Miele
PROFESSIONAL

Operating Instructions
Laboratory Glassware Washer for Laboratory Glassware and Utensils
PG 8583 CD

To prevent accidents and machine damage, read these instructions **before** installation or use.

en - US

M.-Nr. 10 607 860

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Warnings

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

Notices

Notes contain information that is particularly important to follow.

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 used for the function itself in the display.

Example:

Menu Settings ⚑.

IMPORTANT SAFETY INSTRUCTIONS

This machine complies with all statutory safety requirements. However, inappropriate use can lead to personal injury and material damage.
Read these instructions carefully before using the machine 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.

Proper use

▶ This machine 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 machine must only be used for cleaning laboratory glassware and utensils if the manufacturer has stated that they are suitable for machine reprocessing. 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 machine is intended for indoor use in a stationary location only.

Risk of injury

Please pay attention to the following notes to avoid injury.

▶ This machine must be commissioned, serviced and repaired by a Miele authorized and trained service technician only. To ensure compliance with Good Laboratory Practice guidelines, Miele repair and maintenance contracts are recommended. Unauthorized repairs can pose considerable risks to the user.

▶ Do not install the machine 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 machine 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 machine is built under a worktop, 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 machine can only be guaranteed if it is grounded properly. 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 grounding system (e.g. electric shock).

▶ A damaged or leaking machine could be dangerous and compromise your safety. Disconnect the machine from the electrical supply immediately and contact Miele Service.

▶ As standard, the drain water of the machine will reach temperatures greater than 160 °F (70 °C). At this temperature, drain water can potentially damage the drain system. In order to reduce damage to the drain system, Miele offers an optional drain water cool-down kit.

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

▶ Only use process chemicals which have been approved by the manufacturer for use in the application you are using. The process chemical manufacturer is responsible for any negative effects on the material the load is made of and for any damage they may cause to the machine.

▶ Use caution when handling process chemicals. These may contain irritant, corrosive or toxic ingredients.
Please observe the process chemical manufacturer's safety instructions and safety data sheets.
Wear protective gloves and goggles.

▶ The machine is designed for operation with water and recommended additive process chemicals only. Organic solvents and flammable liquid agents must not be used as 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 wash cabinet is NOT safe to drink!

▶ Do not lift the machine 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 machine to tip and get damaged or cause injury.

▶ Use caution when sorting items with sharp pointed ends and positioning them in the machine.

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

▶ When operating the machine, beware of the high temperatures involved. If you bypass the electrical lock to open the door, there is a risk of scalding or chemical burns.

▶ Should personnel accidentally come into contact with toxic vapors or process chemicals, 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 with a water hose or a pressure washer.

▶ The machine must be disconnected from the electrical 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 laboratory glassware and utensils and avoid damage to the loads being cleaned.

▶ If it is necessary to interrupt a program, as an exception only, this may only be done by authorized personnel.

▶ The cleaning standard must be routinely confirmed by the user. The process should be validated on a regular basis, and checked against documented control results.

▶ 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 aluminum items can be machine processed using special procedures only.
Items containing iron, and soiling containing residual rust must not be placed in the cabinet.

▶ Process chemicals can, in certain circumstances, cause damage to the machine. Always follow the recommendations of the process chemical manufacturer.
In case of damage or doubt about compatibility, please contact Miele.

▶ Process chemicals containing chlorine can damage the elastomers of the machine.
If the use of process chemicals containing chlorine is required, a maximum temperature of 167°F/75°C in the "Cleaning" program blocks is recommended (see program chart).
In machines equipped with special oil-resistant elastomers (from the factory) for oil and grease applications, process chemicals containing chlorides may not be used!

▶ Abrasive substances must not be placed in the machine 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 machine.

▶ Pre-treatments with cleaning agents can create foam, as can certain types of soiling and process chemicals. Foam can have an adverse effect on the 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 machine and its accessories caused by process chemicals, soiling and any reaction between the two, please read the notes in "Chemical Processes and Technology."

▶ Even when a process chemical is recommended on technical application grounds, it 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 publicized by the chemical manufacturer, can have a negative effect on the cleaning result.

▶ When using a process chemical it is essential that the manufacturer's instructions are followed. The process chemical 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 manufacturer's instructions on storage and disposal of process chemicals.

▶ 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 process chemicals, water quality, etc., are discussed with Miele.

▶ For applications that demand especially stringent cleaning and rinsing results, the operator must ensure that quality control occurs on a regular basis to meet the standards involved.

▶ The mobile units, 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 70°F (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 machine 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.

Children in the vicinity

▶ Children must be supervised in the vicinity of the machine. Do not allow children to play with the machine. They could get locked inside it.

▶ Children must not use the machine.

▶ Keep children away from process chemicals. These can cause burning in the mouth, nose and throat if swallowed, or inhibit breathing. Keep children away from the machine when the door is open. There could still be residual process chemical in the cabinet. Observe the safety data sheets for the process chemical and seek medical advice immediately if a child has swallowed chemical agent or got it in the eyes.

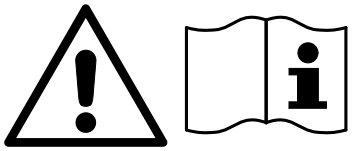
Using accessories

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

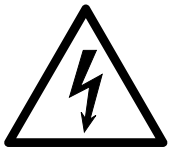
▶ Only use Miele mobile units, baskets, modules and inserts with this machine. Using mobile units, baskets, modules and inserts made by other manufacturers, or making modifications to Miele accessories can cause unsatisfactory cleaning results, for which Miele cannot be held liable. Any resulting damage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

IMPORTANT SAFETY INSTRUCTIONS

Symbols on the machine



Attention:
Observe the operating instructions!



Attention:
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!

Disposal of your old machine

▶ 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 process chemicals. Observe safety regulations and wear safety goggles and gloves.
Make the door lock inoperable, so that children cannot accidentally lock themselves in the machine. Then make appropriate arrangements for its safe disposal.

Miele cannot be held liable for damage caused by non-compliance with these warnings and safety instructions.

SAVE THESE INSTRUCTIONS

This Miele labwasher can be used to reprocess laboratory glassware and laboratory utensils with water based media. The process includes cleaning, rinsing and drying. Due to the wide variety of laboratory glassware and laboratory utensils on the market, it may be necessary in some cases to establish whether the items are suitable for reprocessing in a labwasher. This will depend on its use and the type of soiling present. Please also observe information provided by the manufacturer of the laboratory glassware and laboratory utensils.

Laboratory glassware and laboratory utensils suitable for reprocessing include a wide range of items, for example:

– Vessels such as test tubes, beakers, flasks, etc.
– Measuring vessels such as measuring cylinders, pipettes, volumetric flasks, etc.
– Dishes such as petri dishes, watch glasses, etc.
– Small items such as lids, spatulas, magnetic stirring rods, stoppers, etc.
– Other items such as funnels, etc.

Examples of application areas:

– Laboratories in schools, colleges and universities,
– Research, quality assurance, development, technology and production,
– Different areas of inorganic, organic, analytical and physical chemistry,
– Biology, microbiology and biotechnology,
– Laboratories.

Laboratory glassware and laboratory utensils for reprocessing are referred to as the wash load if they are not more closely defined.

Processing conditions must be suitable for the wash load and for the type of soiling.
Process chemicals must be suitable for the type of soiling and for methods of analysis being used.

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

This machine is programmed to carry out the final rinse with mains water or with processed water of a quality to suit the application (e.g. purified water, fully demineralized water or demineralized water).
It is particularly important to ensure the appropriate water quality for the rinse and final rinse of items used for analytical purposes.

Miele can provide IQ and OQ validation support.

The machine fulfills the requirements of the EU Machinery Directive 2006/42/EC.

Spray arm pressure and monitoring

The machine has a sensor for monitoring spray pressure e.g in order to detect pressure fluctuations caused by improper loading of the machine or foam in the water circulation system. Spray pressure monitoring is activated for the "Cleaning" and "Final rinse" wash blocks.
The spray pressure monitoring result is documented together with the process documentation.

Spray arm speed can also be monitored, e.g. for detection of blockages caused by improper loading of the machine or foam in the water circulation system. Spray arm speed monitoring can be activated or deactivated via the programmable settings.

Miele Service can make further settings for spray pressure and spray arm monitoring.

User profiles

Daily operators

Daily operators must be instructed how to properly operate and load the machine and trained regularly to guarantee safe daily use. They require knowledge of machine reprocessing of laboratory glassware and utensils.

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

Administration

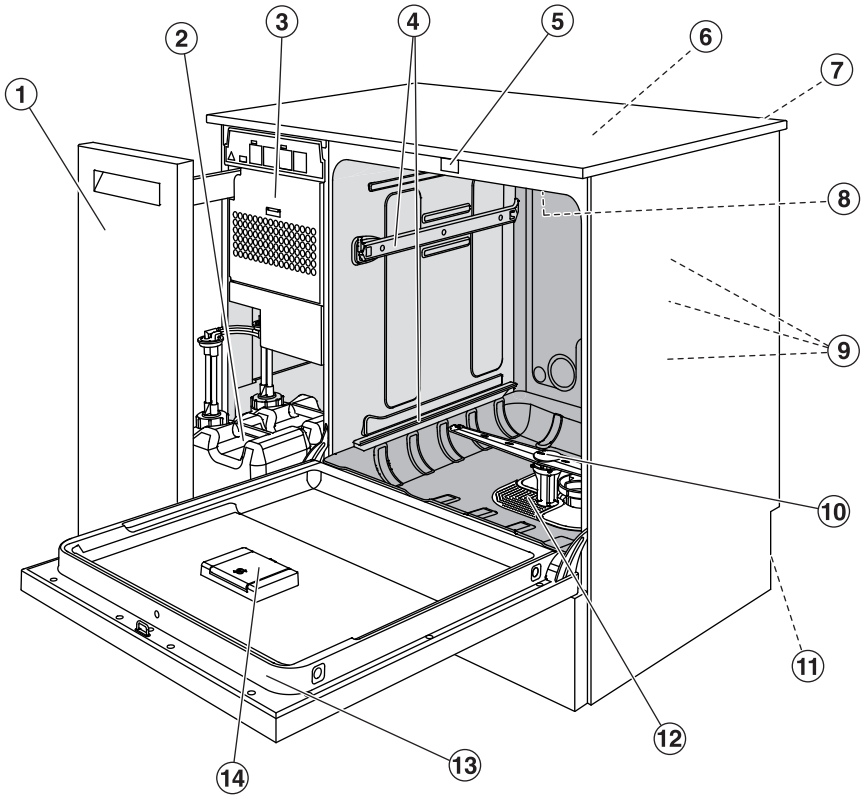
More advanced tasks, e.g. interrupting or canceling a program, require more detailed knowledge of the machine.

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

Validation processes assume specialized knowledge of the machine processes involved and of applicable standards and legislation.

Administrative processes and settings are allocated to the Additional settings. This section is protected from unauthorized access by a code.

Machine overview



① Side unit

② Dispensing containers for process chemicals

③ Drying unit

④ Rails for baskets and mobile units

⑤ Door lock

⑥ Test point for performance checks (Top, front right; only visible with lid removed)

⑦ Module slot for a communication module (Back, top right)

⑧ Upper machine spray arm

⑨ Water connections for mobile units and baskets

⑩ Lower machine spray arm

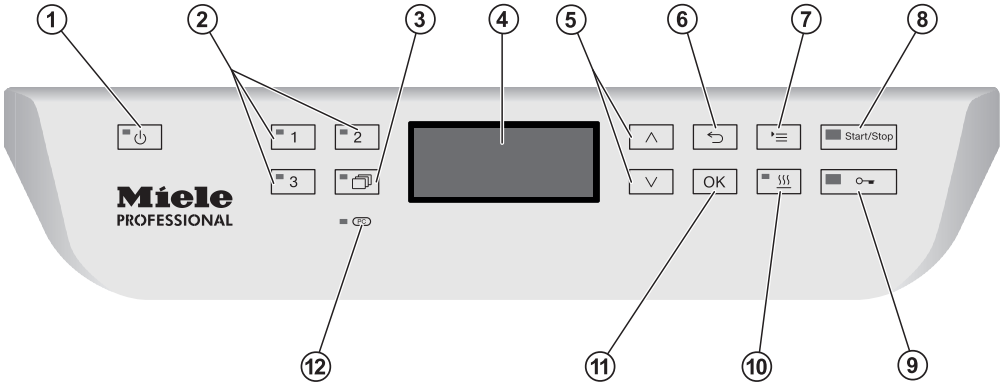
⑪ Rear of the machine:
- Second data plate
- Electrical and water connections

⑫ Filter combination

⑬ Data plate

⑭ Reservoir for reactivation salt

Control panel



① ⏻ **button (On/Off)**
For switching the machine on and off.

② 1, 2 **and** 3 **buttons**
Program selection buttons.
The button assignment can be configured.

③ **button (Program List)**
For accessing the list of all programs.

④ **Display**
User interface and program sequence display.

⑤ ∧ **and** ∨ **arrow buttons**
Navigation in user interface.

⑥ **button (Cancel)**
For canceling a process in the user interface
(not for canceling programs)

⑦ **button (Settings)**
For accessing the system settings menu.

⑧ *Start*/*Stop* **button**
For starting or canceling a program.

⑨ button **(Door Release)**
For opening the door before or after a program.

⑩ **button (Drying)**
For switching drying on and off.

⑪ *OK* **button**
For confirming selections or entries in the user interface
(acknowledge or save).

⑫ PC **Service interface**
Testing and transmission point for Miele Service.

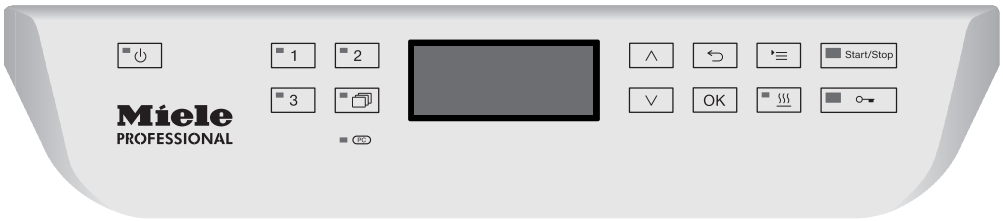
LEDs in the buttons

The buttons on the control panel have LEDs that indicate the status of the machine.

Button	LED	Status
Button ⏻	**ON**	The machine is switched on.
	FLASHES	The machine is ready for use.
	OFF	The machine is switched off.
Program selection buttons 1, 2 **and** 3	**ON**	The respective program has been selected. At the end of the program the LED will remain lit until a different program is selected.
	OFF	The program is not selected or the program settings are being selected.
Button	**ON**	A program has been selected from the program list. At the end of the program the LED will remain lit until a different program is selected.
	OFF	No program has been selected from the list or the program settings are being selected.
Button	**ON**	The additional "Drying" function has been activated for the selected program (not available for all programs; see "Program chart").
	OFF	The additional "Drying" function has been deactivated.
Start/Stop **button**	**ON**	A program is running.
	FLASHES GREEN	A program has been selected, but has not yet started.
	FLASHES RED	A fault has occurred (see "Frequently asked questions").
	OFF	A program has finished.
Button	**ON**	The door is closed (locked) and there is no program running.
	FLASHES	A program has finished and the door is closed (locked).
	OFF	A program is running or the door is open (unlocked).

Control panel

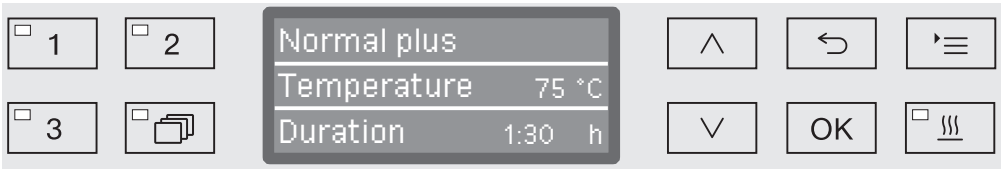
The machine is operated exclusively by the buttons located on the stainless steel surfaces on either side of the display. The display is not a touch screen.



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.

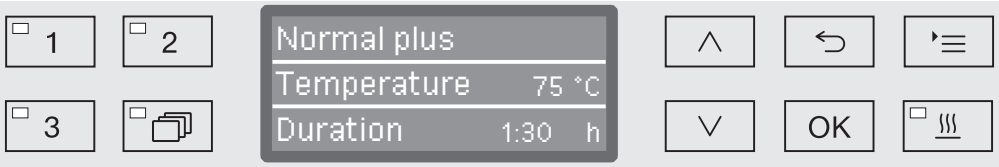
Switching on the machine

The machine must be connected to the electrical supply.

■ Press the ⏻ button until the button's LED lights up.

After that, the display will show the following, for example:

As soon as the machine is ready for operation, the display changes to show the last selected program, e.g.



If the machine 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 be set first. To enable this, the display automatically changes to the relevant screen.

Switching off the machine

■ Press the ⏻ button.

Auto-Off function

To save energy, the machine has a function to switch off automatically. 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.

Ready for operation (standby)

When it is ready for use (standby), the machine remains switched on, the ⏻ button flashes and the time is shown on the display. Pressing any button reactivates the machine. Standby can be switched on and off as required (see "Additional settings/Switch off after").

Display interface

The machine 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.

Menu operation

☰

Settings button

For accessing the system settings menus.

∧ **and** ∨

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

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 canceled at any time by pressing the ⮌ button. The display changes to the next menu level up. Any setting changes made will not be saved.

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:

Button ☰
- ▸ Settings ⚑
  - ▸ Time of day
    - ▸ Time format

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

Display view

When selecting a menu, the last menu used is generally pre-selected.

Example:

Options

All available setting options are listed 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

After that, further instructions are provided.

Example:

- Select an option using the ∧ and ∨ arrow buttons.
- Press *OK* to save the setting.

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.

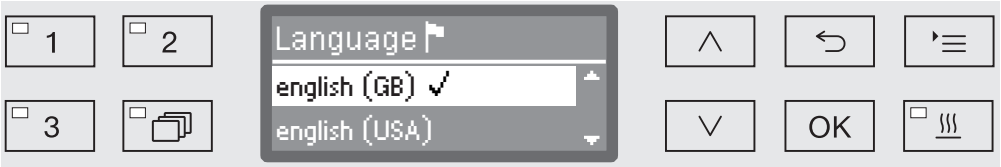
Use the ∧ and ∨ arrow buttons on the control panel to navigate through the menu.

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.

Check

If there are several options available, the current setting is marked with a check ✓.



System messages

The i 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 i symbol is shown on 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 i symbol. See "Problem solving guide" and "After sales service" for more information.

Installation and connection

Before commissioning, the machine must be securely installed, and the water inlet and drain hoses and the power cord correctly connected. See "Installation," "Water connection," and "Electrical connection" and the installation plan supplied.

Procedure

During commissioning, a set procedure is followed which must not be interrupted, e.g. by opening the door. The display will automatically guide you through the process.

All settings, except for selecting the water connections, can be retrospectively altered via the Settings and Additional settings menus.

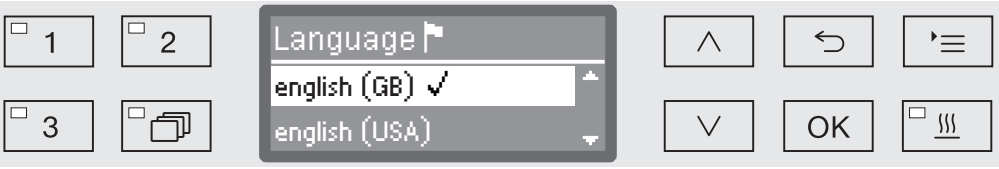
The settings made during the commissioning process are only adopted after a complete program has been run.
If the program is interrupted or if no program is started or the machine is switched off, the commissioning process must be carried out again.

Turning on the machine

- Press the ⏻ button until the LED on the keypad lights up.

Selecting the language

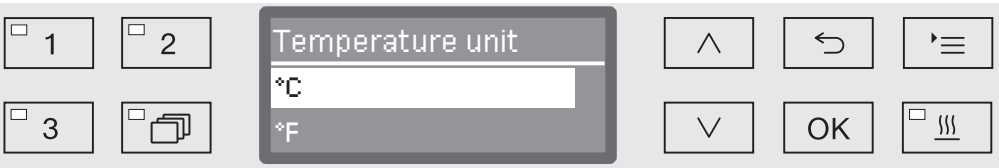
The commissioning process starts with selecting the language.



- Use the ∧ and ∨ arrow buttons to select the language you want and hit *OK* to save.

Selecting the temperature unit

The menu for selecting the temperature unit will then appear.



- Use the ∧ and ∨ arrow buttons to select the temperature unit you want and hit *OK* to save.

Selecting the date format

The menu for selecting the date format will then appear.

– DD = day
– MM = month
– YY = year.

■ Use the ∧ and ∨ arrow buttons to select the date format you want and press *OK* to save.

Setting the date

The menu for setting the date will then appear.

■ Use the ∧ and ∨ arrow buttons to set the day, month, and year and press *OK* to save each one.

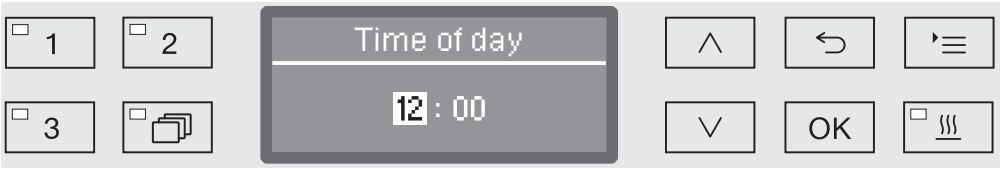
Selecting the clock format

The menu for selecting the clock format will then appear.

■ Use the ∧ and ∨ arrow buttons to select the clock format you want and hit *OK* to save.

Setting the clock

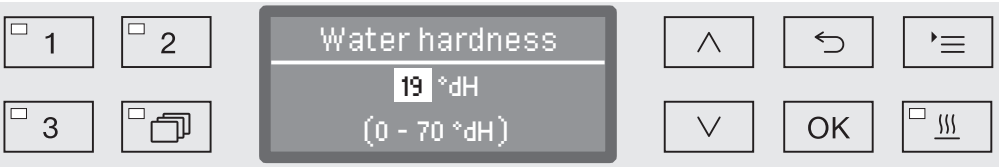
The menu for setting the display for the time of day will then appear.



■ Use the ∧ and ∨ arrow buttons to select the hours and minutes and hit *OK* to save each one.

Setting the water hardness level

The menu for setting the water hardness will then appear.



The possible range is shown in the bottom line of the display. Water hardness setting values can be found in the "Water softener/Settings" chart.

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

With varying water hardness, always set the highest level. If the water hardness fluctuates between, for instance, 8 and 18 gr/gal (8 and 17 °dH), the water hardness must be set to 18 gr/gal (17 °dH).

- Set the water hardness using the arrow buttons ∧ (higher) and ∨ (lower) and press *OK* to save.
- Write down the water hardness as described in "Water softener/ Water hardness".

