Miele

Operating Instructions
Laboratory Glassware Washer

ExploreLine
PLW 8604

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

en-US, CA

M.-Nr. 12 894 871

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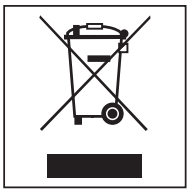
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Applicable symbols

Symbol	Legend
	For warnings and safety notes; see “IMPORTANT SAFETY INSTRUCTIONS”
	Mandatory sign; see “IMPORTANT SAFETY INSTRUCTIONS”
	Observe the operating instructions
	MET symbol
	EMC symbol of the VDE
	Do not dispose of electrical machines in household waste; they need to be disposed of separately, see “Disposal of your old machine”
	Manufacturer

Symbols and conventions used in this document

Warnings

⚠ Warnings contain information related to safety. This alerts you to the potential danger of injury to people or damage to property. Read the warnings carefully and follow the instructions and directions.

Notes

Notes contain information that is particularly important to follow.

Additional information and comments

Additional information and comments are contained in a simple frame.

Operating steps

Operating steps are indicated by a black square bullet point.

Display

Display text is indicated by a particular font.

Example:

Save.

Definition of terms

Machine

In these operating instructions, the laboratory glassware washer is referred to as "the machine".

Wash items

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

Load carriers

Unless otherwise specified, all components and parts for holding wash items are referred to as load carriers, e.g., mobile units, baskets, modules, inserts, injector nozzles, etc.

Process chemicals

All media dispensed during a program sequence are generally referred to as process chemicals, e.g., cleaning agents.

Wash water

The term “wash water” refers to water or to a mixture of water and process chemicals.

Cycle

Machine-based cleaning and reprocessing procedures are generally referred to as cycles.

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.

▶ Observe the IMPORTANT SAFETY INSTRUCTIONS provided by the wash item manufacturers and their instructions on how to handle the wash items correctly.

▶ 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 cleaning machine should only be commissioned, repaired, and maintained by Miele Service or a qualified specialist authorized by the manufacturer of the machine. 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.

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

▶ The machine must not be installed in the immediate vicinity of room doors. When the wash cabinet door is open, it could block the room doors, locking people in or out. If the wash cabinet door also protrudes into the walkway, it poses a tripping hazard and could block possible escape routes.

▶ If the machine is installed under a countertop, it must be installed under a continuous countertop which is firmly secured to adjacent units to achieve the necessary stability.

▶ The electrical safety of the machine can only be guaranteed when correctly grounded. It is essential that this standard safety requirement is observed and regularly tested. If in any doubt, please have the electrical installation inspected by a qualified electrician.

▶ A damaged or leaking machine can pose a threat to your safety. Always switch off a damaged or leaking machine 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 by an appropriately qualified specialist.

▶ The waste water system on site must be temperature-resistant to at least 199°F (93°C). For systems with lower temperature resistance, suitable waste water cooling systems must be installed by the supervisor.

▶ 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.

▶ If a program is interrupted or canceled, the inside of the wash cabinet may be contaminated in various ways depending on the application, e.g., with pathogenic bacteria, toxic or carcinogenic substances, etc. Appropriate protective measures must be taken when opening the wash cabinet door, e.g., the use of gloves.

▶ Load carriers and wash items must be allowed to cool down before removal. Empty any remaining water into the wash cabinet or an on-site utility sink before removing items.

▶ 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 avoid damage to the loads being cleaned.

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

▶ It is the responsibility of the operator to demonstrably ensure reprocessing standards in routine operation. Process results should be inspected and documented on a regular basis.

▶ 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.

▶ Under certain circumstances, process chemicals can result in damage to the machine. The recommendations issued by manufacturers of process chemicals must be followed.
Contact the machine manufacturer in the event of damage and any suspicion of material incompatibility.

▶ 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, e.g., cleaning agent, is recommended by the manufacturers of the process chemical, the machine manufacturer takes no responsibility for the effect of such process chemicals on the wash items.
Please note that changes in product formulation, storage conditions, etc., which are not announced by manufacturers of process chemicals may impair the quality of cleaning results.

▶ 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 relevant manufacturer's instructions on storage and disposal of process chemicals and their containers.

▶ 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 cleaning agents, 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.

▶ Load carriers which hold the wash items must be used only as intended.
The interior of lumened wash items must be thoroughly flushed through with wash water.

▶ 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.

▶ Please follow the advice on installation in these operating instructions and the installation plan.

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.

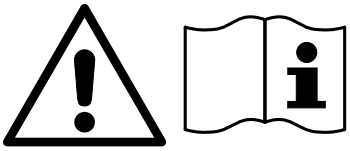
▶ Keep children away from process chemicals. These can cause burning in the mouth, nose and throat if swallowed, or inhibit breathing. Keep children away from the machine when the door is open. There could still be residual process chemical in the cabinet. Observe the safety data sheets for the process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

Using components and accessories

▶ It is strongly recomended to use only original spare parts and accessories from the manufacturer, which are suitable for the application they are required for. Model designations are available from Miele.

▶ Only use original load carriers from the machine manufacturer. Using load carriers made by other manufacturers or making modifications to original accessories can result in unsatisfactory cleaning results.

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!

