway? | When pressing the \( \rightarrow \) button, be aware that the temperature in the wash cabinet is over 60 °C.  
⚠️ When the door is opened, hot steam and chemical agents can escape!  
- Open the door only when strictly necessary. |
| Door blocked | Protruding wash load items or objects are blocking the door, e.g. towels.  
- Remove all objects and arrange the wash load so that it does not obstruct the door.  
Door seal sticks.  
- Clean the door seal.  
Heavy objects in front of the washer-disinfector can impede the automatic opening of the door by the Comfort lock.  
- Do not place heavy objects in front of the door of the washer-disinfector.  
The Comfort door lock is blocked.  
- Try to open the door carefully (without using force) by pulling on the door handle.  
If the door is still blocked:  
- Open the door using the emergency release.  
- Close the door and try to open it again using the \( \rightarrow \) button.  
If it is still blocked:  
- Contact Miele Professional Service. |
## Problem solving guide

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible cause and remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obstruction sensor</td>
<td>Protruding wash load items or objects are blocking the door, e.g. towels. The door was closed before the door lock rail was fully retracted.</td>
</tr>
<tr>
<td></td>
<td>- Open the door.</td>
</tr>
<tr>
<td></td>
<td>- Remove all objects and arrange the wash load so that it does not obstruct the door.</td>
</tr>
<tr>
<td></td>
<td>- The door lock rail must be fully retracted before you close the door again.</td>
</tr>
</tbody>
</table>

### Unsatisfactory cleaning results and corrosion

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible cause and remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>There are white deposits on the wash load.</td>
<td>The water softener is set too low.</td>
</tr>
<tr>
<td></td>
<td>- Set the water softener to the correct water hardness.</td>
</tr>
<tr>
<td></td>
<td>There is no salt in the salt reservoir.</td>
</tr>
<tr>
<td></td>
<td>- Refill with reactivation salt.</td>
</tr>
<tr>
<td></td>
<td>The quality of the water for the final rinse was insufficient.</td>
</tr>
<tr>
<td></td>
<td>- Use water with a low conductance value.</td>
</tr>
<tr>
<td></td>
<td>- If the washer-disinfector is connected to a water softening cartridge, check it and replace as necessary.</td>
</tr>
<tr>
<td></td>
<td>The water from the WW water connection is not sufficiently softened.</td>
</tr>
<tr>
<td></td>
<td>- Check the pre-selected water softening units. If necessary, replace the water softening cartridge with a new one.</td>
</tr>
<tr>
<td>The wash load is flecked.</td>
<td>The rinsing agent reservoir is empty.</td>
</tr>
<tr>
<td></td>
<td>- Refill the reservoir.</td>
</tr>
<tr>
<td></td>
<td>The rinsing agent concentration is set too low.</td>
</tr>
<tr>
<td></td>
<td>- Contact Miele Professional Service to have the dispensing concentration reset.</td>
</tr>
<tr>
<td>Problem</td>
<td>Possible cause and remedy</td>
</tr>
<tr>
<td>---------</td>
<td>--------------------------</td>
</tr>
</tbody>
</table>
| The cleaning result is unsatisfactory. | Mobile units, baskets, modules and inserts were not suitable for the load.  
- Select mobile units, baskets, modules and inserts which are suitable for the task. |
| | Mobile units, baskets, inserts and modules were incorrectly loaded or overloaded.  
- Arrange the wash load correctly according to the information in the Operating instructions.  
- Avoid overloading the mobile units, baskets, modules and inserts. |
| | The programme was not suitable for the soiling.  
- Select a suitable programme.  
or  
- Adjust the parameters to suit the task. |
| | Soiling has been left to dry on the wash load for too long.  
- Soiling should not be left on the load for more than 6 hours before machine reprocessing. |
| | A spray arm is blocked.  
- Ensure the spray arms are not obstructed when arranging the wash load. |
| | Injector nozzles on the mobile units, baskets, modules or inserts are blocked.  
- Check the nozzles and clean them as necessary. |
| | The filters in the wash cabinet are dirty.  
- Check the filters and clean them if necessary. |
| | Mobile units, baskets or modules were not correctly mounted on the water connection.  
- Check the adapter. |
| Items made of glass are showing signs of corrosion. | The items are not suitable for machine reprocessing.  
- Only use items which are declared by their manufacturer as suitable for machine reprocessing. |
| | Neutralisation has not taken place during the programme.  
- Check the level in the supply container and vent the dispensing system if necessary. |
| | The wash temperature was too high.  
- Select a different programme.  
or  
- Reduce the wash temperature. |
| | Cleaning agents used were too alkaline.  
- Use a milder cleaning agent.  
or  
- Reduce the concentration of the cleaning agent. |
### Problem solving guide