Selecting water connections

The menu for setting water connections will then appear.

Unused water connections, e.g., if there is only one connection, can be deactivated here.

Following commissioning, the water connections can be reinstated by Miele Service.

The water connection is set via multiple choice. A box ☐ is shown in the display next to all water connections. If the connection is activated, a check ☑ is displayed. Select to activate or deactivate the water connections.

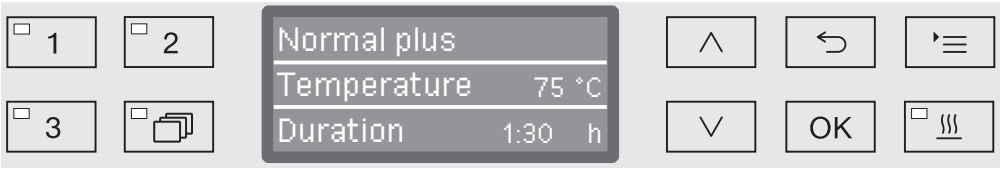
- Use the ∧ and ∨ arrow buttons to select the proper plumbing connections. Water connections are activated or deactivated by pressing *OK*.
- To save the selection, select the Accept option at the end of the list and confirm with *OK*.

Commissioning completed

Commissioning is completed when the following message is displayed.

- Confirm the message with *OK*.

The machine is now ready for use.



The settings made during the commissioning process are only adopted after a complete program has been run.

- Select any program, e.g.: Drain.
- Press the *Start*/*Stop* button to start the program.

After commissioning, every program starts with reactivation of the water softener.

Fault 420

If the program is canceled using Fault 420, all the plumbing connections are deactivated.

- Confirm the error message with *OK*.
- Use the ⏻ button to switch the machine off.
- Wait approximately 10 seconds before switching the machine on again with the ⏻ button.

The commissioning procedure starts again.

- Perform commissioning and activate at least one plumbing connection; e.g. for cold water.

Electronic door lock

The machine 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 machine is connected to the electrical supply and is switched on (the LED for the ⏻ button is lit up)

– there is no program running

– the temperature in the wash cabinet is less than 140°F (60°C)

– 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 machine 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 touch the door frame.
Risk of injury!

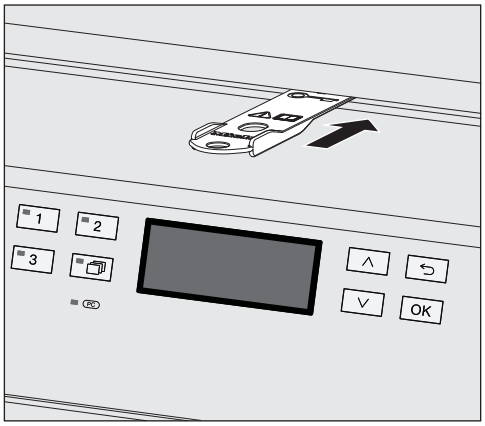
■ Lift the door until it engages with the door lock. The door is automatically pulled into the correct position by the Comfort door lock.

Opening 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 power loss.

⚠ If the emergency release is operated during a program 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 machine 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:

The message remains in the display until the door is closed. It is not recorded if the machine is switched off.

Water hardness

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

Mains water with a water hardness of 4 gr/gal (4 °dH) must be softened. This occurs automatically in the built-in water softener. 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.
It is useful to know your water hardness so that you can provide the service technician with this information in the event of any subsequent service calls. For this reason, record the hardness of the mains water here:

_____gr/gal or °dH

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

If the hardness level of your water is constantly less than 4 gr/gal (= 4 °dH), salt is not required for the water softener. The water hardness level must, however, still be set.

Setting the water hardness level

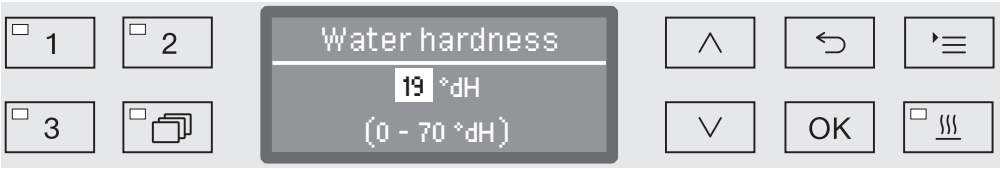
Water hardness can be set between 0 and 70 gr/gal (0 - 70 °dH).

- Open the menu as follows:

☰ button

▸ Additional 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 8 - 18 gr/gal (8 - 18 °dH), always program the machine to the higher value, 18 gr/gal (18 °dH) in this example.

- Set the water hardness level using the arrow buttons (∧ = higher and ∨ = lower).
- Press OK to save the setting.

Settings table

gr/gal	ppm $CaCO_3$	mmol/l	**Display**
0	0	0	**0**
1	20	0.2	**1**
2	40	0.4	**2**
3	50	0.5	**3**
4	70	0.7	**4**
5	90	0.9	**5**
6	110	1.1	**6**
7	130	1.3	**7**
8	140	1.4	**8**
9	160	1.6	**9**
10	180	1.8	**10**
11	200	2.0	**11**
12	220	2.2	**12**
13	230	2.3	**13**
14	250	2.5	**14**
15	270	2.7	**15**
16	290	2.9	**16**
17	310	3.1	**17**
18	320	3.2	**18**
19	340	**3.4**	**19 *)**
20	360	3.6	**20**
21	380	3.8	**21**
22	400	4.0	**22**
23	410	4.1	**23**
24	430	4.3	**24**
25	450	4.5	**25**
26	470	4.7	**26**
27	490	4.9	**27**
28	500	5.0	**28**
29	520	5.2	**29**
30	540	5.4	**30**
31	560	5.6	**31**
32	580	5.8	**32**
33	590	5.9	**33**
34	610	6.1	**34**
35	630	6.3	**35**

gr/gal	ppm $CaCO_3$	mmol/l	**Display**
36	650	6.5	**36**
37	670	6.7	**37**
38	680	6.8	**38**
39	700	7.0	**39**
40	720	7.2	**40**
41	740	7.4	**41**
42	760	7.6	**42**
43	770	7.7	**43**
44	790	7.9	**44**
45	810	8.1	**45**
46	830	8.3	**46**
47	850	8.5	**47**
48	860	8.6	**48**
49	880	8.8	**49**
50	900	9.0	**50**
51	920	9.2	**51**
52	940	9.4	**52**
53	950	9.5	**53**
54	970	9.7	**54**
55	990	9.9	**55**
56	1000	10.0	**56**
57	1020	10.2	**57**
58	1040	10.4	**58**
59	1060	10.6	**59**
60	1070	10.7	**60**
61	1090	10.9	**61**
62	1110	11.1	**62**
63	1130	11.3	**63**
64	1150	11.5	**64**
65	1160	11.6	**65**
66	1180	11.8	**66**
67	1200	12.0	**67**
68	1220	12.2	**68**
69	1240	12.4	**69**
70	1250	12.5	**70**

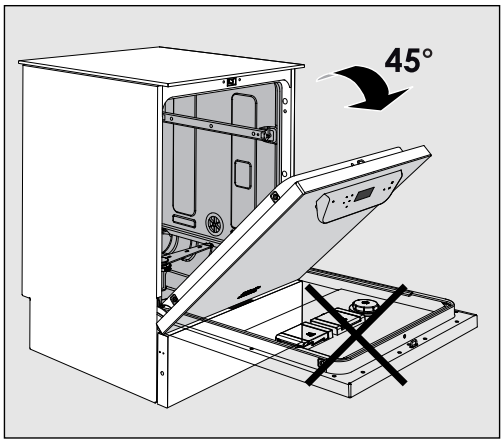
*) Factory default setting

Filling the salt container

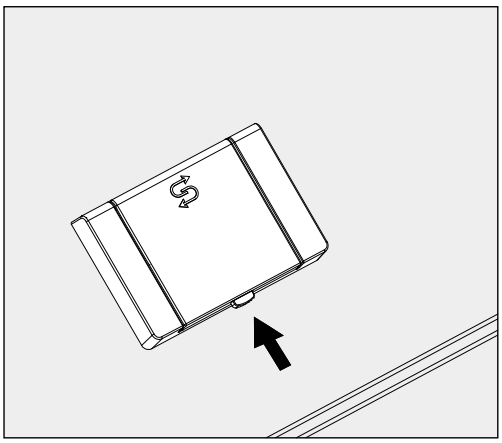
Use only special, coarse-grained reactivation salt with a granule size of approx. 1/16" - 3/16" (1 - 4 mm).
Do not under any circumstances use other types of salt such as table salt, agricultural or gritting salt. These may contain insoluble additives which can impair the functioning of the water softener.

Reactivation salt is available from Miele, please contact Miele for ordering. See last page for contact information.

⚠ 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.

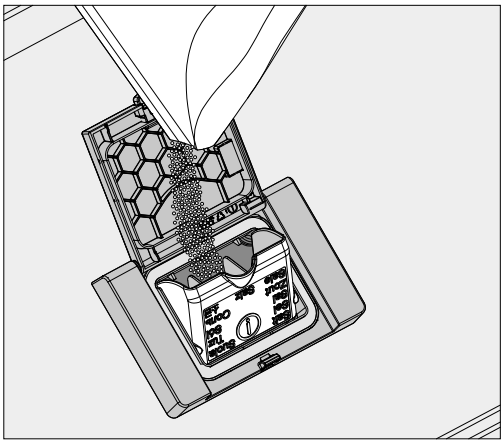


- Open the door to an angle of approx. 45°. This ensures that the salt flows into the reservoir more easily.



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

The reservoir takes approx. 3 - 4 lbs. (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 4 lbs. (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 Rinse program after refilling salt.

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

Salt and saline solution which has overflowed can cause severe corrosion damage to the wash chamber if they are not rinsed away.

Salt refill reminder

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

- Confirm the message with the *OK* button.
- Fill the reservoir as described.

When the message first appears, there may be sufficient salt for a further program, 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 machine 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 machine 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 and injectors are equipped with one or more connection points to the water supply. When loading baskets, mobile units, etc. into the machine, 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 machine 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 Service and is only available for selected basket models.

⚠ The assembly of connectors for the water supply of mobile units and baskets must be carried out by Miele Service.
Fitting faults on mobile units and baskets can cause damage to the machine.

Following conversion, mobile units and baskets can no longer be used in older models.

Adjusting the height of the upper basket

Height-adjustable upper baskets can be adjusted between three positions with 3/4" (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 openings

– A plastic connection piece

– 6 screws.

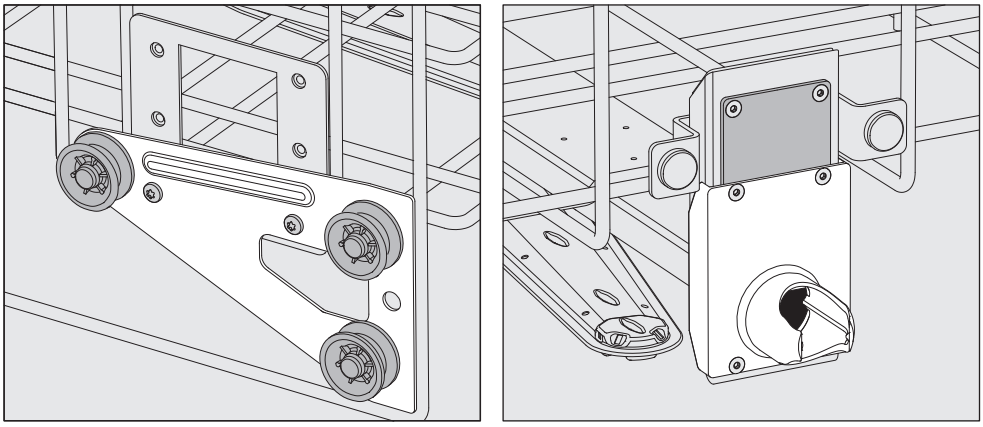
Only adjust the upper basket horizontally. The baskets are not designed to be positioned on a slant (one side up, one side down). Altering the height will alter loading heights for both the upper and lower baskets.

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.

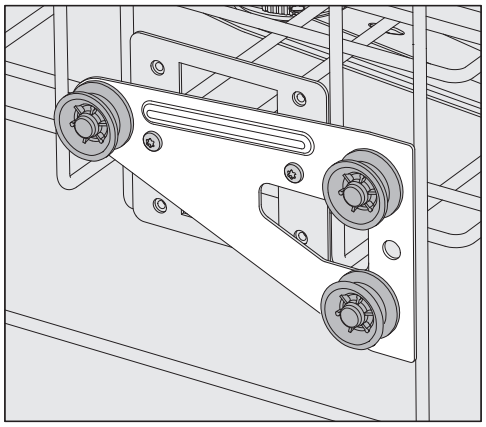
To adjust the upper basket to the ...

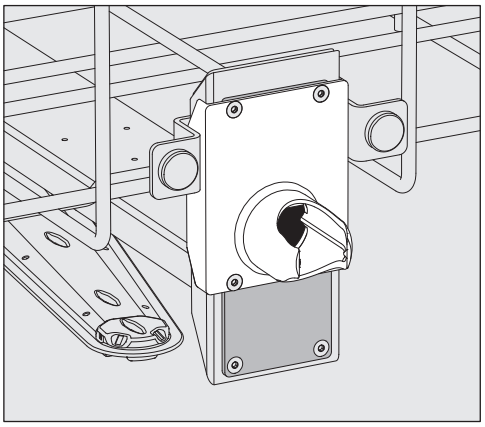
... upper position:



- 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 opening is covered. Secure the stainless steel plate at the top with 2 screws. Place the water connector in the lower opening of the stainless steel plate so that the middle opening is covered. Secure the water connector with 4 screws.

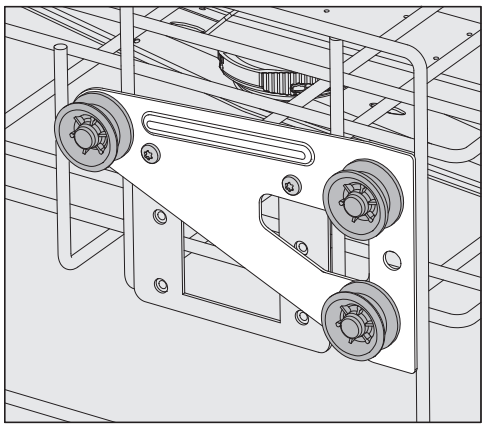
... middle position:

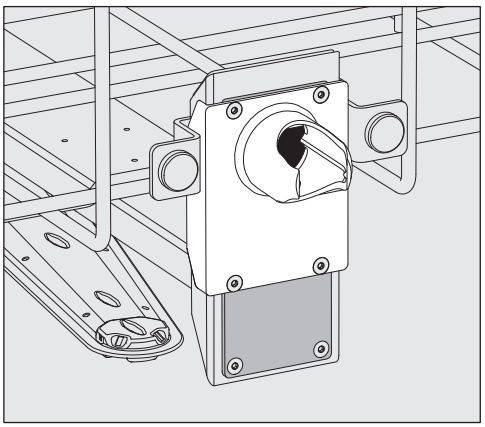




- Move the roller brackets on both sides to the middle position and secure them firmly.
- Position the stainless steel plate over the openings in the water supply pipe so that one of the outer openings are covered. Secure the stainless steel plate at the top or bottom with 2 screws. Place the water connector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

Then check:

- Put the upper basket back on the rails and push it in carefully to check that the water connection is positioned correctly.

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.

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.

– Arrange the wash 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.
– 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 should be placed at an angle to make sure water runs off them freely.
– Tall, narrow, hollow items should be placed in the center of the baskets or units if possible to ensure better water coverage. or units if possible to ensure better water coverage.
– 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. an A 6) and small items placed in a mesh tray to prevent them blocking the spray arms.
– The spray arms must not be blocked by items which are too tall or which hang down in 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 aluminum require special procedures and are not generally suitable for machine reprocessing. are not generally suitable for machine reprocessing.
– When cleaning items that are made entirely or partially out of plastic , the maximum thermal stability of the item must be considered. Select an appropriate program or adjust the temperature of the program accordingly.

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

Preparing the load

- Empty all items before loading them into the machine.
- Remove non-water soluble residues such as paint, adhesives and polymer compounds using appropriate solvents.
- Rinse wash load items which have been in contact with solvents, chloride solutions or hydrochloric acid thoroughly with water and drain well before loading into the machine.

⚠ 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 70°F (21°C).

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

- Scoop nutrient media (Agar) out of petri dishes.
- Shake out any blood residues and remove any clots.
- If necessary rinse the wash load briefly with water to prevent coarse soiling entering the machine.
- Remove all stoppers, corks, labels, sealing wax residue, etc.
- Secure small items, such as stoppers and taps in suitable baskets for small items.

It may be necessary in individual cases to check whether extremely stubborn contamination, e.g., vacuum grease, paper labels, etc., which could affect the cleaning result, must be removed in advance.

It must be determined whether wash load items which are contaminated with microbiological material, pathogenic germs, facultative pathogenic bacteria, genetically modified material, etc. need to be sterilized prior to machine reprocessing.

Carry out a visual check before starting every program:

– 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 process chemical containers sufficiently filled?

The following must be checked at the end of every program:

– 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.

Wash load...

...wide-neck

Wash load items with wide necks, e.g. beakers, wide neck Erlenmeyer flasks and petri dishes, or cylindrical items, e.g. test tubes, can be cleaned inside and out by rotating spray arms.
To do this the wash load is positioned in full, half or quarter inserts and placed in an empty lower basket or an upper basket with a spray arm.

...narrow-neck

Baskets with special injector modules are available for wash load items with narrow necks, e.g. narrow neck Erlenmeyer flasks, round bottomed flasks and measuring flasks.

The injector units and modules come with their own operating instructions.

When loading please note:

- Place petri dishes or similar items in the appropriate insert with the dirty side facing towards the middle.
- Place pipettes with the pointed end facing downwards.
- Quarter segment inserts should be positioned at a minimum 1" (3 cm) distance from the edge of the upper or lower basket.
- Position quarter segment inserts for test tubes around the middle to leave the corners of the upper or lower basket free.
- Use a cover net to avoid breakages if required.

Chemical processes and technology

In this section you will find a description of the causes of common issues which can occur between different types of soiling, process chemicals and the components of the machine, along with their solutions as necessary.

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

General notes	
Problem	**Solution**
If elastomers (hoses and seals) and plastics in the machine are damaged, it can lead to 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.	– Establish the cause of the damage and rectify it. See information regarding "Process chemicals," "Soiling," and "Reaction between process chemicals and soiling."
Heavy foaming during a program affects cleaning and rinsing results. Foam leaking from the wash cabinet can cause damage to the machine. Cleaning processes cannot be standardized and validated where there has been a build-up of foam.	– Establish the cause of the foam and rectify it. – Check the process used regularly to monitor foaming levels. See information regarding "Process chemicals," "Soiling," and "Reaction between process chemicals and soiling."
Corrosion to stainless steel in the wash cabinet and to accessories can give them a different appearance: – Rust (red marks/discoloration) – Black marks/discoloration – White marks/discoloration (etched surface). Corrosive pitting can lead to the machine not being water-tight. Depending on the application corrosion can affect cleaning and rinsing results (laboratory analysis) or cause corrosion to stainless steel items in the cabinet.	– Establish the cause of the corrosion and rectify it. See information regarding "Process chemicals," "Soiling," and "Reaction between process chemicals and soiling."

Process chemicals	
Problem	**Solution**
The ingredients in process chemicals have a strong affect on the longevity and functionality (throughput) of the dispensing system.	– Follow the process chemical 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 Service for advice.
Process chemicals can damage elastomers and plastics in the machine and accessories.	– Follow the process chemical manufacturer's instructions and recommendations. – Carry out a regular visual check of any accessible elastomers and plastics for damage.
Process chemicals containing hydrogen peroxide can release large amounts of oxygen.	– Use only validated processes. – The wash temperature must be lower than 158°F (70°C) when using hydrogen peroxide. – Please contact Miele Service for advice.
The following process chemicals can cause large amounts of foam to build up: – Process chemicals containing tensides. Foam can occur: – in the program block in which the process chemical is dispensed, – in the following program block due to carry over,	– Process parameters in the wash program, such as dispensing temperature, dosage concentration etc. must be set to ensure the whole process is foam free or little foaming occurs. – Please observe process chemical manufacturer's instructions.

Chemical processes and technology

Process chemicals	
Problem	**Solution**
De-foaming agents, especially silicone-based ones can cause the following: – Deposits to build up in the cabinet – Deposits to build up on the load – Damage to elastomers and plastics in the machine – Damage to certain plastics (e.g. polycarbonate and plexiglass) in the load being processed.	– De-foaming agents should be used as an exception only, for instance when essential for the process. – The wash cabinet and accessories should be periodically cleaned without a load and without de-foaming agent using the Organic program. – Please contact Miele Service for advice.

Soiling	
Problem	**Solution**
The following substances can damage elastomers (hoses and seals) and plastics in the machine: – Oil, wax, aromatic and unsaturated hydrocarbons, – Emollients, – Cosmetics, hygiene and skin care products such as creams (analytical applications).	– Depending on usage, wipe the lower door seal on the machine periodically with a lint-free cloth or sponge. Clean the wash chamber and accessories without a load using the Inorganic program. – Process the load using the Oil program program (where available) or use a special program that dispenses emulsifiers.
The following substances can lead to a heavy build-up of foam during washing and rinsing: – Some process chemicals. – Reagents for analysis, e.g. for microtiter plates, – Cosmetics, hygiene and skin care products such as shampoos and creams (analytical applications), – Active foaming agents such as tensides.	– Thoroughly rinse items in water beforehand. – Select a cleaning program with at least one short pre-rinse in cold or hot water. – Depending on application, use antifoaming agents that do not contain silicone oils.

Soiling	
Problem	**Solution**
The following substances cause corrosion to stainless steel in the wash cabinet on accessories: – Hydrochloric acid, – Other substances containing chlorides such as sodium chloride, etc. – Concentrated sulfuric acid, – Chromic acid, – Particles of iron and shavings.	– Thoroughly rinse items in water beforehand. – Put the drip-dry items to be washed into the mobile units, baskets, modules and inserts and start a program as soon as possible after placing in the machine.

Reaction between process chemicals and soiling	
Problem	**Solution**
Natural oils and fats can be saponified with alkaline processing chemicals. This can lead to a heavy build-up of foam.	– Use the Oil program. – This special program dispenses emulsifiers (pH neutral) in the pre-rinse. – Depending on application use antifoaming agents that do not contain silicone oils.
Soiling containing high protein levels such as blood can cause a heavy build-up of foam when processed with alkaline process chemicals.	– Select a cleaning program with at least one short pre-rinse in cold water.
Non-precious metals such as aluminum, magnesium and zinc can release hydrogen when processed with very acidic or alkaline process chemicals (oxyhydrogen reaction).	– Please observe process chemical manufacturer's instructions.