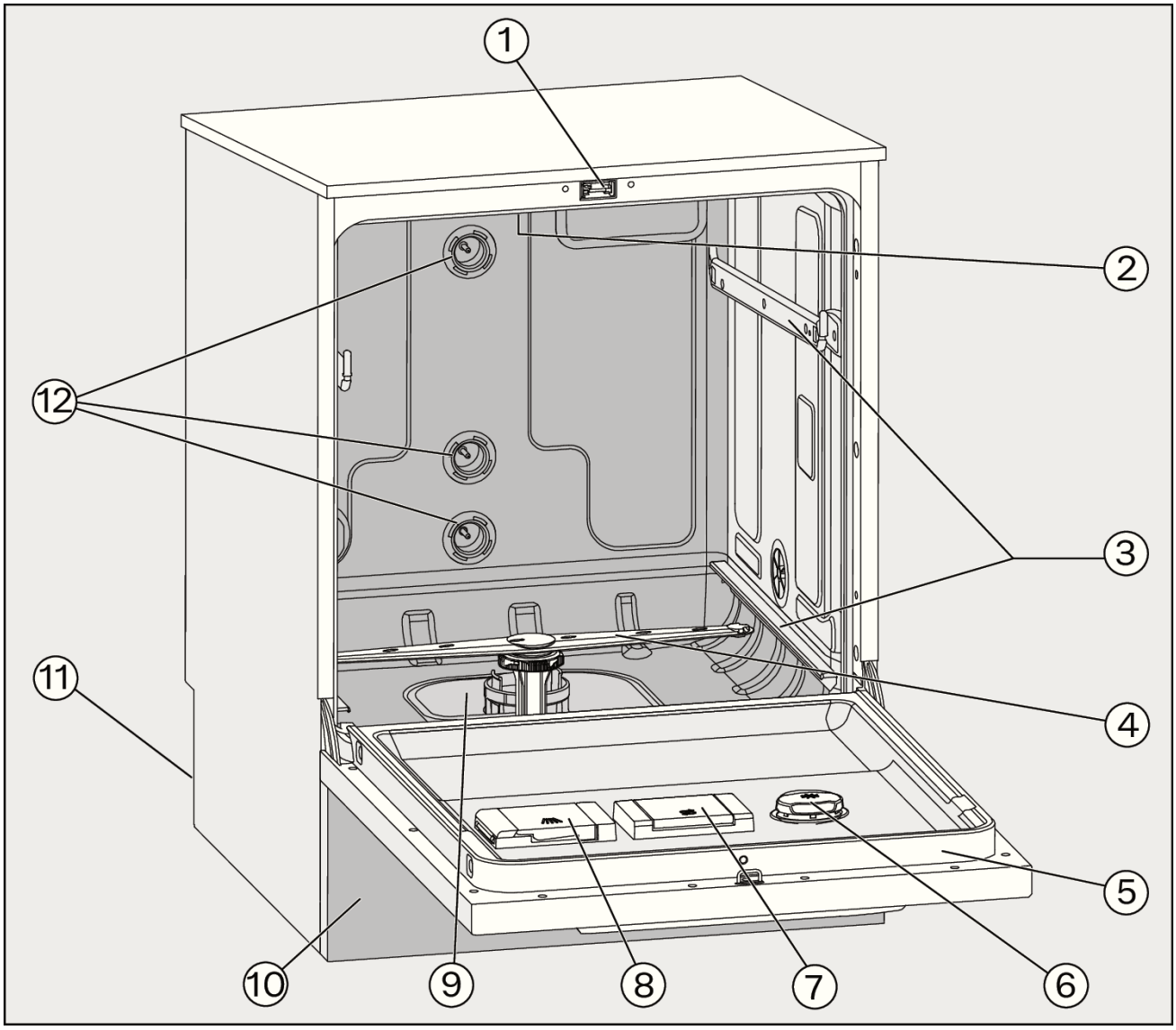
Disposal of your old machine

▶ 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

Machine description

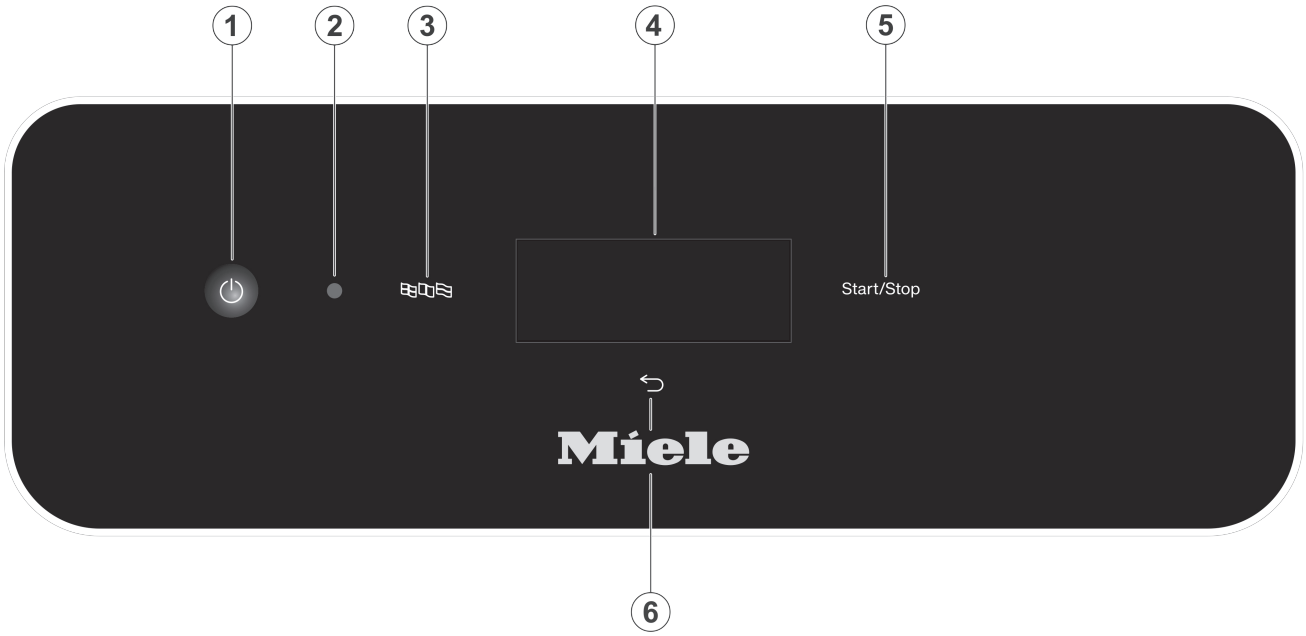
Appliance overview



① Door lock
② Top machine spray arm
③ Rails for baskets and mobile units
④ Lower machine spray arm
⑤ Data plate
⑥ Dispensing compartment for process chemicals
⑦ Container for reactivation salt
⑧ Container for powder cleaning agents
⑨ Filter combination
⑩ Toe-kick panel
⑪ Rear:
- electrical and water connections
- connections for an external dispenser module (DOS module)

⑫ Water connections for baskets and mobile units

Control panel



① ⏻ On/Off switch
Switching the machine on and off

② Service interface
Testing and transmission point for Miele Service

③ button (language selection)
For selecting the display language

④ Touch display
For displaying and selecting control elements

⑤ *Start/Stop* button
For starting or canceling a program

⑥ ⮌ button (cancel or back)
For canceling a process in the user interface (not for canceling programs)

Buttons on the control panel

Most of the buttons on the control panel are backlit with LED bulbs (light-emitting diodes). These have the following meaning during operation.

Button	LED	Status
	ON	The display language can be changed.
	ON	A process on the display can be canceled.
	OFF	The display shows the top menu level.
		A program is running.
		One or more system messages must be acknowledged.
Start/Stop	**ON**	A program is running.
	Pulsing	Display ON: - A program has been selected, but has not yet started. Display OFF: - The machine is in Standby mode.
	FLASHES RED	A fault has occurred (see “Frequently asked questions”).
	OFF	A program has finished.

General description

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

How it works

The machine is designed for the machine reprocessing of laboratory glassware and similarly categorized components and parts.

Integrated process monitoring ensures standardization and reproducibility. The machine also helps to increase work efficiency, occupational health, and safety, as well as preserving the value of the wash items.

The use of suitable load carriers (baskets, modules, inserts, etc.) is important to ensure adequate cleaning and protection of the wash items.

Intended use

The machine is designed for laboratories, laboratory research labs and other laboratory applications in the industrial sector, and has the necessary cleaning programs.

The machine is used to reprocess reprocessable laboratory glassware, laboratory utensils, and similarly categorized components and parts using water-based media, for example:

- 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, releasing tools, and stoppers
- other items such as boxes, plastic flasks and containers, metal parts, pipe and hose pieces, and funnels

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

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

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

Direct washing of blood contaminants is not allowed in this machine.

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

For additional areas of application or additional programs, please contact Miele Service.

Intended user group

This machine is designed exclusively for industrial purposes.

All persons using the machine must fulfil the following requirements:

- They must have sufficient expertise in how to reprocess the wash items.
- They must be instructed in how to use the machine by Miele Service, by a customer service team specially trained and authorized by the manufacturer, or by a person who has already received instruction.

Installation requirements

Installation site

The machine is intended for installation in laboratories and laboratory-like rooms.

The unit must be installed in rooms that comply with the following environmental conditions:

- Draught-free and dry
- The installation room must be equipped with suitable room ventilation
- Massive (observe floor load-bearing capacity) and level surface
- No direct sunlight

The machine must only be connected in conjunction with a residual current device.

Conditions of use

Operation (according to UL 61010-1, CSA C22.2 No. 61010-1):

- Ambient temperature:	40 °F to 104 °F (5 °C to 40 °C)
- Relative humidity:	max. 80 % for temperatures up to 88 °F (31 °C) linear decrease to 50 % for temperatures up to 104 °F (40 °C)
- Relative humidity:	min. 10 %
Altitude above sea level (according to UL 61010-1, CSA C22.2 No. 61010-1)	Up to 6,561 ft (2.000 m)
Background noise level	N/A

Contraindications

The machine must not be used for reprocessing any products other than those specified. It must not be used for wash items that have not been approved for machine reprocessing by the manufacturer.

The 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 machine is not suitable for removing soiling which is soluble in water at temperatures ≥ 158°F/70°C, such as agar.

Machines must not be used for the reprocessing of any medical instruments. This includes, but is not limited to, instruments designated for final patient use without further processing.

Any deviation from this directive must be reported immediately to Miele's Medical Product Officer.

Furthermore, reprocessing must not be performed on products for which special, deviating cleaning or reprocessing is intended, e.g., medical devices.

The reprocessing of single-use material is not permitted unless the manufacturer of the single-use material prescribes machine reprocessing prior to single use.

Foreseeable misuse

Improper use can be caused by incorrect loading, unsuitable wash items, e.g., medical devices, or unsuitable (process) chemicals.

Failure of the operator to comply with routine checks and regular service intervals.

Failure to observe the specified installation requirements.

Daily operators

For day-to-day use, operators must be instructed on the basic functions and how to load the machine and must also be trained regularly.

They must have a basic knowledge of machine reprocessing of laboratory glassware and utensils.

Day-to-day work is carried out using the user level and in the Machine functions and Settings menus. The menus are freely accessible to all users.

Administration

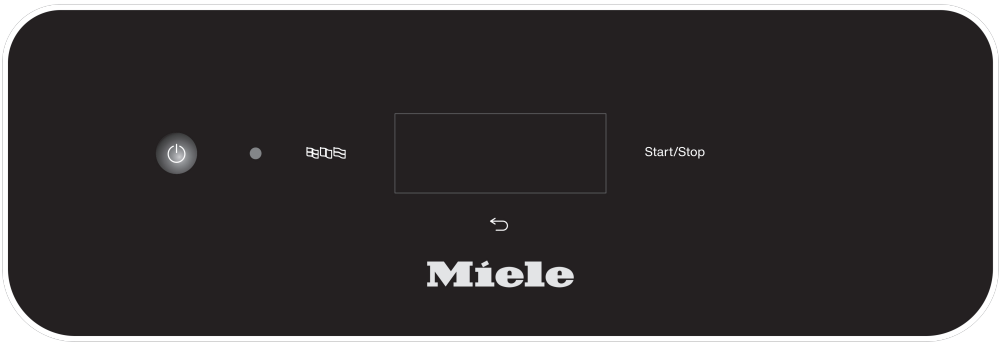
More advanced tasks, e.g., interrupting or canceling a program, require more detailed knowledge about the machine reprocessing of laboratory glassware and utensils.

Alterations to the reprocessing procedure or adaptations to the machine, components, accessories used, or on-site conditions require additional specific knowledge of the machine.

Validation processes assume specialized knowledge of the machine reprocessing of laboratory glassware and utensils, of the processes involved, and of applicable standards and legislation.

The Extended settings menu incorporates all administrative processes and settings. This is protected by a PIN code.

Operation via control panel



The machine is usually operated via the control panel, which has an integrated touch display and various buttons (sensor controls).

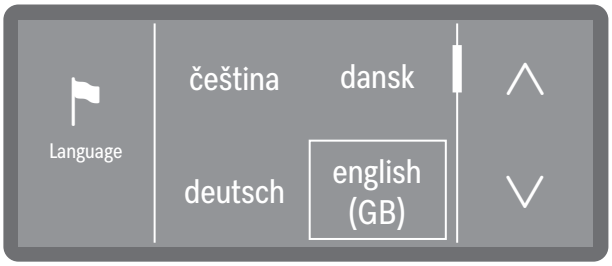
The buttons are backlit with LEDs and are only displayed in context, i.e., if they can be operated in conjunction with the display. Otherwise, they are not visible and cannot be selected.

The touch display and sensor controls react to touch. Every tap of a sensor control is confirmed with an audible keypad tone.

The control panel with sensor controls and the touch display can be scratched by pointed or sharp objects, e.g., pens.
Only touch the control panel with your fingers or special pens for touch displays which have rubber tips (touch pens).

Every touch on the sensor controls is confirmed by a keypad tone. You can adjust the volume of the keypad tone or switch it off on the display; see ▸ ⚙ Settings ▸ Volume.

Display screens



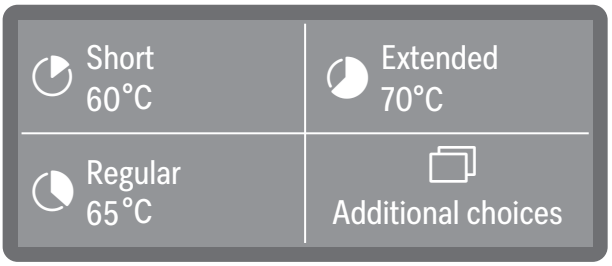
All display screens shown in these instructions are examples and may differ from the actual display screens.

