Miele

Operating Instructions
Laboratory Glassware Washer for Laboratory Glassware and Utensils
PG 8504

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

en - US

M.-Nr. 10 284 314

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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.

Notes

Notes contain information that is particularly important to follow. They are highlighted by a thickly framed box.

Additional information and comments

Additional information and comments are contained in a simple frame.

Operating steps

Operating steps are indicated by a black square bullet point.

Example:

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

Display

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

Example:

Menu Settings ⚑.

Definition of terms

Wash items The term “wash items” is used wherever the items to be reprocessed are not defined in any further detail.

Wash water The term “wash water” is used for the mixture of water and process chemicals.

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

▶ Use of this machine is only approved for the applications stated in the operating instructions. Conversions, modifications, and any other use are not permitted and could be dangerous.
The cleaning processes are only designed for laboratory glassware and utensils which are designated as reprocessable by the manufacturer. The information provided by the manufacturer of the wash items must be observed.

▶ 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.

▶ The machine should only be installed, commissioned, repaired, and maintained by a Miele authorized technician. A Miele service contract is recommended to ensure full compliance with the normative and regulatory provisions. Incorrect repairs can cause considerable danger to users.

▶ 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.

▶ If the machine is built under a countertop, it must only be installed under a continuous countertop 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.

▶ Label machines which have been taken out of operation and lock them to prevent them being switched on again without authorization. The machine may only be put back into operation once it has been successfully repaired by Miele Service or an authorized technician.

▶ 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 their manufacturer for the relevant application. The manufacturer of the process chemicals is liable for any negative influences on the material of the wash items and 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!

▶ Use caution not to inhale powder process chemicals. Process chemicals can cause chemical burns in the mouth and throat or lead to asphyxiation.

▶ 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.

▶ Be careful when sorting wash items with sharp, pointed ends. Position them in the machine so that you will not hurt yourself or create a danger for others.

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

▶ The machine can get hot when in use. Use caution not to scald or burn yourself or come into contact with irritant substances when opening the door.

▶ 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.

▶ Depending on the properties of the flooring and footwear worn on it, liquids can cause a slipping hazard. Keep the floor dry where possible and take care to clean up any liquid spills straight away. Take the necessary precautions when cleaning up hazardous substances and hot liquids.

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.

▶ 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 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 process chemicals, always consult the instructions issued by individual manufacturers. Process chemicals must only be used for the purpose they are designed for by the manufacturer to avoid any material damage or the occurrence of very strong chemical reactions, such as an oxyhydrogen explosion.

▶ 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.

▶ If the cleaning result is subject to particularly stringent requirements, e.g., in chemical analysis, regular quality control should be carried out by the operator to ensure that required standards of cleanliness are being achieved.

▶ 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 components and 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, and inserts made by other manufacturers, or making modifications to Miele accessories can cause unsatisfactory cleaning results, for which Miele cannot be held liable. Any resultant damage will not be covered by the guarantee.

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.

SAVE THESE INSTRUCTIONS

Appropriate use

This cleaning machine is designed to reprocess laboratory glassware, utensils, and similarly categorized components using water-based media. These include:

- vessels such as beakers, flasks, cylinders, and test tubes
- measuring vessels such as measuring cylinders and volumetric flasks
- dishes such as petri dishes and watch glasses
- plates such as slides and sequencing plates
- small items such as lids, magnetic stirring rods, spatulas, and stoppers
- other items such as boxes, plastic flasks and containers, metal parts, pipe and hose pieces, and funnels

Reprocessing encompasses the cleaning and rinsing of the laboratory glassware, utensils, and components listed above.

Pipettes are excluded from this list. This cleaning machine is not designed for reprocessing pipettes.

Reprocessing is carried out in conjunction with:

- process chemicals which are tailored to the result of the reprocessing
- load carriers which are tailored to the wash items

Observe the information issued by the manufacturer of the wash items.

This machine is designed for use in laboratories (e.g., chemical and biological laboratories in universities and research institutes).

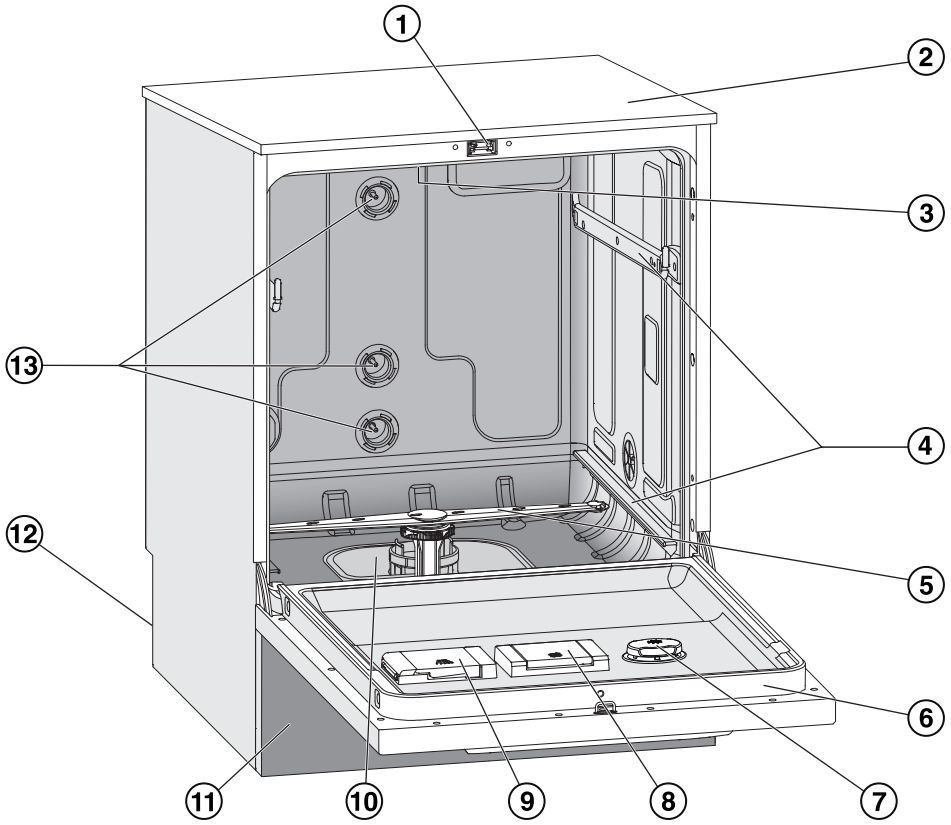
This machine is suitable for removing water-soluble soiling.
The cleaning machine is not suitable or only suitable to a limited extent for removing soiling that is difficult to dissolve in water or which is not soluble in water, such as oils and fats.
The cleaning machine is not suitable for removing soiling which is soluble in water at temperatures ≥ 158°F (70°C), such as agar.

Inappropriate use

This machine must not be used for any purposes other than the appropriate use described. This applies in particular to:

- the reprocessing of medical devices suitable for reprocessing
- use in the restaurant industry
- residential or household use

Machine overview



① Door lock

② Test point for performance checks (Top, front right; only visible with lid removed)

③ Upper machine spray arm

④ Rails for baskets and mobile units

⑤ Lower machine spray arm

⑥ Data tag

⑦ Container for neutralizing agent or rinsing agent

⑧ Container for reactivation salt

⑨ Dispensing canister for powder cleaning agent

⑩ Filter combination

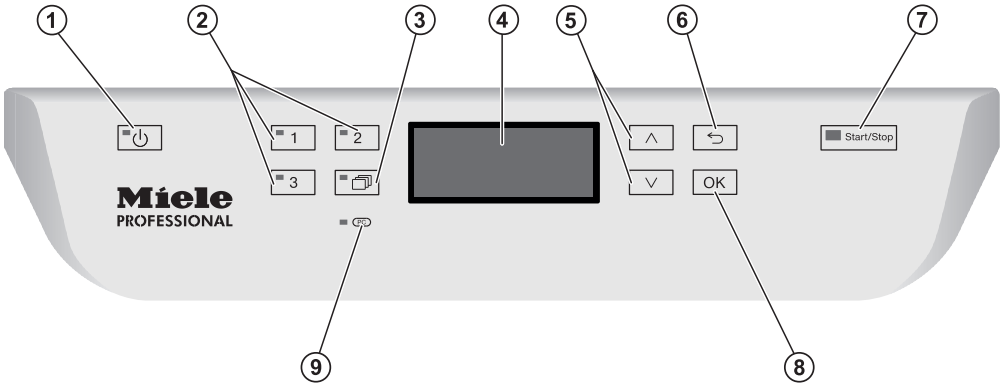
⑪ Toe-kick panel

⑫ Rear of machine:

- Second data tag
- Electrical and water connections
- Connection for an external dispenser module (DOS module)

⑬ Water connections for mobile units and baskets

Control panel



① ⏻ **(On/Off) button**
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**
For navigating in the user interface.

⑥ ⮌ **button (Cancel)**
For canceling a process in the user interface.
No program interruption!

⑦ *Start*/*Stop* **button**
For starting or canceling a program.

⑧ *OK* **button**
For confirming selections or entries in the user interface (acknowledge or save).

⑨ PC **Service interface**
Testing and transmission point for Miele Technical Service.

LEDs in the buttons

The buttons on the control panel have LEDs that indicate the status of the machine. 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 with this button. 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 with this button or the program settings are being selected.
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.

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.

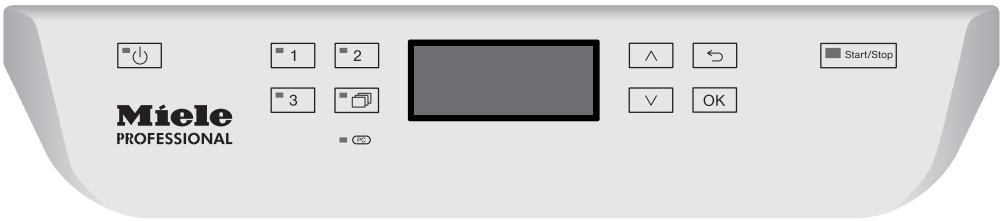
Alterations or adaptations to the machine, e.g. accessories used or on-site conditions require additional specific knowledge of the machine.

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.

Control panel

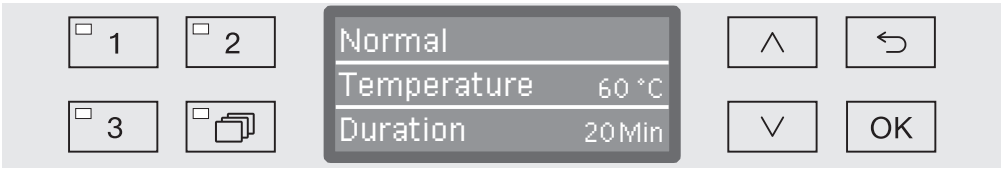
The machine is operated exclusively by the buttons located on the stainless steel surfaces on either side of the display. The display is not a touch screen.



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, with the exceptions of the ⏻ and the *Start*/*Stop* button, are shown next to the display.

Switching on

The machine must be connected to the electrical supply.

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

After that, the display shows the following:

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 default settings have been reinstated, some basic parameters, e.g., language, date, time, etc., must first be set. To enable this, the display automatically changes to the relevant screen.