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible cause and remedy</th>
</tr>
</thead>
</table>
| Stainless steel items are showing signs of corrosion.                  | The stainless steel is of insufficient quality for machine reprocessing.  
  - Only use stainless steel items made of high quality stainless steel and follow the instructions of the manufacturer regarding machine reprocessing. |
|                                                                        | The chloride content in the water is too high.  
  - Have a water analysis check carried out. Connection to an external water processing unit and the use of demineralised water may be necessary. |
|                                                                        | Neutralisation has not taken place during the programme.  
  - Check the level in the supply container and vent the dispensing system if necessary. |
|                                                                        | Rust or superficial rust has built up in the wash cabinet, e.g. due to an excessively high iron content in the water or rust on other wash load items.  
  - Check the installation.  
  - Discard any rusty items. |
# Spray arm monitoring / Wash pressure

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible cause and remedy</th>
</tr>
</thead>
</table>
| **Spray arm monitoring - upper spray arm:** Spray arm blocked or excessive foaming **or** Spray arm monitoring - lower spray arm: Spray arm blocked or excessive foaming **or** Spray arm monitoring - mobile unit spray arm 1 - : spray arm blocked or excessive foaming | The rotation speed set has not been reached because:  
- Items are obstructing the machine or basket spray arms.  
  - Arrange the load so that the spray arms can turn easily and start the programme again.  
- The relevant spray arm is blocked.  
  - Clean the spray arm.  
  - Check whether the filters in the wash cabinet are clean and correctly inserted.  
  - Start the programme again.  
- The wash pressure is too low due to a heavy build-up of foam.  
  - Follow the instructions regarding foam build-up in "Chemical processes and technology".  
  - Start the **Rinsing** programme in order to clean the wash cabinet.  
  - Then reprocess the load again. |
| **Spray pressure exceeds tolerance** | The wash pressure differs from the reference value. Possible causes of fluctuations in the wash pressure include:  
- defective water connections,  
- open adapters,  
- foam build-up.  
  - Identify and resolve the cause of this.  
  - The programme was not interrupted. Nevertheless, the wash load must be reprocessed. |
| **Spray pressure fluctuates too much** | A programme was interrupted because of severe fluctuations in the wash pressure. Possible causes of fluctuations in the wash pressure include:  
- defective water connections,  
- open adapters,  
- foam build-up.  
  - Identify and resolve the cause of this.  
  - Reprocess the load again. |
Problem solving guide

Water inlet and drainage

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible cause and remedy</th>
</tr>
</thead>
</table>
| Check water inlet           | One or more taps are turned off.  
  ■ Turn on the taps.  
  There was insufficient water in the machine.  
  ■ Clean the water intake filters.  
  ■ Turn on the taps fully.  
  The flow pressure at the water connection is too low.  
  ■ Refer to the specifications for flow pressure in the "Technical data".  
  ■ Contact a suitably qualified plumber. |

Noises

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible cause and remedy</th>
</tr>
</thead>
</table>
| Knocking noise in the wash cabinet.  | One or more spray arms are knocking against the wash load.  
  ■ Cancel the programme. To do this, follow the instructions in "Cancelling a programme".  
  ■ Arrange the wash load so it cannot obstruct the spray arms.  
  ■ Make sure the spray arms are not obstructed.  
  ■ Start the programme again.      |
| Rattling noise in the wash cabinet.  | Items are insecure in the wash cabinet.  
  ■ Cancel the programme. To do this, follow the instructions in "Cancelling a programme".  
  ■ Rearrange the load so that items are secure.  
  ■ Start the programme again.     |
| Knocking noise in the water pipes.   | This may be caused by the on-site installation or the cross-section of the piping. It has no influence on the function of the washer-disinfector.  
  ■ Contact a suitably qualified plumber. |
## Problem solving guide