Switching on

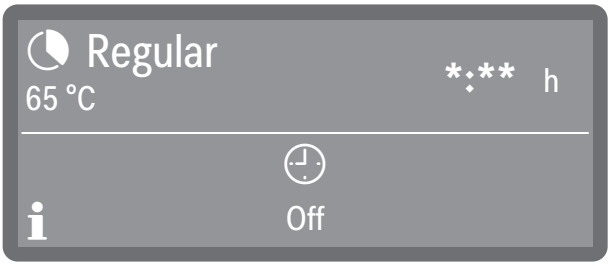
The machine must be connected to the electrical supply.



- Press the ⏻ On/Off switch until the Miele logo appears on the display.



As soon as the machine is ready for operation, the display changes and shows the menu selection.



(:** Program runtime varies depending on configuration)*

If the Memory function is activated, the most recently started program is displayed.

Tip: The Memory function can be activated or deactivated at ▸ ⚙ Extended settings ▸ Memory.

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.

Switching off

- Press the ⏻ On/Off switch for a few seconds.

The machine then goes into Standby mode for approx. 1 minute before it switches off completely.

Standby/Off

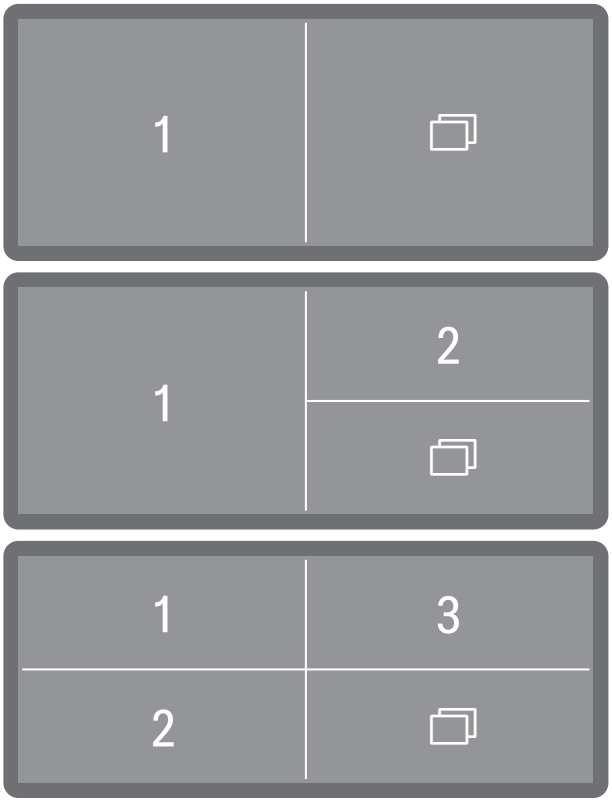
If the machine has not been used for approx. 10 minutes, it can be set to Standby mode or switched off automatically.

In Standby mode, the Lmachine remains switched on and the *Start/Stop* sensor control pulses. The machine can be reactivated by pressing the *Start/Stop* sensor control, touching the display, or opening the door.

After automatic switch-off, the machine is switched off and can be switched on again by pressing the ⏻ On/Off sensor control.

Touch display

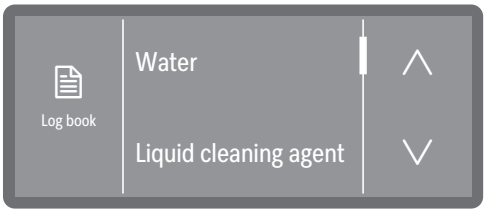
In operating mode, the display is divided into 2–4 fields. The fields are sensor controls that can be selected by tapping on them.

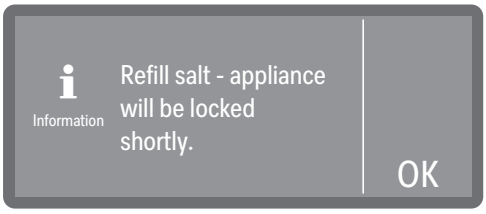


Fields 1–3 are assigned preselected programs at the factory. However, you can also assign favorite programs to these fields. Additional choices opens the system settings.

Tip: To set up favorite programs, see ▸ Extended settings ▸ Set Favorites.

The displays for the system settings and for system and fault messages are divided into 3 columns.





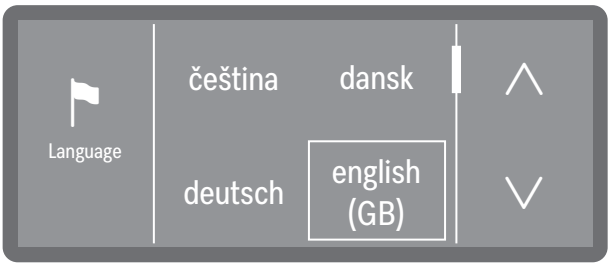
The left-hand column displays the title of the currently selected menu with a pictogram or, in the case of system or fault messages, the pictograms for information ℹ or faults ⚠.

The central column contains the menu options that can be selected and the system or fault messages.

If required for the specific context, control elements are displayed in the right-hand column, such as the ∧ and ∨ arrow buttons or an OK sensor control.

Scroll bar

If there are more options available than can be displayed, a scroll bar will appear on the right-hand side of the display alongside the 2 arrow buttons ∧ and ∨.



You can scroll through the menu by pressing the ∧ and ∨ arrow buttons.

Inputs on the display

In these operating instructions, the descriptions for operating the menus are shown as follows:

Input path

All menus and the program selection are accessed via the display with the Additional choices sensor control. You have to select this first and then follow the input path described.

The input path describes the sequence to follow to access the menu level in question. The listed menu options have to be selected individually on the touch display.

It is not always necessary to follow the complete path. For example, if you have already opened one of the upper levels of the input path, you can continue to follow the path from this level.

Example:

Additional choices
Machine functions
Dispensing paths

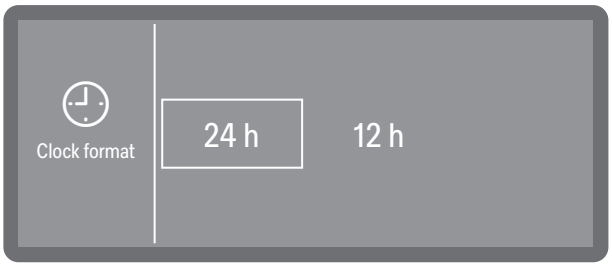
Example 2:

▸ Machine functions ▸ Dispensing paths

Display and options

All setting options from the menus are presented as a list with a short explanation. Preselected options are highlighted by a frame.
The subsequent procedure is then described.

Example:



- 24 h

  Time of day display in 24-hour format.

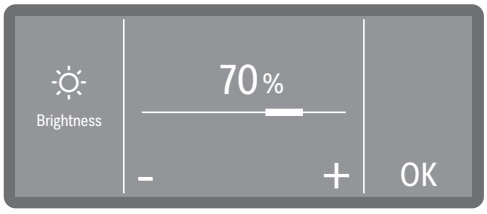
- 12 h

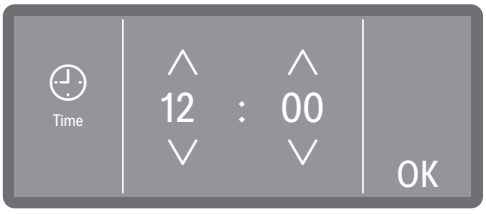
  Time of day display in 12-hour format (am/pm).

■ Tap to select a format.

Setting numerical values

Numerical values are entered in 2 different ways.



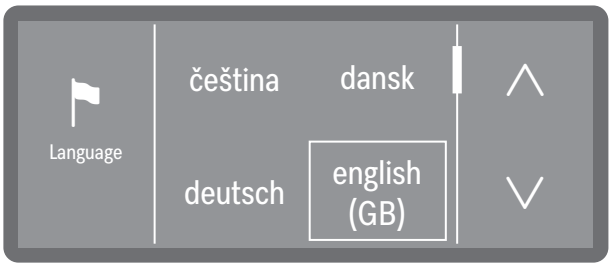


The numerical values are set either using the plus and minus symbols (+ and -) or the arrow buttons (∧ and ∨). You must tap the symbols or arrows directly to increase the numbers (+ or ∧) or decrease them (- or ∨).

Selecting the language

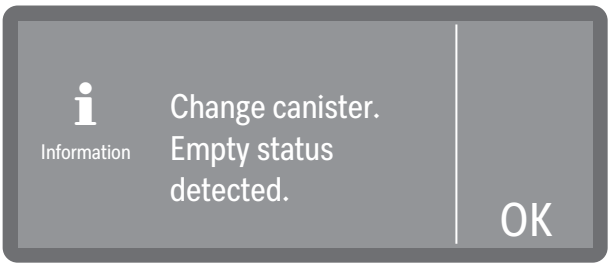
You can change the display language at any time.

■ Press the language selection button next to the display.



■ Scroll to the language you want using the ∧ and ∨ sensor controls and select the language by tapping it.

System messages i



System messages are indicated by the information symbol i. These give information about current processes and the machine status. If there is more than one system message, they are shown one after the other and – depending on the message – must be acknowledged individually.

Fault messages ⚠



In the event of a fault, a warning symbol ⚠ appears on the display and the *Start/Stop* button flashes red in rapid succession. If audible signals are activated, a warning tone will also sound. Warning messages must be acknowledged by tapping the warning symbol. Troubleshooting assistance can be found in 🕮 “Frequently asked questions”.

Installation and connection

Before commissioning, the machine must be securely installed, and the water inlet, drain hoses, and the power cord correctly connected. Follow the instructions in 🕮 “Installation”, 🕮 “Water connection”, and 🕮 “Electrical connection” as well as the instructions in the installation plan for the laboratory glasswasher.