Switching off

■ Press the ⏻ button.

Auto-off function

To save energy, the machine has an Auto-off function. If the machine has not been used for a specific time period, it switches itself off automatically; see “Additional 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

To access the system settings menu, you must first switch the machine off with the ⏻ button.
Then press and hold the ⮌ button while switching the machine back on with the ⏻ button.
Then release both buttons.

∧ 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

In these operating instructions, all descriptions for operating the menus follow a simple structure:

Input path

The input path describes the complete sequence to follow to access the menu level in question. The listed menu options have to be selected individually using the arrow buttons and confirmed with *OK*.

Example:

- To open the system menu level, press the ⏻ button to switch off the cleaning machine, then hold down the ⮌ button and press the ⏻ button to switch the machine back on.

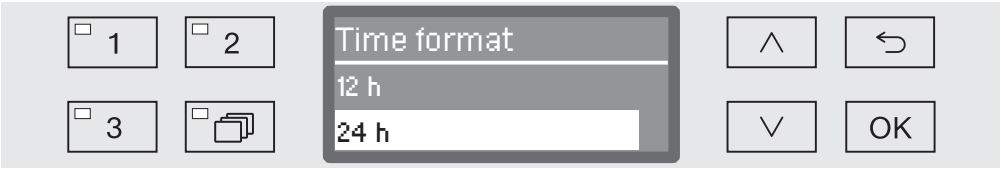
  ▸Settings ⚑
  ▸Time of day
  ▸Time format

If a menu level is already shown on the display, you don't need to follow the complete path. If you have already called up the Settings ⚑ menu, for example, you don't need to switch the cleaning machine off and back on again. In this case, you can follow the path from the Settings ⚑ menu.

Display

When you call up a menu, the last setting to be made is generally preselected.

Example:



Options

All setting options from the menus are presented as a list with a short explanation.

Example:

- 12 h

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

- 24 h

  Time of day display in 24-hour format.

Method

The next steps are explained.

Example:

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

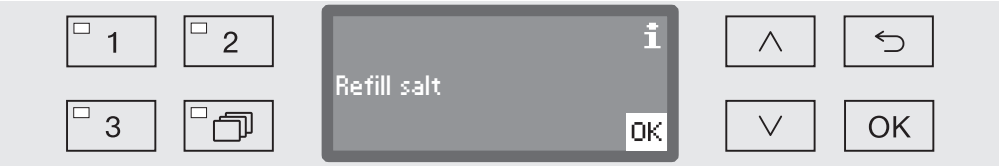
If a menu contains more than two options, the end of the option list is marked by a dotted line. The last entry appears above the line, the first entry below it.

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.

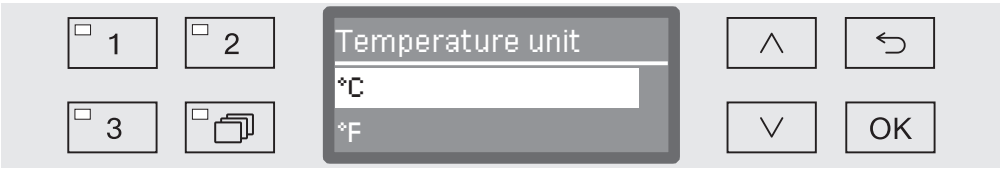
Selecting the language

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

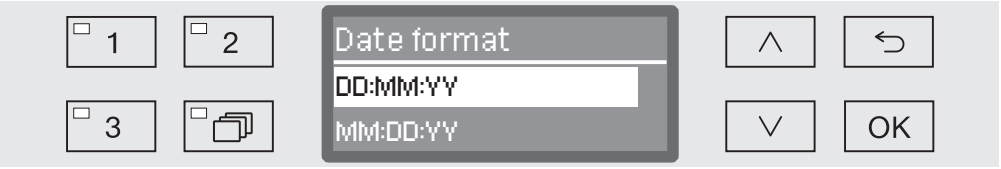
The menu for selecting the temperature unit will then appear.



- 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.

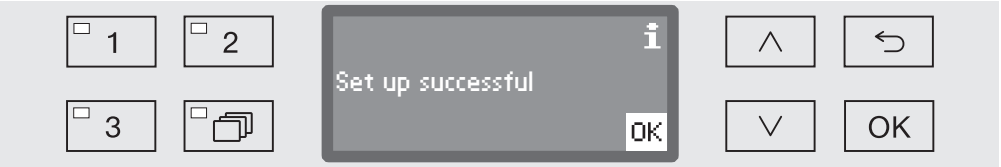
Following commissioning, the water connections can be reinstated by Miele Service.

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.

Opening the door

⚠ If the door is opened during a program cycle, hot water and process chemicals can escape.
Risk of scalding, burning and chemical burns.
Do not open the door if a program is running.

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

⚠ Do not touch the door frame.
Risk of injury!

- Lift the door until it engages with the door lock.

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 Additional settings menu by switching the machine off with the ⏻ button and then switch it on again with the ⏻ button while keeping the ⮌ button pressed.
- Open the menu as follows:

  ▸ 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**

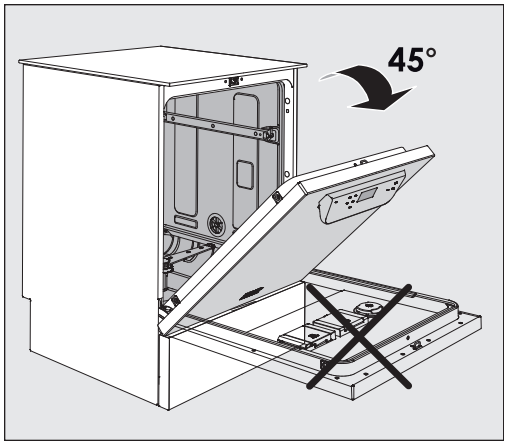
*) Factory default setting

Filling the salt container

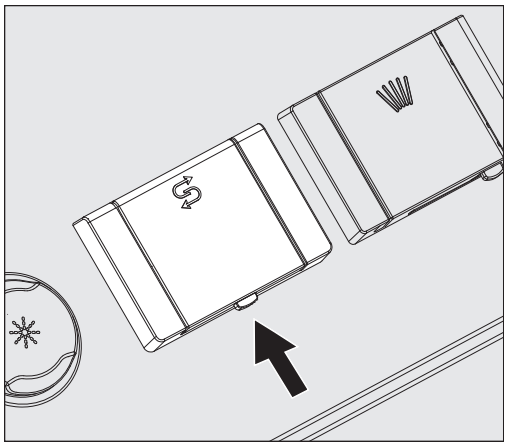
Use only special, coarse-grained reactivation salt with a granule size of approx. 1/16“ - 3/16” (1 - 4 mm).
Do not under any circumstances use other types of salt such as table salt, agricultural or gritting salt. These may contain insoluble additives which can impair the functioning of the water softener.

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.

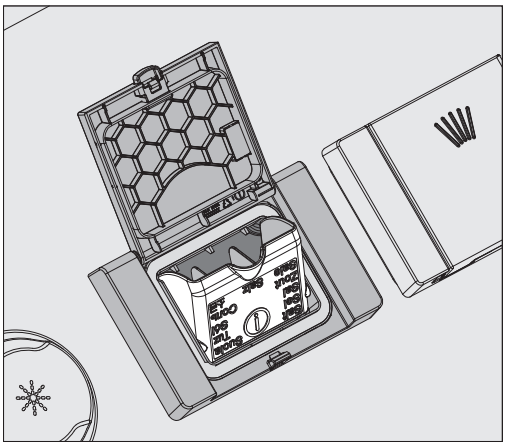


- Open the door to an angle of around 45°. This ensures that the salt flows into the container more easily.



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

The container takes approx. 3-4.5 lb (1.4–2 kg) of salt, depending on the type of salt and the remaining fill level.



⚠ Never fill the container with water.
The container could overflow when filled with salt.

- Add salt into the container until the funnel is full but still closes easily. Do not add any more than 2 kg of salt.

As the salt container is being filled, displaced water (brine) may run out.

- Clean any excess salt from around the opening of the container, focusing especially on the container's seal. Do **not** use running water to rinse away salt residues as this can cause the container to overflow.
- Close the container.

⚠ Do not force the container shut if it has been overfilled.
If an overfilled salt container is forced shut, this may damage the container.
Remove excess salt before closing the container.

- Run the Rinse program after refilling salt.

This will ensure that any traces of salt and brine are dissolved, diluted, and rinsed away.

Excess salt and brine which has overflowed can cause corrosion damage 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.

⚠ When using an upper basket with a spray arm at the same time as 2 injector modules in the bottom basket, the amount of water required has to be increased by + 50 oz. (1.5 l) for the program (see “Additional settings/Additional functions”).
Using up to 4 injector modules in the upper basket and the lower basket at the same time is not permitted.

See “Program chart” for an overview of which programs can be used for which accessories.

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.

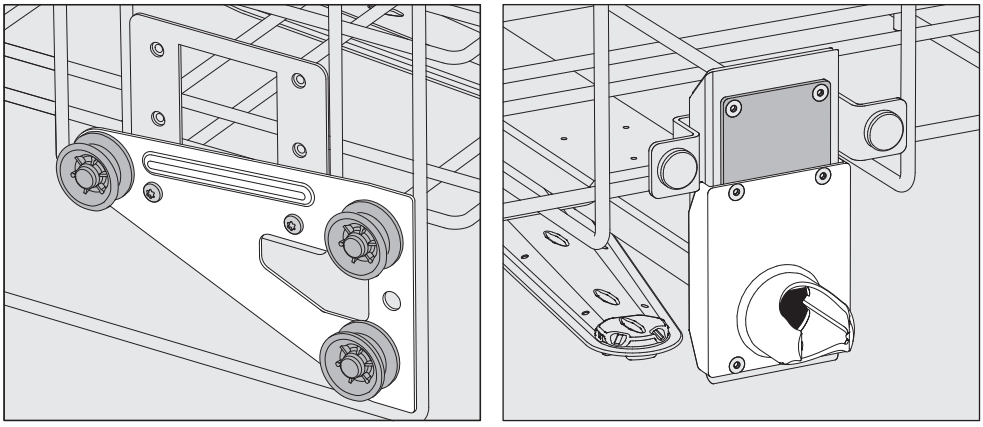
Only adjust the upper basket horizontally. The baskets are not designed to be positioned on a slant (one side up, one side down). Altering the height will alter loading heights for both the upper and lower baskets.

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.

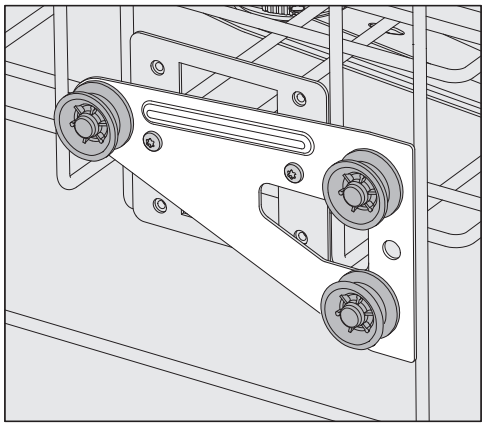
To adjust the upper basket to the ...