Using process chemicals

⚠ Only use process chemicals designed specifically for use in machines and follow the manufacturer's instructions on their application.
Please observe any instructions relating to non-toxic residues.

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

Contact Miele for information on suitable process chemicals.

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

Dispensing systems

The machine is equipped with an internal dispensing systems for process chemicals:

– Neutralization agent
  This is dispensed using a siphon.

– Liquid process chemicals
  This is dispensed via a siphon.

An additional internal dispensing system can be fitted retrospectively by Miele Service if required.

Labelling of the siphons

Liquid process chemicals from external containers are dispensed by siphons. Color coding the siphons can be helpful for correct dispensing.

Miele uses and recommends the following:

– Blue: for process chemicals
– Red: for neutralizing agent
– Green: for an additional second process chemical
– White: for acidic process chemicals
– Yellow: for free choice

Neutralizing agent

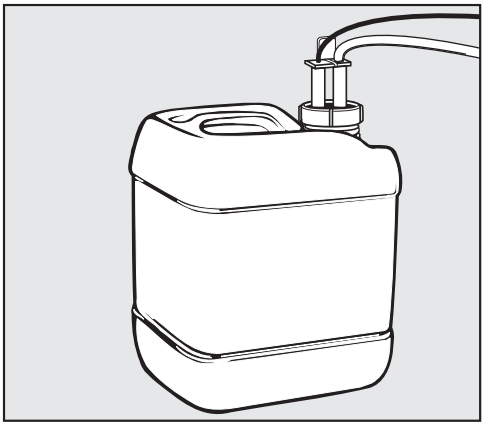
Neutralizing agent (pH setting: acidic) neutralizes any residues of alkaline process chemicals on the surface of the load.

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

In the Inorganic program, neutralizing agent is dispensed additionally for an acidic pre-wash.

Replenishing neutralizing agent

- Open the drawer in the side unit.
- Remove the neutralizing agent container (red marking) and place it on the open cabinet door or on a surface which is robust and easy to clean.
- Unscrew and remove the siphon. Place the container lance 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 color coding.
- Wipe up any spilled neutralizing agent thoroughly.
- Place the container back in the drawer in the side cabinet.
- Close the drawer. Ensure that the dispensing tubes and cords are not kinked or trapped.
- After that, the dispensing system must be primed (see "Settings ⚑ / Priming DOS").

Adding and dispensing process chemicals

Checking consumption

Check consumption regularly by checking the fill levels in the supply containers and replace containers in time.

Refill indicator

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

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

If the container is empty, the machine will be locked against further use.
It will be ready for use again when the supply container has been replaced.

Dispensing neutralizing agent

For adjusting dispensing concentration, see "Additional settings/ Dispensing systems."

Process chemicals

⚠ Only use process chemicals which are suitable for labwashers. Do not use process chemicals for domestic machines. Contact Miele for available process chemicals.

The machine is designed exclusively for use with liquid process chemicals. The liquid process chemicals is dispensed from an external supply container via a siphon.

For environmental reasons, it is important to always consider the following factors when selecting a process chemical:

– How alkaline does the process chemical need to be for the cleaning application involved?

– Are protein-removing enzymes required and is the program sequence suitable for this?

– Are tensides required for proper dispersion and emulsification?

– Is a process chemical containing active chlorine required or can an active chlorine-free process chemical be used?

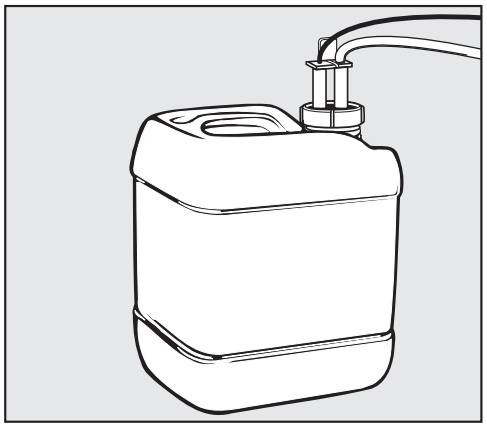
⚠ Process chemicals containing chlorine can damage the elastomers of the machine.
If the use of process chemicals containing chlorine is required, a maximum temperature of 167°F/75°C in the "Process chemical dispensing" program blocks is recommended (see program chart).
In machines equipped with special oil-resistant elastomers (from the factory) for oil and grease applications, process chemicals containing chlorides may not be used!

For cleaning specific types of soiling, and for information on the process chemicals and additives to use for liquid dispensing, please contact Miele Technical Service.

Adding and dispensing process chemicals

Refilling liquid process chemicals

- Open the drawer of the side unit.
- Remove the liquid process chemical container (blue marking) and place it on the open cabinet door or on a surface which is robust and easy to clean.
- Unscrew and remove the siphon. Place the container lance on the open cabinet door.
- Replace the empty container with a full one.



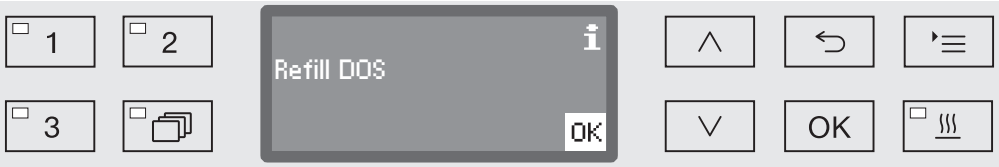
- Push the siphon into the opening of the container and screw it back on tightly. Observe the color coding.
- Wipe up any spilled neutralizing agent thoroughly.
- Place the container back in the drawer in the side cabinet.
- Close the drawer. Ensure that the dispensing tubes and cords are not kinked or trapped.
- After that, the dispensing system must be primed (see "Settings ⚑ / Priming DOS").

Checking consumption

Check consumption regularly by checking the fill levels in the supply containers and replace containers in time.

Refill indicator

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



- Confirm the message shown with *OK* and
- Refill the liquid process chemicals as described.

If the container is empty, the machine will be locked against further use.
It will be ready for use again when the supply container has been replaced.

Dispensing liquid process chemicals

For adjusting dispensing concentration, see "Additional settings/ Dispensing systems."

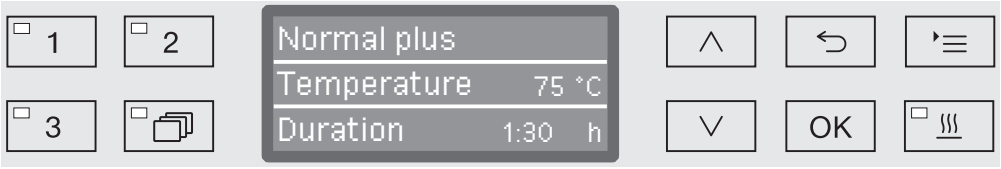
Selecting a program ...

... using the short-cut buttons

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

... from the program list

- Press the ⧉ button and
- use the ∧ and ∨ arrow buttons to highlight a program and confirm your selection with *OK*.



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

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

Always select the program depending on the type of load and degree and type of soiling.
The programs and their areas of application are described in the program overview at the end of these operating instructions.

Starting a program

- Close the door.
  When the door is closed, the LED in the ⚷ 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 ⚷ button will go out.

Starting a program using delay start

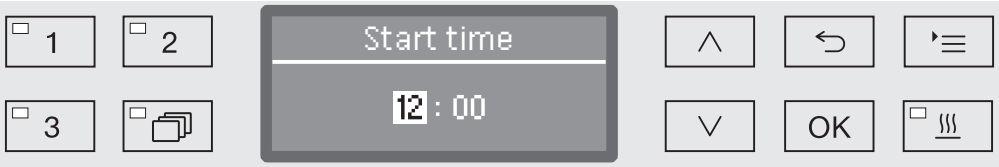
The start of a program can be delayed; for example, to benefit from economy rates of electricity or to clean the wash chamber before it is used the next day. Starting from the programmed time, a delay start time between 1 minute and 24 hours can be selected in one minute increments (see "Settings⚑/Time of day").

Delay start must be switched on in the Settings menu (see "Settings ⚑/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 program.
- Press the *OK* button before starting the program.



- Use the arrow buttons ∧ (higher) and ∨ (lower) to set the time and press *OK* to confirm your selection.

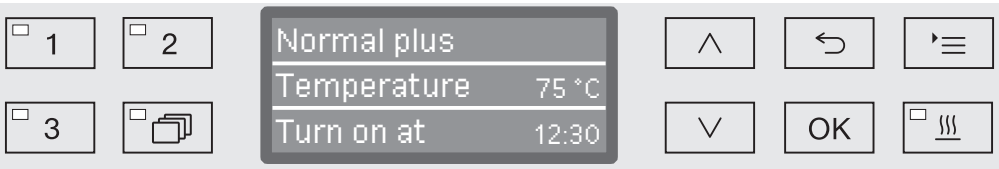
Each press of the *OK* button takes the highlighting to the next input position automatically. You cannot go back to the previous entry. If a mistake is made, the process must be canceled using the ⮌ button and repeated.

- Use the arrow buttons ∧ (higher) and ∨ (lower) to set the minutes and press *OK* to save your entry.

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 program with the set start time set is then shown on the display. If automatic deactivation has been selected (see "Additional settings/Switch off after"), the machine will switch itself off after the set time until the program start time set is reached.

Deactivating delay start

- Press the ⮌ button or switch off the machine using the ⏻ button.

Drying

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

When the drying function is activated and the door is closed, the drying system feeds heated and HEPA-filtered air into the wash chamber for active drying of the load. The heated air is discharged through the steam condenser and can be cooled down if necessary (see "Additional settings/Air cooling").

The drying function can be preselected for all programs with a drying phase or can be retrospectively switched on or off every time a program is selected (see "Settings ⚑/Drying").

Drying is activated or deactivated prior to program start by pressing the ⌇⌇⌇ button. The LED in the button ⌇⌇⌇ indicates whether the additional function is on or off. The drying time of the program can also be changed.

When the drying function is activated, the program runs longer.

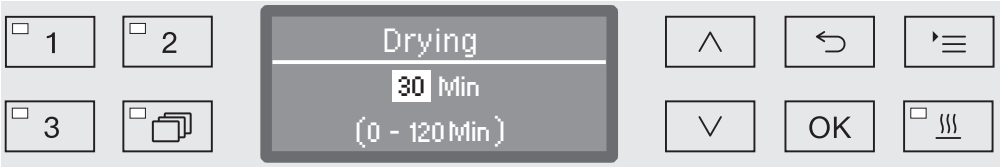
Activating and deactivating drying

- Select a program.
- Press the ⌇⌇⌇ button before the program starts.

If the drying time (Drying time) is set as changeable (Time changeable?) in the program settings, the time set can be altered. Otherwise, the drying time set cannot be changed.

If drying is deactivated

If the drying function was deactivated previously, it can be activated by pressing a button.



If the time is set as changeable, the preset drying time for this program is shown in minutes (min) in the display and the possible setting range is displayed in the bottom line.

- Use the arrow buttons ∧ (higher) and ∨ (lower) to change the drying time and press*OK* to save the setting. Drying is now activated.

If drying is activated

If the drying function has been activated, you can choose either to deactivate the drying function, activate automatic door opening or reset the drying time as described above.

– Deactivate

  Drying is deactivated.

– Set the time (only if the time is set as changeable)

  You can alter the drying time with this option.

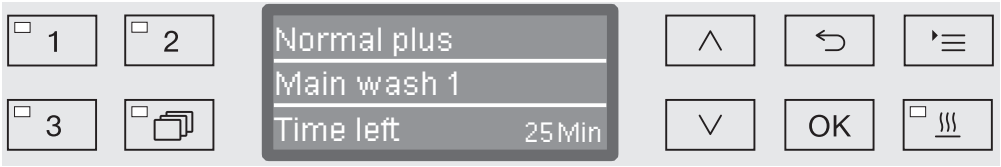
– Automatic door opening

  Activates or deactivates automatic door opening at the end of the program.

■ Select an option using the arrow buttons ∧ and ∨ and confirm this with *OK*.

Program cycle display

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



Top line

– Program name.

Middle line

The following parameters can be checked using the arrow buttons ∧ and ∨:

– Current program block, e.g. Main wash 1

– Actual or required temperature
(depending on the display set, see "Additional settings/Display: Temperature")

– A_0 value,

– Conductivity
(only with conductivity meter).

– Cycle number,

Bottom line

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

Program end

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

Top line

– Program name.

Middle line

Continuously alternating between:

– Parameter met/not met,

– A_0 value,

– Conductivity in final wash block
(only with conductivity meter).

– Cycle number,

Bottom line

– Program 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 state, an audible tone also sounds for approx. 10 seconds (see "Settings⚑/Volume").

Interrupting a program

The factory default setting prevents interruption of programs while they are running. If required, this function can be activated by Miele Technical Service.

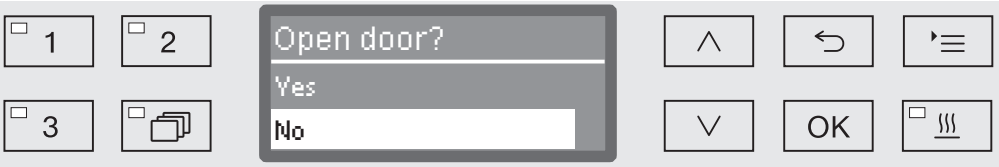
A program which is already running should only be interrupted if strictly necessary, e.g. if the wash load is moving about significantly.

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

- Press the ⊶ button.

You are asked if you really wish to open the door.
If the temperature in the wash chamber is above 140°F (60°C) at the moment, it is first necessary to acknowledge the following message:

- Confirm the message with *OK*.



- Use the ∧ and ∨ arrow buttons to select Yes.
- Pressing the *OK* button interrupts the program.

Selecting Yes interrupts the program and the door opens. The display shows the following message:

- Rearrange the items so that they are stable and close the door.

The program continues from the point at which the interruption occurred. Every program interruption is recorded in the cycle report.

If no button is pressed for several seconds, or if the process is canceled using the ⮌ button, the display will revert to the program sequence display. The program is not interrupted.

Canceling a program

⚠ If a program is canceled, the items in the machine must be reprocessed again.

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

Program canceled due to a fault

The program stops prematurely and an error message appears in the display.

Take appropriate steps to resolve the fault, depending on its cause (see "Frequently asked questions").

Canceling a program manually

A program which is already running should only be canceled if necessary, e.g. if the wash load is moving in the chamber.

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

- Use the ∧ and ∨ arrow buttons to select Yes.
- Pressing the *OK* button interrupts the program. Entry of a code may also be required (see "Additional settings/Code").

If no button is pressed for several seconds, or if the process is canceled using the ⮌ button, the display will revert to the program sequence display.

Restarting the program

- Start the program again or select a new program.

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 check ☑. You will find an explanation of how to change settings after the overview.

Settings

- Delay start
  - No ☑
  - Yes ☐
- Drying
  - No ☐
  - Yes ☑
    - Automatic door opening
      - No ☑
      - Program end ☐
- DOS priming
  - DOS_
- Filter maintenance
  - Coarse filter/HEPA filter
    - Reset (Yes/No)
  - Filter combination
    - Reset (Yes/No)
    - Interval ⇨ 10
- Language
  - deutsch ☐
  - english (GB) ☑
  - ... ☐
- Time of day
  - Set
  - Display
    - On ☐
    - On for 60 seconds ☐
    - Do not display ☑
  - Time format
    - 12 h ☐
    - 24 h ☑
- Volume
  - Keypad tone
  - Buzzer tones
    - Program end
    - Warning

Delay Start

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

■ Open the menu as follows:

button

▸ Settings

▸ Delay start

– No

Delay start is deactivated.

– Yes

Delay start is activated and can be used for all programs.

■ 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 programs with a drying phase (see "Program charts").

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

When the drying function is activated and the door is closed, the drying system feeds heated and HEPA-filtered air into the wash chamber for active drying of the load. The heated air is discharged through the steam condenser and can be cooled down if necessary (see "Additional settings/Air cooling").

■ Open the menu as follows:

≡ button

▸ Settings

▸ Drying

– No

The drying function is automatically deactivated for all programs.

– Yes

The drying function is activated for all programs. The program duration is lengthened if the drying function is activated.

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

■ Press *OK* to save the setting.

If the Yes option was selected, Automatic door opening can be activated for all programs. This opens the door at the end of the program, allowing any heat remaining in the wash chamber to dissipate faster.

– No

The door remains closed at the end of the program.

– Program end

As soon as the temperature in the wash chamber has dropped below 140°F (60°C), the comfort door closing aid opens the door slightly. Before the door is opened, an appropriate message is shown in the display and a signal tone sounds if the buzzer has been activated.

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

■ Press *OK* to save the setting.

DOS priming

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

The DOS system must be primed only if:

– It is being used for the first time.

– The reservoir was exchanged.

– The dispensing system has been emptied completely.

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

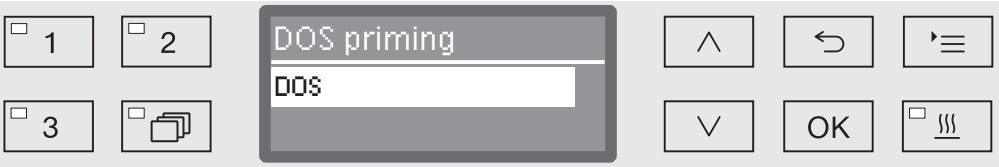
■ Open the menu as follows:

☰ button

▸ Settings

▸ DOS priming

▸ DOS... (name of dispensing system)

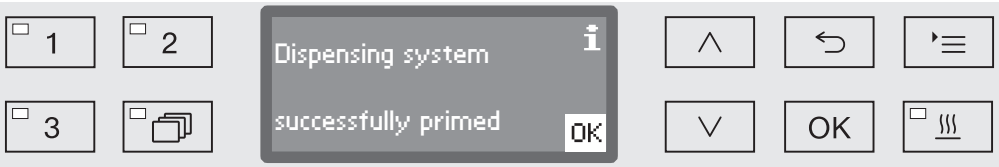


Automatic priming will start when the dispensing system is selected. Once started, the automatic priming process can no longer be canceled.

■ Select a dispensing system using the ∧ and ∨ arrow buttons.

■ Press *OK* to start the priming process.

Automatic priming is successfully completed when the following message appears in the display:



Filter maintenance

Changing the air filter

The air filter in the drying system must be replaced regularly with a new one. For more information on changing the filter, see "Maintenance/Changing the filter".

Cleaning the filters in the wash chamber

The filters in the wash chamber must be checked and cleaned daily, see "Maintenance/Cleaning the filters in the wash chamber".
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

– 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.

■ Use the ∧ and ∨ arrow buttons to select an option and press *OK* to confirm your selection.

Resetting the counter

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

– Yes

The counter is reset.

– No

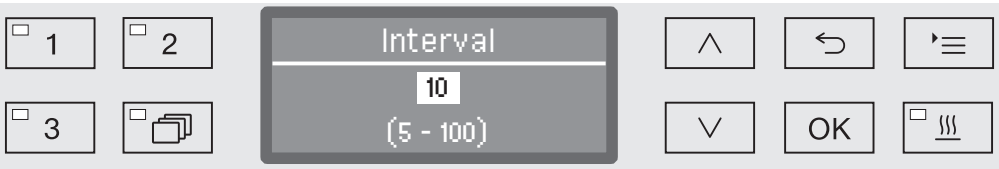
The counter will not be reset.

■ Use the ∧ and ∨ arrow buttons to select an option and press *OK* to confirm your selection.

Setting the interval

The interval depends on the number of programs 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 program sequences per day and 5 workdays in the week, this yields an interval of 10 (2 x 5 = 10). With a higher incidence of particles, a shorter interval should be selected in order to clean the filters several times weekly.



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

■ Use the arrow buttons ∧ (higher) and ∨ (lower) to set the Interval.

■ Press *OK* to save the setting.

Language

The language set will be used in the display.

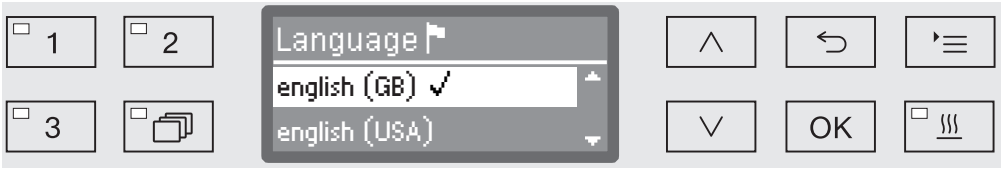
■ Open the menu as follows:

☰ button

▸ 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 already been set.



A list will appear in the display with all languages available. The currently selected language has a check ✓ 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 daylight savings time and standard time.
You need to make this adjustment yourself as necessary.

Selecting the clock format

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

- Open the menu as follows:

≡ button

▸ Settings

▸ Time of day

▸ Time format

– 12 h

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

– 24 h

Time of day display in 24-hour format.

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

Setting the clock

To set the format for the time of day:

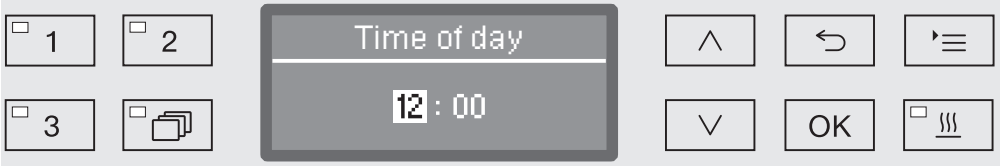
- Open the menu as follows:

≡ button

▸ Settings

▸ Time of day

▸ Set



- Use the arrow buttons ∧ (higher) and ∨ (lower) to set the 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 canceled 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.

Display

If necessary, the machine can set to standby for use 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 "Additional settings/Switch off after".

Once the set standby time elapses, the machine is activated for use. During standby, the machine remains switched on and the time is shown on the display. Pressing any button reactivates the machine.

■ Open the menu as follows:

☰ button

▸ Settings

▸ Time of day

▸ Display

– On

Once the set standby time elapses, the machine is permanently activated for use and the time appears on the display.

– On for 60 seconds

Once the set standby time elapses, the machine is activated for use for 60 seconds. After the 60 seconds have elapsed, the machine switches off. The time appears on the display while the machine is in standby.

– Do not display

After the standby time has elapsed, the machine switches off. The time no longer appears on the display.

■ Use the ∧ and ∨ arrow buttons to select an option.

■ 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)

– Program end

– System messages (information)

■ Open the menu as follows:

button

▸ Settings

▸ Volume

– Buzzer tones

Setting the buzzer volume for program end and system messages (information).

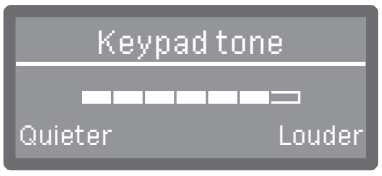
– Keypad tone

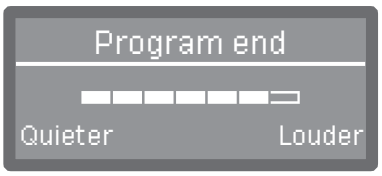
Setting the buzzer volume for keypad tone.