Process

The commissioning process requires a set period of time which cannot be interrupted.

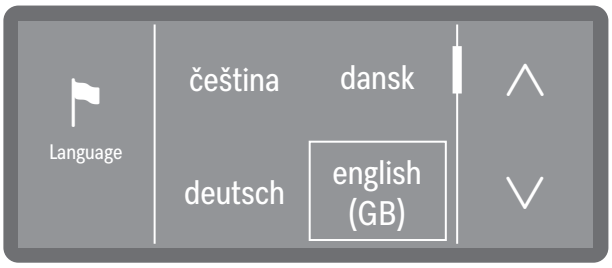
Once commissioning is complete, you can change all the settings made during commissioning via the ▸ ⚙ Settings and ▸ ⚙🔒 Extended settings menus. The only exceptions are the language selection, which is made using the language selection sensor control on the control panel, and the selection of the water connections, which can only be reset by Miele Service.

Switching on

- Press the ⏻ button.

Selecting the language

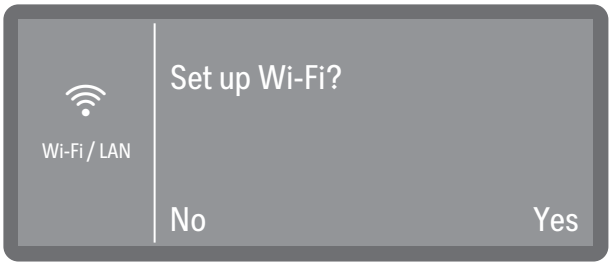
Commissioning starts with the selection of the display language.



- Scroll to the language you want using the ∧ and ∨ sensor controls and select the language by tapping it.

Wi-Fi setup

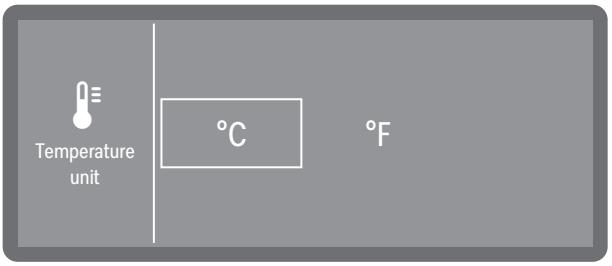
You have to select whether you want to integrate the machine into a Wi-Fi network during commissioning or whether you want to integrate it at a later time or not at all.



- Select Yes to integrate the machine into an existing Wi-Fi network on site.
  To do this, follow the instructions in ▸ ⚙🔒 Extended settings ▸ Network/Wi-Fi.
- Select No if you want to integrate the machine into a Wi-Fi network at a later time or not at all.

Setting the temperature unit

The temperature can be shown on the display in °C (degrees Celsius) or °F (degrees Fahrenheit).



- °C

  Temperature display in Celsius.

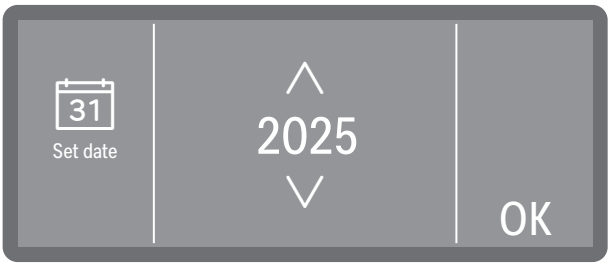
- °F

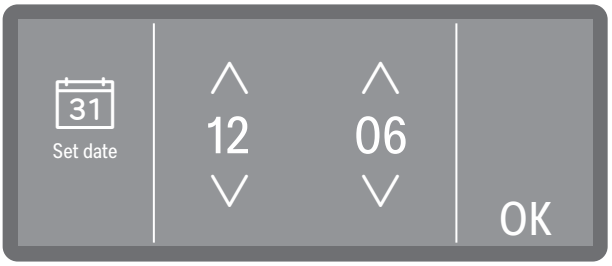
  Temperature display in Fahrenheit.

■ Select the desired temperature unit.

Setting the date

Set today's date.





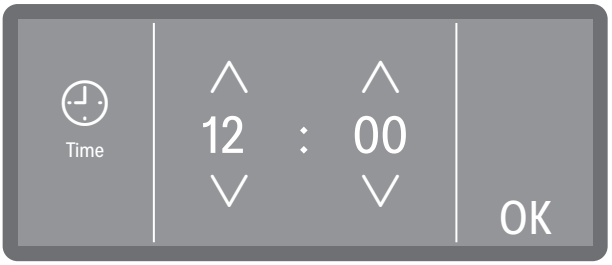
■ Set the date in the order of year, month, and day. The order is predefined.

■ Press OK to save the setting.

Tip: You can customize the display format after commissioning at ▸ ⚙ Settings ▸ Date ▸ Date format.

Setting the time of day

Set the current time of day. The input format is predefined.



■ Set the time of day and confirm your selection with the OK button.

Tip: You can customize the display format after commissioning at ▸ ⚙ Settings ▸ Time ▸ Clock format.

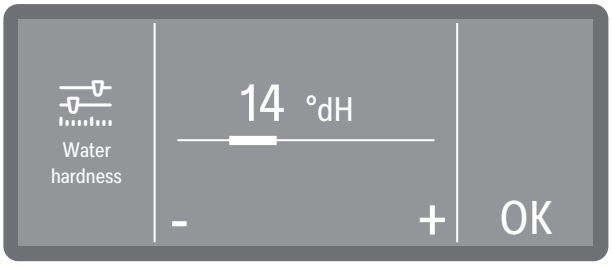
Setting the water hardness

You can find out the degree of hardness of the tap water from your local water supplier.

As an alternative, you may also determine the approximate water hardness by using the test strip included with the machine. To do this, follow the instructions in 🕮 “Determining the degree of hardness”.

With varying water hardness, always set the highest level. If the water hardness fluctuates between, for instance, 8.3 and 17.7 gpg (8 and 17°dH), the water hardness must be set to 17.7 gpg (17°dH).

Water hardness setting values can be found in the table in 🕮 “Settings table”.



- Set the water hardness level by tapping the - symbol (lower) and + symbol (higher).
- Press OK to save the setting.

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. Therefore, document the water hardness.

Selecting water connections

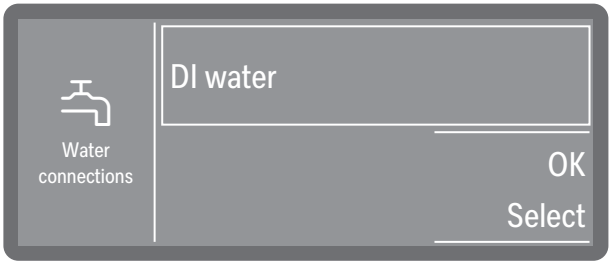
All available water connections are activated in the control system at the factory. Individual water connections can be subsequently deactivated, e.g., if no connection options are available for them.

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

- Select one of the available water connections, for example:

- DI water

  connection for DI water

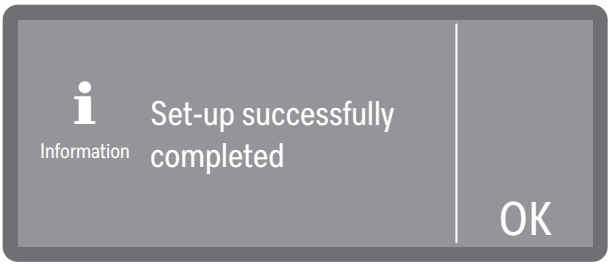


The frame indicates the activated water connection. Tapping the connection removes the frame and permanently deactivates the water connection.

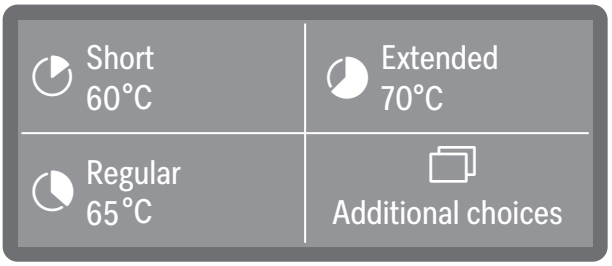
- Select OK to confirm your choice.

Commissioning completed

Your machine has been successfully commissioned once you see the following message:



- Confirm the message with OK.



The machine is now ready for use.

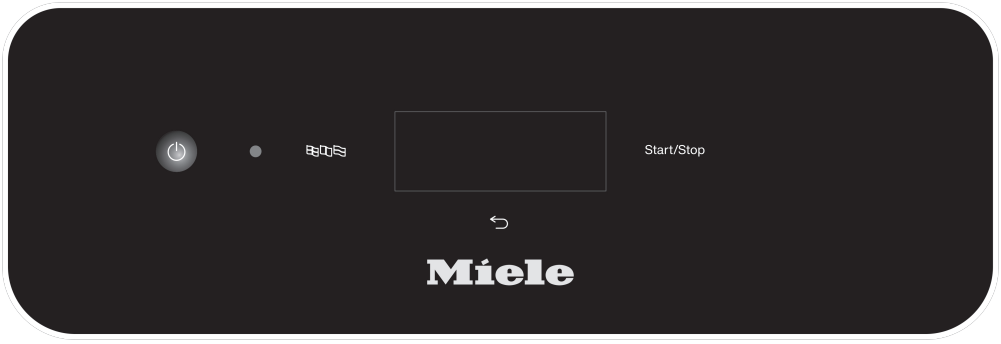
Pull-open lock

In the case of machines with a pull-open lock, the door can be opened at any time, even during a program sequence. In the latter case, special caution is needed.

Opening the door

⚠ Danger of scalding, burning, and chemical burns!
If the door is opened during a program sequence, hot water and process chemicals can escape. The program in progress is also interrupted and, under certain circumstances, even canceled.
Do not open the door if a program is running.

The control panel also serves as a door handle.



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

Close the door.