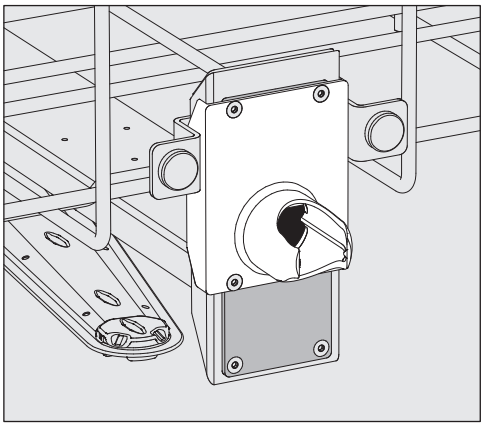
... upper position:



- 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.

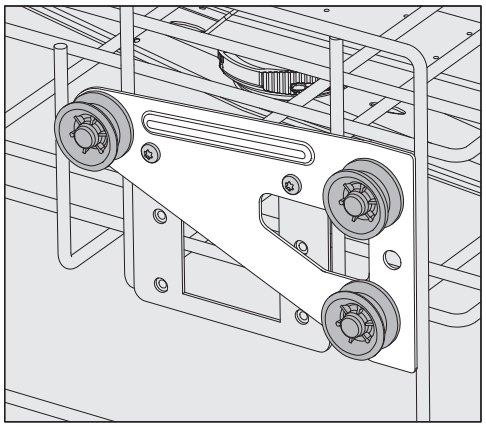
... middle position:

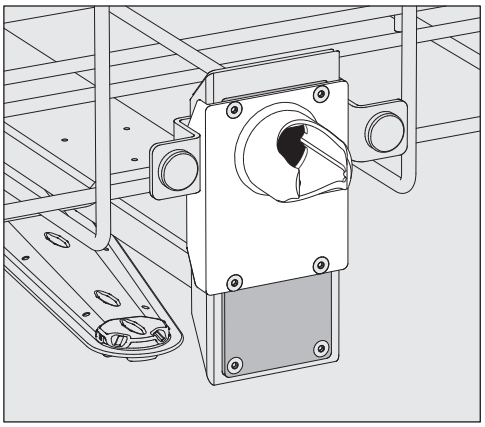




- Move the roller brackets on both sides to the middle position and secure them firmly.
- Position the stainless steel plate over the openings in the water supply pipe so that one of the outer openings are covered. Secure the stainless steel plate at the top or bottom with 2 screws. Place the water connector 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.
- Items containing iron that can rust or corrode must not be added to the load or to the wash chamber.
- 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 wash load should have only a slight solvent residue film when place in the wash chamber.
Solvents with a flash point below 70°F (21°C) may only be present in trace amounts.

⚠ Chloride solutions, in particular hydrochloric acid, must not be placed in the chamber!

- Shake out any blood residues and remove any clots.
- If necessary, rinse the wash load briefly with water to prevent coarse soiling from 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.

Process validation

As a rule, it is the responsibility of the user to ensure that items cleaned in the machine meet the required standards.

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.
- 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 chemical reactions which can occur between different types of soiling, process chemicals, and the components of the machine, along with their remedies as necessary.

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

General information	
Problem	**Solution**
If elastomers (hoses and seals) and plastics in the machine are damaged, for example by swelling, shrinking, hardening, or brittleness of materials, tears, and cracks, components will not function correctly and this generally leads to leaks.	- Determine and remedy the causes of the damage. See information regarding “Associated process chemicals”, “Soiling”, and “Reaction between process chemicals and soiling” in this section.
A heavy build-up of foam during the program sequence will impair the cleaning and rinsing effect on the wash items. Foam escaping from the wash cabinet can cause damage to the machine. When foam develops, the cleaning process is not standardized or validated in principle.	- Determine and remedy the causes of the foam. - Check the process used regularly to monitor foaming levels. See information regarding “Associated process chemicals”, “Soiling”, and “Reaction between process chemicals and soiling” in this section.
Corrosion to stainless steel in the wash cabinet and to accessories can give them a different appearance: - rust (red marks/discoloration) - black stains/discoloration - white stains/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) wash items.	- Determine and remedy the causes of corrosion. See information regarding “Associated process chemicals”, “Soiling”, and “Reaction between process chemicals and soiling” in this section.

Associated process chemicals	
Problem	**Solution**
The ingredients in process chemicals have a significant impact on the longevity and functionality (throughput) of dispensing systems.	- Follow the process chemical manufacturer's instructions and recommendations. - Carry out a regular visual check of the dispensing system (suction wands, hoses, dispensing canisters, 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 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.
The following process chemicals can cause large amounts of foam to build up: - cleaning agents and rinsing agents containing surfactants Foam can occur: - in the program phase in which the process chemical is dispensed - in the following program block if it has been spilt - in the following program with rinsing agent if it has been spilt	- The 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 very low-foaming. - Please observe the process chemical manufacturer's instructions.
De-foaming agents, especially silicone-based ones, can cause the following: - a build-up of deposits in the wash cabinet - a build-up of deposits on the wash items - damage to elastomers and plastics in the cleaning machine - damage to certain plastics (e.g., polycarbonate and plexiglass) in the wash items	- De-foaming agents should be used in exceptional cases only; for instance, when absolutely essential for the process. - The wash cabinet and accessories should be periodically cleaned without wash items and without de-foaming agent using the Regular or Extended program. - Please contact Miele for advice.

Soiling	
Problem	**Solution**
The following substances can damage elastomers (hoses and seals) and plastics in the cleaning machine: - oil, wax, aromatic and unsaturated hydrocarbons - emollients - cosmetics, hygiene and skincare products such as creams (analytical applications, filling)	- Depending on usage, wipe the lower door seal on the cleaning machine periodically with a lint-free cloth or sponge. Clean the wash cabinet and accessories without wash items using the Regular or Extended program. - Use the Extended program and dispense powder cleaning agent on the door to reprocess the wash items.
The following substances can lead to a heavy build-up of foam during washing and rinsing: - some disinfection agents, dishwashing cleaning agents, etc. - reagents for analysis, e.g., for microtiter plates - cosmetics, hygiene and skincare products such as shampoos and creams (analytical applications, filling) - active foaming agents such as surfactants	- Thoroughly rinse wash items in water beforehand. - Select the Extended program (with a cold or hot pre-cleaning). - Depending on the application, use defoaming agents that do not contain silicone oils.
The following substances may cause corrosion to stainless steel in the wash cabinet and on accessories: - hydrochloric acid - other substances containing chlorides, such as sodium chloride - concentrated sulphuric acid - chromic acid - particles of iron and shavings	- Thoroughly rinse wash items in water beforehand. - Put the drip-dry items to be washed into the mobile units, baskets, modules, and inserts and start a reprocessing program as soon as possible after placing in the wash cabinet.

Reaction between process chemicals and soiling	
Problem	**Solution**
Natural oils and fats can be emulsified with alkaline process chemicals. This can lead to a heavy build-up of foam.	- Select the Regular or Extended program. - Depending on the application, use defoaming 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.	- For cold water connection, select the Extended program (with a cold water pre-cleaning). - For hot water connection, pre-treat the wash items where necessary.
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 the process chemical manufacturer's instructions.

⚠ Unsuitable process chemicals pose a health risk.
Using unsuitable process chemicals will generally cause an unsatisfactory wash result and can pose a health risk or cause damage to property.
Only use process chemicals designed specifically for use in laboratory glassware washers and follow the manufacturer's instructions on how to use them.
Please follow any instructions relating to non-toxic residues.

⚠ Process chemicals pose a health risk.
Some process chemicals may be corrosive and irritant.
Observe the relevant safety codes and safety data sheets issued by the process chemical manufacturers when handling process chemicals.
Take all protective measures required by the process chemical manufacturer, e.g., wear protective goggles and protective gloves.

Contact Miele for information about suitable process chemicals.

Highly viscous (thick) process chemicals 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:

- Neutralizer or Rinse aid
  This is dispensed via a storage reservoir ✳ in the door.
- Powder cleaning agents
  These are dispensed using a dispensing canister //\\\ in the door.

Labeling of the suction wands

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

Miele uses and recommends the following:

- Blue: For cleaning agents
- Red: For neutralizing agents
- Green: For chemical disinfection agents or an additional second cleaning agent
- White: For acidic process chemicals
- Yellow: For free choice

DOS modules

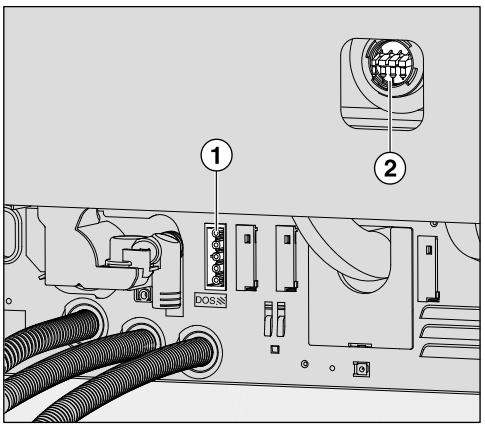
If required an additional external dispensing module (DOS module) can be fitted retrospectively for liquid process chemicals.

External DOS modules are fitted by Miele Service or a qualified and approved technician. Internal dispensing systems cannot be retrospectively fitted.

Connecting a DOS module

The DOS module is supplied with its own installation instructions.

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



① Power supply for DOS 1, process chemicals .

② Connection for dispensing hose.

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

Unused connectors must be blanked off with safety caps to prevent the leakage of wash fluid.

Dispensing liquids

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

Dispensing neutralizer or rinse aid

The container with the ✳ symbol on the lid can be used to dispense either neutralizing agent **or** rinsing agent.

Neutralizing agent is programmed at the factory.

To change the agent, e.g., from neutralizing agent to rinsing agent, the controls for the cleaning machine must be reprogrammed by Miele Customer Service.

Neutralizing agent

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

The neutralizing agent is dispensed in the Interim rinse program stage, after the main wash (see program charts). For this, the container must be filled.

Rinse aid

The dispensing of rinse aid is deactivated ex-works.
Please contact Miele Service if you wish to activate it.
If rinse aid has been activated, neutralizing agent will not be dispensed in the Interim rinse phase of the program.

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

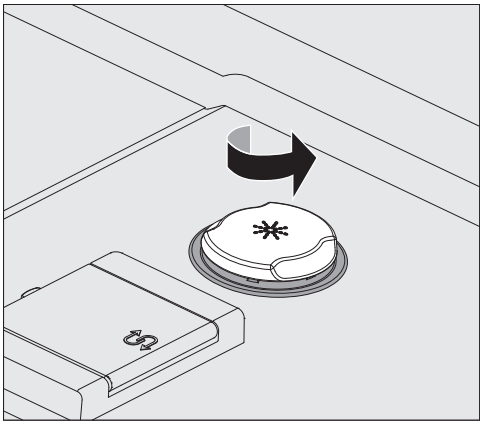
⚠ Residues of rinse aid remain on the surface of items after they have dried.
It is important to check the suitability of rinse aid being used.

Rinse aid is automatically dispensed in the Final rinse phase. The reservoir must be filled for this to occur.