■ Select an option using the ∧ and ∨ 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 Program 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.

The Additional settings menu incorporates all administrative processes and settings.

The Additional 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 check ☑. You will find an explanation of how to change settings after the overview.

Additional settings

- Code
  - Cancel program
    - Code required ☐
    - Code not required ☑
  - Change code
- Date
  - Date format
    - DD:MM:YY ☑
    - MM:DD:YY ☐
  - Set
- Log book
  - Consumption: Water
  - Consumpt.:Cleaning agent
  - Consumpt.: Rinsing aid
  - Consumpt.: Neutra. agent
  - ...
  - Operating hours
  - Program cycle counter
  - Service interval
- Report
  - Short ☑
  - Long ☐
- Temperature unit
  - °C ☑
  - °F ☐
- Program settings
  - Change program
    - ...
  - Reset program
    - ...
- Air cooling
  - Yes ☐
  - No ☑
- Release program
  - All ☑
  - Selection
    - ... ☐
- Move program
  - 1 Normal plus
  - 2 Standard
  - 3 Intensive
- Dispensing system
  - DOS_
    - Active
    - Inactive
    - DOS priming
    - Concentration
    - Change name
- Test program
  - 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 ☐
- Factory default
  - Reset
    - Program settings only
    - All settings
    - No
- Software version
  - EB ID XXXXX
  - EGL ID XXXXX
  - EZL ID XXXXX
  - EFU ID XXXXX
  - LNG ID XXXXX

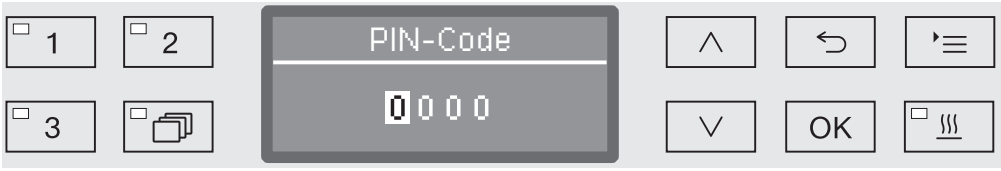
Code

The Additional settings menu incorporates relevant functions and system settings which require an enhanced knowledge of machine reprocessing. Access to the menu can therefore be protected by a four digit code.
It is not possible to block individual options or use multiple codes at the same time.

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

Entering a PIN code

If access to the Additional settings menu is blocked, you will be prompted to enter the code when it is selected.



If you do not have the code, contact a user with appropriate access rights or cancel the process using the ⮌ button.

- 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 canceled 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.

Blocking the cancellation of a program

A program which is already running should only be canceled if necessary, e.g. if the wash load is moving in the chamber. Access to the option of canceling a program can be blocked using the code.

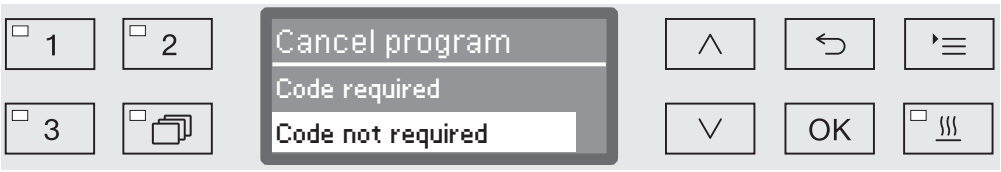
■ Open the menu as follows:

☰ button

▸ Additional settings

▸ Code

▸ Cancel program



– Code required

A program can only be canceled by entering the code.

– Code not required

All users can cancel running programs at any time.

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

■ Press *OK* to save the setting.

Changing 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 a code is lost, a new code must be issued by Miele Service.

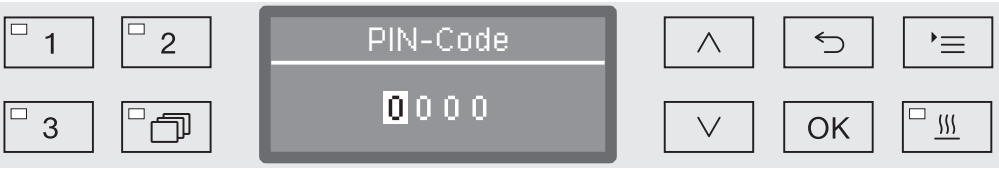
- Open the menu as follows:

≡ button

▸ Additional settings

▸ Code

▸ Change code



- 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 canceled using the ⮌ button and repeated. Entered digits are replaced by a * symbol.

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

Date

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:

☰ button

▸ Additional 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

▸ Additional settings

▸ Date

▸ Set

- Use the arrow buttons ∧ (higher) and ∨ (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 canceled using the ⮌ button and repeated.

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

Log book

The entire life cycle of the machine, including consumption data for water and process chemicals, as well as operating hours and program cycles are recorded in the log book.

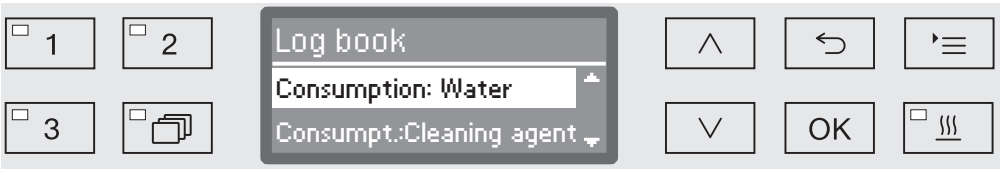
Miele Service can also use the log book to calculate a recommendation for service intervals.

■ Open the menu as follows:

▸≡ button

▸ Additional settings

▸ Log book



– Consumption: Water

Display of the total amount of water used in liters (l).

– Consumpt.:Cleaning agent

Display the total amount of liquid process chemicals used in liters (l).

– Consumpt.: Rinsing aid

Display the total amount of neutralizing agent used in liters (l).

– Consumpt.: Neutra. agent

Display the total amount of neutralizing agent used in liters (l).

– Operating hours

Display of the total number of operating hours

– Program cycle counter

Total of all completed programs. There is no breakdown of individual programs. Canceled programs are not included.

– Service interval

Date of the next service (entered by Miele 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 program, the temperature display is refreshed every 2 to 5 seconds depending on the program stage. The temperature can be displayed in degrees Celsius (°C) or Fahrenheit (°F).

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

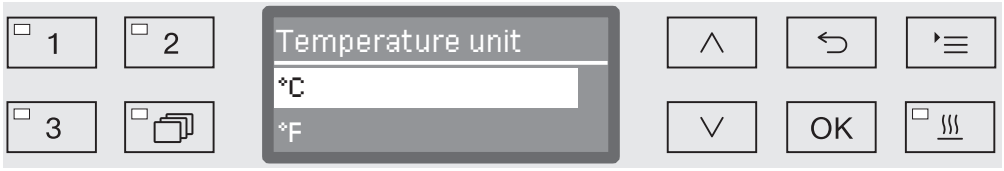
If the temperature unit is changed to °F, the temperature displayed is automatically recalculated.

- Open the menu as follows:

≡ button

▸ Additional 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.

Program settings

You can use this menu to customize the current program to suit technical requirements and the wash load or to reset all additional functions to the factory default settings.

Additional in-depth knowledge is required to alter program settings and this should only be done by an experienced user or by a Miele Service Technician.

More information can be found in "Program settings."

Air cooling

During the drying phase, the hot exhaust air from the wash cabinet is released into the room via the steam condenser. Depending on the size of the room, this can heat up the room.

To reduce this effect, the heated air can be cooled down during the drying phase using a fine spray mist in the steam condenser.

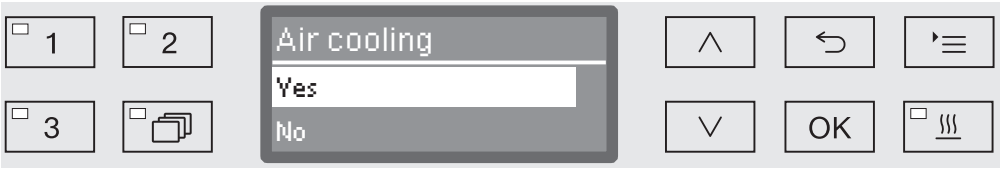
Using the air cooling feature in the steam condenser will increase water consumption.

■ Open the menu as follows:

☰ button

▸ Additional settings

▸ Air cooling



– Yes

Hot air is cooled using the steam condenser.

– No

Hot air is released uncooled into the room.

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

■ Press *OK* to save the setting.

Program release

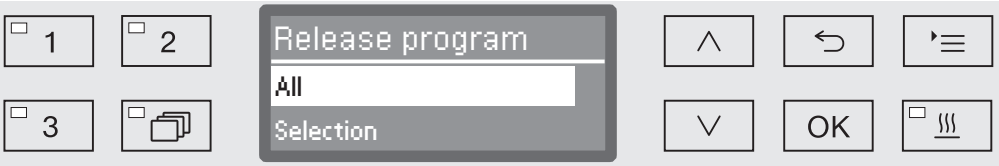
It is possible to block access to individual programs. Blocked programs are not available for selection; it can thus be ensured, for example, that only validated programs are used.

- Open the menu as follows:

⁝≡ button

▸ Additional settings

▸ Release program



– All

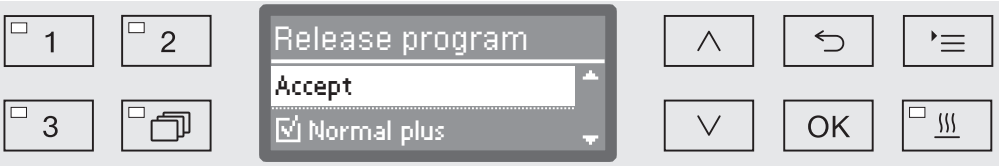
All programs are released for use.

– Selection

A selection of programs is 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 programs.



Programs are selected by multiple choice. A box ☐ is shown next to all programs in the list. If a program is released, there is a check ☑ in the box. An empty box indicates a blocked program.

- Programs 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 program: allocating program selection buttons

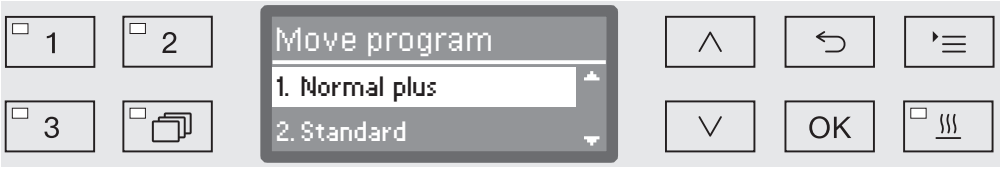
You can sort the program selection list to suit your requirements and therefore also allocate the program selection buttons 1, 2 and 3.

■ Open the menu as follows:

‣≡ button

▸ Additional settings

▸ Move program



All enabled programs are shown in the program list (see "Further settings/Enabling programs"). A program's position in the program list is the determining factor for assigning the program selection buttons. Programs are numbered from 1 - n. The first three programs in the list are assigned to the program selection buttons; for example:

– 1. Normal plus on program selection button 1

– 2. Standard on program selection button 2

– 3. Intensive on program selection button 3

– 4. Inorganic

– 5. Organic

– etc.

■ Use the ∧ and ∨ arrow buttons to select the program you would like to move.

■ Confirm your selection with *OK*.

Now you can move this program within the list.

■ Use the ∧ and ∨ arrow buttons to move the program to the position you want.

■ Press *OK* to save the program to the selected position.

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

The process can be repeated as often as you wish.

■ Press the ⮌ button to exit the menu.

Dispensing systems

Up to two process chemicals can be dispensed in each wash block. Using the following menu you can activate and vent the dispensing system, change the name if necessary and set the dispensing concentration for all programs.

Activating dispensing systems

Individual dispensing systems can be activated or deactivated for all programs as follows.

■ Open the menu as follows:

☰ button

▸ Additional settings

▸ Dispensing system

▸ DOS... (name of dispensing system)

– Active

The selected dispensing system is activated. Dispensing will only occur in the appropriate wash blocks (see "Program charts").

– Inactive

The selected dispensing system is deactivated for all programs.

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

■ Press *OK* to save the setting.

DOS priming

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

The DOS system must be primed only if:

– It is being used for the first time.

– The reservoir was exchanged.

– The dispensing system has been emptied completely.

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

■ Open the menu as follows:

☰ button

▸ Additional settings

▸ Dispensing system

▸ DOS... (name of dispensing system)

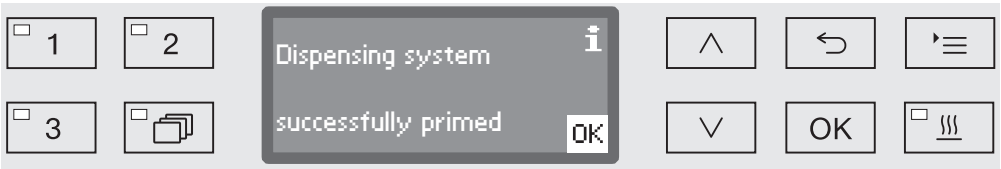
▸ DOS priming

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

■ Select a dispensing system using the ∧ and ∨ arrow buttons.

■ Press *OK* to start the priming process.

Automatic priming is successfully completed when the following message appears in the display:



Setting the dispensing concentration for liquid process chemicals

The dispensing concentration for liquid process chemicals, e.g. in the case of a change of process chemicals, can be adjusted for all programs at once.

The dispensing concentration must be set in accordance with the manufacturer's instructions or with the required processing result.

The consumption of liquid agents is recorded in the log book (see "Further settings/Log book").

- Open the menu as follows:

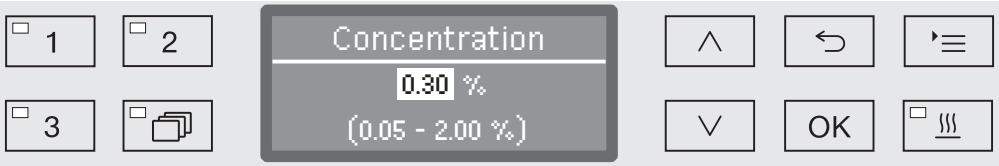
≡ button

▸ Additional settings

▸ Dispensing system

▸ DOS_

▸ Concentration



The dispensing concentration can be adjusted in increments of 0.01%. The possible range is shown in the bottom line of the display.

- Set the concentration using the arrow buttons ∧ (higher) and ∨ (lower).
- Press *OK* to save the setting.

Renaming a dispensing system

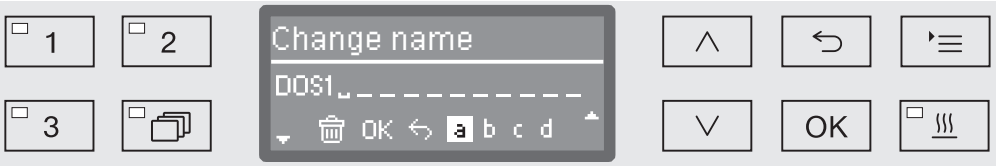
If necessary, you can add an additional term to the designations of the dispensing systems "DOS1" etc., e.g. "DOS1 detergent". The designation "DOS" with the associated number cannot be changed.

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

If the option

– Change name

has been selected, the display changes to the following view:



The current name is shown on the second line of the display. This can be changed using the options shown in the bottom line. The top line shows which option has been selected from the bottom line.

Names may consist of up to 15 characters including spaces. The following options are available:

– Letters from A to Z;
each new word will start with a capital letter.

– Numbers from 0 to 9.

– Space characters ␣.

– Use the 🗑 symbol to delete the last position.

– The name is saved when the OK symbol in the display is selected. The display will then revert to the initial menu.

– The ⮌ symbol in the display or the ⮌ button end the process without saving the name change. The display reverts to the initial menu.

■ Use the arrow buttons ∧ (right) and ∨ (left) to move the cursor to the option you require.

■ Confirm each entry with *OK*.

Test program

Various programs are available for monitoring cleaning performance in routine testing.

See "Maintenance" for more information on these programs.

Interface

With Miele machines, cleaning processes can be documented. To enable this, Miele machines 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 devices (computers, printers, etc.) which comply with EN/IEC 60950.

Contact Miele for more information on communication modules, software and suitable printers.

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.

Configuring the interface

⚠ The interface must be configured only by a qualified and competent person.

■ Open the menu as follows:

☰ button

▸ Additional settings

▸ Interface

– Ethernet

Configuration of an Ethernet interface.

– RS232

Configuration of a serial RS232 interface.

■ Select the type of interface and press *OK* to confirm your selection.

The parameters for the interface must be configured next.

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

RS-232

– 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

– 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.

Following parameters are preconfigured:

Baud rate	9600
Bit	8
Parity	none
Stop bits	1

Water hardness

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

For more information see "Water softener."

Display: Temperature

The wash cabinet temperature can be viewed during a program. 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

▸ Additional 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 program, 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

▸ Additional settings

▸ Display

– Contrast

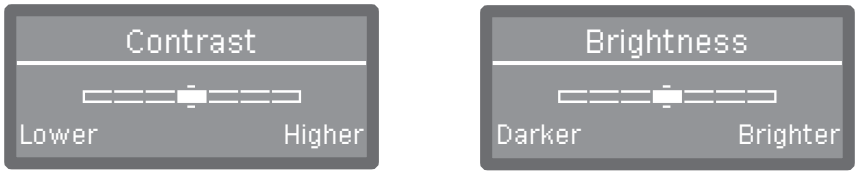
Set the contrast.

– Brightness

Set the brightness.

■ 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.

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.

Ready for operation (standby)

During standby, the machine remains switched on and the time is shown on the display. Pressing any button reactivates the machine.

- To activate standby, the Auto-Off function must be enabled under Additional settings/Switch off after and a standby time set.
- In addition, an option to display the time of day must be selected in Settings ⚑/Time of day/Display.

Once the set standby time elapses, the machine is activated for use.

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 Additional 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 automatically.

- Use the ⏻ button to switch the machine on again.

Switching off after activating

■ Open the menu as follows:

‣≡ button

▸ Additional 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.

Factory default

All parameters which have been altered can be reset to their default settings. Control parameters and program settings are reset separately.

■ Open the menu as follows:

≡ button

▸ Additional settings

▸ Factory default

▸ Reset

– No

Altered parameters are maintained.

– Program settings only

All program settings are reset.

Programs saved on free memory locations remain unchanged.

– All settings

All control parameters, including dispensing quantities and water hardness, will be reset.

■ Use the ∧ and ∨ arrow buttons to select an option.

■ Confirm your selection with *OK*.

The machine reboots.

All settings

When All settings is selected and the machine is restarted, you will be prompted to re-enter basic parameters such as the language, date, time, water hardness, etc.

■ Enter the language, date, time, and so on.

When the last entry is made, all the parameters are saved and the factory default settings have been reset. The display changes and shows the last selected program.

Software version

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

For more information, see "Service."

Adjusting program settings

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

Additional in-depth knowledge is required to alter program settings and this should only be done by an experienced user or by a Miele Service Technician.

Program structure

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

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

Program header

– Rinse arm monitoring

  It is possible to monitor spray arm rotation in selected wash blocks.

– Conductivity Limit

  The conductivity of the water in the final rinse phase is monitored using a conductivity measuring module (LFMMc).

– Water volume change

  The water intake quantity can be increased or reduced in each program. The setting is then valid for all program blocks including water intake.

– Drainage time

  If the on-site drainage system is insufficient to drain the waste water from the wash cabinet within the time allocated, the drainage time can be increased.

Program settings

Program blocks

The wash block sequence is predefined and is the same as in the program chart (see "Program chart").

– Pre-rinse 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 104 - 140°F (50°C and 85°C) with the addition of an appropriate cleaning detergents.

– Interim rinse 1 to 4

  In the interim rinse stages the process chemicals from the previous wash blocks are rinsed off and neutralized where necessary by the addition of neutralizing agents.

– Final rinse 1 to 2

  To avoid deposits on the wash load, demineralized (DI) water should preferably be used if available for the final rinse.

– Drying

  Adequate drying reduces residual moisture on the load.

Opening the menu

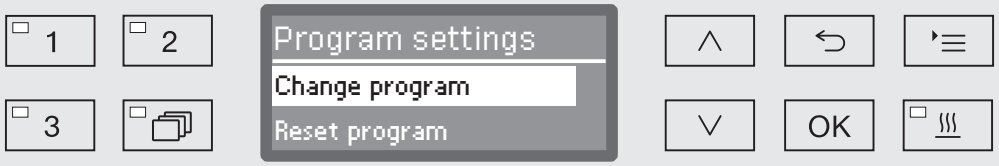
The menu for program settings is locked for users by factory default. If required, this can be released by Miele Service.

■ Open the menu as follows:

▸≡ button

▸ Additional settings

▸ Program settings



– Change program

Programs can be adapted to suit specific technical requirements.

– Reset program

Reset a program to factory default settings. Programs newly installed by Miele Service will be deleted with this option.

Resetting a program

Programs can be individually reset to factory default.

Programs stored on a free memory location are irretrievably deleted.

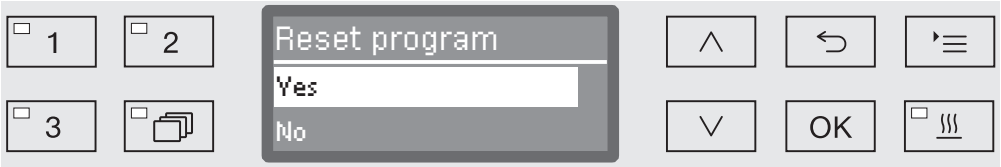
...

▸ Program settings

▸ Reset program

All programs are then listed in the display.

■ Use the ∧ and ∨ arrow buttons to select the program and confirm your selection with *OK*.



– Yes

The program will be reset to factory default.

– No

Program parameters will not be changed.

■ Use the ∧ and ∨ arrow buttons to select an option and confirm your selection with *OK*.

Altering a program

You can alter all parameters which are identified as changeable in the program charts. Other settings can only be altered by Miele Service.

A program setting is altered in two steps:

– First the wash blocks must be reallocated to the program or the existing allocation confirmed again. Only allocated program blocks can be parameterized.

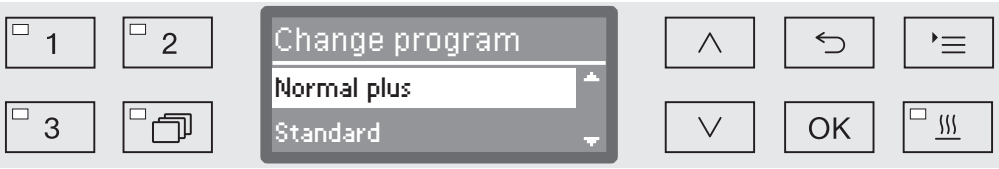
– Then the program parameters can be altered.

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

...