### Printer/serial interface

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible cause and remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serial printer fault: no paper</td>
<td>The printer has run out of paper.</td>
</tr>
<tr>
<td></td>
<td>■ Replenish the paper.</td>
</tr>
<tr>
<td>Serial printer fault: offline</td>
<td>The washer-disinfector cannot connect to the printer.</td>
</tr>
<tr>
<td></td>
<td>■ Switch the printer on.</td>
</tr>
<tr>
<td></td>
<td>■ Check the connection between the washer-disinfector and the printer.</td>
</tr>
<tr>
<td></td>
<td>■ If in doubt, have the configuration of the interface checked by a suitably qualified person.</td>
</tr>
<tr>
<td></td>
<td>If the printer has been replaced, the printer type may need to be adjusted in the interface configuration.</td>
</tr>
<tr>
<td>Serial printer fault: general fault</td>
<td>The printer is not ready for operation.</td>
</tr>
<tr>
<td></td>
<td>■ Check the printer for fault messages.</td>
</tr>
<tr>
<td></td>
<td>■ Change the printer cartridge if necessary.</td>
</tr>
<tr>
<td>Network down</td>
<td>The communication module has identified a network interruption or cannot establish a connection.</td>
</tr>
<tr>
<td></td>
<td>■ Consult your network administrator.</td>
</tr>
<tr>
<td></td>
<td>If the problem cannot be resolved:</td>
</tr>
<tr>
<td></td>
<td>■ Contact Miele Professional Service.</td>
</tr>
</tbody>
</table>
Cleaning the drain pump and non-return valve

If water has not been pumped away at the end of a programme there may be a foreign object in the drain pump or blocking the non-return valve.

- Take the filter combination out of the wash cabinet (see Maintenance / Cleaning the filters in the wash cabinet†).

- Lift the locking clamp.

- Lift out the non-return valve and rinse well under running water.

- Make sure that the vent on the external part of the non-return valve is not blocked (This vent is only visible when the non-return valve has been taken out). If it is blocked, use a pointed object to release the blockage.

The drain pump impeller is situated under the non-return valve (see arrow).

- Check the impeller for blockages and remove them if necessary before refitting the non-return valve.

- Carefully replace the non-return valve and secure it with the clamp.
Cleaning the filters in the water inlet

Filters are incorporated into the water inlet connection on the hose to protect the water inlet valve. If these filters get dirty, they must be cleaned as otherwise too little water will flow into the wash cabinet.

⚠️ The plastic housing on the water inlet valve contains an electrical component. It must not be immersed in water.

Cleaning the filter:

- Disconnect the washer-disinfector from the mains (switch the washer-disinfector off, switch off at the wall and unplug it or disconnect or disable the fuse).
- Turn off the tap.
- Unscrew the inlet hose.
- Carefully pull the large surface area filter 1 out.
- Carefully remove the seal from the threaded union.
- Withdraw fine filter 2 using pointed pliers.
- Clean the filters or replace them with new ones if necessary.
- Replace the filters and seals, making sure they are sitting correctly.
- Reconnect the hose to the tap, making sure the union goes on straight and not cross-threaded.
- Turn on the tap gradually to test for leaks. If there is a leak, the inlet hose might not be on securely, or it may have been screwed on at an angle. Unscrew and reconnect the water inlet hose correctly before tightening it.

IMPORTANT

Australia and New Zealand

For Australia and New Zealand a non-return valve is required between the tap and filter.
After sales service

Contacting Miele Professional Service

⚠ Repairs should only be carried out by a suitably qualified and trained Miele technician in accordance with local and national safety regulations. Unauthorised or incorrect repairs could cause personal injury or damage the machine.

To avoid unnecessary service call-outs, check that the fault has not been caused by incorrect operation when an error message first appears. Please refer to the information in "Problem solving guide".

If, having followed the advice in the operating instructions, you are still unable to resolve a problem, please call Miele Professional Service.

Contact details can be found at the end of this booklet.

When contacting Miele, please quote the model type and number of your appliance. These are shown on the data plates: one on the side of the door and another on the back of the appliance.