- Make sure that no objects or wash items protrude into the closing area of the door.

⚠ Risk of injury caused by crushing.
Do not put your hand inside the door as it is closing. Risk of crushing.

- Raise the door upward until the catch engages.

Water softening

In order to achieve excellent cleaning results, the machine requires a supply of soft water with a low calcium content. Hard tap water results in the build-up of calcium deposits on the wash items and on the wash cabinet walls.

Tap water with a water hardness of 4.2 gpg (0.7 mmol/L (4°dH)) or more must be softened. This occurs automatically while a program is running in the built-in water softener.
The water softener must be set to the exact hardness of the tap water.

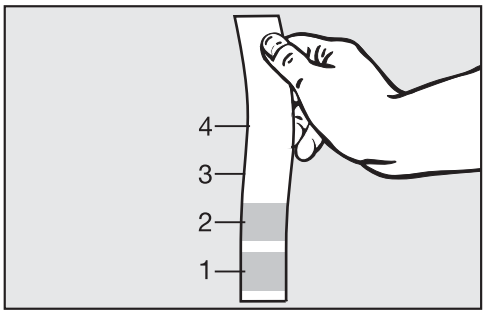
Setting the water hardness

Determining the degree of hardness

You can find out the degree of hardness of the tap water from your local water supplier.

As an alternative, you may also determine the approximate water hardness by using the test strip included with the machine.

- Take a water sample at the nearest water connection.



- Dip the test strip into the water for approx. 1 second. The zones of the test strip must be fully immersed.
- Remove the test strip from the water and shake the excess water off the test strip.

After approx. 1 minute, and based on the coloration, you will be able to read the water hardness.

Test strip	Water hardness	Settings on the display
4 green zones	< 3.1 gpg (0.5 mmol/l (3°dH))	3°dH or lower
1 red zone	> 4.2-7.3 gpg (0.7-1.2 mmol/l (4–7°dH))	7°dH
2 red zones	> 7.3–14.6 gpg (1.2-2.5 mmol/l (7–14°dH))	14°dH
3 red zones	> 14.6-21.9 gpg (2.5-3.7 mmol/l (14–21°dH))	21°dH
4 red zones	> 21.9 gpg (3.7 mmol(21°dH))	*)

*) Contact your local water supplier, inquire about the degree of hardness, and set this on the display.

Setting the degree of hardness

With varying water hardness, always set the highest level. If the water hardness fluctuates between, for instance, 8.3 and 17.7 gpg (8 and 17°dH), the water hardness must be set to 17.7 gpg (17°dH).

Water hardness setting values can be found in “Settings table”.

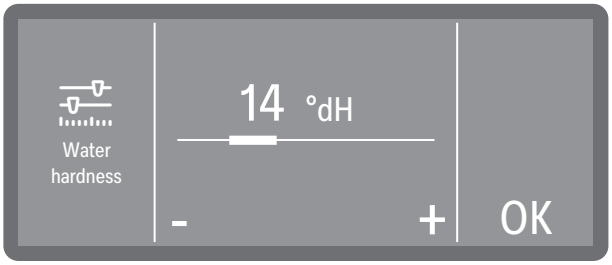
The menu is saved under the following input path.

Additional choices

> Extended settings

> > Water hardness

- Select the Water hardness menu option.



- Set the water hardness level by tapping the - symbol (lower) and + symbol (higher).
- Press OK to save the setting.

Water hardness

Settings table

Water hardness can be set between 0 and 70 gpg (0–70°dH).
The water hardness is preset to 14 gpg (14°dH) at the factory.

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

Reactivation salt

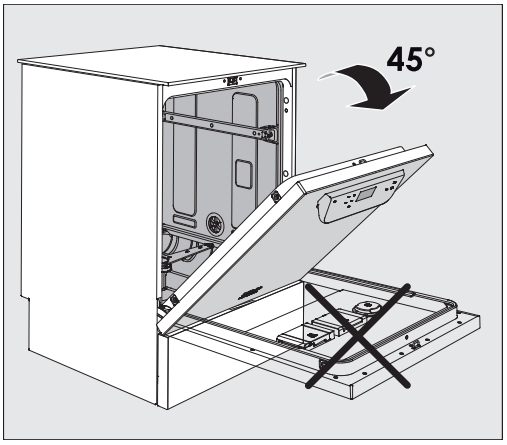
The water softener must be reactivated at regular intervals. Special reactivation salt is required for this. Reactivation is carried out automatically during a program sequence.

If the water hardness is consistently less than 4.2 gpg (0.7 mmol/l (4°dH)), salt is not required for the water softener. However, the water hardness level must still be set; see “Setting the water hardness”.

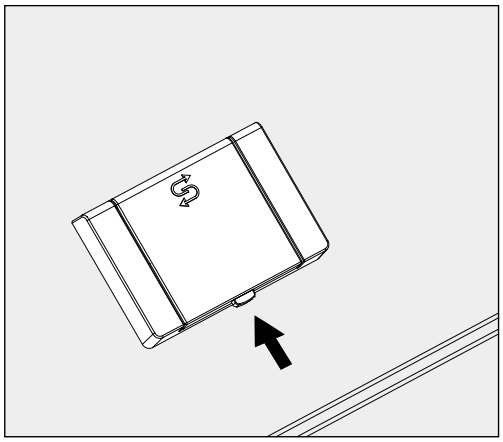
Filling the container for reactivation salt

Only use special, coarse-grained reactivation salt or pure evaporated salt with a grain size of approx. 1/16"-3/16" (1–4 mm).
Never use other salts, e.g., table salt, cattle salt, or de-icing salt. Other salts may contain insoluble additives which can impair the functioning of the water softener.

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

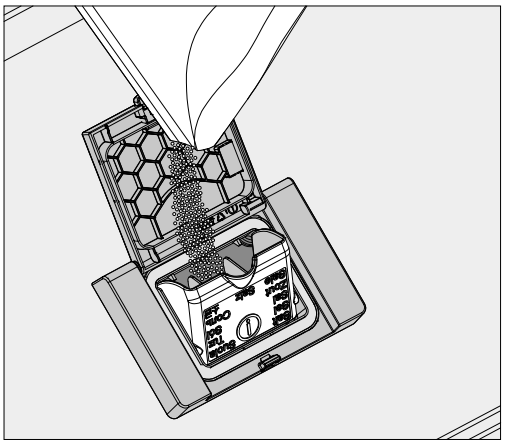


- Open the door to an angle of around 45°. This ensures that the salt flows into the container more easily.



- Press the yellow locking button on the salt container ⇄. The flap will spring open.
- Open the funnel.

The container takes approx. 3-4.4 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 4.4 lb (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. Make sure that the container is closed tightly so that no wash water can enter 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.

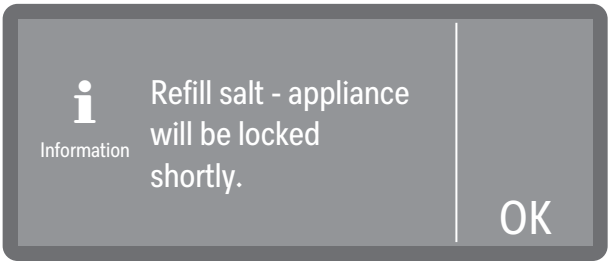
- Run the Cold water rinse program after refilling salt.

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

Excess salt and brine which has overflowed cause corrosion damage if they are not rinsed away.

Salt refill indicator

If the fill level in the salt container is low and reactivation is carried out, the following message appears on the display:

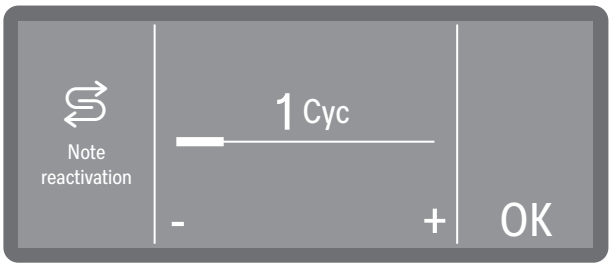


- Confirm the message with OK.

- Top up the reactivation salt; see 🕮 “Filling the container for reactivation salt”.

If the message is being displayed for the first time, additional program cycles may be possible depending on the set water hardness. If no salt is added, the message is displayed again at the end of every program.

Reactivation notification



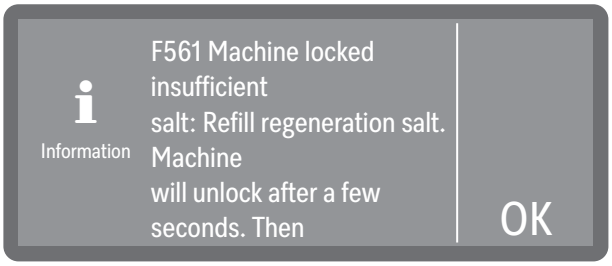
You can set how many program cycles in advance you want to be notified of the upcoming reactivation; see ▸ Extended settings ▸ Note reactivation.

Canceling machine lock due to lack of salt

If the salt in the water softener has been used up, a fault appears on the display and the machine is locked to prevent further use.



- Acknowledge the fault by tapping the warning symbol.



- Follow the instructions on the display and top up the reactivation salt; see 🕮 “Filling the container for reactivation salt”.

The machine lock is lifted automatically with a certain delay once salt has been added.

Mobile units, baskets, modules and inserts

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

Select load carriers and other 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 load carriers (if available).

Miele offers suitable load carriers for all areas of application defined in "Appropriate use", such as mobile units, baskets, modules, inserts, and special rinse fittings. Contact Miele for more information.

⚠ If you are using an upper basket with a spray arm and 2 injector modules in the lower basket at the same time, the water volume for the programs must be increased by + 1.5 L (see ▸ Extended settings ▸ Configure programs ▸ Increas. water quantity).
The simultaneous use of up to 4 injector modules in the upper and lower baskets is not permitted!