▸ Program settings

▸ Change program

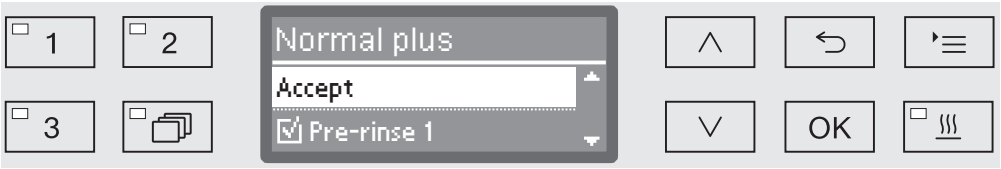


■ Select the program you want to alter.

For more information, see "Allocating wash blocks."

Allocating wash blocks

For every program change, the wash blocks must first be allocated.



Allocation is by multiple choice. A box ☐ is shown next to all wash blocks in the display. If a wash block is allocated to the program, there is a check ☑ in the box. This wash block is allocated to the program by ticking the box or the allocation can be removed by removing the tick.

- The wash blocks can be selected or deselected using the ∧ and ∨ arrow buttons and confirming with *OK*.
- To save the selection, select the Accept option at the end of the list and confirm with *OK*.
- If you want to adopt the preset wash blocks without any changes, you can confirm the Accept option immediately with *OK*.

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

Spray-arm monitoring

The cleaning result depends on the wash water reaching all surfaces and cavities of the wash load. To do this the wash water is distributed throughout the wash chamber by the rotation of the machine, basket and mobile unit spray arms.

It is possible to monitor the rotation speed of the spray arms during a program.

The rotation speed is determined using special magnetic spray arms. The sensors of this machine cannot detect the magnetic spray arms of older basket and mobile unit models and therefore these cannot be monitored.

If the rotational speed detected is not within a preset range, this is an indication of blockage due to loading errors or build-up of foam in the water circulation system.

The rotation speed range depends on the area of application, the program and the mobile unit or basket used.

Switching on spray arm monitoring

Spray arm monitoring is switched on and off for all wash blocks.

...

▸ Rinse arm monitoring

– Off

Spray arm monitoring is switched off.

– Off for basket

Only the machine spray arms are monitored. The sensors for the basket and mobile unit spray arms are deactivated.

– On

All spray arms are monitored.

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

■ Press *OK* to save the setting.

The action desired at different spray arm rotational speeds is set in each wash block.

...

▸ Select wash block, e.g.: Main wash 1

▸ Rinse arm monitoring

– On -> Stop

A program in operation is interrupted if the rotational speed deviates. The interruption is shown on the display and noted in the cycle report.

– On -> Warning

The program continues to run normally if the rotational speed deviates. Only a message appears on the display and the deviation is noted in the cycle report.

– Off

No message appears and the program continues to run normally.

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

■ Press *OK* to save the setting.

Measuring conductivity

Electrical conductivity in a water based solution is a measure of the total amount of dissolved conductive substances (e.g. salts, acids, etc.).

The electrical conductivity during the final rinse phase is relevant for the processing result. Salts and deposits in the water remain on the wash load after drying.
High conductivity in this phase can limit the intended use of processed wash load items.

The conductivity of water used is affected by insufficient/varying quality of the water used, caused by e.g.,

– an empty water softener and/or demineralization cartridge (optional accessory),

– a ruptured membrane in the reverse osmosis unit (optional accessory),

– on-site work on the water supply,

– transposed water connections after maintenance work.

Possible causes for carry-over of conductive substances from previous wash blocks are e.g.:

– residual used water,

– residual initial contamination,

– residual process chemicals,

– properties of items being processed, e.g. hollow,

– type of load,

– foam.

The conductivity of the final rinse phase is the total of the conductivity of water used in water inflow and the carry-over of conductive substances from the previous wash blocks.

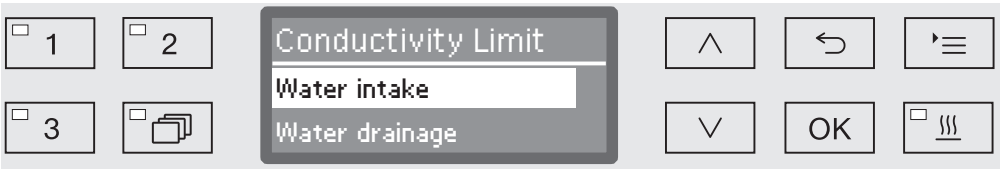
The conductivity meter of the machine monitors the conductivity of the wash water. Non-conductive substances, e.g. non-ionic tensides are not detected by the sensor.

Activating conductivity measuring

Conductivity measuring is activated individually for each program. Conductivity is measured in the final rinse phase.

...

▸ Conductivity Limit



– Water intake

The electrical conductivity of the water after water intake during final rinse phase is measured.

– Water drainage

The electrical conductivity of the water at the end of the final rinse phase is measured.

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

■ Press *OK* to save the setting.

Following selection a maximum limit value for electrical conductivity must be set.

Setting limit values

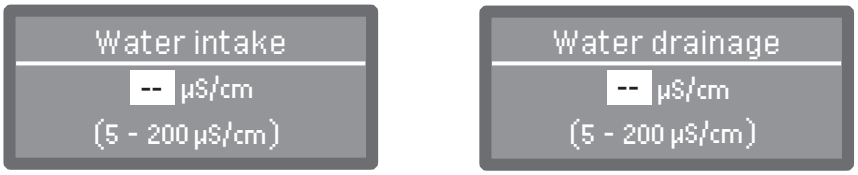
The limit values for Water intake and Water drainage are set individually.

...

▸ Conductivity Limit

▸ Water intake **and/or** Water drainage

▸ Set



The limit values are set in increments of 1. The possible range is shown in the bottom line of the display.

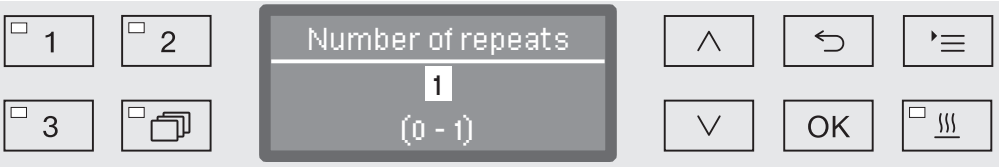
■ Use the arrow buttons ∧ (higher) and ∨ (lower) to set the limit value.

■ Press *OK* to save the limit value.

Repeating if limit value is exceeded

If the conductivity for incoming water or draining water exceeds the limit value, the measurement can be repeated.
If the limit value for incoming water is too high, the water is pumped out and fresh water is allowed in again. If the conductivity value at the end of the final rinse phase exceeds the limit value for draining water, the entire final rinse block is repeated.
If the measured value still exceeds the limit value after the repeat measurement, the program ends and a fault message is generated. The message can be shown on the display and also in the cycle report.

...
- ▸ Conductivity Limit
  - ▸ Water intake and/or Water drainage
    - ▸ Number of repeats

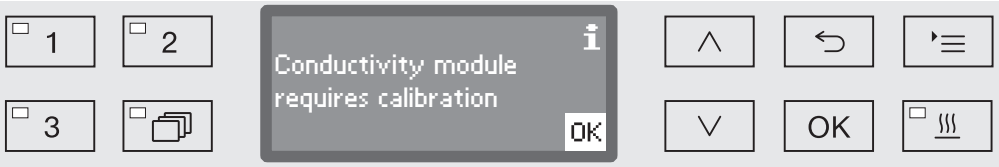


The setting value is entered in increments of 1. The possible range is shown in the bottom line of the display.

- Use the arrow buttons ∧ (higher) and ∨ (lower) to set the number of repetitions.
- Press *OK* to save the setting.

Calibrating the conductivity meter

At regular intervals, e.g. in the course of maintenance, the conductivity meter must be calibrated by Miele Technical Service. Calibration outside the maintenance cycles may also become necessary.



- If this message appears, contact Miele Technical Service.

Activating the conductivity sensor

The conductivity is measured during the final rinse phase (see program charts).

...

▸ Final rinse 1 **or** Final rinse 2

▸ Conductivity Monitoring

– Yes

The conductivity is being measured.

– No

The conductivity sensor is deactivated.

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

■ Press *OK* to save the setting.

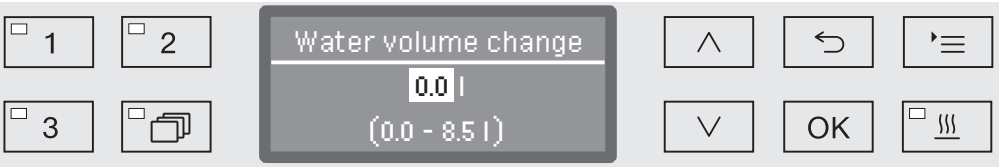
Changing water quantity

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 process chemicals 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.

...

▸ Water volume change



The water quantity can be increased in 17 oz. (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:

In this case, the drainage time can be increased.

...

▸ Drainage time

– Standard

The standard drainage time setting applies.

– Extended

Drainage time is increased by a pre-set increment. Program duration will increase with this setting.

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

■ Press *OK* to save the setting.

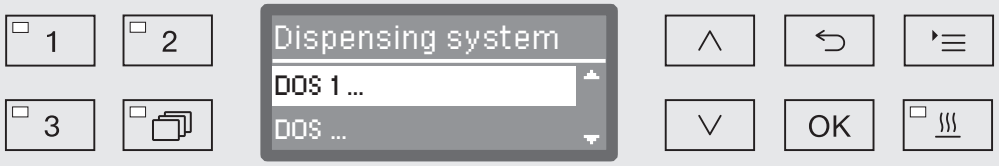
Setting the concentration

Up to two process chemicals can be dispensed in each wash block. It is also possible to control the same dispensing system twice.

...

▸ Dosage 1 or Dosage 2

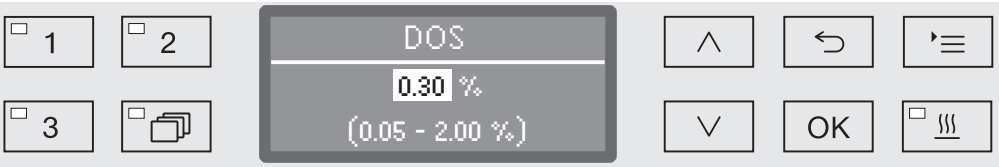
▸ Dispensing system



The number of dispensing systems can vary according to model and the number of connected DOS modules.

- Select an option using the ∧ and ∨ arrow buttons and save your choice with *OK*.

Then you can set the dispensing concentration in % (percent).



Adjustment is in increments of 0.01%. The possible range is shown in the bottom line.

- Use the arrow buttons ∧ (higher) and ∨ (lower) to set the dispensing concentration.
- Press *OK* to save the setting.

Setting the wash block temperature

The wash block temperature is reached by heating up the chamber wash solution. The temperature must be suited to the requirements of the task.

At temperatures over 131°F (55°C), protein denaturing occurs, which can cause the soiling to fix.

...

▸ Wash block temperature

– Without heater

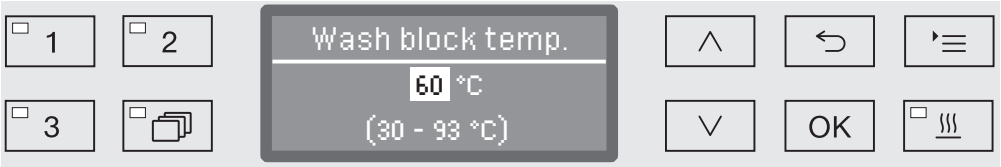
The chamber wash solution is not heated up. The temperature in the wash cabinet is the result of the temperature of the previous wash block and the influx of water.

– Set

Set a wash block temperature.

- Select an option using the ∧ and ∨ arrow buttons.
- Press *OK* to save the setting.

When Set is selected, the wash block temperature must then be entered.



Adjustment is in increments of 1. The possible range is shown in the bottom line.

Dispensing of process chemicals occurs at a default dispensing temperature set at the factory. If process chemicals are to be dispensed in this wash block, the lowest temperature that can be set will be the dispensing temperature. It is not possible to set a lower value.

- Use the arrow buttons ∧ (higher) and ∨ (lower) to set the wash block temperature.
- Press *OK* to save the setting.

Setting the holding time

The holding time is the duration in which the wash block temperature is kept constant.

...

▸ Holding time

The duration can be set in 1 minute increments. The possible range is shown in the bottom line.

If process chemicals are to be dispensed in this wash block, the holding time will equal at least the DOS exposure time. It is not possible to set a lower value.

- Use the arrow buttons ∧ (higher) and ∨ (lower) to set the holding time.
- Press *OK* to save the setting.

Drying unit

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

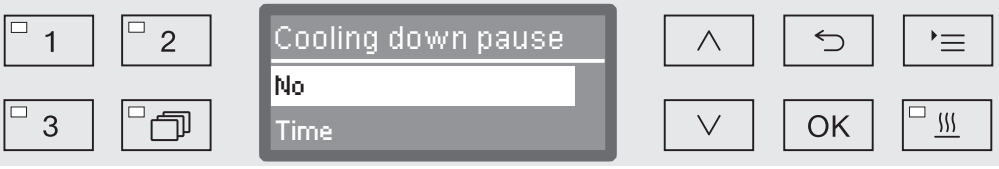
When the drying function is activated and the door is closed, the drying system feeds heated and HEPA-filtered air into the wash chamber for active drying of the load. The heated air is discharged through the steam condenser and can be cooled down if necessary (see "Additional settings/Air cooling").

Cooling down pause

A cooling down pause can be inserted between the end of the final rinse phase and starting of the drying system. During this pause, water vapor is extracted from the wash chamber and condensed by the steam condenser. This reduces the moisture level in the wash chamber, which promotes drying.

...

▸ Cooling down pause



– No

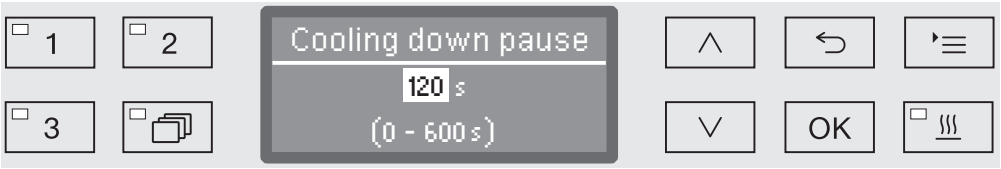
The drying system starts immediately after the rinse phase without a cooling down pause.

– Time

The cooling down pause is activated for a duration which can be set.

- Use the arrow buttons ∧ and ∨ to select an option and press *OK* to confirm your selection.

When Time has been selected, the duration of the cooling down pause must then be set.



The setting value is entered in increments of 10. The possible range is shown in the bottom line of the display.

- Use the arrow buttons ∧ (higher) and ∨ (lower) to set the duration of the cooling down pause.
- Press OK to save the setting.

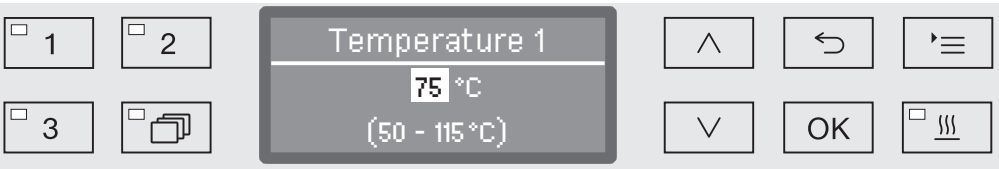
Setting the temperature and time

The drying phase consists of two blocks. The temperature and duration (holding time) must be set for each block.
The first block (temperature 1 and drying time 1) is not assigned in all programs, but if necessary can be set up by Miele Technical Service.

Setting temperature 1

...

▸ Temperature 1



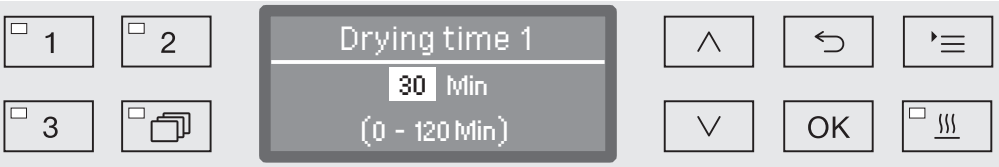
The temperature is set in 5° increments. The possible range is shown in the bottom line of the display.

- Use the arrow buttons ∧ (higher) and ∨ (lower) to set the temperature.
- Press *OK* to save the setting.

Setting drying time 1

...

▸ Drying time 1



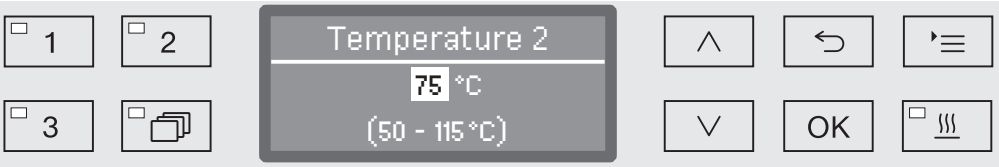
The holding time is set in 1 minute increments. The possible range is shown in the bottom line of the display.

- Use the arrow buttons ∧ (higher) and ∨ (lower) to set the holding time.
- Press *OK* to save the setting.

Setting temperature 2

...

▸ Temperature 2



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

- Use the arrow buttons ∧ (higher) and ∨ (lower) to set the temperature.
- Press *OK* to save the setting.

Setting drying time 2

...

▸ Drying time 2

▸ Set

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

- Use the arrow buttons ∧ (higher) and ∨ (lower) to set the holding time.
- Press *OK* to save the setting.

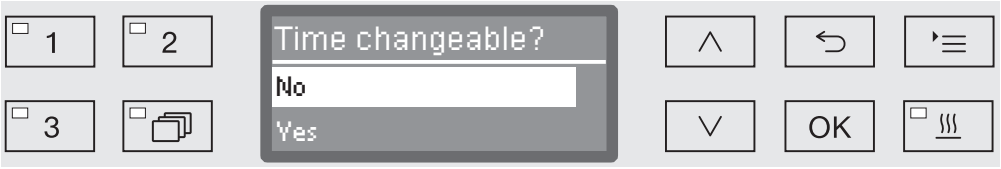
Time changeable

If required, the drying time can be set again and saved before the start of every program.

...

▸ Drying time 2

▸ Time changeable?



– Yes

The drying time can be set again and saved before the start of every program.

– No

The drying time cannot be changed.

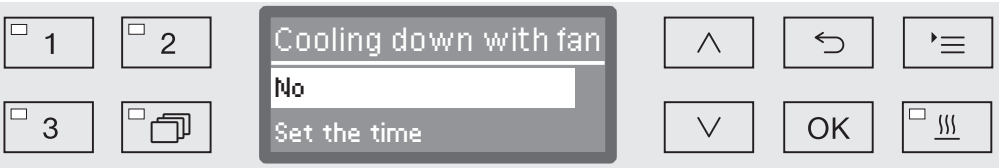
- Select an option using the ∧ and ∨ arrow buttons.
- Press *OK* to save the setting.

Blower cooling

After drying, cooling of the wash load can be accelerated by the drying system. To do so the drying system blower runs with the heating switched off, cooling the interior of the wash chamber.

...

▸ Cooling down with fan



– No

The drying system blower is not switched on.

– Set the time

The drying system blower will run for a specified duration.

- Use the arrow buttons ∧ and ∨ to select an option and press *OK* to confirm your selection.

When Set the time has been selected, the duration of the cooling down pause must then be set.

The setting value is entered in increments of 10. The possible range is shown in the bottom line of the display.

- Use the arrow buttons ∧ (higher) and ∨ (lower) to set the cooling down duration.
- Press OK to save the setting.

Documentation of processes

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

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

- Machine type and serial number
- Date
- Program start and program name
- Cycle number
- Wash 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
- Program end
- System messages, e.g. refill salt.

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

Memory

Depending on the size of the report, between 10 and max. 20 cycle reports are stored in an internal power loss 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 program 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 loss memory for graphic information.

Adding cycle numbers

Miele 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 RS-232 interface for connection to a report printer.

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

Only use devices (computers, printers, etc.) which comply with EN/IEC 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 be configured only by a qualified and competent person. Follow the instructions in "Additional 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 Service.

Information on wash pressure, 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 power cord to an existing wireless access point.

Problems 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 to report software problems, contact your system or network administrator.

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 machine. All 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

▸ Additional settings

▸ Report

– 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 machine.

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

▸ Additional 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 machine can go on being used.

Maintenance

For optimal performance and longest machine life, Miele recommends the machine to be serviced by Miele Service at least **once a year or once every 1,000 hours of operation**.

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

– Drying unit

– Conductivity meter

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 program will be run as a test run

– Seals will be tested for water tightness

– All relevant measuring systems will be safety tested, including fault displays

– Safety features

Routine checks

The operator should conduct a series of routine checks. A routine check-list is supplied with the machine. It is recommended to do this check daily, weekly or monthly depending on usage.

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

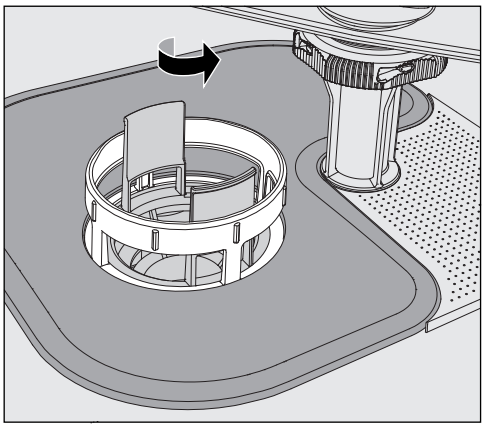
– Mobile units, baskets, modules and inserts.

Cleaning the filters in the wash cabinet

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

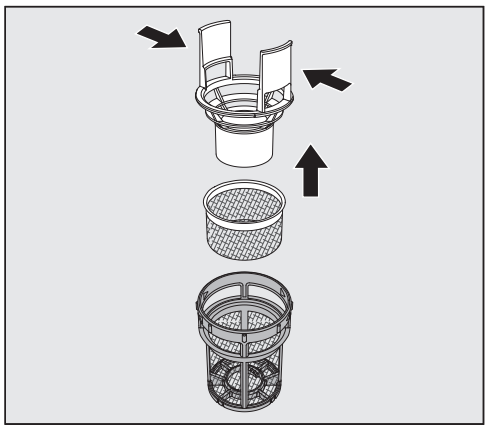
⚠ This machine must not be used without all the filters in place.

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

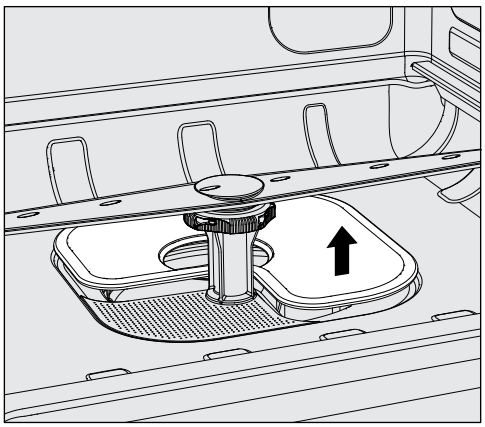


⚠ Danger of injury from glass shards, needles etc. which are retained in the filter.