Please tell Miele the fault message or code shown in the display.
Software version

When contacting Miele you may need the version number of individual components of control software. These can be called up as follows:

- Open the menu as follows:
  - † button
    - Further settings
      - Software version

The software units are listed in the display. XXXXX stands for the relevant version number:

- EB Id: XXXXX
  - Software version of the control and display units in the control panel.

- EGL Id: XXXXX
  - Software version of the control board.

- EZL Id: XXXXX
  - Software version of the relay board.

- EFU Id: XXXXX
  - Software version of the frequency converter.

- LNG Id: XXXXX
  - Language package version.

You cannot change any settings in this menu.

Software updates und upgrades may only be undertaken by Miele Professional Service.

- Exit the menu with the OK or .goBack buttons.
Installation

Installation and levelling

Please refer to the installation diagram provided.

⚠️ In order to reduce the risk of water damage, the area around the washer-disinfector should be limited to furniture and fittings that are designed for use in commercial environments.

The washer-disinfector must be stable and horizontal.

Any unevenness in the floor level and height of the machine can be compensated for by adjusting the four feet. The feet can be screwed out to a maximum of 600 mm.

⚠️ Do not lift the machine by protruding parts such as the control panel. They could be damaged or torn off.

⚠️ Some metal parts pose a risk of injury/being cut. Wear cut-resistant protective gloves when transporting and setting up the machine.

⚠️ For transport by means of a hand trolley, the machine must be in its original packaging or placed on a stable, continuous support. Otherwise, components in the base of the machine can be damaged.

The washer-disinfector is suitable for the following types of installation:

– Free-standing.

– Slot-in:

  The washer-disinfector can be installed beside other appliances or furniture or in a suitable niche. The niche must be at least 600 mm wide and 600 mm deep.

– Built-under:

  The washer-disinfector can be built under a continuous worktop or the draining board of a sink. The space provided must be at least 600 mm wide, 600 mm deep and 820 mm high.
Building under a continuous worktop

To install the washer-disinfector under a continuous worktop, the lid must be removed as follows:

- Unscrew both securing screws from the lid at the back of the machine.
- Open the door.
- Unscrew the left and right fixing screws.
- Lift the lid off.

Steam condenser

To avoid steam damage to the worktop, the protective foil supplied (25 x 58 cm, self-adhesive) must be applied underneath the worktop in the area of the steam condenser.

Protective foil / Worktop protector

The protective foil supplied protects the worktop from damage caused by steam when the door is opened. It should be positioned underneath the worktop above the machine door.
Installation

Securing to the worktop

To improve stability, the washer-disinfector must be secured to the worktop after it has been aligned.

- Open the door.

- Screw the washer-disinfector to the continuous worktop through the holes in the front trim on the left and right.

Please contact Miele to secure it at the sides to adjacent cabinetry.

Venting the circulation pump

The gaps between a built-in machine and adjacent cabinetry must not be filled with silicone sealant as this could compromise the ventilation to the circulation pump.

Electromagnetic compatibility (EMC)

The washer-disinfector has been tested for electromagnetic compatibility in accordance with EN 61326-1 and is suitable for operation in commercial environments, such as hospitals, medical centres and laboratories and other similar environments which are connected to the mains power supply.

The machine's high frequency (HF) energy emissions are very low and are therefore unlikely to interfere with other electronic appliances in the vicinity.

Flooring in the installation area must be wood, concrete or tiled. Synthetic flooring must be able withstand a relative humidity level of 30% to minimise the risk of electrostatic discharges.

The quality of the power supply should comply with that found in a typical commercial or hospital environment and should deviate from the nominal voltage by a maximum of +/- 10%.
Electrical connection

⚠️ All electrical work must be carried out by a suitably qualified and competent electrician in accordance with local and national safety regulations.

- In the UK it must comply with BS 7671.
- We recommend connecting the machine to the power supply via a suitable plug and socket which must be easily accessible for servicing and maintenance work after the machine has been installed. An electrical safety test must be carried out before installation and after any service work.
- For hard-wired machines, connection should be made via a suitable mains switch with all-pole isolation which, when in the off position, ensures a 3 mm gap between all open contacts.
- Equipotential bonding should be carried out if required.
- For technical data see data plate or wiring diagram supplied.
- For increased safety, it is recommended to protect the machine with a suitable residual current device (RCD) with a trip current of 30 mA.
- If replacing the mains cable, use only original Miele replacement parts or a suitable cable with core cable ends.