Filling the reservoir

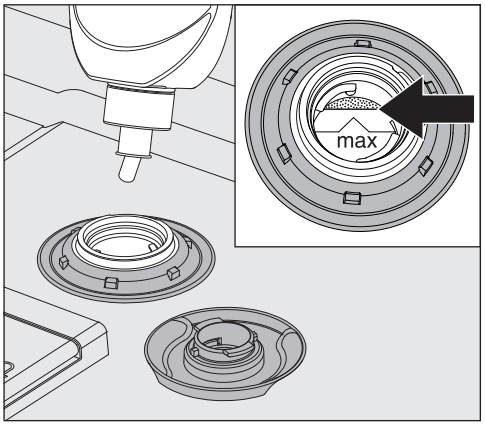
⚠ Never add cleaning agent.
This will always destroy the container.
Only fill the container with the programmed process chemical – neutralizing agent **or** rinsing agent.

- Open the door fully.

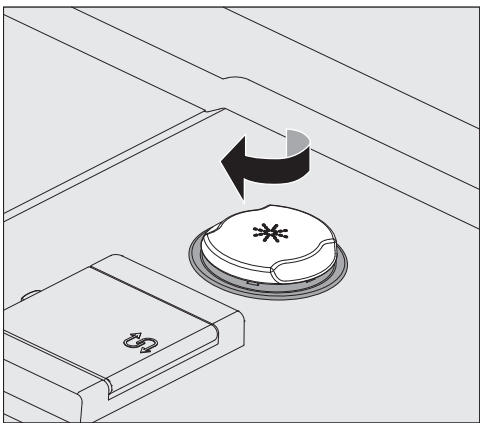


- Unscrew the yellow lid with the ✳ symbol in the direction of the arrow.

The container holds approx. 300 ml.



- Add the process chemical only until it is visible at the “max” mark in the funnel.

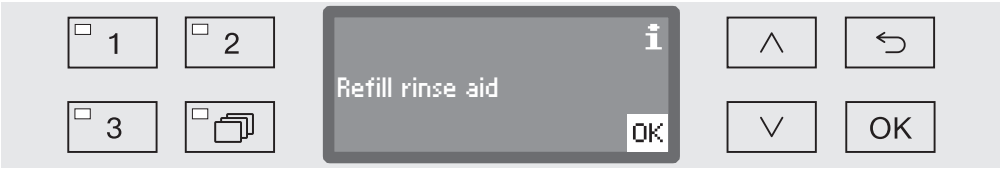


- Close the container.

- Wipe up any spilled process chemical thoroughly. Then start the Rinse program to prevent over-foaming from occurring during the next program.

Refill indicator

When the fill level is low in the (DOS 2) supply container for neutralizer or rinse aid you are reminded to refill it.



⚠ This message also appears when dispensing neutralizing agent. When refilling the reservoir, make sure you are using the correct process chemical.

- Confirm the message shown with *OK* and
- Refill the process chemical as described above.

Detergent quantity

For information about setting the dispensing concentration, see “Additional settings / Additional functions / Dispensing systems”.

If spots appear on items after reprocessing:

- Reduce the amount if using **neutralizing agent**.
- Increase the amount if using **rinse aid**.

If clouding or smearing appears on items:

- Increase the amount if using **neutralizing agent**.
- Reduce the amount if using **rinse aid**.

Process chemicals

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

This machine can be used with powder process chemicals or with liquid process chemicals via an external DOS module.

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

Miele recommends the use of liquid process chemicals.

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

- How alkaline does the cleaning agent need to be for the cleaning application involved?
- Are protein-removing enzymes required and is the program sequence suitable for this?
- Are surfactants required for proper dispersion and emulsification?
- Is a cleaning agent containing active chlorine required or can a cleaning agent without active chlorine be used?

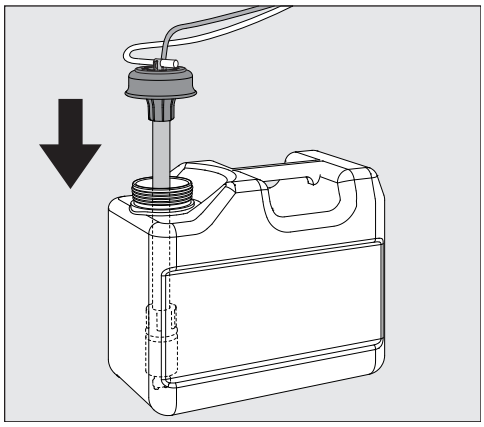
⚠ Cleaning agents containing chlorine can damage the plastics and elastomers inside the cleaning machine.

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

Refilling liquid cleaning agent

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

- Place the liquid cleaning agent container (blue marking) on the open chamber door or on a surface which is robust and easy to clean.
- Take the lid off the canister and remove the suction wand. Place the suction wand on the open wash cabinet door.
- Replace the empty container with a full one.



- Push the suction wand into the opening of the container and secure the lid. Observe the color coding.
- Feed the suction wand into the container until it reaches the bottom.
- Wipe up any spilled process chemical thoroughly.
- Place the container on the floor next to the machine or in an adjacent cabinet. The container must not be placed on top of or above the machine. Make sure that the dispensing hose is 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.

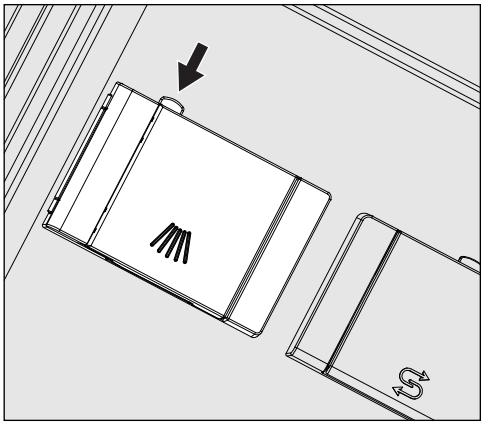
Dispensing liquid process chemicals

For information about setting the dispensing concentration, see “Additional settings / Additional functions / Dispensing systems”.

Dispensing powder cleaning agents

⚠ Take care not to inhale powder cleaning agents.
Swallowing process chemicals can cause chemical burns in the mouth and throat or lead to asphyxiation.

- Add powder cleaning agent to the dispensing canister with the //\\\ symbol before starting the program. Do not dispense powder cleaning agent in the Rinse and Drain programs.

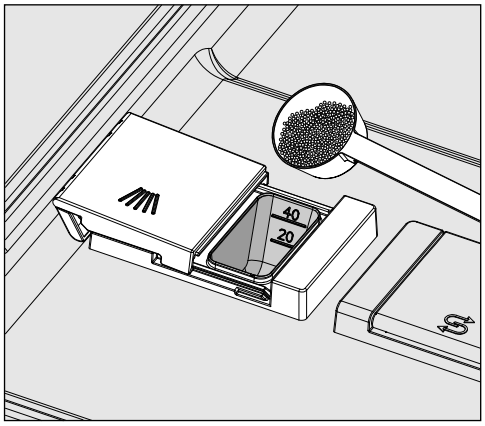


- Press the yellow button on the dispensing canister with the //\\\ symbol.

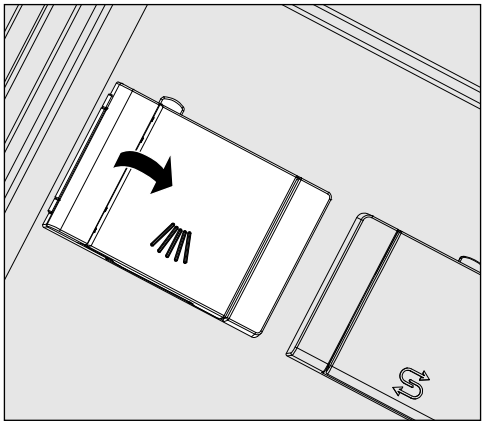
The flap will spring open. The flap is always open at the end of a program cycle.

The level markers in the powder dispensing canister with the door in the horizontal position equate to the amount dispensed in milliliters (ml). The max. capacity is approx. 60 ml of cleaning agent.
The amount in ml equates to approx. the amount normally recommended in grams (g) for proprietary powder cleaning agents. Powder density can affect this amount.

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



■ Add powder cleaning agent to the dispensing canister.



■ Close the flap.

⚠ Make sure that all of the cleaning agent has dissolved at the end of the program sequence.
Repeat the program if residual cleaning agent is present.
Check whether any wash items have prevented the flushing out of the dispensing canister and rearrange the wash items if necessary.

Nozzle A 802

The nozzle A 802 flushes the powder detergent out of the dispenser during the programme.

If an upper basket and a lower basket with two modules are being used, nozzle A 802 for powder detergent must be fitted. The operating instructions for the modules describe how to do this.

Selecting a program

Program selection buttons

- Select a programme using program selection buttons 1, 2, or 3.

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 lights up and the relevant program appears 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.

The different programs and their uses are described in “Program charts” at the end of these operating instructions.

Always select the program depending on the type of wash items and degree and type of soiling, or on infection prevention issues.

Starting a program

- Close the door.
- Press the *Start*/*Stop* button.
  The LED in the button will light up constantly.

Starting a program using delay start

The start of a program can be delayed (to benefit from economy rates of electricity, for example, or to clean the wash cabinet 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 (see “Settings ⚑/Delay start”).

If soiling is left to dry on the wash items for a long time, the reprocessing result can be adversely affected. There is also a risk of corrosion for stainless steel wash 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 hours, and confirm your selection with the *OK* button.

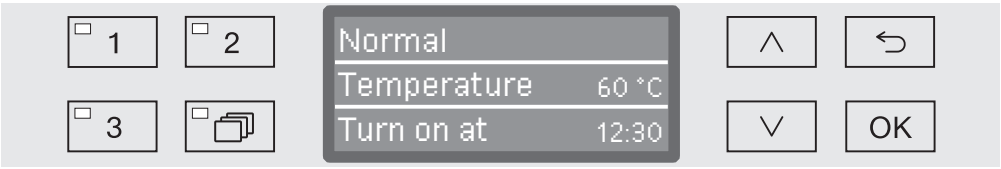
When the *OK* button is pressed, the display jumps automatically to the next input position. You cannot go back to the previous entry. If a mistake is made, the process must be canceled using the ⮌ button and repeated.

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

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

Activating Delay Start

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



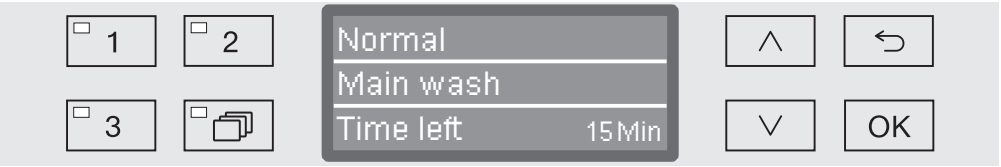
The selected program with the set start time set is then shown on the display. If automatic deactivation has been selected (see “Additional settings/Switch off after”), the machine will switch itself off after the set time until the program start time is reached.

Deactivating Delay Start

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

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 ∧ and ∨ arrow buttons:

- current program block, e.g. Main wash
- actual or required temperature
  (depending on the display set, see “Additional settings/Display: Temperature”)

Bottom line

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

Program end

The following messages and parameters appear at the end of a program:

Top line

- Program name.

Middle line

- Temperature
  (required temperature of the final wash phase)

Bottom line

- Program finished.