■ 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 chamber.

– ... 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 chamber, this interval must be reset after cleaning; see "Settings ⚑/Filter maintenance.

Checking and 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.

- 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 Service.

Cleaning the spray arms

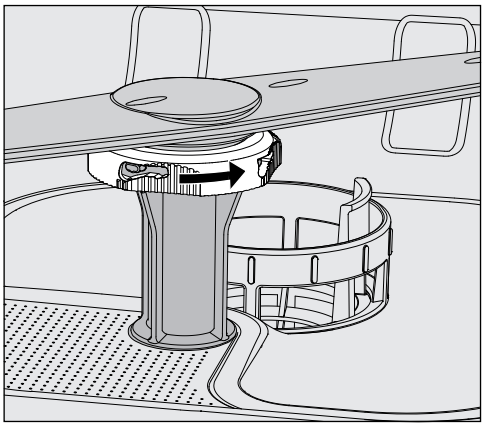
The spray arms in the machine as well as in the mobile units and baskets must be fully dismantled for cleaning:

- Remove the mobile unit or baskets from the machine.

The upper spray arm of the machine is connected through a plug-in connector.

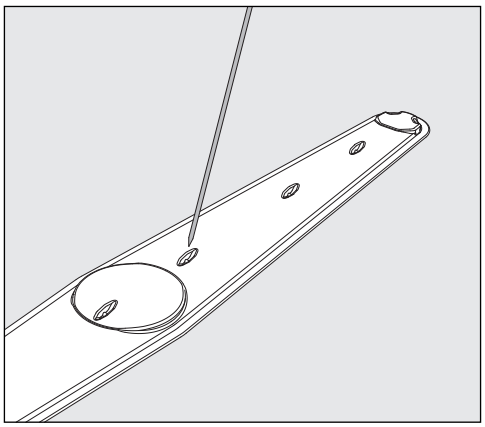
- Pull the upper spray arm of the machine downwards to remove it.

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 possible.
- 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 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 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 machine

⚠ Never clean the machine 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 small amount of dishwashing solution or with a non-abrasive stainless steel cleaner.
- Proprietary glass or plastic process chemicals 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 Service.
- Remove any soiling from the door sides and hinges.
- Regularly clean the groove in the base panel under the door with a damp cloth.

Cleaning the wash cabinet

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

Cleaning the door front

- To clean the stainless steel front, use a damp cloth with a small amount of dishwashing solution and hot water, or with a non-abrasive process chemicals for use on stainless steel.

Preventing resoiling

- To help prevent resoiling of stainless steel surfaces (fingerprints, etc.), a suitable stainless steel conditioner can be used after cleaning.

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 machine 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:

– Do the spray arms rotate freely?

– Are the spray arm jets free of any blockages (See "Cleaning the spray arms")?

– Do the magnets integrated into the spray arms have any metallic objects sticking to them?

– Do the tubular filters have to be cleaned or filter plates, e.g., in an E 478/1, have to be replaced?

Maintenance of mobile units, baskets, modules and inserts

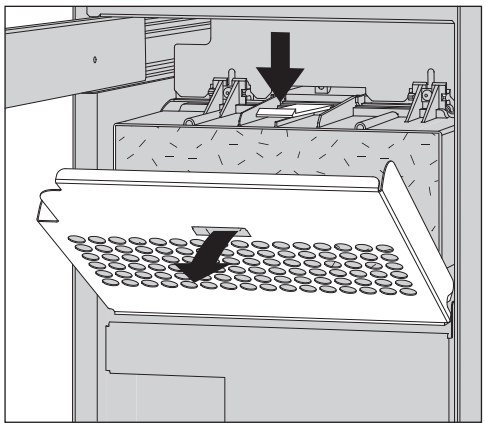
For optimal performance and longest machine life, Miele recommends the machine to be serviced by Miele Service at least **once a year or once every 1,000 hours of operation**.

Filter change

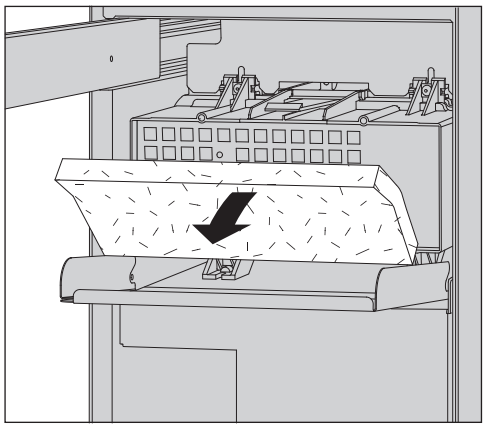
The air filter for the internal drying unit has a limited lifespan and has to be replaced on a regular basis, e.g. when the following message appears:

Changing the coarse filter

- Open the drawer of the side unit.



- Release the filter grille and swing it downwards to open. The grille can also be removed completely.



- Change the coarse filter. The soft side of the filter must be facing the front.
- Replace the filter grille and close the side unit drawer.

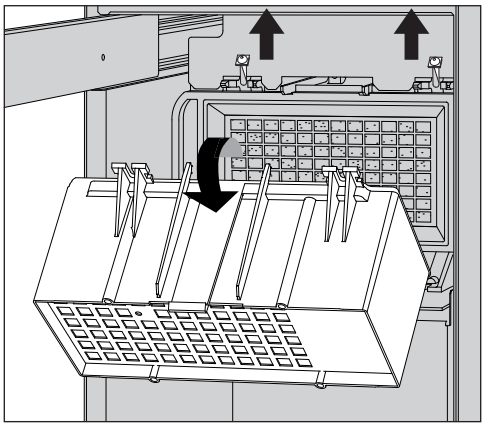
Whenever the coarse filter is replaced, the operating hours counter must be reset (see "Resetting the operating hours counter").

Changing the HEPA filter

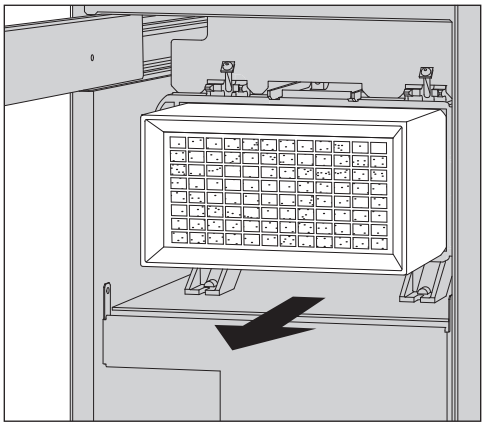
Replace with an **original Miele HEPA filter classification 13** for optimum performance.

If possible the HEPA filter should be changed by Miele Service during maintenance. If this is not possible, proceed as follows to change the filter:

- Open the side unit drawer and remove the filter grille and coarse filter.



- Undo the screws securing the coarse filter housing and swing it upwards.
- Remove the coarse filter housing.



- Remove the HEPA filter from its holder and insert a new one.
- Replace the coarse filter housing and tighten the securing screws.
- Replace the coarse filter and the filter grille and close the side unit drawer.

Whenever the HEPA filter is replaced the operating hours counter must be reset (see "Resetting the operating hours counter").

Resetting the operating hours counter

The maximum permitted number of operating hours is preset in the controls for all filters. After a filter has been changed, the operating hours counter must be reset.

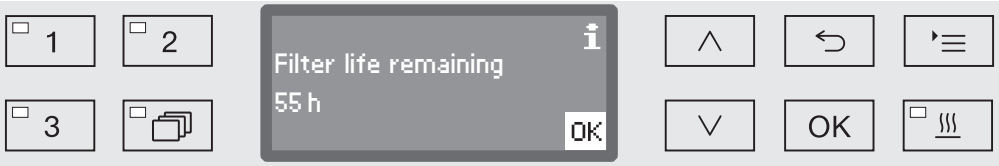
■ Open the menu as follows:

‣≡ button

‣ Settings

‣ Filter maintenance

‣ Coarse filter and/or HEPA filter



The remaining operating hours for this filter type are shown in the display.

■ Confirm the message with *OK*.

Then you will be asked if you wish to reset the operating hours counter.

⚠ The operating hours counter must only be reset when the filter has been changed.

– Yes

The operating hours counter will be reset for the new filter.

– No

The counter will not be reset.

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

■ Confirm your selection with *OK*.

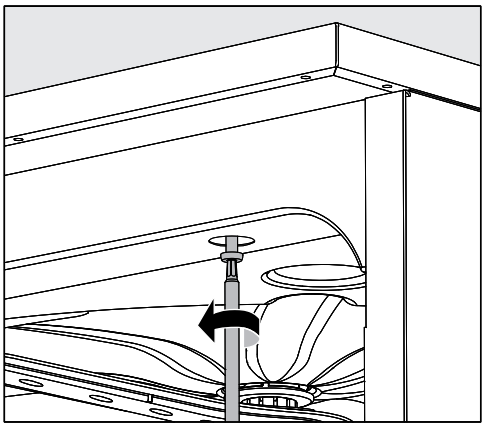
Performance check

Processing performance can be regularly confirmed by the user if required.

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 countertop. To reach the access point, the lid of the machine must be removed or the machine must be pulled out from under the countertop.

- Open the door.



- Unscrew the retaining screws.
- Then remove the safety screws on the back of the machine from the **lid** and lift the **lid** to remove it.

Or

- Pull the machine out by approx. 6" (15 cm) from under the **countertop**.

Test programs

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

The test programs interrupt the program sequence automatically at specified points. The interruption is indicated by an audible signal tone and message on the display. Miele Technical 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 chamber, do not keep the door open too long.

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

In addition, the door can be opened at any time during the drying phase to check the dryness of the wash load. In this way, you can determine the optimal drying time.

The following test programs can be selected:

– Laboratory

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

– Validation

  The program sequence is interrupted at the following points:

  – before the chamber washer solution is drained away in the final wash block,
  – after the interim rinse before the chamber washer solution is drained away, and
  – after water intake and before draining in the final rinse block.

Activating a test program

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

■ Open the menu as follows:

▸≡ button

▸ Additional settings

▸ Test program

– No

The menu is exited without selecting a program.

– Laboratory

Activates the Laboratory test program.

– Validation

Activates the Validation test program.

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

■ Press *OK* to activate the test program for the next program start.

You can now start the performance test.

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

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

If you want to deactivate the test program 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 how to correct it. You should, however, note the following:

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

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

Technical faults and messages

Problem	Possible cause and solution
The display is dark and all LEDs are out.	The machine is not switched on. ■ Switch the machine 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 fuse trips again, contact Miele Service.
	The machine is not plugged in. ■ Insert the plug.
The machine has switched itself off.	This is not a fault. The Auto-Off function switches the machine off automatically after a preset duration to save energy. ■ Switch the machine on again 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.
Power outage during operation	If a temporary power outage occurs during a program sequence, no measures are required. The program which was running continues without interruption. If the temperature in the wash cabinet drops below the minimum value required for the program block during the power outage, the program block is repeated. In case of a power outage of ≥ 20 hours, the entire program is repeated. Each power outage is logged within the scope of the cycle documentation.
Next service due on:	This is not a fault. Miele Service has recommended a date for the next service visit. ■ Please contact Miele Service to arrange a service visit.

Frequently asked questions

Dispensing/dispensing systems

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

Problem	Possible cause and solution
Refill DOS	During a program sequence, a low level of liquid chemical agent in a container has been identified. ■ Replace the empty container with a full one.
Prog. start not possible. Prime dispenser pump DOS	A program cannot be started because: - There is air in the dispensing system. - The dispensing system has been completely emptied. ■ Check the level in the reservoir and refill or replace it with a full container as necessary. ■ Vent the dispensing system.
Dispensing system DOS priming	This is not a fault. The dispensing system is automatically being vented. Wait until the venting process is finished.
Priming DOS canceled. Priming must be repeated	Priming of the dispensing system was canceled 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 opening of the siphon for blockages and remove them as necessary. ■ Start the priming process again.
	Contact Miele Technical Service if there are leaks in the dispensing hose or a fault with the siphon.

Problem	Possible cause and solution
Check container/lance DOS	Little or no flow has been identified. ■ Check the level in the supply container. Replace an empty container with a full one, if necessary. ■ Check the suction opening of the siphon for deposits. ■ Prime 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. ■ Prime the dispensing system.
	Contact Miele Technical 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 Service for advice.

Insufficient salt/water softener

Problem	Possible cause and solution
Refill salt	Salt is running low in the water softener. ■ Refill the reactivation salt before starting the next program.
Machine locking Insufficient salt	Salt in the water softener is completely used up and reactivation is no longer possible. The machine is locked for further use. ■ Refill with reactivation salt.
Salt container empty, Program locked	The water softener cannot reactivate because there is insufficient salt. The machine is locked for further use. ■ Refill with reactivation salt. The machine is unlocked a few seconds after the salt reservoir is refilled. Reactivation will occur automatically during the next program sequence.
Salt container lid not closed correctly	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 program. ⚠ When the door is opened, hot steam and process chemicals can escape! ■ Open the door and close the container flap.

Cancel with fault code

If a program is canceled and a fault code appears, e.g., Fault XXX (where XXX represents a number), there could be a serious technical fault.

In the event of a program being canceled and a fault number being shown:

- Use the ⏻ button to switch the machine off.
- Wait approximately 10 seconds before switching the machine on again with the ⏻ button.
- Acknowledge the fault code by entering your PIN code.
- Start the previously selected program again.

If the same message appears again:

- Make a note of the fault message.
- Use the ⏻ button to switch the machine off.
- Contact Miele Technical Service.

Please also read the notes regarding the following fault numbers:

Problem	Possible cause and solution
Fault 403-405	A program has been canceled because water intake by the machine was insufficient or severely restricted. ■ Turn on the faucets fully. ■ Follow the further information provided in the Check water intake message.
Fault 406-408	A program was canceled because the water inlet volume is insufficient. ■ Check whether the faucets are fully turned on. ■ Refer to the information regarding minimum flow pressure in "Connection to the water supply" and "Technical data". ■ Check the filter in the water inlet. ■ Contact Miele Technical Service for advice.
Fault 412-414	A program was canceled because the water intake volume is too high. ■ Refer to the information regarding recommended maximum flow pressure and maximum permitted static water pressure in "Connection to the water supply" and "Technical data". ■ Contact Miele Technical Service for advice.
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 sort the wash load so that it does not obstruct the door. ■ Close the door.

Problem	Possible cause and solution
Fault 440	The float switch in the sump of the wash cabinet 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 sump of the wash cabinet behind the spray arm.
Fault 460-462	A program was interrupted due to the spray arm speed dropping below the set value because: - items are obstructing the machine or basket spray arms. ■ Arrange the load so that the spray arms can turn easily and start the program again. - 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."
Fault 492, 504	A program was canceled because there is not enough spray pressure. The filters in the wash chamber may be blocked. ⚠ Danger of injury from glass shards, needles etc. which are retained in the filter. ■ Check and clean the filters in the wash chamber (see "Maintenance/Cleaning the filters in the wash chamber").
Fault 518-521	No flow was detected when dispensing from an external supply container. ⚠ Caution when handling process chemicals. For all process chemicals, the process chemical manufacturer's safety instructions as given on their safety data sheets must be observed. ■ Check the level in the containers and replace empty ones with filled ones. ■ Check the suction opening of the siphons and remove any deposits. ■ Check the hose connections on the siphons, the machine, and any DOS modules. ■ Remove any kinks from the dispensing hoses and check the hoses for leaks. Position the dispensing hoses so that they cannot kink. ■ Vent the dispensing system.
	If you identify any leaks in the dispensing hoses or defects on the siphons, contact Miele Technical Service.

Problem	Possible cause and solution
Fault 526	The supply pressure has dropped below the minimum value. - The water pressure is too low due to a heavy build-up of foam. Spilled rinse aid may not have been cleaned up after being added. ■ Follow the instructions regarding foam build-up in "Chemical processes and technology." ■ Start the Rinse program to clean the wash chamber. - The carriers were loaded incorrectly or overloaded. ■ Use only mobile units, 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 chamber 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 washer's water connectors in the back panel of the wash cabinet to ensure that they are attached tightly and remove any blockages. - The amount of water may be insufficient for the application. ■ Increase the amount of water (see "Program settings"). If necessary, consult Miele Technical Service.
Fault 550	The waterproof system has been activated. One of the water supply hoses might have a leak. ■ Close the water faucets. ■ Contact Miele Service.
Fault 555	Too much water has accumulated in the steam condenser. ■ Restart the machine. Excess water is pumped out automatically.

Problem	Possible cause and solution
Fault 559	There is a problem with the process documentation interface. The machine has detected a module for and Ethernet interface, but only a serial interface is activated in the controls (RS232). Deactivate the RS232 interface: ■ Open the menu for configuring the interface Additional settings/Interface and then select 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 person.

Process-related faults and messages

Problem	Possible cause and solution
Change the coarse filter	The maximum permitted operating hours for the coarse filter have been reached. ■ Replace the coarse filter with a new one. ■ Reset the operating hours counter for the coarse filter.
Change HEPA filter	The maximum permitted operating hours for the HEPA filter have been reached. ■ Replace the HEPA filter with a new one. ■ Reset the operating hours counter for the HEPA filter.
Drying during program deactivated	Drying cannot be selected at the start of a program because drying is not available for the selected program. ■ Start the program without drying. or ■ Have the drying parameters for this program adjusted by Miele 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 Service.

Problem	Possible cause and solution
Test program: Test object can now be removed	This is not a fault. A test program is running to check performance. At certain points in the program, the sequence is interrupted so that samples can be taken. ■ Take a sample. or ■ Wait. The program will continue automatically in approx. 30 seconds. or ■ Continue the program without delay by pressing the *Start*/*Stop* button.
Program cancelled	This is not a fault. A program which was running was canceled by the user. ⚠ The wash cabinet interior can be very hot. When the door is opened, hot steam and process chemicals can escape. Protective measures for personal safety must be observed.
Program continued	This is not a fault. The process of canceling a program was not completed. The program 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*.
All program settings reset	This is not a fault! A user has restored the factory default setting for the program. ■ Confirm the message with *OK*.

Door

Problem	Possible cause and solution
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 Service.
Warning! Cabinet hot. Open anyway?	When the ⊶ button is pressed, the temperature in the wash cabinet is over 158°F (60°C). ⚠ When the door is opened, hot steam and process chemicals can escape! ■ Open the door only when necessary.
Door blocked	Protruding wash load items or objects are blocking the door, e.g. towels. ■ Remove all objects and sort the wash load so that it does not obstruct the door.
	The door seal sticks. ■ Clean the door seal.
	Heavy objects in front of the machine can impede the automatic opening of the door by the Comfort lock. ■ Do not place heavy objects in front of the door of the machine.
	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 ⊶ button. If it is still blocked: ■ Contact Miele Technical Service.
Obstruction sensor	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. ■ Open the door. ■ Remove all objects and sort the wash load so that it does not obstruct the door. ■ The door lock rail must be fully retracted before you close the door again.
Emergency release	The door was opened using the emergency release. ■ See "Opening the door using the emergency release."

Problem	Possible cause and solution
The door is open a fraction and cannot be closed using the ⊶ button.	This is not a fault. The Comfort door lock has opened the door slightly at the end of the program. ■ Open the door. The door can now be closed completely again using the ⊶ button.

Unsatisfactory cleaning and corrosion

Problem	Possible cause and solution
There are white deposits on the wash load.	The water softener is set too low. ■ Set the water softener to the correct water hardness.
	There is no salt in the salt reservoir. ■ Refill with reactivation salt.
	The quality of the water for the final rinse was insufficient. ■ Use water with a low conductivity value ■ If the machine is connected to a water softening cartridge, check it and replace as necessary.
	The water from the DI water connection is not sufficiently demineralized. ■ Check the external demineralization system. If necessary, replace the demineralization cartridge with a new one.

Frequently asked questions

Problem	Possible cause and solution
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. according to the information in the operating instructions. ■ Avoid overloading the mobile units, baskets, modules and inserts.
	The program was not suitable for the soiling. ■ Select a suitable program. or ■ Adjust the parameters to suit the task.
	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 chamber 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.
	Neutralization has not taken place during the program. ■ Check the level in the reservoir and vent the dispensing system if necessary.
	The wash temperature was too high. ■ Select a different program. or ■ Reduce the wash temperature.
	The process chemicals used were too alkaline. ■ Use a milder process chemical. or ■ Reduce the concentration of process chemicals.

Problem	Possible cause and solution
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 demineralized water may be necessary.
	Neutralization has not taken place during the program. ■ 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/conductivity/wash pressure

Problem	Possible cause and solution
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. - items are obstructing the machine or basket spray arms. ■ Arrange the load so that the spray arms can turn easily and start the program again.
	- the relevant spray arm is blocked. ■ Clean the spray arm. ■ Check whether the filters in the wash chamber are clean and correctly inserted. ■ Start the program again.
	- 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 Rinse program to clean the wash chamber. ■ After that, reprocess the load.
Conductivity level too high: Actual value: µS/cm Max value: µS/cm	Carry-over of conductive substances during reprocessing. ■ Check the process.
	Empty or faulty water softener or demineralization system. ■ Check external water softener or demineralization systems. ■ Reactivate the systems if necessary.
	Work on the on-site water supply. ■ Contact a qualified plumber.
	Water connections transposed. ■ Observe the markings on the water connections (see "Connection to the water supply").
Conductivity level exceeds limit	Conductivity value cannot be determined because the value is out of range (too low). ■ Contact Miele Service.
Conductivity module requires calibration	The conductivity meter must be recalibrated. ■ Contact Miele Service.
Conductivity module communication error	The connection to the conductivity module is disrupted. ■ Contact Miele Service.
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 program is not interrupted. Nevertheless, you must reprocess the load.

Problem	Possible cause and solution
Spray pressure fluctuating too much	A program 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.

Water inlet and drainage

Problem	Possible cause and solution
Check water intake	One or more faucets are turned off. ■ Turn on the faucets.
	There was insufficient water in the machine. ■ Clean the water intake filters. ■ Turn on the faucets fully.
	Flow pressure at the water connection is less than 4.35 psi (0.3 bar/30 kPa). ■ Contact a qualified plumber.
Check drainage	A program was canceled because the water in the wash chamber 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. ■ Start the program again. - The filters in the wash chamber are blocked. ■ Clean the filters in the wash chamber. ⚠ Danger of injury from glass shards, needles etc. which are retained in the filter. ■ Start the program again. - The drain pump or non-return valve is blocked. ■ Clean the supply line to the drain pump and the non-return valve. ■ Start the program again. - The drainage system cannot accommodate the water because it is blocked. ■ Contact a qualified plumber.