You can find an overview of which programs can be selected depending on the accessories used in the "Program overview".

Water supply

Load carriers with spray arms or other irrigation connectors are equipped with one or several connectors for the water supply at the rear. When these are slid into the machine, the connections couple automatically with the water supply docking points in the rear panel of the cabinet. The load carriers are held in position by the wash cabinet door when it is closed.
Unused docking points in the rear panel of the wash cabinet are closed mechanically.

Mobile units and baskets from older series

The use of mobile units and baskets from older series is only possible in this machine following consultation with Miele. In particular, mobile units and baskets with water supply pipes for spray arms and injector manifolds must be converted to the modified water connections.
The conversion is carried out by Miele Service and is only possible on selected models.

⚠ The connectors for the water supply to the mobile units and baskets must be installed by Miele Service.
Assembly errors can cause damage to the machine when using the mobile units and baskets.

Following conversion, the mobile units and baskets can no longer be used in Laboratory Glassware Washers from older series.

Height-adjustable upper baskets

Height-adjustable upper baskets can be adjusted between 3 positions with 1" (3 cm) between each position to accommodate wash items of different heights.

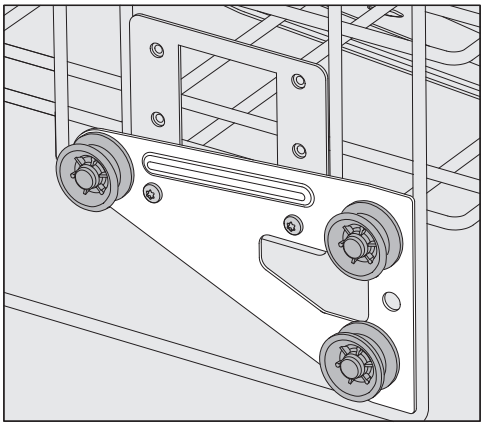
To adjust the height, the brackets with rollers on the side of the upper basket and the water connector at the back of the basket have to be moved. The roller brackets are each secured to the upper basket by 2 screws. The water connector consists of the following components:

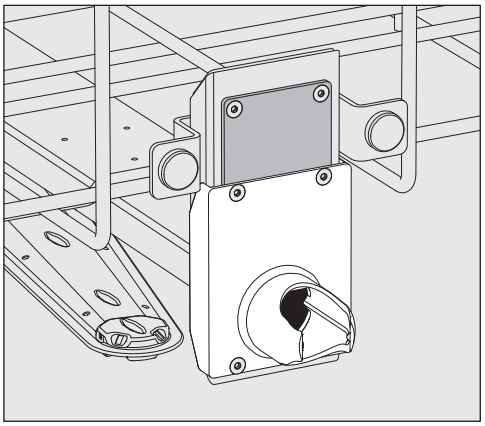
- a stainless steel plate with 2 openings
- a plastic connector
- 6 screws

Only adjust upper baskets horizontally. The baskets are not designed for tilting (one side up, one side down).
Adjusting the height alters the vertical clearance of the upper and lower baskets.

Setting the upper position

- 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.

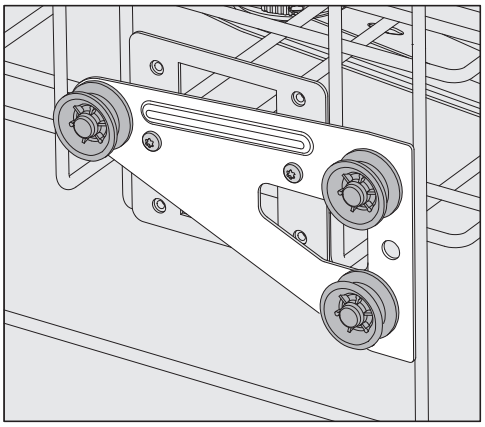


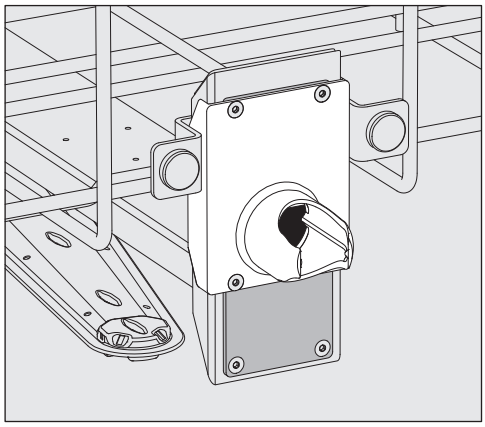


- Move the roller brackets on both sides to the lower position and secure them firmly.
- Place the stainless steel plate over the openings in the water inlet pipe so that the top opening is covered. Screw the stainless steel plate to the top with 2 screws. Insert the connector into the lower opening of the stainless steel plate so that the middle opening is covered. Screw the connector on with 4 screws.

Setting the middle position

- 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.

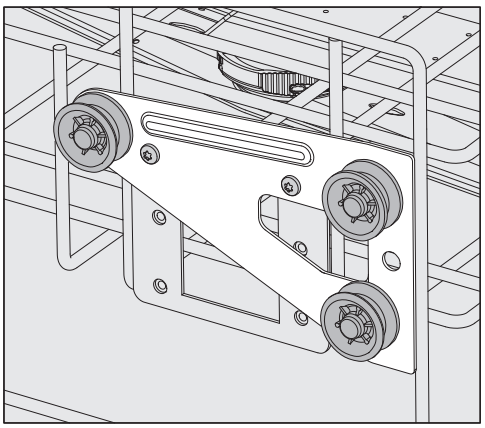


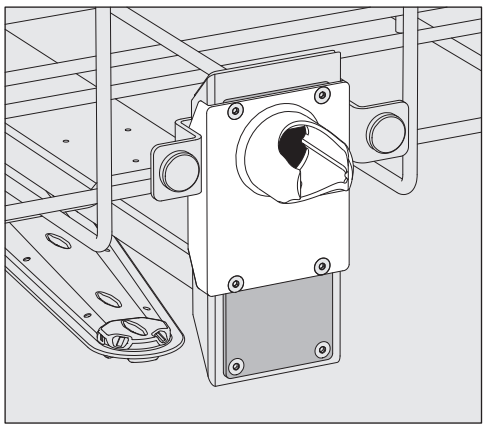


- Move the roller brackets on both sides to the middle position and secure them firmly.
- Place the stainless steel plate over the openings in the water inlet pipe so that one of the outer openings is covered. Screw the stainless steel plate to the top or bottom with 2 screws. Insert the connector into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

Setting the lower position

- 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.





- Move the roller brackets on both sides to the top position and secure them firmly.
- Place the stainless steel plate over the openings in the water inlet pipe so that the lower opening is covered. Screw the stainless steel plate to the bottom with 2 screws. Insert the connector into the upper opening of the stainless steel plate so that the middle opening is covered. Screw the connector on with 4 screws.

Then check:

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

Wash pressure measurement

The wash pressure can be measured if required on all load carriers with spray arms, injector manifolds, or other wash connections, e.g., during performance tests.

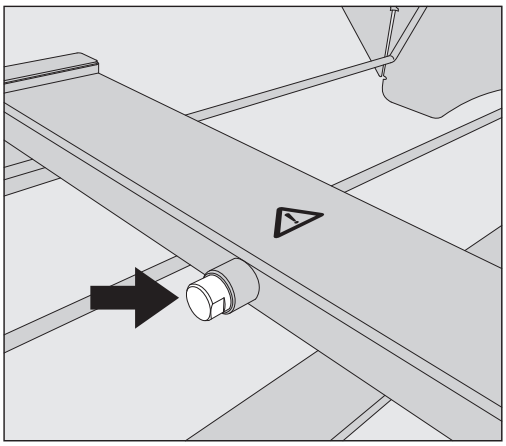
Test point for measuring wash pressure

On load carriers with spray arms and additional injector manifolds or other wash connections, there is a connection on the injector manifold or a wash connection for wash pressure measurement. The exact location is described in the respective operating instructions for the load carriers.

On load carriers with spray arms but without other wash connections, the test point for measuring the wash pressure can be found in the water inlet pipe for the spray arms. The test point is labeled with a ⚠ warning symbol and closed with a blanking plug.

⚠ All test points labeled with a warning symbol ⚠ are intended exclusively for wash pressure measurement.
Do not connect any wash items or irrigation connectors to the test points.

Perform measurement



- To measure the wash pressure, replace the blanking plug with a Luer Lock adapter.

Suitable Luer Lock adapters, such as the E 447, are available from Miele.

- Carry out the measurement.
- Close the test point again with the blanking plug after the measurement.

Arranging the wash items

⚠ Contaminated wash items pose a health risk.
Contaminated wash items can result in various hazards to health, which can lead to infections, poisoning, injuries, and more depending on the type of contamination.
When working with contaminated wash items, ensure that all necessary measures are taken to protect personnel.
Wear protective gloves and use suitable aids.

⚠ Only wash items which have been designated by their manufacturer as suitable for machine reprocessing may be processed. The manufacturer’s specific reprocessing instructions must be observed.
Used disposable items must not be reprocessed.

- Special load carriers or irrigation connectors such as nozzles, irrigation sleeves, or adapters may be required for appropriate internal cleaning, depending on the wash items.
- Arrange the wash items so that wash water can access all surfaces. This ensures that they get properly cleaned.
- Do not place wash items inside other items where they may be concealed, as this will hamper cleaning.
- Do not place wash items so close together that cleaning is hampered.
- The interior of lumened wash items must be thoroughly flushed through with wash water. Special load carriers or rinse fittings are required for this, depending on the wash items.
- Ensure that wash items with long, narrow, hollow sections can be flushed through properly before placing them in or connecting them to a rinse fitting.
- Lumened instruments should be inverted and placed in the correct load carriers to ensure that wash water can flow in and out of them unrestricted.
- Deep-sided wash items should be placed at an angle to make sure the wash water runs off them freely.
- Tall, narrow, hollow items should be placed in the center of the baskets or mobile units. This ensures better water coverage.
- Take apart any wash items which can be dismantled according to the manufacturer's instructions and reprocess the individual parts separately from each other.
- Lightweight wash items should be secured with cover nets to prevent them from spinning around in the wash cabinet and blocking the spray arms.
- Only reprocess small items and micro components in special inserts, mesh trays with lids, or filters.
- The spray arms must not be blocked by wash items which are too tall or which hang down in their path.