The LED in the *Start*/*Stop* button goes out as well. In the factory default state, an audible tone also sounds for approx. 10 seconds (see “Settings⚑/Volume”).

Ending the program

■ Open the door to end the program. The machine must be switched on when you do this.

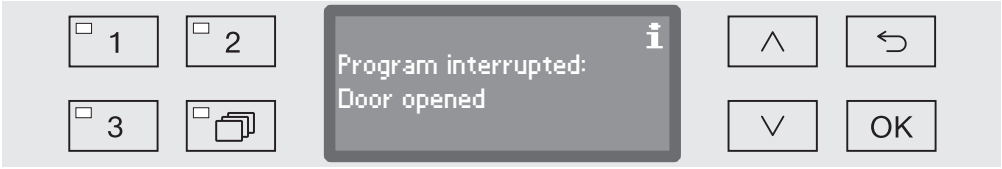
Interrupting a program

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

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

- Open the door.

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.

Canceling a program

⚠ 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 the Yes option.
- Confirm the selection with *OK*; this will cancel the program.

Selecting No will cause the program to continue without interruption. 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

- Before starting the program, check to see whether any more process chemicals are required.
- 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 ☐
  - DOS priming
    - DOS_
  - Language ⚑
    - deutsch ☐
    - english (GB) ☑
    - ... ☐
  - Date
    - Date format
      - DD:MM:YY ☑
      - MM:DD:YY ☐
    - Set
  - 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 systems menu by switching the machine off with the ⏻ button and then with the ⮌ button held, switch it back on with the ⏻ button.
- Open the menu as follows:

  ▸ 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.

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 systems menu by switching the machine off with the ⏻ button and then with the ⮌ button held, switch it back on with the ⏻ button.
- Open the menu as follows:

  ▸ Settings

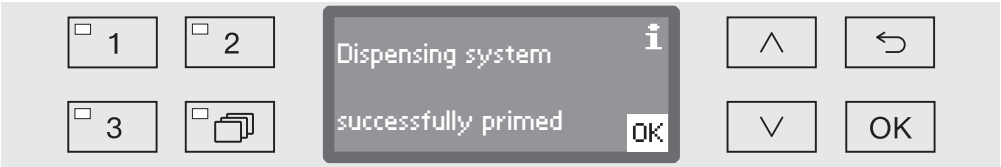
  ▸ DOS priming

  ▸ 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:



Language

The language set will be used in the display.

- Open the systems menu by switching the machine off with the ⏻ button and then with the ⮌ button held, switch it back on with the ⏻ button.
- Open the menu as follows:

  ▸ Settings

  ▸ Language

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

A list of all the available languages will be displayed. The language currently selected is marked with a check ✓.

The factory default language is set as German.

- 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.

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 systems menu by switching the machine off with the ⏻ button and then with the ⮌ button held, switch it back on with the ⏻ button.
- Open the menu as follows:

  ▸ 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 systems menu by switching the machine off with the ⏻ button and then with the ⮌ button held, switch it back on with the ⏻ button.
- Open the menu as follows:

▸ 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.

Time of day

The time of day is required for delay start and the display, for example. 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 systems menu by switching the machine off with the ⏻ button and then with the ⮌ button held, switch it back on with the ⏻ button.
- Open the menu as follows:

  ▸ 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 systems menu by switching the machine off with the ⏻ button and then with the ⮌ button held, switch it back on with the ⏻ button.
- Open the menu as follows:

  ▸ 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 systems menu by switching the machine off with the ⏻ button and then with the ⮌ button held, switch it back on with the ⏻ button.
- Open the menu as follows:

  ▸ 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 systems menu by switching the machine off with the ⏻ button and then with the ⮌ button held, switch it back on with the ⏻ button.

■ Open the menu as follows:

▸ Settings

▸ Volume

- Buzzer tones

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

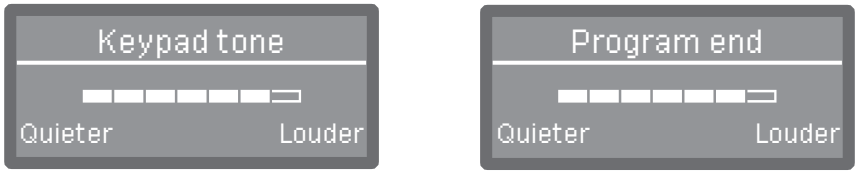
- Keypad tone

  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.

Additional settings

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
  - Release
    - Additional settings
      - Block ☐
      - Yes ☑
  - Change code
- Log book
  - Consumption: Water
  - Consumpt.:Cleaning agent
  - Consumpt.: Rinse aid
  - Operating hours
  - Wash programs
  - Service interval
- Temperature unit
  - °C ☑
  - °F ☐
- Move program
  - 1 Normal
  - 2 Regular
  - 3 Extended
- Additional functions
  - Reset
  - Increased water level
  - Interim rinse
  - Dispensing system
    - Active
    - Inactive
    - DOS priming
    - Concentration
    - Change name
  - Temperature / Time
    - ...

- Release program
  - All ☑
  - Selection
    - ... ☐
- 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

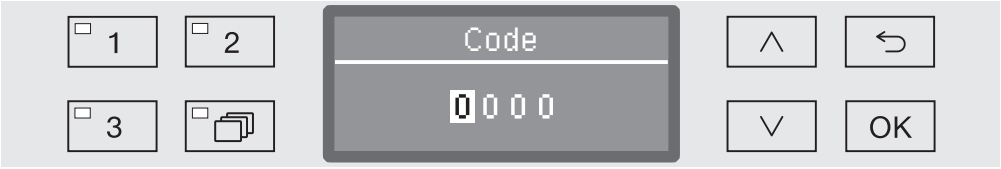
Code

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.

Release

The following function can be used to restrict access to the Additional settings menu via a code or to take the restriction off.

- Open the Additional settings menu by switching the machine off with the ⏻ button and then switch it on again with the ⏻ button while keeping the ⮌ button pressed.
- Open the menu as follows:

  ▸ Additional settings

  ▸ Code

  ▸ Release

  ▸ Additional settings

- Block

  The menu is only accessible by using a code.

- Yes

  The menu is available to all users.

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

Changing the PIN code

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

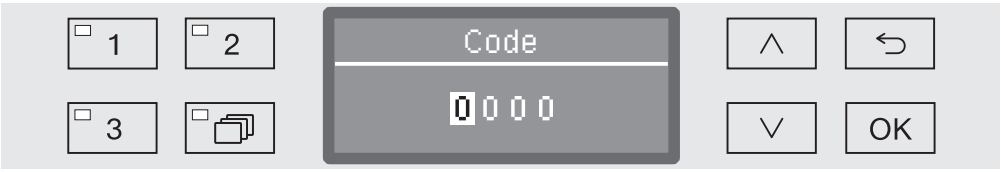
⚠ When a new PIN code is entered, the old PIN code is overwritten and is permanently deleted. Therefore it cannot be reinstated. If a PIN code is lost, a new code must be issued by Miele Service.

- Open the Additional settings menu by switching the machine off with the ⏻ button and then switch it on again with the ⏻ button while keeping the ⮌ button pressed.
- Open the menu as follows:

  ▸ 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.

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 Additional settings menu by switching the machine off with the ⏻ button and then switch it on again with the ⏻ button while keeping the ⮌ button pressed.
- Open the menu as follows:

  ▸ 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). Powder process chemicals are not shown.

- Consumpt.: Rinse aid

  Display total consumption of neutralizing agent or rinsing agent in liters (l).

- Operating hours

  Display the total number of operating hours.

- Program cycle counter

  Total of all completed program sequences. 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 choice with *OK*.

Values in the machine log book cannot be altered.

- Press the ⮌ button to exit the menu.

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).

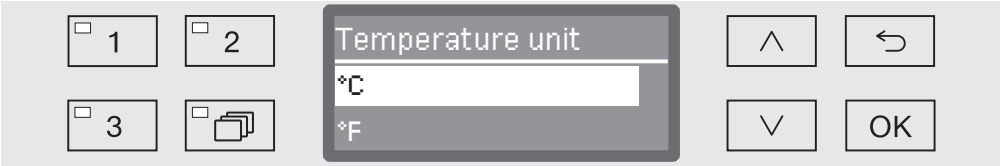
The temperature unit is set at the factory to °C.

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

- Open the Additional settings menu by switching the machine off with the ⏻ button and then switch it on again with the ⏻ button while keeping the ⮌ button pressed.
- Open the menu as follows:

  ▸ 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.

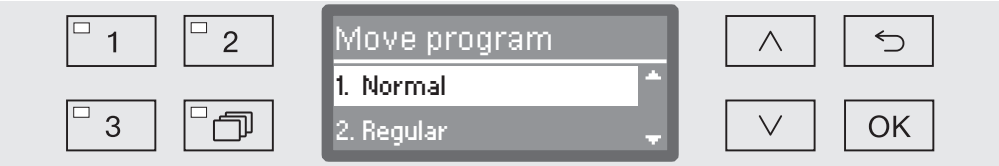
Moving a program: allocating program selection buttons

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 Additional settings menu by switching the machine off with the ⏻ button and then switch it on again with the ⏻ button while keeping the ⮌ button pressed.
- Open the menu as follows:

  ▸ Additional settings

  ▸ Move program



All enabled programs are shown in the program list (see “Additional 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 on program selection button 1
- 2. Regular on program selection button 2
- 3. Extended on program selection button 3
- 4. Demineralized rinse
- 5. Rinse
- 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.

Additional functions

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

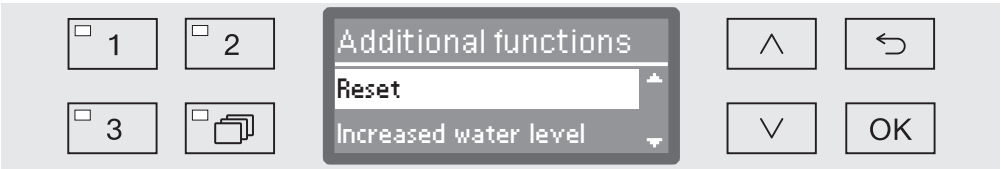
Additional specialist knowledge is required to alter program settings and this should therefore be performed only by experienced users or by Miele Customer Service.

Changing program parameters on a validated machine will require a new performance validation.

- Open the Additional settings menu by switching the machine off with the ⏻ button and then switch it on again with the ⏻ button while keeping the ⮌ button pressed.
- Open the menu as follows:

  ▸ Additional settings

  ▸ Additional functions



- Reset

  All parameters that have been set under “Additional functions” will be reset to the factory default setting.

- Increased water level

  The water level will be increased for all programs.

- Interim rinse

  All programs that incorporate this option will have an extra interim rinse stage (see the program chart).

- Dispensing system

  Priming the dispensing system and renaming it.

- Temperature / Time

  Adjust the temperature and holding time for the Main wash or Final rinse program block.

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

See the next section for details of how to continue.

Reset

You can reset altered additional function parameters back to their default settings if necessary. This does not apply to further settings.

...

▸ Reset

- No

  Altered parameters are maintained.

- Yes

  All parameters will be reset to the factory default setting.