Frequently asked questions

Noises

Problem	Possible cause and solution
There is a knocking noise in the wash cabinet.	One or more spray arms are knocking against the wash load. ■ Cancel the program. To do this, follow the instructions in "Canceling a program." ■ Arrange the wash load so it cannot obstruct the spray arms. ■ Make sure the spray arms are not obstructed. ■ Start the program again.
There is a rattling noise in the wash cabinet.	Items are not properly secured in the wash cabinet. ■ Cancel the program. To do this, follow the instructions in "Canceling a program." ■ Rearrange the load so that items are secure. ■ Start the program 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 affect on the function of the machine. ■ Contact a qualified plumber.

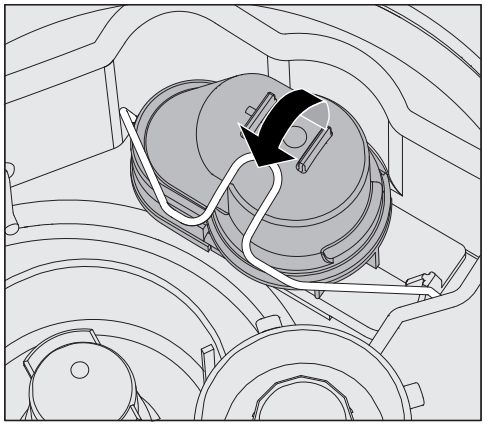
Printer/serial interface

Problem	Possible cause and solution
Serial printer fault: no paper	The printer has run out of paper. ■ Replenish the paper.
Serial printer fault: offline	The machine cannot connect to the printer. ■ Switch the printer on. ■ Check the connection between the machine and the printer. ■ If in doubt, have the configuration of the interface checked by a qualified person. If the printer has been replaced, the printer type must be adjusted in the interface configuration.
Serial printer fault: general fault	The printer is not ready for operation. ■ Check the printer for fault messages. ■ Change the printer cartridge if necessary.
Network down	The communication module has identified a network interruption or cannot establish a connection. ■ Consult your network administrator. If the problem cannot be resolved: ■ Contact Miele Service.

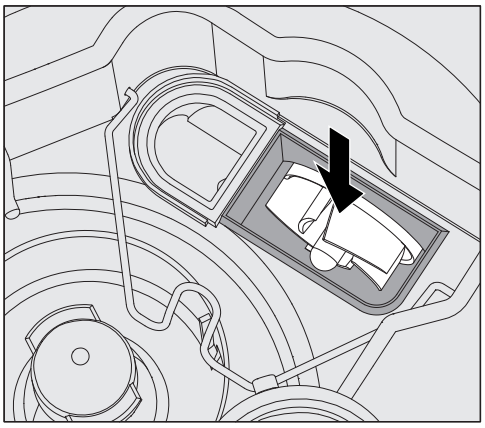
Cleaning the drain pump and non-return valve

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

- Take the filter combination out of the wash chamber (see Maintenance/Cleaning the filters in the wash chambe").



- Open the locking clamp.
- Lift out the non-return valve and rinse well under running water.
- Make sure that the vent on the outside of the non-return valve is not blocked (this vent is only visible after 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.
- Carefully replace the non-return valve and secure it with the clamp.

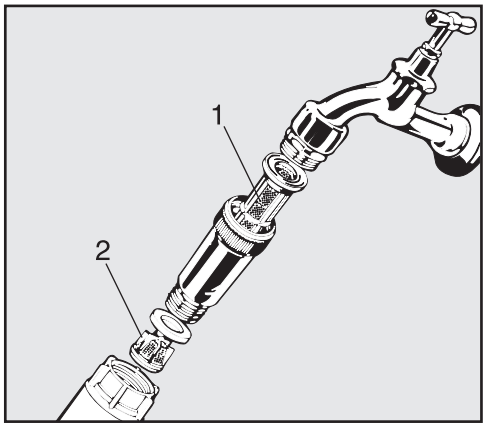
Cleaning the filters in the water inlet

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 dipped in water.

To clean the filter

- Disconnect the machine from the power supply (switch the machine off, unplug it or disconnect or disable the fuse).
- Turn off the water supply.
- Unscrew the water intake valve.



- Carefully pull out the large surface area filter 1.
- Take the seal ring out of the screw connection.
- Remove 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 placed in the right position.
- Reconnect the hose to the water faucet, making sure the thread goes on straight and not cross-threaded.
- Open the water faucet gradually to test for leaks. If there is a leak, the inlet hose might not be secured properly, or it may have been screwed on at an angle. Unscrew and reconnect the water inlet hose correctly before tightening it.

Contacting Miele Service

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

To avoid unnecessary service calls, check that the fault has not been caused by incorrect operation when an error message first appears. Please refer to the information in "Frequently asked questions."

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

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

When contacting Miele, please have the machine model name and serial number on hand. These are shown on the data plates: on the side of the door and on the back of the machine.

Please also note and share any fault messages or codes shown in the display.

Software version

When contacting Miele, you may need to supply the different software version numbers. This information can be found in the menu "Additional settings."

■ Open the menu as follows:

☰ button

▸ Additional 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 done by Miele Technical Service.

■ Exit the menu with the *OK* or ⮌ buttons.

Installation and alignment

Please refer to the installation diagram provided.

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

The machine must be stable and horizontal.

Any unevenness in the floor level can be compensated for by adjusting the two front feet. The feet height can be adjusted by a maximum of 1/3" (8 mm).

With the feet screwed in the machine can be rolled backwards or forwards on fitted castors. To do this the machine must be raised up slightly at the front.

⚠ Do not lift the machine by the control panel or the drawer in the side unit.
This could damage them.

⚠ 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 truck, 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 machine is suitable for the following types of installation:

– Freestanding.

– Slot-in:

  The machine can be installed beside other machines or furniture or in a suitable niche. The niche must be at least 35 7/16" (900 mm) wide and 27 9/16" (700 mm) deep.

– Building under:

  The machine can be built under a continuous worktop or the draining board of a sink. The space provided must be at least 35 7/16" (900 mm) wide, 27 9/16" (700 mm) deep and 32 5/16" (820 mm) high.

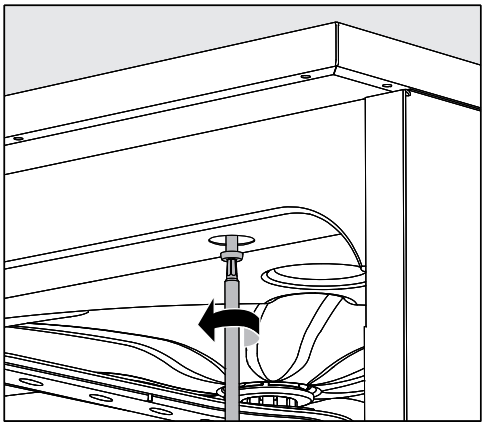
Freestanding machines or machines installed in a niche must have the lid fitted.
23 3/8" (60 cm) or 27 9/16" (70 cm) deep lids with additional side wall extensions are available from Miele.

Fitting the lid

The lid must be screwed to the machine. The side with the screw threads on the underside goes to the front and the side with the safety screw holders protruding downwards goes to the back.

Follow the fitting instructions supplied with the lid.

- Place the lid on the machine so that it is flush with the machine.
- Tighten the two securing screws on the back of the machine.
- Open the door.



- Remove the cover caps on the left and right and tighten the fixing screws. Then replace the cover caps.

Built-under a continuous worktop

Steam condenser

To avoid steam damage to the worktop, the protective foil supplied (self adhesive 10 x 23" / 25 x 58 cm) must be applied underneath the worktop in the area of the steam condenser.

Protective foil/ countertop protector

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

Preventing heat accumulation

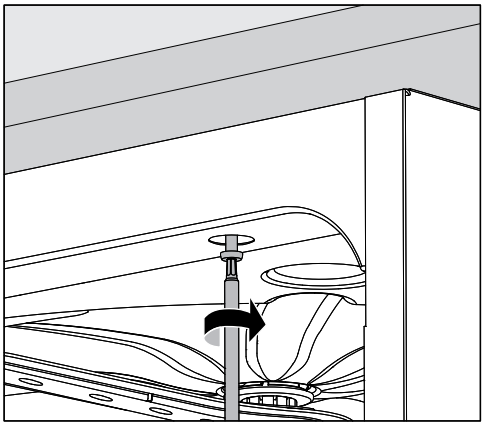
During the drying phase, the hot exhaust air from the wash cabinet is released into the surrounding environment through the steam condenser of the rear of the machine. To prevent heat accumulation and excessive formation of condensation water, a sufficient air circulation must be guaranteed.

- Keep a 3/8" (10 mm) distance for air exchange between the machine and the worktop.
- If required an air grids should be mounted in the side units.

Securing to the worktop

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

- Open the door.



- Screw the machine 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 machine has been tested for electromagnetic compatibility and is suitable for operation in commercial environments, such as hospitals, medical practicies, laboratories and other similar environments which are connected to the power supply.

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

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

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

– The electrical installation must be in compliance with national and local codes.
– It is recommended to connect the machine to the power supply via the supplied plug and a 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 switch with all-pole isolation which, when in the off position, ensures a 1/8" (3 mm) gap between all open contacts.
– Equipotential bonding should be carried out if required.
– For technical data, see the data plate or the attached wiring diagram!
– For increased safety, it is highly recommended to protect the machine with a 30 mA residual current device (RCD).
– If replacing the power cord, use only original Miele replacement parts.

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

The machine 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. Please contact Miele for further details.

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

The wiring diagram is supplied with the machine.

WARNING

THIS MACHINE MUST BE GROUNDED

Additional equipotential bonding

There is a screw connection point marked ⏚ at the back of the machine, to which additional equipotential bonding can be connected if required.

Peak-load cut-out

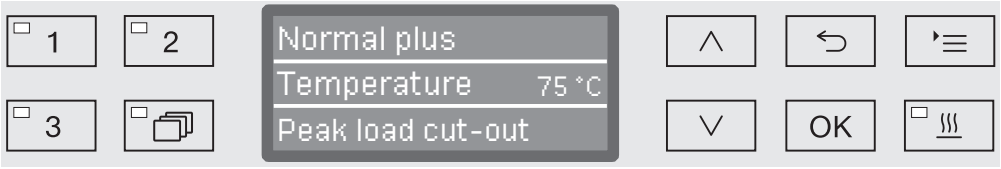
The machine is suitable for use in an energy management system. For this purpose, it must be technically adapted and the controls reset by Miele Technical Service.

Please contact Miele Technical Service for further information.

Peak-load management

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 program will not be interrupted. If one of the components that is switched off is needed during the current program stage, the program duration will simply increase for the duration of the load cut-out.

The third line of the display will alert you of the peak load cut-out for example:



Connecting the water supply

⚠ Water from the wash cabinet must not be consumed.

– The machine must be connected to the water supply in strict accordance with local and national water authority regulations.

– The water used must at least comply with 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 machine, as well as the machine itself. If the chloride content of the water exceeds 100ppm (100 mg/l), the risk of corrosion to items being cleaned in the machine 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.

– A backflow preventer is not required.

– The machine is supplied as standard for connection to cold water (blue coded hose) and hot water (red coded hose) with a max temp. of 150°F (65°C). Connect the inlet hoses to the faucet valves.

– 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 supply.

– The **minimum flow pressure** for cold water is 14.5 psi (100 kPa) gage pressure, for hot water 5.8 psi (40 kPa) gage pressure and for DI water connection is 4.4 psi (30 kPa) gage pressure.

– **Recommended flow pressure** for cold and hot water connections is ≥ 29 psi (200 kPa) gage pressure and for DI water connection ≥ 29 psi (200 kPa) gage pressure, to avoid excessively long water intake times.

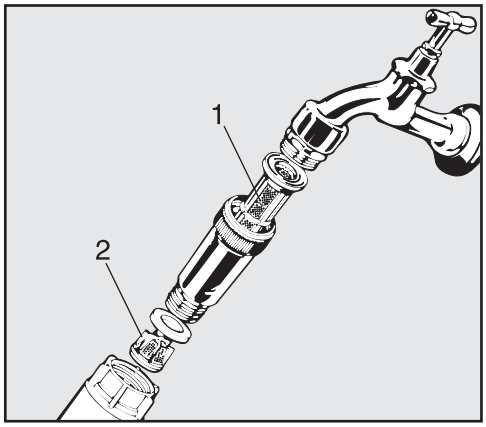
– The **maximum permitted static water pressure** is 145 psi (1,000 kPa).

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

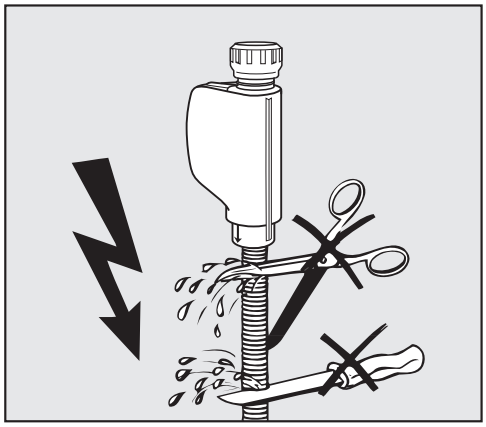
– More information on DI water connection can be found at the end of this section.

– A faucet 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 hoses are approx. 5' 7" (1.7 m) long pressure hoses terminating in a ¾" female thread. On no account may the inlet filter be removed.



– Install the filter (supplied in accessory pack) between the faucet valve and the inlet hose. The filter for DI water is made of chromium-nickel steel and can be recognized by its dull surface.



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

Also refer to the supplied installation diagram!

DI water connection for a pressurized system with 4.4 - 145 psi (30-1,000 kPa) gage pressure

This machine is suitable for a pressurized DI system operating between 4.4 - 145 psi (30-1,000 kPa). If the water pressure is below 29 psi (200 kPa) the water intake duration will be automatically increased.

- The pressure tested hose for DI water, coded green, has a ¾" threaded union for connection to the onsite faucet for DI water.

⚠ If the machine is not going to be connected to DI water, the DI water connection has to be deactivated by a Miele Service technician. The inlet hose remains in position at the back of the machine.

DI water connection for a non-pressurized system below 4.4 psi (30 kPa) gage pressure

DI water connections below 4.4 psi (30 kPa) gage pressure require the installation of an external booster pump, which can be requested through Miele Service. Installation of the pump must be carried out by Miele Service.

Demineralized water ring line

The machine can be connected to a ring line system for demineralized water. For this purpose, it must be technically adapted and the controls reset by Miele Technical Service.

Please contact Miele Technical Service for further information.

Connecting the water drain

– 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 machine drainage hose should be connected to a separate drain for the machine only. If no separate drain is available, Miele recommends connecting it to a dual-chamber siphon.

⚠ As standard, the drain water of the machine will reach temperatures greater than 158°F (70°C).
At this temperature, drain water can damage the drain system.
In order to reduce the drainage temperature Miele offers an optional drain water cool-down kit.

– The on-site connection point, measured from the lower edge of the machine, should be positioned at a height between 11 3/4" (0.3 m) and 3' 3" (1.0 m). If it is lower than 11 3/4" (0.3 m), the drain hose must be laid in a coil at a height of at least 11 3/4" (0.3 m).

– The drainage system must be able to accommodate a minimum drainage flow of 4 gpm (16 l/min).

– The drainage hose is approx. 4' 7" (1.4 m) long and flexible with an internal diameter of 7/8" (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 13' (4.0 m), and the delivery head must not exceed 13' (4.0 m).

– Drainage noise can be considerably reduced if the drainage hose is positioned in an arc at a minimum height of 2' (0.6 m) and a max. height of 3' 3" (1.0 m) measured from the bottom edge of the machine.

Also refer to the supplied installation diagram!

	Imperial	Metric
Height with machine lid Height without machine lid	32 7/8" 32 5/16"	835 mm 820 mm
Width	35 3/8"	898 mm
Depth Depth with door open	27 1/2" 51 3/16"	698 mm 1,300 mm
Wash cabinet dimensions: Height Width Depth	 20 9/16" 21 1/8" 20 9/16"	 520 mm 530 mm 520 mm
Weight (net)	216 lbs	98 kg
Max. load capacity of open door	81.6 lbs	37 kg
Voltage, rated load, fuse rating	See data plate	See data plate
Power cord length	Approx. 5' 9" ft.	Approx. 1.8 m
Water temperature water connection: Cold water / Steam condenser Hot water (optional) / DI water (optional)	 max. 68 °F max. 150 °F	 max. 20 °C max. 65 °C
Static water pressure	max. 145 psi	max. 1,000 kPa
Minimum supply pressure water connection: Cold water / steam condenser Hot water DI water	 14.5 psi 5.8 psi 4.4 psi	 100 kPa 40 kPa 30 kPa
Recommended flow pressure water connection: Cold water / hot water / Steam condenser DI water (optional)	 29 psi 29 psi	 ≥ 200 kPa ≥ 200 kPa
DI water connection without pressure (optional)	1.3-8.7 psi	8.5-60 kPa
Drainage pumping height	min. 11 3/4" ft, max. 3' 3" ft	min. 0.3 m, max. 1.0 m
Drain hose length	max. 13' 1" ft	max. 4.0 m
Operation: Ambient temperature Relative humidity maximum linear decreasing to	 40 °F to 104 °F 80 % for temperatures up to 88°F 50 % for temperatures up to 104°F	 5 °C to 40 °C 80 % for temperatures up to 31°C 50 % for temperatures up to 40°C
Storage and transport conditions: Ambient temperature Relative humidity Air pressure	 - 4 °F to 140 °F 10 % to 85 % 7.25 psi to 15.37 psi	 - 20 °C to 60 °C 10 % to 85 % 500 hPa to 1060 hPa
Altitude above sea level	up to 4,921 ft*	up to 1,500 m*
Ingress protection (as per IEC 60529)	IP20	
Degree of soiling (as per IEC/EN 61010-1)	2	
Overvoltage category (according to IEC 60664)	II	
Noise level in dB (A), sound pressure LpA during cleaning and drying phases	< 70	
Certifications	CAN/CSA-C22.2 No. 61010-1-04, CAN/CSA-C22.2 No. 61010-2-040, UL Std. No. 61010-1 (2nd Edition), IEC 61010-2-040:2006	
Manufacturer's address	Miele & Cie. KG, Carl-Miele-Strasse 29, 33332 Gütersloh, Germany	

* If installed above 4,921 ft (1,500 m) the boiling point of water will be lower.

Program chart

Free memory

New program name:

Application:
Programmable program for special applications. Please contact Miele Technical Service to have the program set up.

Program header			
▸ Water volume change [l]	_____	Rinse arm monitoring	
Drainage time		▸ ☐ On	
▸ ☐ Standard		▸ ☐ Off for basket	
▸ ☐ Extended		▸ ☐ Off	

		Wash block	Pre-rinse		
Parameters			1	2	3
Water quality					
Dosage	1	Dispensing system			
		▸ Concentration [%]			
	2	Dispensing system			
		▸ Concentration [%]			
▸ Wash block temperature					
▸ Holding time [Min]					
▸ Conductivity Monitoring (conductivity)					

Drying unit			
Cooling down pause		▸ Temperature 2	_____
▸ ☐ No		Drying time 2	
▸ Set [seconds]	_____	▸ Set [Min]	_____
▸ Temperature 1	_____	▸ Time changeable?	☐ Yes / ☐ No
▸ Drying time 1 [Min]	_____	Cooling down with fan	
		▸ ☐ No	
		▸ Set [seconds]	_____
▸ Automatic door opening	☐ No / ☐ Program end		

Conductivity Limit (Optional)

Water intake		Water drainage	
▸ Set [µS/cm]		▸ Set [µS/cm]	
▸ Number of repeats	☐ 0 / ☐ 1	▸ Number of repeats	☐ 0 / ☐ 1

Cleaning		Interim rinse				Final rinse	
1	2	1	2	3	4	1	2

▸ = Customizable parameters.

CW = cold water
HW = hot water;
CWxx = CW proportion in mixed water as percentage (CW70 = 70% CW + 30% HW);
DI = fully demineralized water

Min = Holding time in minutes

DOS 1 = process chemicals
DOS 3 = neutralizing agent
DOS 4 = DOS module

Program chart

Free memory

New program name:

Application:
Programmable program for special applications. Please contact Miele Technical Service to have the program set up.

Program header			
▸ Water volume change [l]	_____	Rinse arm monitoring	
Drainage time		▸ ☐ On	
▸ ☐ Standard		▸ ☐ Off for basket	
▸ ☐ Extended		▸ ☐ Off	

		Wash block	Pre-rinse		
Parameters			1	2	3
Water quality					
Dosage	1	Dispensing system			
		▸ Concentration [%]			
	2	Dispensing system			
		▸ Concentration [%]			
▸ Wash block temperature					
▸ Holding time [Min]					
▸ Conductivity Monitoring (conductivity)					

Drying unit			
Cooling down pause		▸ Temperature 2	_____
▸ ☐ No		Drying time 2	
▸ Set [seconds]	_____	▸ Set [Min]	_____
▸ Temperature 1	_____	▸ Time changeable?	☐ Yes / ☐ No
▸ Drying time 1 [Min]	_____	Cooling down with fan	
		▸ ☐ No	
		▸ Set [seconds]	_____
▸ Automatic door opening	☐ No / ☐ Program end		

Conductivity Limit (Optional)

Water intake		Water drainage	
▸ Set [µS/cm]		▸ Set [µS/cm]	
▸ Number of repeats	☐ 0 / ☐ 1	▸ Number of repeats	☐ 0 / ☐ 1

Cleaning		Interim rinse				Final rinse	
1	2	1	2	3	4	1	2

▸ = Customizable parameters.

CW = cold water
HW = hot water;
CWxx = CW proportion in mixed water as percentage (CW70 = 70% CW + 30% HW);
DI = fully demineralized water

Min = Holding time in minutes

DOS 1 = process chemicals
DOS 3 = neutralizing agent
DOS 4 = DOS module

Program chart

Normal plus

Application:
For removal of organic residues and certain inorganic residues.

Program header			
▸ Water volume change [l]		Rinse arm monitoring	
Drainage time		▸ ☐ On	
▸ ☑ Standard		▸ ☑ Off for basket	
▸ ☐ Extended		▸ ☐ Off	

		Wash block	Pre-rinse		
		Parameters	1	2	3
Water quality			CW50		
Dosage	1	Dispensing system			
		▸ Concentration [%]			
	2	Dispensing system			
		▸ Concentration [%]			
▸ Wash block temperature					
▸ Holding time [Min]			1		
▸ Conductivity Monitoring (conductivity)					

Drying unit			
Cooling down pause		▸ Temperature 2	230°F/110°C
▸ ☐ No		Drying time 2	
▸ Set [seconds]	30	▸ Set [Min]	30
▸ Temperature 1		▸ Time changeable?	☐ Yes / ☑ No
▸ Drying time 1 [Min]		Cooling down with fan	
		▸ ☐ No	
		▸ Set [seconds]	120
▸ Automatic door opening	☑ No / ☐ Program end		

– For preparative and analytical applications, – For light to medium levels of soiling, – For normal wash result requirements.