- Broken glass and ceramics can result in serious injury when loading or unloading. Damaged glass or ceramic wash items must not be reprocessed in the machine.
- Nickel and chrome-plated wash items and items made of aluminum are not generally suitable for machine reprocessing. Special process conditions are required for these wash items.
- For wash items made entirely or partly of plastic, observe the maximum temperature resistance and select the program accordingly or adjust the temperature of the program.

Suitable load carriers and rinse fittings as well as other accessories are available from Miele.

Preparing the wash items

⚠ Danger of explosion due to flammable gases.
Flammable solvents with a flash point below 70°F (21°C) outgas and can generate a flammable mix of gases.
Only place wash items into the wash cabinet that are wetted with traces of solvents at most.
Start a reprocessing program immediately after loading.

⚠ Material damage due to solvents.
Solvents can damage the elastomers and plastics of the machine and lead to leaks.
Only place wash items into the wash cabinet that are wetted with traces of solvents at most.
Start a reprocessing program immediately after loading.

⚠ Material damage due to corrosion.
Chloride solutions, particularly hydrochloric acid, and ferrous materials that can rust or corrode cause corrosion on the stainless steel of the machine and the load carrier.
Do not introduce any chloride solutions into the wash cabinet.
Do not introduce any ferrous materials that can rust or corrode into the wash cabinet.

⚠ Risk of infection and risk of environmental damage.
Microbiological material, pathogens, facultative pathogens, and genetically modified material can cause infections or environmental damage.
Observe the laws, standards, and guidelines for handling biohazardous substances.

- Follow the wash item manufacturer's instructions regarding precleaning and pre-treatment.
- Empty all wash items before loading into the machine and pay particular attention to relevant regulations.
- Pour blood residues out of vessels and scoop out blood clots.
- Disassemble the wash items according to the instructions of the wash item manufacturer.

- Open available faucets and valves or remove them according to the manufacturer's instructions and place the individual parts in suitable basket for small parts.
- Remove all stoppers, corks, labels, sealing wax residue, etc.
- If necessary, rinse the wash items briefly with water so that larger quantities of soiling are not introduced into the wash cabinet.
- Rinse wash items which have been in contact with solvents, chloride solutions, or hydrochloric acid thoroughly with water and drain well before placing them in the wash cabinet. Start a reprocessing program immediately after placing in the wash cabinet.
- Remove water-insoluble residues such as paint, adhesives, and polymer compounds using appropriate solvents.
- Scoop nutrient media (agar) out of petri dishes.
- Place small parts and micro components in suitable basket for small parts to secure them.
- Remove any aids which are difficult to get rid of and contaminate the wash items in addition to the original soiling. These include grease, paper labels, and other labels.
- Assess whether the wash items must be sterilized before reprocessing if they are contaminated with:

- microbiological material
- pathogens
- facultative pathogens
- genetically modified material

Checks before starting a program

Carry out a visual check before starting every program:

- Are the wash items correctly loaded and connected for cleaning?
- Was the recommended loading template followed?
- Can the lumen/narrow sections of hollow wash items be accessed by the wash water?
- Are the spray arms clean and do they rotate freely?
- Is the filter combination clean and securely installed?
  Remove any coarse soiling and clean the filter combination if necessary.
- Are the removable modules, nozzles, irrigation sleeves, and other irrigation connectors securely connected?
- Are the load carriers with spray arms or nozzles, irrigation sleeves, and other irrigation connectors correctly connected to the water supply?
- Are all process chemical containers sufficiently filled?

After reprocessing

Tests

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

- Carry out a visual check of the wash items for the cleaning results.
- Are all lumened wash items still attached to the appropriate nozzles?

The reprocessing results may be impaired if the wash items have been turned over or detached from the irrigation connectors or have tipped over during reprocessing.
Assess whether reprocessing needs to be repeated.

- Are the lumens of hollow wash items free from obstructions?
- Are the nozzles and connections securely held in position in the load carriers?

Process validation

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

Laboratory glassware

Wash items with wide necks

Wash items with wide necks, such as glass beakers, wide-neck Erlenmeyer flasks, and petri dishes, or cylindrical items such as test tubes, can be cleaned and rinsed inside and out using rotating spray arms. To do this, the wash items are positioned in appropriate inserts and placed in a basket or mobile unit with a spray arm.

Wash items with narrow necks

Mobile injector units or special injector modules are required for wash items with narrow necks, e.g., narrow-necked Erlenmeyer flasks, round flasks, measuring flasks, etc.

Suitable load carriers and rinse fittings as well as other accessories are available from Miele.

When loading please note:

- Place petri dishes or similar items in the appropriate insert with the soiled side facing downward.
- Position inserts for test tubes in the center on the load carriers to leave the corners of the load carriers free.
- Use a cover net to prevent breakages if necessary.

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 hoses.	- Follow the process chemical manufacturer's instructions and recommendations. - Carry out a regular visual check of the dispensing hose (suction lances, hoses, canisters, etc.) for any damage. - Regularly check the flow rate of the dispensing hose. - 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.
Hydrogen peroxide can release large amounts of oxygen.	- Only use validated processes. - The wash temperature must be lower than 158°F (70°C) when using hydrogen peroxide. - Please contact Miele for advice.
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 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.

Chemical processes and technology

Soiling	
Problem	**Solution**
The following substances can damage elastomers (hoses and seals) and plastics in the machine: - oil, wax, aromatic and unsaturated hydrocarbons - emollients - cosmetics, hygiene and skincare products such as creams (analytical applications, filling)	- Depending on usage, wipe the lower door seal on the machine periodically with a lint-free all-purpose 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 the wash items in water beforehand. - Select a cleaning program with at least one short pre-wash in cold or hot water. - Depending on the application, use de-foaming 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 the wash items in water beforehand. - Put the drip-dry wash items into the load carriers 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 de-foaming agents that do not contain silicone oils.
Soiling containing high protein levels, such as blood, can cause a heavy build-up of foam when processed with alkaline process chemicals.	- Select a cleaning program with at least one short pre-wash in cold water.
Non-precious metals such as aluminum, magnesium, and zinc can release hydrogen when processed with very acidic or alkaline process chemicals (oxyhydrogen reaction).	- Please observe the process chemical manufacturer's instructions.

Process chemicals

⚠ 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.

Highly viscous (thick) process chemicals can affect the dispensing monitoring and lead to inaccurate data. In this instance, please contact Miele Service for advice.

Contact Miele for information about suitable process chemicals.

The safety data sheets for the process chemicals must be easily accessible during operation of the machine.

Process chemicals

The machine is equipped with a dispensing canister for powder cleaning agents.

If required, an external dispenser module for liquid cleaning agents can be retrofitted. The retrofit process can be carried out at any time by Miele Service or a suitably qualified specialist. Liquid cleaning agent is dispensed from an external canister via a suction lance. It is not possible to use powder cleaning agent and liquid cleaning agent at the same time.

Miele recommends dispensing liquid cleaning agent.

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

- How alkaline does the cleaning agent need to be for the cleaning application involved?
- Are protein-removing enzymes required and is the 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.

Neutralizing agent

Neutralizing agent is dispensed via an internal dispensing hose.

Neutralizing agent (pH setting: acidic) neutralizes residues of alkaline cleaning agents on the surface of the wash items.

Rinse aid

Rinse aid is necessary to ensure water does not cling and leave marks on wash items, and to help wash items dry faster after reprocessing.

The dispensing of rinse aid is deactivated at the factory.
To activate it, please contact Miele Service.
Once rinse aid dispensing has been activated, it is no longer necessary to dispense neutralizing agent.

Rinse aid dispensing should be activated if DI water is not being used in the Final rinse program section.

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

Dispensing systems

The machine is designed for dispensing the following process chemicals:

- Cleaning agents
  Powder cleaning agents are dispensed via a //|\\ dispensing canister in the door.
  An external dispenser module must be retrofitted to dispense liquid cleaning agents.
- Neutralizing agents **or** rinse aids
  These are dispensed from a ✳ dispensing canister in the door.

Color coding of suction lances

Liquid process chemicals from external canisters are dispensed via suction lances. Color coding can be helpful for correct dispensing.

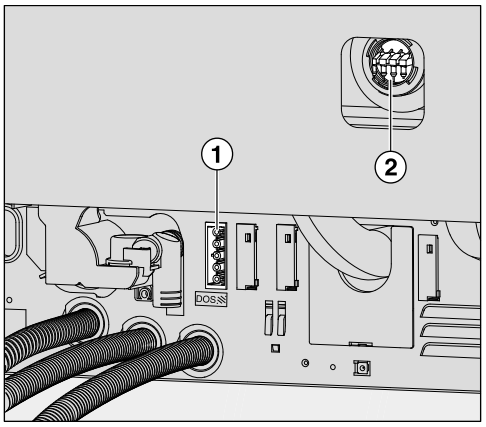
Dispenser modules

If required, additional external dispenser modules (DOS modules) for liquid process chemicals can be retrofitted. The number of connections varies depending on the equipment variant.

External dispenser modules are installed by Miele Service. Internal dispensing hoses cannot be retrofitted.

Connecting dispenser modules

The dispenser modules are supplied with installation instructions.



① Power supply connection

② Connections for dispensing hoses

The dispenser modules are controlled via the power supply. Pay attention the labeling of the connections.

- DOS 1 Cleaning agent

- Connect the power supply.
- To connect the dispensing hoses, release the hose clip on a free connector and remove the protective cap.
- Push the dispensing hose onto the connector and secure it with a hose clip.