Further notes on the electrical connection are given in the Installation diagram supplied with the machine.

The washer-disinfector must only be operated with the voltage, frequency and fusing shown on the data plate.

This machine can be converted to a different type of power supply in accordance with the conversion diagram and wiring diagram supplied.

A data plate can be found on the inside of the door and another on the back of the machine.

The wiring diagram is supplied with the washer-disinfector.

**WARNING**
**THIS APPLIANCE MUST BE EARTHED**

Equipotential bonding connection

There is a screw connection point marked ⦿ at the back of the washer-disinfector, to which additional equipotential bonding can be connected if required.
Electrical connection

Peak load cut-out

The machine is suitable for use in an energy management system. For this purpose, it must be technically adapted and the controls reset by Miele Professional Service.

Please contact Miele Professional Service for further information.

In the event of a peak load cut-out, some machine components such as the heater element will be switched off for a while. The machine will remain on during this period and the current programme will not be interrupted. If one of the components that is switched off is needed during the current programme stage, the programme duration will simply increase for the duration of the load cut-out.

The third line of the display will alert you to the peak load, for example:

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>Vario TD Inst 4trays</th>
<th>▲</th>
<th>◀</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>4</td>
<td>Temperature 55 °C</td>
<td>V</td>
<td>OK</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Peak load cut-out</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Warning: this machine must be earthed

The machine can be connected using a switch or plug. The installation must be performed by a suitably qualified electrician in accordance with local and national regulations.
Connection to the mains water supply

⚠️ Water from the wash cabinet must not be consumed.

- The washer-disinfector must be connected to the water supply in strict accordance with current local and national water authority regulations.

- The water used must at least comply with European regulations for drinking water quality. If the water supply has a high iron content, there is a danger of corrosion occurring on stainless steel items being cleaned in the washer-disinfector, as well as the appliance itself. If the chloride content of the water exceeds 100 mg/l, the risk of corrosion to items being cleaned in the washer-disinfector will be further increased.

- In certain regions (e.g. mountainous areas) the water composition may cause precipitates to form, requiring the use of softened water in the steam condenser.

- The washer-disinfector is supplied as standard for connection to cold water (blue coded hose) and hot water up to max. 65 °C (red coded hose). Connect the inlet hoses to the tap valves for cold and hot water.

- If there is no hot water supply available, the inlet hose coded red must also be connected to the cold water supply.

- The intake hose without water protection device for the steam condenser is connected to the cold water tap.

- The **minimum flow pressure** for cold water is 100 kPa and for hot water 40 kPa.

- The **recommended flow pressure** for cold and hot water connections is ≥ 200 kPa to avoid excessively long water intake times.

- The **maximum permissible static water pressure** is 1000 kPa.

- If the water pressure does not fall into the stated range, contact Miele Professional Service for advice.

- A tap valve with a ¾" threaded union must be provided on site. It should be easily accessible so that the water supply can be turned off when the machine is not in use.

- The inlet hose is approx. 1.7 m long terminating in a ¾" female thread. On no account may the inlet filter be removed.
– Install the filter (supplied in accessory pack) between the tap valve and the inlet hose.

**IMPORTANT**
**Australia and New Zealand**
For Australia and New Zealand a non-return valve is required between the tap and filter.

⚠️ **Do not** shorten or otherwise damage the inlet hoses (see diagram).

See the installation diagram supplied.
IMPORTANT

**Australia and New Zealand.**

This appliance must be installed according to AS/NZS 3500.1. This appliance has been supplied with a separate backflow prevention device.

This machine must be connected to the potable water supply via the non-return valve (check valve) supplied with the machine.

Before making plumbing connections, ensure the appliance is disconnected from the mains power supply (switch off or unplug the power).

- Turn off the mains water tap.
- Place the seals on both sides of the non-return valve.
- Connect the female end of the non-return valve to the mains water tap (3/4" thread).
- Connect the filter to the male end of the non-return valve (3/4" thread).
- Connect the inlet hose to the filter.