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

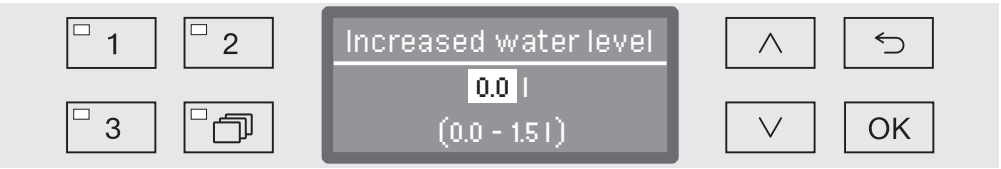
■ Press *OK* to save the setting.

Increased water level

It is advisable to increase the water level when a lot of water is absorbed due to the structure of the wash items, in the event of heavy soiling or when the type of stain (e.g., blood) and the process chemicals used lead to excess foam development. The additional volume of water depends on the type of basket or mobile unit used, the type of stain and the wash items.

...

▸ Water volume change



The volume of water can be modified in increments of 0.5 l. The possible range is shown in the bottom line of the display.

■ Use the ∧ (higher) and ∨ (lower) arrow buttons to adjust the volume of water.

■ Press *OK* to save the setting.

Interim rinse

Some programs can have the option of adding an extra interim rinse (see “Program chart”).

...

▸ Interim rinse

- No

  The additional interim rinse block is deactivated.

- Yes

  The additional interim rinse block is activated for all applicable programs.

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

■ Press *OK* to save the setting.

Dispensing systems

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

...

▸ 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.

If the dispensing systems have been activated (Active), the following options are also available:

- DOS priming

  Vent the dispensing system.

- Concentration

  Set the dosage concentration level. The setting applies to all programs.

- Change name

  Change the name of the dispensing system.

With DOS 2 Rinse aid the only option shown is Concentration.

DOS priming (venting)

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.

...

▸ Dispensing system

▸ DOS_

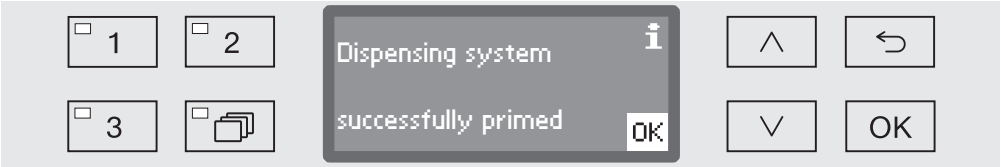
▸ DOS priming

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:



Concentration

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.

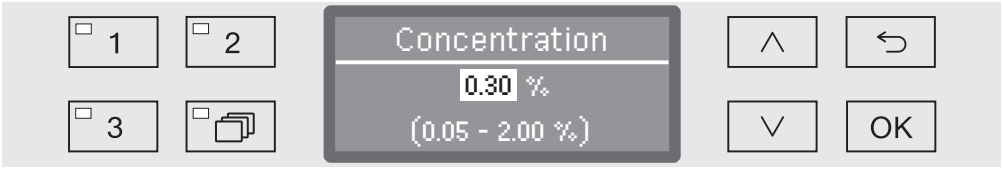
The consumption of liquid agents is recorded in the log book (see “Additional settings/Log book”).

...

▸ 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.

Change name

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.

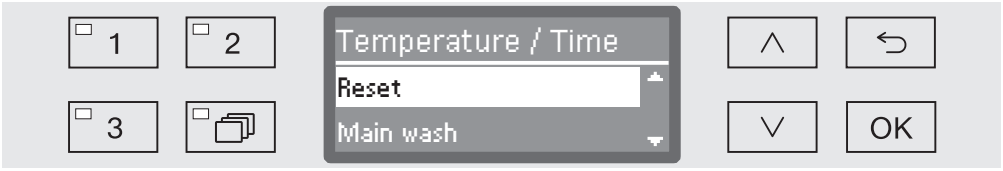
■ Confirm each entry with *OK*.

Temperature/ Time

You now have the option of adjusting the temperature and holding time in the main wash and final rinse stages of individual programs.

...

▸ Temperature / Time



- Reset

  The parameters in all programs will be reset to their default settings.

- Main wash

  Adjust temperature and holding time for this program block.

- Final rinse

  Adjust temperature and holding time for this program block.

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

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

If you select Reset, the program selected will be reset to its default settings and the menu will be closed.

If you select Main wash or Final rinse, the following settings can be altered:

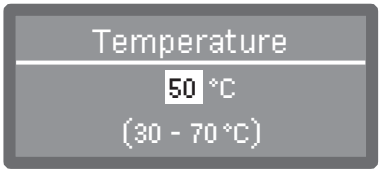
- Temperature/Final rinse temperature

  Adjust the temperature for the selected block.

- Holding time

  Adjust the holding time for the selected block.

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



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

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

■ Press *OK* to save the setting.

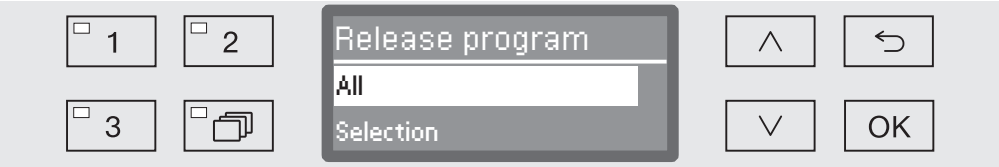
Program release

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 Additional settings menu by switching the machine off with the ⏻ button and then switch it on again with the ⏻ button while keeping the ⮌ button pressed.
- Open the menu as follows:

  ▸ Additional settings

  ▸ Release program



- All

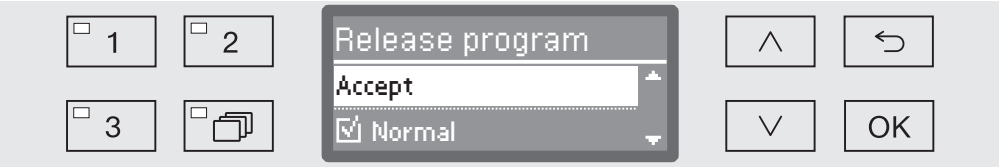
  All programs are released for use.

- 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*.

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.”

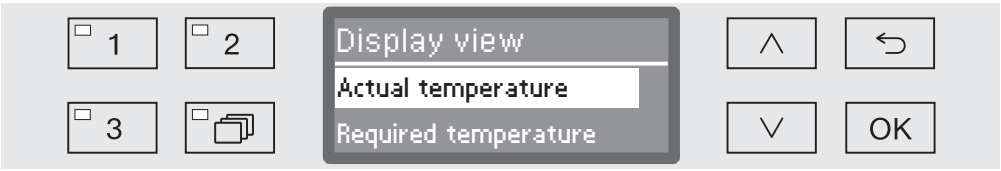
Display: Temperature

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 Additional settings menu by switching the machine off with the ⏻ button and then switch it on again with the ⏻ button while keeping the ⮌ button pressed.
- Open the menu as follows:

  ▸ 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.

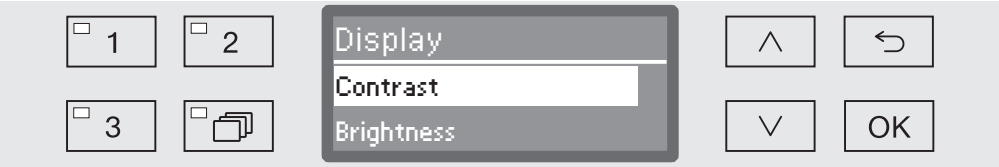
Display: Brightness and contrast

You can use this menu to adjust the brightness and contrast of the display.

- Open the Additional settings menu by switching the machine off with the ⏻ button and then switch it on again with the ⏻ button while keeping the ⮌ button pressed.
- Open the menu as follows:

  ▸ Additional settings

  ▸ Display



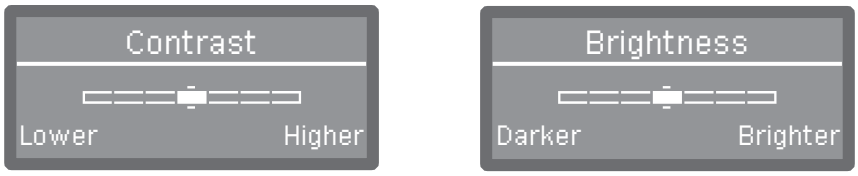
- Contrast

  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 (Auto-Off function)

If the machine has not been used for a specific duration, it switches itself off automatically to save energy.

The Auto-Off function can also be used to activate the machine for use. During standby, the machine remains switched on and the time is shown on the display. Pressing any button reactivates the machine.

The Auto-Off function can be switched on and off as required.

- Open the Additional settings menu by switching the machine off with the ⏻ button and then switch it on again with the ⏻ button while keeping the ⮌ button pressed.
- Open the menu as follows:

  ▸ 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.

Activating standby

- To activate standby, the Auto-Off function must be activated and a standby duration set in Additional settings/Switch off after.
- 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. During standby, the machine remains switched on and the time is shown on the display. Pressing any button reactivates the machine.

Factory default

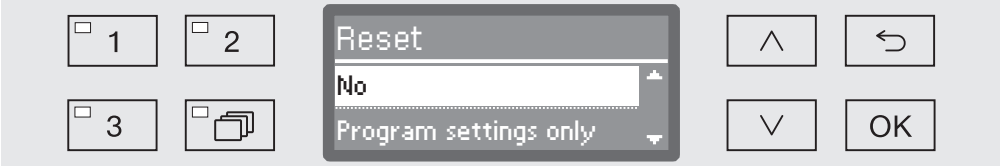
All parameters which have been altered can be reset to their default settings. Control parameters and program settings are reset separately.

- Open the Additional settings menu by switching the machine off with the ⏻ button and then switch it on again with the ⏻ button while keeping the ⮌ button pressed.
- Open the menu as follows:

  ▸ 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.”

Maintenance

The machine should be serviced **every 1,000 hours of operation, or at least once a year,** by Miele Customer Service or a suitably qualified specialist.

Maintenance covers the following points and functional checks:

- replacement of wear parts
- electrical safety check compliant with national rules and regulations (e.g., VDE 0701, VDE 0702)
- door mechanism and door seal
- any screw connections and connectors inside 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
- visual inspection and functional check of components
- a thermo-electric check (optional on request)
- leak test on seals
- safety testing of all relevant measuring systems
- safety features

Routine checks

Before the start of each working day, the operator must conduct a series of routine checks. A routine checklist is supplied with the machine.