Conductivity Limit (Optional) Water intake ▸ Set [µS/cm] ▸ Number of repeats ☐ 0 / ☑ 1 Water drainage ▸ Set [µS/cm] ▸ Number of repeats ☐ 0 / ☑ 1

Cleaning		Interim rinse				Final rinse	
1	2	1	2	3	4	1	2
WW		WW	WW	DI		DI	
DOS 1		DOS 3					
0.3		0.1					
167°F/ 75°C						167°F/ 75°C	
3		2	1	1		1	
						On	

▸ = Customizable parameters.

CW = cold water
HW = hot water;
CWxx = CW proportion in mixed water as percentage (CW70 = 70% CW + 30% HW);
DI = fully demineralized water

Min = Holding time in minutes

DOS 1 = process chemicals
DOS 3 = neutralizing agent
DOS 4 = DOS module

Program chart

Standard

Application:
Simple program for a range of soil types. Not suitable for denatured and acid soluble residues such as protein, metallic salts and amines.

Program header			
▸ Water volume change [l]		Rinse arm monitoring	
Drainage time		▸ ☐ On	
▸ ☑ Standard		▸ ☑ Off for basket	
▸ ☐ Extended		▸ ☐ Off	

		Wash block	Pre-rinse		
Parameters			1	2	3
Water quality					
Dosage	1	Dispensing system			
		▸ Concentration [%]			
	2	Dispensing system			
		▸ Concentration [%]			
▸ Wash block temperature					
▸ Holding time [Min]					
▸ Conductivity Monitoring (conductivity)					

Drying unit			
Cooling down pause		▸ Temperature 2	230°F/110°C
▸ ☐ No		Drying time 2	
▸ Set [seconds]	30	▸ Set [Min]	30
▸ Temperature 1		▸ Time changeable?	☐ Yes / ☑ No
▸ Drying time 1 [Min]		Cooling down with fan	
		▸ ☐ No	
		▸ Set [seconds]	120
▸ Automatic door opening	☑ No / ☐ Program end		

– For light soiling, – For intermediate wash result requirements.

Conductivity Limit (Optional) Water intake ▸ Set [µS/cm] ▸ Number of repeats ☐ 0 / ☑ 1 Water drainage ▸ Set [µS/cm] ▸ Number of repeats ☐ 0 / ☑ 1

Cleaning		Interim rinse				Final rinse	
1	2	1	2	3	4	1	2
CW50		WW	DI			DI	
DOS 1		DOS 3					
0.4		0.1					
158°F/ 70°C						158°F/ 70°C	
3		2	1			1	
						On	

▸ = Customizable parameters.

CW = cold water
HW = hot water;
CWxx = CW proportion in mixed water as percentage (CW70 = 70% CW + 30% HW);
DI = fully demineralized water

Min = Holding time in minutes

DOS 1 = process chemicals
DOS 3 = neutralizing agent
DOS 4 = DOS module

Program chart

Intensive

Application:
For removal of organic residues and certain inorganic residues.

Program header			
▸ Water volume change [l]		Rinse arm monitoring	
Drainage time		▸ ☐ On	
▸ ☑ Standard		▸ ☑ Off for basket	
▸ ☐ Extended		▸ ☐ Off	

		Wash block	Pre-rinse		
		Parameters	1	2	3
Water quality			CW50		
Dosage	1	Dispensing system			
		▸ Concentration [%]			
	2	Dispensing system			
		▸ Concentration [%]			
▸ Wash block temperature					
▸ Holding time [Min]			1		
▸ Conductivity Monitoring (conductivity)					

Drying unit			
Cooling down pause		▸ Temperature 2	230°F/110°C
▸ ☐ No		Drying time 2	
▸ Set [seconds]	30	▸ Set [Min]	30
▸ Temperature 1		▸ Time changeable?	☐ Yes / ☑ No
▸ Drying time 1 [Min]		Cooling down with fan	
		▸ ☐ No	
		▸ Set [seconds]	120
▸ Automatic door opening	☑ No / ☐ Program end		

– For preparative and analytical applications,
– For normal to heavy soiling,
– For normal to high wash result requirements.

Conductivity Limit (Optional)

Water intake		Water drainage	
▸ Set [µS/cm]		▸ Set [µS/cm]	
▸ Number of repeats	☐ 0 / ☑ 1	▸ Number of repeats	☐ 0 / ☑ 1

Cleaning		Interim rinse				Final rinse	
1	2	1	2	3	4	1	2
WW		WW	DI	DI		DI	
DOS 1		DOS 3					
0.4		0.1					
176°F/ 80°C						167°F/ 75°C	
3		2	1	1		1	
						On	

▸ = Customizable parameters.

CW = cold water
HW = hot water;
CWxx = CW proportion in mixed water as percentage (CW70 = 70% CW + 30% HW);
DI = fully demineralized water

Min = Holding time in minutes

DOS 1 = process chemicals
DOS 3 = neutralizing agent
DOS 4 = DOS module

Program chart

Inorganic

Application:
For removal of inorganic residues.

Program header			
▸ Water volume change [l]		Rinse arm monitoring	
Drainage time		▸ ☐ On	
▸ ☑ Standard		▸ ☑ Off for basket	
▸ ☐ Extended		▸ ☐ Off	

		Wash block	Pre-rinse		
		Parameters	1	2	3
Water quality					
Dosage	1	Dispensing system			
		▸ Concentration [%]			
	2	Dispensing system			
		▸ Concentration [%]			
▸ Wash block temperature					
▸ Holding time [Min]					
▸ Conductivity Monitoring (conductivity)					

Drying unit			
Cooling down pause		▸ Temperature 2	230°F/110°C
▸ ☐ No		Drying time 2	
▸ Set [seconds]	30	▸ Set [Min]	30
▸ Temperature 1		▸ Time changeable?	☐ Yes / ☑ No
▸ Drying time 1 [Min]		Cooling down with fan	
		▸ ☐ No	
		▸ Set [seconds]	120
▸ Automatic door opening	☑ No / ☐ Program end		

– General program for analysis and water analysis and for water based cultures with acid-soluble metallic salts such as Ca^{2+} and Mg^{2+}, etc.,
– For light to medium levels of soiling,
– For normal to high wash result requirements.

Conductivity Limit (Optional)

Water intake		Water drainage	
▸ Set [µS/cm]		▸ Set [µS/cm]	
▸ Number of repeats	☐ 0 / ☑ 1	▸ Number of repeats	☐ 0 / ☑ 1

Cleaning		Interim rinse				Final rinse	
1	2	1	2	3	4	1	2
CW50	WW	WW	DI	DI		DI	
DOS 3	DOS 1	DOS 3					
0.3	0.4	0.1					
122°F/ 50°C	167°F/ 75°C					158°F/ 70°C	
2	3	2	1	1		1	
						On	

▸ = Customizable parameters.

CW = cold water
HW = hot water;
CWxx = CW proportion in mixed water as percentage (CW70 = 70% CW + 30% HW);
DI = fully demineralized water

Min = Holding time in minutes

DOS 1 = process chemicals
DOS 3 = neutralizing agent
DOS 4 = DOS module

Program chart

Organic

Application:
For removal of concentrated organic residues such as oils, fats, waxes, etc. Not suitable for acid-soluble residues e.g. metallic salts, amines, etc.

Program header			
▸ Water volume change [l]		Rinse arm monitoring	
Drainage time		▸ ☐ On	
▸ ☑ Standard		▸ ☑ Off for basket	
▸ ☐ Extended		▸ ☐ Off	

		Wash block	Pre-rinse		
		Parameters	1	2	3
Water quality					
Dosage	1	Dispensing system			
		▸ Concentration [%]			
	2	Dispensing system			
		▸ Concentration [%]			
▸ Wash block temperature					
▸ Holding time [Min]					
▸ Conductivity Monitoring (conductivity)					

Drying unit			
Cooling down pause		▸ Temperature 2	230°F/110°C
▸ ☐ No		Drying time 2	
▸ Set [seconds]	30	▸ Set [Min]	30
▸ Temperature 1		▸ Time changeable?	☐ Yes / ☑ No
▸ Drying time 1 [Min]		Cooling down with fan	
		▸ ☐ No	
		▸ Set [seconds]	120
▸ Automatic door opening	☑ No / ☐ Program end		

– For normal to heavy soiling,

– For normal to high wash result requirements.

Liquid process chemicals required, hot and DI water connection recommended.

Conductivity Limit (Optional)

Water intake		Water drainage	
▸ Set [µS/cm]		▸ Set [µS/cm]	
▸ Number of repeats	☐ 0 / ☑ 1	▸ Number of repeats	☐ 0 / ☑ 1

Cleaning		Interim rinse				Final rinse	
1	2	1	2	3	4	1	2
WW	WW	WW	WW	DI		DI	
DOS 1	DOS 1	DOS 3					
0.4	0.3	0.1					
149°F/ 65°C	185°F/ 85°C					167°F/ 75°C	
3	3	2	1	1		1	
						On	

▸ = Customizable parameters.

CW = cold water
HW = hot water;
CWxx = CW proportion in mixed water as percentage (CW70 = 70% CW + 30% HW);
DI = fully demineralized water

Min = Holding time in minutes

DOS 1 = process chemicals
DOS 3 = neutralizing agent
DOS 4 = DOS module

Program chart

Injector Plus

Application:
Program with increased water pressure and increased water levels for the following basket combinations: – Upper basket with one spray arm and lower basket with 2 injector modules. – Upper and lower baskets with a total of 4 injector modules.

Program header			
▸ Water volume change [l]		Rinse arm monitoring	
Drainage time		▸ ☐ On	
▸ ☑ Standard		▸ ☑ Off for basket	
▸ ☐ Extended		▸ ☐ Off	

		Wash block	Pre-rinse		
		Parameters	1	2	3
Water quality			CW50		
Dosage	1	Dispensing system			
		▸ Concentration [%]			
	2	Dispensing system			
		▸ Concentration [%]			
▸ Wash block temperature					
▸ Holding time [Min]			1		
▸ Conductivity Monitoring (conductivity)					

Drying unit			
Cooling down pause		▸ Temperature 2	230°F/110°C
▸ ☐ No		Drying time 2	
▸ Set [seconds]	30	▸ Set [Min]	30
▸ Temperature 1		▸ Time changeable?	☐ Yes / ☑ No
▸ Drying time 1 [Min]		Cooling down with fan	
		▸ ☐ No	
		▸ Set [seconds]	120
▸ Automatic door opening	☑ No / ☐ Program end		

Use as described for the Normal plus program

Conductivity Limit (Optional)

Water intake		Water drainage	
▸ Set [µS/cm]		▸ Set [µS/cm]	
▸ Number of repeats	☐ 0 / ☑ 1	▸ Number of repeats	☐ 0 / ☑ 1

Cleaning		Interim rinse				Final rinse	
1	2	1	2	3	4	1	2
WW		WW	WW	DI		DI	
DOS 1		DOS 3					
0.3		0.1					
167°F/ 75°C						167°F/ 75°C	
3		2	1	1		1	
						On	

▸ = Customizable parameters.

CW = cold water
HW = hot water;
CWxx = CW proportion in mixed water as percentage (CW70 = 70% CW + 30% HW);
DI = fully demineralized water

Min = Holding time in minutes

DOS 1 = process chemicals
DOS 3 = neutralizing agent
DOS 4 = DOS module

Program chart

Pipettes

Application:
For pipettes.

Program header			
▸ Water volume change [l]		Rinse arm monitoring	
Drainage time		▸ ☐ On	
▸ ☑ Standard		▸ ☑ Off for basket	
▸ ☐ Extended		▸ ☐ Off	

		Wash block	Pre-rinse		
		Parameters	1	2	3
Water quality			CW50		
Dosage	1	Dispensing system			
		▸ Concentration [%]			
	2	Dispensing system			
		▸ Concentration [%]			
▸ Wash block temperature					
▸ Holding time [Min]			1		
▸ Conductivity Monitoring (conductivity)					

Drying unit			
Cooling down pause		▸ Temperature 2	176°F/80°C
▸ ☐ No		Drying time 2	
▸ Set [seconds]	30	▸ Set [Min]	35
▸ Temperature 1		▸ Time changeable?	☐ Yes / ☑ No
▸ Drying time 1 [Min]		Cooling down with fan	
		▸ ☐ No	
		▸ Set [seconds]	120
▸ Automatic door opening	☑ No / ☐ Program end		

Conductivity Limit (Optional)

Water intake		Water drainage	
▸ Set [µS/cm]		▸ Set [µS/cm]	
▸ Number of repeats	☐ 0 / ☑ 1	▸ Number of repeats	☐ 0 / ☑ 1

Cleaning		Interim rinse				Final rinse	
1	2	1	2	3	4	1	2
WW		WW	DI	DI		DI	
DOS 1		DOS 3					
0.4		0.1					
158°F/ 70°C						158°F/ 70°C	
3		2	1	1		1	
						On	

▸ = Customizable parameters.

CW = cold water
HW = hot water;
CWxx = CW proportion in mixed water as percentage (CW70 = 70% CW + 30% HW);
DI = fully demineralized water

Min = Holding time in minutes

DOS 1 = process chemicals
DOS 3 = neutralizing agent
DOS 4 = DOS module

Program chart

Plastics

Application:
For heat-sensitive loads, such as plastic flasks (**temperature resistance: at least 131°F/55°C**).

Program header			
▸ Water volume change [l]		Rinse arm monitoring	
Drainage time		▸ ☐ On	
▸ ☑ Standard		▸ ☑ Off for basket	
▸ ☐ Extended		▸ ☐ Off	

		Wash block	Pre-rinse		
		Parameters	1	2	3
Water quality			CW		
Dosage	1	Dispensing system			
		▸ Concentration [%]			
	2	Dispensing system			
		▸ Concentration [%]			
▸ Wash block temperature					
▸ Holding time [Min]			1		
▸ Conductivity Monitoring (conductivity)					

Drying unit			
Cooling down pause		▸ Temperature 2	158°F/70°C
▸ ☑ No		Drying time 2	
▸ Set [seconds]		▸ Set [Min]	15
▸ Temperature 1	176°F/80°C	▸ Time changeable?	☐ Yes / ☑ No
▸ Drying time 1 [Min]	30	Cooling down with fan	
		▸ ☐ No	
		▸ Set [seconds]	120
▸ Automatic door opening	☑ No / ☐ Program end		

– For preparative and, conditionally, analytical applications,
– For light to medium levels of soiling,
– For normal wash result requirements.

Conductivity Limit (Optional)

Water intake		Water drainage	
▸ Set [µS/cm]		▸ Set [µS/cm]	
▸ Number of repeats	☐ 0 / ☑ 1	▸ Number of repeats	☐ 0 / ☑ 1

Cleaning		Interim rinse				Final rinse	
1	2	1	2	3	4	1	2
CW		CW	CW	DI		DI	
DOS 1		DOS 3					
0.3		0.1					
131°F/ 55°C						131°F/ 55°C	
3		2	1	1		1	
						On	

▸ = Customizable parameters.

CW = cold water
HW = hot water;
CWxx = CW proportion in mixed water as percentage (CW70 = 70% CW + 30% HW);
DI = fully demineralized water

Min = Holding time in minutes

DOS 1 = process chemicals
DOS 3 = neutralizing agent
DOS 4 = DOS module

Program chart

Mini

Application:
Short program for lightly soiled items and loads that do not require intensive cleaning.

Program header			
▸ Water volume change [l]		Rinse arm monitoring	
Drainage time		▸ ☐ On	
▸ ☑ Standard		▸ ☑ Off for basket	
▸ ☐ Extended		▸ ☐ Off	

		Wash block	Pre-rinse		
		Parameters	1	2	3
Water quality					
Dosage	1	Dispensing system			
		▸ Concentration [%]			
	2	Dispensing system			
		▸ Concentration [%]			
▸ Wash block temperature					
▸ Holding time [Min]					
▸ Conductivity Monitoring (conductivity)					

Drying unit			
Cooling down pause		▸ Temperature 2	230°F/110°C
▸ ☑ No		Drying time 2	
▸ Set [seconds]		▸ Set [Min]	30
▸ Temperature 1		▸ Time changeable?	☐ Yes / ☑ No
▸ Drying time 1 [Min]		Cooling down with fan	
		▸ ☐ No	
		▸ Set [seconds]	120
▸ Automatic door opening	☑ No / ☐ Program end		

Conductivity Limit (Optional)

Water intake		Water drainage	
▸ Set [µS/cm]		▸ Set [µS/cm]	
▸ Number of repeats	☐ 0 / ☑ 1	▸ Number of repeats	☐ 0 / ☑ 1

Cleaning		Interim rinse				Final rinse	
1	2	1	2	3	4	1	2
WW		WW				DI	
DOS 1		DOS 3					
0.3		0.1					
140°F/ 60°C						140°F/ 60°C	
3		2				1	
						On	

▸ = Customizable parameters.

CW = cold water
HW = hot water;
CWxx = CW proportion in mixed water as percentage (CW70 = 70% CW + 30% HW);
DI = fully demineralized water

Min = Holding time in minutes

DOS 1 = process chemicals
DOS 3 = neutralizing agent
DOS 4 = DOS module

Program chart

Oil program

Application:
For heavy oil soiling such as crude oil, synthetic oils/lubricants, fuels and partially natural oils.

Program header			
▸ Water volume change [l]		Rinse arm monitoring	
Drainage time		▸ ☐ On	
▸ ☑ Standard		▸ ☑ Off for basket	
▸ ☐ Extended		▸ ☐ Off	

		Wash block	Pre-rinse		
Parameters			1	2	3
Water quality			WW		
Dosage	1	Dispensing system	DOS 4		
		▸ Concentration [%]	0.5		
	2	Dispensing system	DOS 1		
		▸ Concentration [%]	0.3		
▸ Wash block temperature			113°F/ 45°C		
▸ Holding time [Min]			1		
▸ Conductivity Monitoring (conductivity)					

Drying unit			
Cooling down pause		▸ Temperature 2	230°F/110°C
▸ ☐ No		Drying time 2	
▸ Set [seconds]	30	▸ Set [Min]	30
▸ Temperature 1		▸ Time changeable?	☐ Yes / ☑ No
▸ Drying time 1 [Min]		Cooling down with fan	
		▸ ☐ No	
		▸ Set [seconds]	120
▸ Automatic door opening	☑ No / ☐ Program end		

Liquid process chemicals required, hot and DI water connection recommended.

Conductivity Limit (Optional)

Water intake		Water drainage	
▸ Set [µS/cm]		▸ Set [µS/cm]	
▸ Number of repeats	☐ 0 / ☑ 1	▸ Number of repeats	☐ 0 / ☑ 1

Cleaning		Interim rinse				Final rinse	
1	2	1	2	3	4	1	2
WW	WW	WW	WW	DI		DI	
DOS 4	DOS 1	DOS 3					
0.4	0.3	0.1					
DOS 1							
0.4							
149°F/ 65°C	185°F/ 85°C					167°F/ 75°C	
2	3	2	1	1		1	
						On	

▸ = Customizable parameters.

CW = cold water
HW = hot water;
CWxx = CW proportion in mixed water as percentage (CW70 = 70% CW + 30% HW);
DI = fully demineralized water

Min = Holding time in minutes

DOS 1 = process chemicals
DOS 3 = neutralizing agent
DOS 4 = DOS module

Program chart

Special 93°C-10'

Application:
For cleaning at 200°F (93°C) with 10 minutes temperature holding time (exposure time).

Program header			
▸ Water volume change [l]		Rinse arm monitoring	
Drainage time		▸ ☑ On	
▸ ☑ Standard		▸ ☐ Off for basket	
▸ ☐ Extended		▸ ☐ Off	

		Wash block	Pre-rinse		
		Parameters	1	2	3
Water quality					
Dosage	1	Dispensing system			
		▸ Concentration [%]			
	2	Dispensing system			
		▸ Concentration [%]			
▸ Wash block temperature					
▸ Holding time [Min]					
▸ Conductivity Monitoring (conductivity)					

Drying unit			
Cooling down pause		▸ Temperature 2	203°F/95°C
▸ ☐ No		Drying time 2	
▸ Set [seconds]	30	▸ Set [Min]	50
▸ Temperature 1	212°F/100°C	▸ Time changeable?	☐ Yes / ☑ No
▸ Drying time 1 [Min]	20	Cooling down with fan	
		▸ ☐ No	
		▸ Set [seconds]	120
▸ Automatic door opening	☑ No / ☐ Program end		

Conductivity Limit (Optional)

Water intake		Water drainage	
▸ Set [µS/cm]		▸ Set [µS/cm]	
▸ Number of repeats	☐ 0 / ☑ 1	▸ Number of repeats	☐ 0 / ☑ 1

Cleaning		Interim rinse				Final rinse	
1	2	1	2	3	4	1	2
CW70		WW	WW			DI	
DOS 1		DOS 3					
0.6		0.1					
199°F/ 93°C						167°F/ 75°C	
10		1	1			3	
						On	

▸ = Customizable parameters.

CW = cold water
HW = hot water;
CWxx = CW proportion in mixed water as percentage (CW70 = 70% CW + 30% HW);
DI = fully demineralized water

Min = Holding time in minutes

DOS 1 = process chemicals
DOS 3 = neutralizing agent
DOS 4 = DOS module

Program chart

Demineralized rinse

Application:
Rinse with demineralized water, holding time: 3 Min.

Rinse

Application:
Cold water rinse, holding time: 1 Min. For flushing out saline solution (see "Water softener"), rinsing heavily soiled loads, e.g for pre-rinsing soiling, or to prevent items drying out and to prevent incrustation before running a full load.

Drain

Application:
For draining chamber washer solution e.g. after a program cancellation (see Operation/ Canceling a program").

Program selection depending on the accessories used

Program	Amount of water	Lower basket		Upper basket	
		2 injector modules	Basket for various inserts	2 injector modules	Basket with spray arm for various inserts
Normal plus, Standard, Intensive, Inorganic, Organic, Plastics, Mini, Oil program			X		X
			X	X	
				X	X
		X			
	+ 0.5 to 0.65 gal (+ 2.0 to 2.5 L)	X			X
Injector Plus		X		X	
Pipettes		A 303 (+ 1 module)			

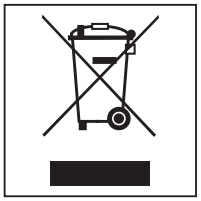
Disposal of packaging material

The packaging is designed to protect the machine against transportation damage. The packaging materials used are selected from materials which are environmentally friendly for disposal and should be recycled.

Ensure that any plastic wrappings, bags, etc. are disposed of safely and kept out of the reach of children. Danger of suffocation!

Disposal of your old appliance

Electrical and electronic appliances contain valuable materials. They also contain certain substances, compounds and components which were essential for the proper functioning and safe use of the equipment. Handling these materials improperly by disposing of them in your household waste can be harmful to your health and the environment. Therefore, please do not dispose of your old appliance with regular household waste and follow local regulations on proper disposal.



Consult with local authorities, dealers or Miele in order to dispose of and recycle electrical and electronic appliances. Miele assumes no responsibility for deleting any personal data left on the appliance being disposed. Please ensure that your old appliance is kept away from children until removal. Observe safety requirements for appliances that may tip over or pose an entrapment hazard.

Please have the model and serial number of your machine available when contacting Technical Service.

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