Ensure that all connections are screwed into position correctly. The connection point is subject to mains water pressure. Turn on the tap slowly and check for leaks. Correct the position of the seal and union if necessary.
Connecting the drain hose

– A non-return valve is incorporated into the drain system in the machine to prevent drainage water flowing back into the machine via the drain hose.

– The washer-disinfector drainage hose should be connected to a separate drain for the washer-disinfector only. If no separate drain is available, we recommend connecting it to a dual-chamber siphon.

– The on-site connection point, measured from the lower edge of the washer-disinfector, should be positioned at a height between 0.3 m and 1.0 m. If it is lower than 0.3 m, the drain hose must be laid in a coil at a height of at least 0.3 m.

– The drainage system must be able to accommodate a minimum drainage flow of 16 l/min.

– The drainage hose is approx. 1.4 m long and flexible with an internal diameter of 22 mm. Hose clips for the connection are supplied.

– The drain hose must not be shortened.

– The drain hose can be extended using a connection piece to attach a further length of hose. The drainage length must not be longer than 4.0 m, and the delivery head must not exceed 4.0 m.

– Drainage noise can be considerably reduced if the drainage hose is positioned in an arc at a minimum height of 0.6 m and a max. height of 1.0 m measured from the bottom edge of the washer-disinfector.

See the installation diagram supplied.
### Technical data

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height with machine lid</td>
<td>835 mm</td>
</tr>
<tr>
<td>Height without machine lid</td>
<td>820 mm</td>
</tr>
<tr>
<td>Width</td>
<td>598 mm</td>
</tr>
<tr>
<td>Depth</td>
<td>598 mm</td>
</tr>
<tr>
<td>Wash cabinet dimensions:</td>
<td></td>
</tr>
<tr>
<td>height</td>
<td>520 mm</td>
</tr>
<tr>
<td>width</td>
<td>530 mm</td>
</tr>
<tr>
<td>depth of upper basket / lower basket</td>
<td>474 mm / 520 mm</td>
</tr>
<tr>
<td>Weight (net)</td>
<td>74 kg</td>
</tr>
<tr>
<td>Max. load capacity of open door</td>
<td>37 kg</td>
</tr>
<tr>
<td>Voltage, rated load, fuse rating</td>
<td>See data plate</td>
</tr>
<tr>
<td>Mains cable</td>
<td>approx. 1.8 m</td>
</tr>
<tr>
<td>Water temperature water connection:</td>
<td></td>
</tr>
<tr>
<td>Cold water / Steam condenser</td>
<td>max. 20 °C</td>
</tr>
<tr>
<td>Hot water</td>
<td>max. 65 °C</td>
</tr>
<tr>
<td>Static water pressure</td>
<td>Max. 1000 kPa excess pressure</td>
</tr>
<tr>
<td>Minimum flow pressure water connection:</td>
<td></td>
</tr>
<tr>
<td>Cold water / Steam condenser</td>
<td>100 kPa excess pressure</td>
</tr>
<tr>
<td>Hot water</td>
<td>40 kPa excess pressure</td>
</tr>
<tr>
<td>Recommended flow pressure water connection:</td>
<td></td>
</tr>
<tr>
<td>Cold water / Hot water Steam condenser</td>
<td>≥ 200 kPa excess pressure</td>
</tr>
<tr>
<td></td>
<td>≥ 100 kPa excess pressure</td>
</tr>
<tr>
<td>Delivery head</td>
<td>min. 0.3 m, max. 1.0 m</td>
</tr>
<tr>
<td>Drainage length</td>
<td>max. 4.0 m</td>
</tr>
<tr>
<td>Operation:</td>
<td></td>
</tr>
<tr>
<td>Ambient temperature</td>
<td>5 °C to 40 °C</td>
</tr>
<tr>
<td>Relative humidity maximum</td>
<td>80 % for temperatures up to 31 °C</td>
</tr>
<tr>
<td>linear decreasing to</td>
<td>50 % for temperatures up to 40 °C</td>
</tr>
<tr>
<td>Storage and transportation conditions:</td>
<td></td>
</tr>
<tr>
<td>Ambient temperature</td>
<td>- 20 °C to 60 °C</td>
</tr>
<tr>
<td>Relative humidity</td>
<td>10 % to 85 %</td>
</tr>
<tr>
<td>Air pressure</td>
<td>500 hPa to 1060 hPa</td>
</tr>
<tr>
<td>Altitude above sea level</td>
<td>Up to 1,500 m*</td>
</tr>
<tr>
<td>Protection category (according to IEC 60529)</td>
<td>IP21</td>
</tr>
<tr>
<td>Soiling level (according to IEC/EN 61010-1)</td>
<td>2</td>
</tr>
<tr>
<td>Overvoltage category (according to IEC 60664)</td>
<td>II</td>
</tr>
<tr>
<td>Noise level in dB (A), sound pressure LpA during cleaning and drying phases</td>
<td>&lt; 70</td>
</tr>
<tr>
<td>Test certificates awarded</td>
<td>EMC, VDE, radio and television suppressed</td>
</tr>
<tr>
<td>CE mark</td>
<td>MDD guidelines 93/42/EEC, Class IIb</td>
</tr>
<tr>
<td>Manufacturer's address</td>
<td>Miele &amp; Cie. KG, Carl-Miele-Straße 29, 33332 Gütersloh, Germany</td>
</tr>
</tbody>
</table>