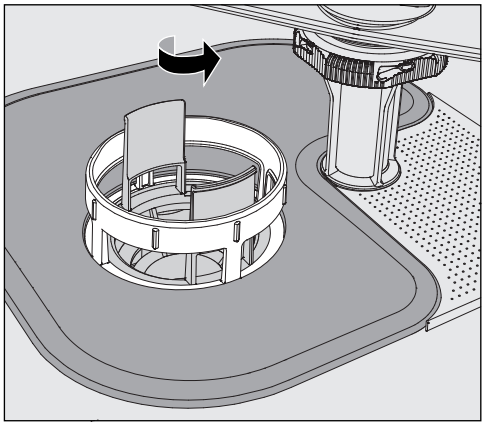
The following items must be checked:

- all filters in the wash cabinet
- spray arms in the machine and in any mobile units, modules, or baskets
- the wash cabinet and the door seal
- dispensing systems
- mobile units, baskets, modules, and inserts
- the filters in the load carriers

Cleaning the filters in the wash cabinet

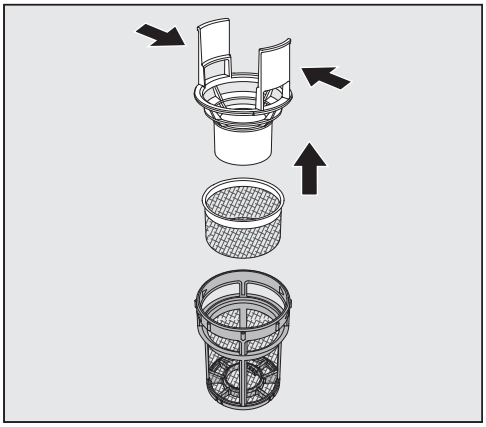
The filters in the floor of the wash cabinet prevent coarse soiling from coming into contact with the circulation system. Filters can become blocked by soiling, so they need to be checked every day and cleaned as necessary.

⚠ Risk of damage due to blocked waterways.
If the filters are not inserted, dirt particles will end up in the machine water circuit. The dirt particles may block the nozzles and valves.
Only start a program if the filters are inserted.
Check that the filters are positioned correctly when you reinsert them after cleaning.

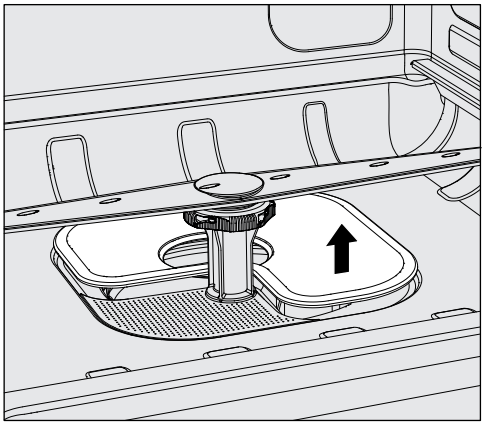


⚠ Danger of injury from glass shards, needles etc. which are retained in the filter.

- 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.

Checking and cleaning the spray arms

The spray arm nozzles 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 water circulation.

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

- To do this, remove the mobile unit and the baskets.
- Visually check the spray arms for soiling and blocked nozzles.
- 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

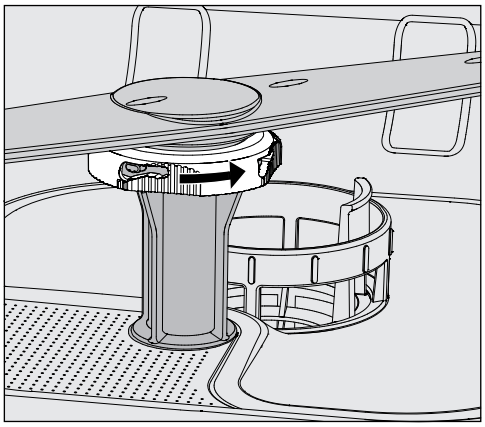
The spray arms in the machine as well as in the mobile units and baskets must be fully dismantled for cleaning:

- Remove the mobile unit or baskets from the machine.

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

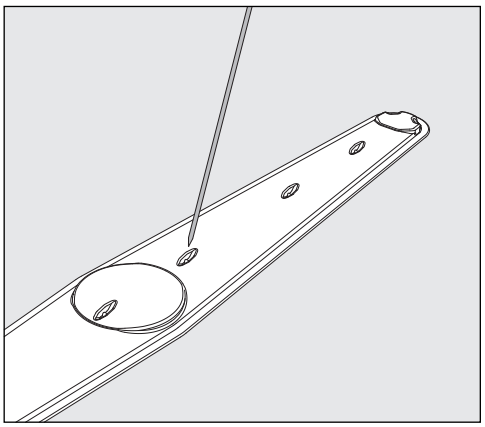
- Pull the upper spray arm of the machine downwards to remove it.

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.
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 seals regularly with a damp cloth to remove any soiling and stains.
  Seals which are no longer tight or which have suffered damage must be replaced with new ones by Miele Service.
- Remove any stains from the door sides and hinges.
- Regularly clean the groove in the base panel under the door with a damp cloth.
- Clean the locking clamp.

Cleaning the wash cabinet

The wash cabinet is generally self-cleaning. However, should a build-up of deposits occur in the chamber, please contact Miele Service for advice.

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 must be checked daily to make sure they are functioning correctly. A checklist is supplied with the machine.

The following points need to be checked:

- 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 units, baskets, or modules?
- Are all injector nozzles, irrigation sleeves, and hose adapters clear so that wash water 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 bars?
- 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 nozzles 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

The machine should be serviced **every 1,000 hours of operation, or at least once a year,** by Miele Customer Service or a suitably qualified specialist.

Frequently asked questions

The following guide should help you to find the reason for a fault and to correct it. However, please note the following:

⚠ Repairs may only be carried out by Miele Customer Service.
Unauthorized repairs can expose the user to considerable risk.

To avoid unnecessary service visits, check that the fault has not been caused by incorrect operation when a fault 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 breaker is defective or has tripped. ■ Refer to the minimum breaker rating on the data plate. ■ Reset the breaker switch. ■ If the breaker 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.
Program finished **has appeared on the display and you cannot select or start a program.**	This is not a fault! ■ Open and close the door. The machine must be switched on when you do this.
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 chamber 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.
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.

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
The dispenser for powder process chemicals contains residue at the end of the program.	The dispenser was still damp when process chemicals were added. ■ Make sure the dispenser is dry before adding powder process chemicals.
	The dispenser flap was blocked by items in the cabinet. ■ Rearrange the load so that the flap can open.
The dispenser flap will not close.	Process chemicals residue is blocking the latch. ■ Remove the process chemical residue.
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 suction wand blocked. ■ Check the dispensing hose for kinks and leaks. Position it so that it cannot become kinked. ■ Check the suction opening of the suction wand for blockages and remove them as necessary. ■ Start the priming process again.
	Contact Miele Service if there are leaks in the dispensing hose or a fault with the suction wand.

Frequently asked questions

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 Service if there are leaks in the dispensing hose or a fault with the siphon.

Highly viscous (thick) process chemicals 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.

Cancellation 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.
- 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 flow rate 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 filters in the water supply. ■ In this instance, please contact Miele Service for advice.
Fault 412–414	A program was canceled because the water flow rate is too high. ■ Refer to the information regarding recommended maximum flow pressure and maximum permissible static water pressure in “Connection to the water supply” and “Technical data”. ■ In this instance, please contact Miele Service for advice.
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.

Problem	Possible cause and solution
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 550	The waterproof system has been activated. One of the water supply hoses might have a leak. ■ Close the faucets. ■ Contact Miele Service.
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
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.
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*.

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.

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.

Frequently asked questions

Problem	Possible cause and solution
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. - Dispense using the DOS 2 reservoir ✳ in the door: ■ Refill the reservoir with neutralizing agent.
	- Dispense via an external container: ■ Check the level in the reservoir and prime 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.
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. - Dispense using the DOS 2 reservoir ✳ in the door: ■ Refill the reservoir with neutralizing agent.
	- Dispense via an external container: ■ 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.

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

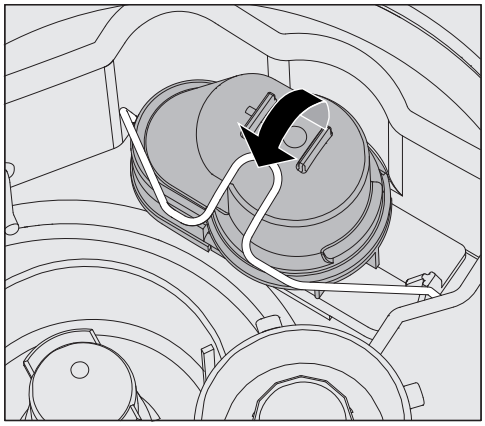
Noises

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.

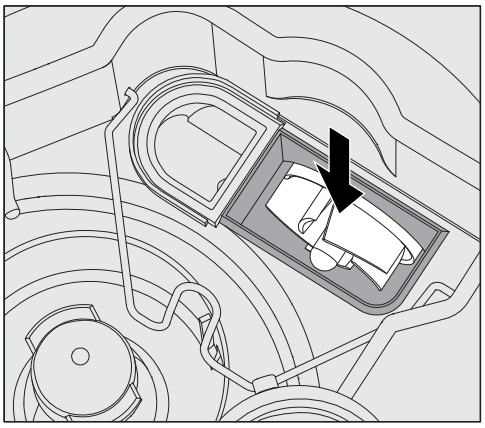
Cleaning the drain pump and non-return valve

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 chamber").



- 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.

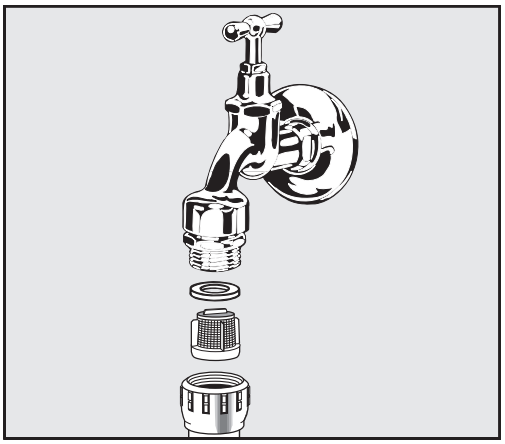
Cleaning the filters in the water inlet

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 breaker).
- Close the faucet.
- Unscrew the water intake valve.



- Take the seal ring out of the screw connection.
- Pull the filter out using combination or pointed pliers.
- Clean the filter or replace it if necessary.
- Replace the filter and seal, making sure they are sitting correctly.
- Screw the water intake valve onto the faucet. Ensure that the screw thread goes on straight and not cross-threaded.
- Open the faucet. If water leaks out, the screw connection may not be connected securely or it may have been screwed on at an angle. Unscrew and reconnect the water intake valve correctly.

Retrofitting the large-surface filter

If the water contains a high level of insoluble components, a large-surface filter can be installed between the faucet and the water inlet hose.
The large-surface filter is available from Miele Customer Service.

Contacting Customer Service

⚠ Repairs may only be carried out by a Miele authorized technician.
Unauthorized repairs can expose the user to considerable risk.

To avoid unnecessary service visits, check that the fault has not been caused by incorrect operation when a fault message first appears. Please refer to the relevant instructions in the “Frequently asked questions”.

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

Contact details can be found at the end of these operating instructions.

When contacting Customer Service, please quote the model and serial number of your machine. Both pieces of information can be found on the data tag. There is one data tag on the side of the door and another on the back of the machine.

Please tell Customer Service the fault message or code shown on 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 Additional settings menu by switching the machine off with the ⏻ button and then switch it on again with the ⏻ button while keeping the ⮌ button pressed.
- Open the menu as follows:

  ▸ 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 and upgrades may only be undertaken by Miele 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.

You can compensate for any unevenness in the floor level and height of the machine by adjusting the four feet. The feet can be screwed out to a maximum of 2 3/8" (60 mm).