* If installed above 1,500 m the boiling point of water will be lower. In this case the disinfecting temperature and the holding time will need to be reset by a Miele Professional Service technician.
## Programme chart

<table>
<thead>
<tr>
<th>Programme</th>
<th>Use</th>
<th>Pre-wash</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Free memory)</td>
<td>Programmable programme for special applications; programming by arrangement with Miele Professional Service.</td>
<td></td>
</tr>
<tr>
<td>(Free memory)</td>
<td>Programmable programme for special applications; programming by arrangement with Miele Professional Service.</td>
<td></td>
</tr>
<tr>
<td>Vario TD Inst 4trays</td>
<td>Cleaning and disinfecting programme, compliant with EN ISO 15883, for processing instruments <strong>without hollow sections/lumen</strong> in mobile unit A 202 for 4 mesh trays.</td>
<td>CW</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 Min</td>
</tr>
<tr>
<td>Vario TD Inst 6trays</td>
<td>Cleaning and disinfecting programme, compliant with EN ISO 15883, for processing instruments <strong>without hollow sections/lumen</strong> in mobile unit / basket combinations for 6 mesh trays A 202 and A 103.</td>
<td>CW</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 Min</td>
</tr>
<tr>
<td>Vario TD AN</td>
<td>Cleaning and disinfecting programme with a higher water level, designed for processing anaesthetic instruments. Cleaning and disinfecting programme, compliant with EN ISO 15883 80 °C (+5 °C, -0 °C) with a 10 minute holding time, for medical devices which come into contact with intact skin.</td>
<td>CW</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 Min</td>
</tr>
<tr>
<td>Vario TD Inst 8trays</td>
<td>Cleaning and disinfecting programme, compliant with EN ISO 15883, for processing instruments <strong>without hollow sections/lumen</strong> in mobile units for 8 mesh traysA 208.</td>
<td>CW</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 Min</td>
</tr>
<tr>
<td>Ward end utensils</td>
<td>Cleaning and disinfecting programme, compliant with EN ISO 15883, for processing ward end utensils e.g. kidney dishes, bowls etc.</td>
<td>CW</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 Min</td>
</tr>
<tr>
<td>Programme sequence</td>
<td>Cleaning</td>
<td>Interim rinse</td>
</tr>
<tr>
<td>---------------------</td>
<td>----------</td>
<td>--------------</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>CW70 158°F/55°C</td>
<td>HW</td>
<td>HW</td>
</tr>
<tr>
<td>DOS 1 5 Min</td>
<td>HW</td>
<td>DOS 3 1 Min</td>
</tr>
<tr>
<td>CW70 158°F/55°C</td>
<td>HW</td>
<td>HW</td>
</tr>
<tr>
<td>DOS 1 5 Min</td>
<td>HW</td>
<td>DOS 3 1 Min</td>
</tr>
<tr>
<td>CW70 158°F/55°C</td>
<td>HW</td>
<td>HW</td>
</tr>
<tr>
<td>DOS 1 5 Min</td>
<td>HW</td>
<td>DOS 3 1 Min</td>
</tr>
<tr>
<td>CW70 158°F/55°C</td>
<td>HW</td>
<td>HW</td>
</tr>
<tr>
<td>DOS 1 5 Min</td>
<td>HW</td>
<td>DOS 3 1 Min</td>
</tr>
<tr>
<td>CW70 158°F/55°C</td>
<td>HW</td>
<td>DI 182°F/83°C</td>
</tr>
<tr>
<td>DOS 1 5 Min</td>
<td>HW</td>
<td></td>
</tr>
</tbody>
</table>
## Programme chart

<table>
<thead>
<tr>
<th>Programme</th>
<th>Use</th>
<th>Pre-wash</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Short</td>
<td>For cleaning and thermal disinfection at 93 °C with 3 minutes temperature holding time (refer to country specific standards). For <strong>lightly</strong> soiled items.</td>
<td>CW</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 Min</td>
</tr>
<tr>
<td>Medium</td>
<td>For cleaning and thermal disinfection at 93 °C with 3 minutes temperature holding time (refer to country specific standards). For <strong>normally</strong> soiled items.</td>
<td>CW</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 Min</td>
</tr>
<tr>
<td>Long</td>
<td>For cleaning and thermal disinfection at 93 °C with 3 minutes temperature holding time (refer to country specific standards). For <strong>heavily</strong> soiled items.</td>
<td>CW</td>
</tr>
<tr>
<td>Rinsing</td>
<td>For flushing out saline solution (see “Water softener / Adding salt”), rinsing heavily soiled loads, e.g. for pre-rinsing soiling, residual disinfecting agent, or to prevent items drying out and to prevent incrustation before running a full load.</td>
<td></td>
</tr>
<tr>
<td>Drain</td>
<td>For draining suds solution, e.g. after a programme cancellation (see “Operation/Cancelling a programme”).</td>
<td></td>
</tr>
</tbody>
</table>
### Programme sequence

<table>
<thead>
<tr>
<th>Cleaning</th>
<th>Interim rinse</th>
<th>Final rinse</th>
<th>Drying</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>HW 149°F/65°C</td>
<td>HW</td>
<td>DOS 3</td>
<td>HW</td>
</tr>
<tr>
<td>DOS 1</td>
<td>1 Min</td>
<td>1 Min</td>
<td>3 Min</td>
</tr>
<tr>
<td>HW 149°F/65°C</td>
<td>HW</td>
<td>DOS 3</td>
<td>HW</td>
</tr>
<tr>
<td>DOS 1</td>
<td>3 Min</td>
<td>1 Min</td>
<td>3 Min</td>
</tr>
<tr>
<td>HW 149°F/65°C</td>
<td>HW</td>
<td>DOS 3</td>
<td>HW</td>
</tr>
<tr>
<td>DOS 1</td>
<td>3 Min</td>
<td>1 Min</td>
<td>3 Min</td>
</tr>
<tr>
<td>CW</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 Min</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**CW = Cold water**  
**HW = Hot water**  
**CWxx = CW Percentage of component in mixed water (CW70 = 70 % CW + 30 % HW)**  
**Min = Holding time in minutes**  
**DOS 1 = Cleaning agent**  
**DOS 2 = Rinsing agent (door dispensing)**  
**DOS 3 = Neutralising agent or chemical disinfection agent**
Caring for the environment

Disposal of the packing material
The packaging is designed to protect the washer-disinfector against transportation damage. The packaging materials used are selected from materials which are environmentally friendly for disposal and should be recycled.

Recycling the packaging reduces the use of raw materials in the manufacturing process and also reduces the amount of waste in landfill sites. Ensure that any plastic wrappings, bags etc. are disposed of safely and kept out of the reach of babies and young children. Danger of suffocation!

Disposing of your old appliance
Electrical and electronic appliances often contain valuable materials. They also contain specific materials, compounds and components, which were essential for their correct function and safety. These could be hazardous to human health and to the environment if disposed of with your domestic waste or if handled incorrectly. Please do not, therefore, dispose of your old appliance with your household waste.

Please dispose of it at your local community waste collection / recycling centre for electrical and electronic appliances. You are also responsible for deleting any personal data that may be stored on the appliance prior to disposal. Please ensure that your old appliance poses no risk to children while being stored prior to disposal.