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

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 23 5/8" (600 mm) wide and 23 5/8" (600 mm) deep.
- Building under:

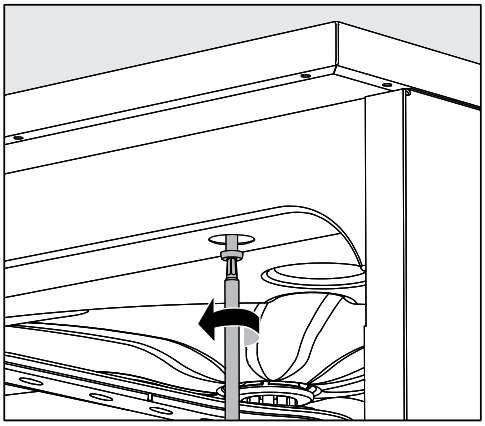
  The machine can be built under a continuous countertop or the draining board of a sink. The space provided must be at least 23 5/8" (600 mm) wide, 23 5/8" (600 mm) deep and 32 5/16" (820 mm) high.

Built-under a continuous countertop

Removing the lid

To build the machine under a continuous countertop, the lid must be removed as follows:

- Unscrew both securing screws from the lid at the back of the machine.
- Open the door.



- Unscrew the left and right fixing screws.
- Lift the lid.

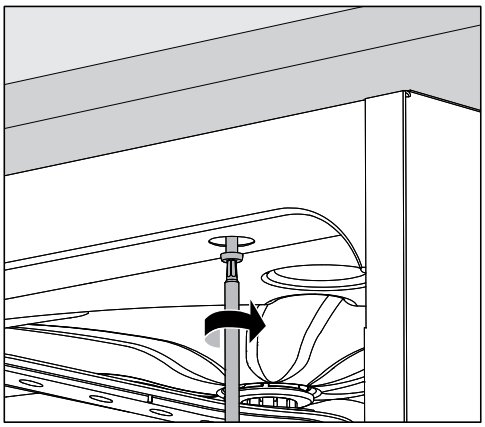
Protective foil/ countertop protector

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.

Securing to the countertop

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

- Open the door.



- Screw the machine to the continuous countertop through the holes in the front trim on the left and right.

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

Priming the circulation pump

⚠ The gaps between a built-in machine and adjacent cabinetry must not be sealed, e.g., with silicone sealant, as this could compromise the priming of the circulation pump.

Electromagnetic compatibility (EMC)

This machine has been tested for electromagnetic compatibility (EMC) and is suitable for operation in commercial environments, such as laboratories and other similar environments which are connected to the power supply.

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

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

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

⚠ 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 current local and national safety regulations (DIN VDE 0100 in Germany).
- The connection to the power supply must comply with national regulations. The power outlet must be accessible after the machine has been installed. An electrical safety test must be carried out after installation and after any servicing work.
- If the machine is hard-wired to the power supply, a power switch capable of disconnecting the machine at all poles must be installed. This power switch must be designed to operate at the rated current, have a contact gap of at least 1" (3 mm), and also be lockable in the off position.
- If necessary, equipotential bonding must be carried out.
- The rated loads are specified on the data plate and in the circuit diagram supplied with the machine.
- 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 replacement parts from the manufacturer or a suitable wire with core wire ends.

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.

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 negotiation

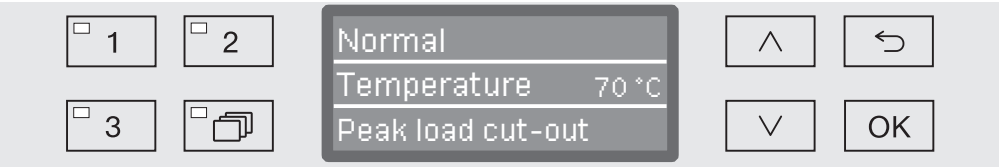
The machine is suitable for use in an energy management system. For this purpose, it must be technically adapted and the controls reset by Miele Service.

Please contact Miele Service for further information.

Load management

In the event of a peak-load negotiation, 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 cycle time will simply increase for the duration of the load cut-out.

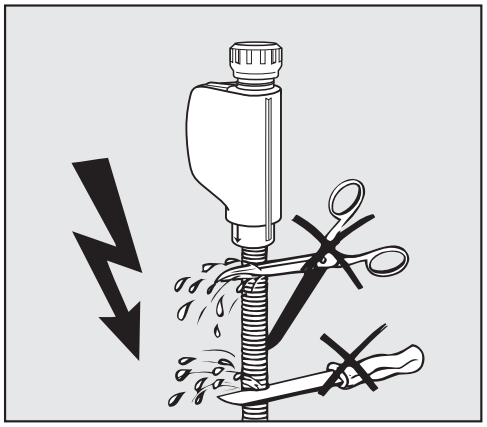
The third line of the display will alert you to the load cut-out, for example:



Connecting the water supply

⚠ Water from the chamber is not suitable for drinking!

- The machine must be connected to the water supply in strict accordance with local regulations.
- The water used must at least comply with local and national codes for drinking water quality. If the water supply has a high iron content, there is a danger of corrosion occurring on wash items made of stainless steel and on the machine itself. If the chloride content of the water exceeds 100 mg/l, the risk of corrosion to wash items made of stainless steel in the machine will be further increased.
- The machine complies with the applicable standards for the protection of drinking water.
- This machine is supplied as standard for connection to cold water (blue coded hose). Connect the inlet hose to the cold water faucet as required.
- The minimum flow pressure for the cold water connection is 5.8 psi (40 kPa) gage pressure, and for DI water connection is 4.4 psi (30 kPa) gage pressure.
- Recommended flow pressure for the cold water connection 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.
- Shut-off valves with a ¾ inch screw thread must be provided on site for the connection. The valves must be easily accessible to allow the water inlet to be turned off when not in use.
- The water inlet hoses are approximately 5' 7" (1.7 m) long pressure hoses, DN 10, with ¾ inch screw thread. The filters in the screw threads must not be removed.



⚠ Do **not** shorten or otherwise damage the inlet hoses supplied with the machine.

See the installation diagram supplied.

Retrofitting the large-surface filter

If the water contains a high level of insoluble components, a large-surface filter can be installed between the faucet and the water inlet hose.
The large-surface filter is available from Miele Customer Service.

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 supply has to be deactivated by Miele Service. The intake hose remains on 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.

DI water ring line

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

Please contact Miele 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.
- 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 ft (4.0 m), and the delivery head must not exceed 13 ft (4.0 m).

Also refer to the supplied installation diagram!

Program	Application
(Free memory)	Programmable program for special applications; programming by arrangement with Miele Service.
(Free memory)	Programmable program for special applications; programming by arrangement with Miele Service.
Normal	Short program for very lightly soiled wash items and low final rinse requirements: - to remove water-soluble soiling - suitable to a limited extent for small amounts of organic soiling - not suitable for denatured residues such as protein - not suitable for inorganic, acid-soluble residues such as metallic salts
Regular	Program for lightly soiled wash items and moderate final rinse requirements: - to remove water-soluble soiling - suitable to a limited extent for small amounts of organic soiling - not suitable for denatured residues such as protein - not suitable for inorganic, acid-soluble residues such as metallic salts
Extended	Program for lightly soiled to moderately soiled wash items and moderate rinse requirements: - to remove water-soluble soiling - to remove organic soiling - to remove denatured residues such as protein - suitable to a limited extent for inorganic, acid-soluble residues, such as metallic salts
Demineralized rinse	Program for rinsing the wash cabinet and for rinsing wash items with DI water.
Rinse	Program for rinsing the wash cabinet, for flushing out brine (see “Water softener/Adding reactivation salt”), or for rinsing heavily soiled wash items, e.g., for pre-rinsing soiling, residual disinfecting agent, to prevent items drying out, and to prevent incrustation before running a full load.
Drain	To drain away wash water, e.g., after a program has been canceled (see “Operation/Canceling a program”).

Program chart

Program sequence										
Pre-wash			Main wash		Interim rinse				Final rinse	
1	2	3	1	2	1	2 *	3	4	1	2
			CW 140°F/ 60°C DOS 1 3 Min			CW DOS 2 2 Min			DI 158°F/ 70°C 1 Min	
			CW 140°F/ 60°C DOS 1 3 Min		CW DOS 2 2 Min	CW 1 Min			DI 158°F/ 70°C 1 Min	
CW 1 Min			CW 158°F/ 70°C DOS 1 3 Min		CW DOS 2 2 Min	CW 1 Min			DI 158°F/ 70°C 1 Min	
					DI					
					CW					

CW = cold water
DI = fully demineralized water

Min = Holding time in minutes

* = Optional program block

DOS 1 = process chemicals
DOS 2 = neutralizer or rinse aid

Program selection depending on the accessories used

Upper basket		Lower basket		Water quantity	Program		
Carrier with spray arm for various inserts	**2 injector modules**	**Carrier** for various inserts	**2 injector modules**		Short	Regular	Extended
			✓		OK	OK	OK
✓		✓			OK	OK	OK
✓			✓	+ 50 oz./1.5 l	OK	OK	OK
	✓	✓			OK	OK	OK
	✓		✓		Not permitted	Not permitted	Not permitted

Technical details

	Imperial	Metric
Height with machine lid Height without machine lid	32 7/8" 32 5/16"	835 mm 820 mm
Width	23 9/16"	598 mm
Depth Depth with door open	23 9/16" 47 1/4"	598 mm 1,200 mm
Wash cabinet dimensions: Height Width Depth of upper basket/lower basket	 20 9/16" 21 1/8" 20 9/16"	 520 mm 530 mm 474 mm/520 mm
Weight (net)	159 lbs	72 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	Approx. 5' 9" ft.	Approx. 1.8 m
Water connection water temperature: Cold water/hot water DI water	 Max. 65°C Max. 65°C	 Max. 65°C Max. 65°C
Static water pressure	max. 145 psi	Max. 1,000 kPa pressure
Minimum water connection flow pressure: Cold water/hot water DI water	 5.8 psi 4.4 psi	 40 kPa gage pressure 30 kPa gage pressure
Recommended water connection flow pressure: Cold water/hot water DI water	 29 psi 29 psi	 ≥ 200 kPa gage pressure ≥ 200 kPa gage pressure
DI water supply without pressure (optional)	1.3-8.7 psi	8.5-60 kPa
Drain 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 (according to IEC/EN 61010-1): Ambient temperature Relative humidity maximum linear decrease to Relative humidity minimum	 40 °F to 104 °F 80 % for temperatures up to 88°F 50 % for temperatures up to 104°F 10%	 5°C to 40°C 80% for temperatures up to 31°C 50% for temperatures up to 40°C 10%
Storage and transportation 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 (according to IEC/EN 61010-1)	Up to 2,000 ft (m)*	
Type of protection (according to IEC 60529)	IP21	
Soiling level (according to IEC/EN 61010-1)	2	
Overvoltage category (according to IEC 60664)	II	
Sound emission values in dB (A), sound pressure level 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	

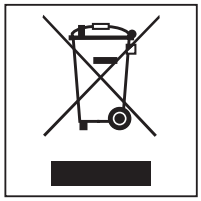
Disposal of packaging material

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.

U.S.A.

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