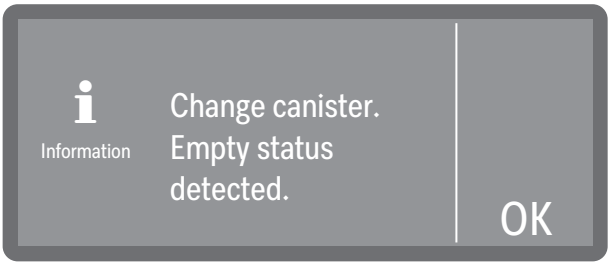
Unused connectors for dispensing hoses must be blanked off with protective caps to prevent the leakage of wash water.

Replacing the media canister

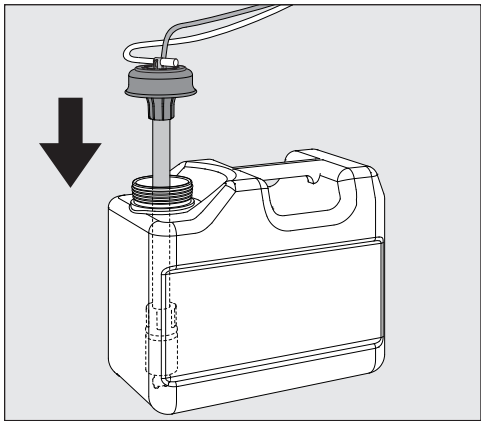
⚠ Damage caused by using unsuitable cleaning agents.
Using unsuitable cleaning agents, such as a cleaning agent for a domestic dishwasher, will mean that the reprocessing result is not as expected.
Only use cleaning agents that are suitable for cleaning machines.

Only replace empty canisters with canisters containing the appropriate process chemicals.
The reprocessing results are sometimes significantly impaired by dispensing the wrong process chemicals in the program blocks. In addition, mixing different process chemicals in the dispensing hose can lead to unexpected chemical reactions.
Observe the color coding of the suction lances.

When the fill level in the canister is low, you are reminded to change the canister:



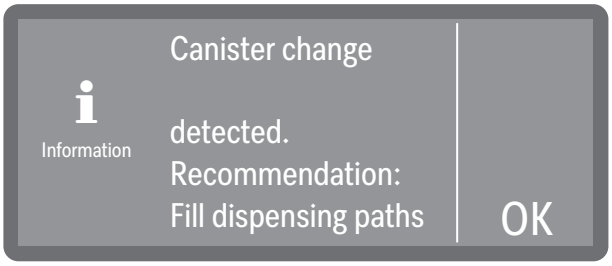
- Press OK to confirm the message.
- Take the canister and place it on a robust and easy-to-clean surface, e.g., the wash cabinet door.
- Take the lid off the canister and remove the suction lance.
- Place the suction lance on a robust and easy-to-clean surface, e.g., the wash cabinet door.
- Replace the empty canister with a full one.



- Push the suction lance into the opening of the canister and secure the lid.
- Feed the suction lance into the canister until it reaches the bottom.
- Wipe up any spilled process chemical thoroughly.

- Place the canister on the floor next to the machine or in an adjacent cabinet. The canister must not be placed on top of or above the machine. Ensure that the dispensing hose is not kinked or trapped.

When replacing the canisters, air can get into the dispensing hose and lead to inaccurate dispensing. For this reason, we recommend that you refill the dispensing hose after changing the canister.



- Confirm the message with OK.
- To fill the dispensing hose, select the corresponding dispensing hose at ▸ Machine functions ▸ Dispensing paths ▸ Fill dispensing paths and start the process. The hose is filled automatically.

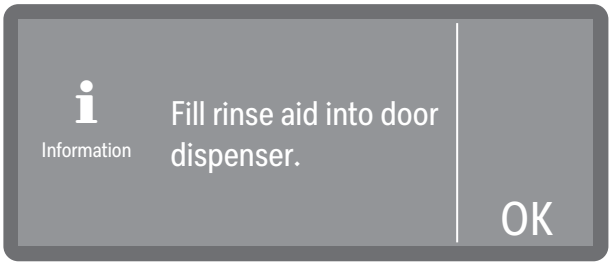
Filling the dispensing canister

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

Neutralizing agent is programmed at the factory.

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

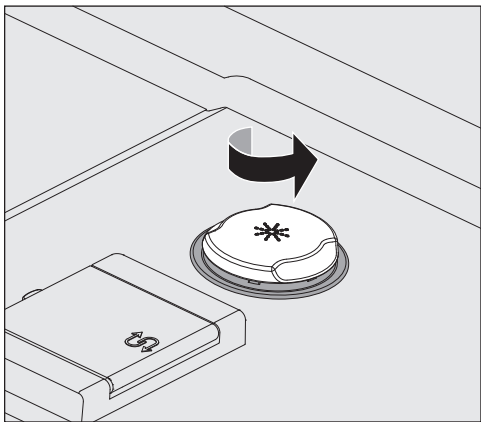
When the fill level in the rinse aid container is low, you are reminded to refill the dispenser canister.



- Press OK to confirm the message.

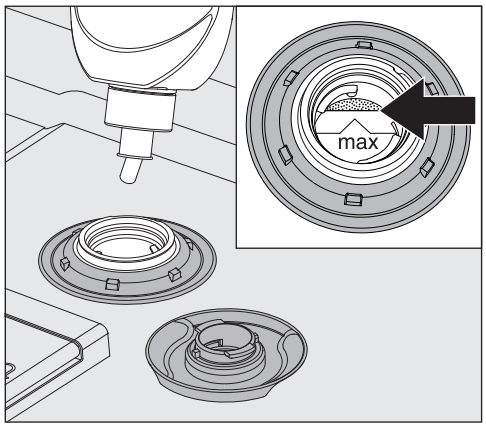
⚠ Never add cleaning agent.
This will always destroy the container.
Only fill the container with the programmed process chemical – neutralizing agent **or** rinsing agent.

- Open the door fully.

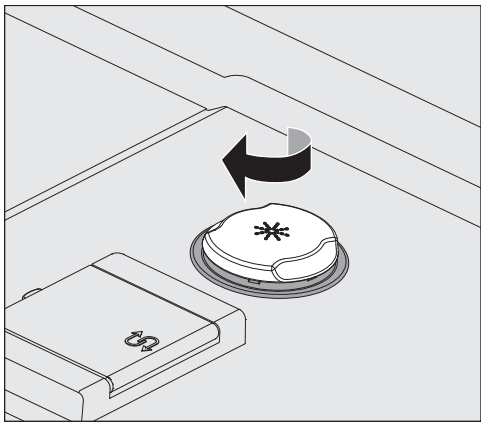


- Unscrew the yellow lid with the ✳ symbol in the direction of the arrow.

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 Cold water rinse program to prevent over-foaming from occurring during the next program.

Setting the dispensing concentration

The dispensing concentration is set at ▸ ⚙ Extended settings ▸ Dispensing system.

Neutralizing agent

If spots appear on wash items after reprocessing:

- Decrease the amount dispensed.

If clouding or smearing appears on wash items after reprocessing:

- Increase the amount dispensed.

Rinse aid

If spots appear on wash items after reprocessing:

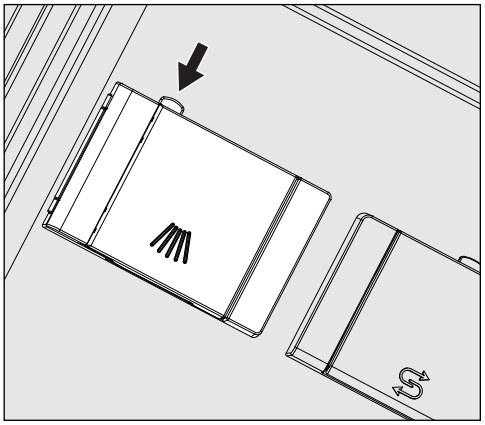
- Increase the amount dispensed.

If clouding or smearing appears on wash items after reprocessing:

- Decrease the amount dispensed.

Powder cleaning agent

⚠ Risk to health due to dust production.
When dispensing powder cleaning agents and tabs, dust from fine cleaning agents can be stirred up. If this dust gets into the mouth, throat, or eyes, it can cause irritation or burns.
When dispensing powder cleaning agents and tabs, avoid the production of dust as much as possible.

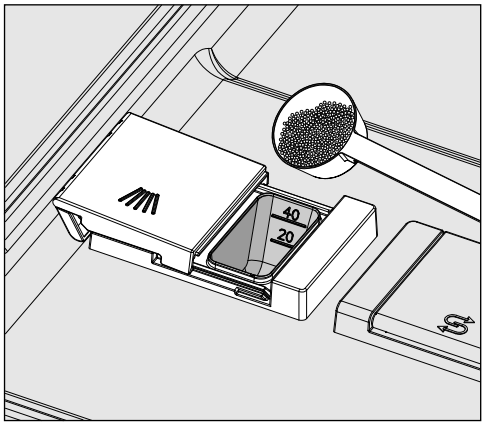


- Press the yellow button on the dispensing canister with the //\\\ symbol.

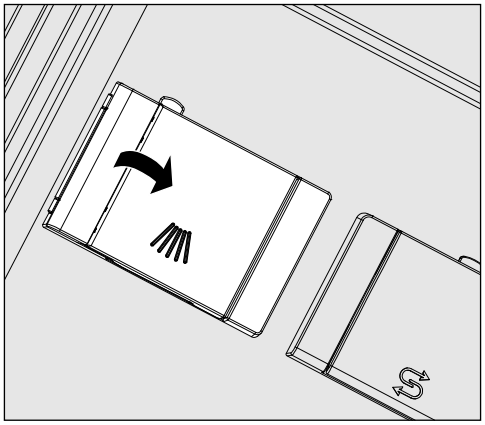
The flap will spring open. The flap is always open at the end of a program cycle.

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 liters 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 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 program.

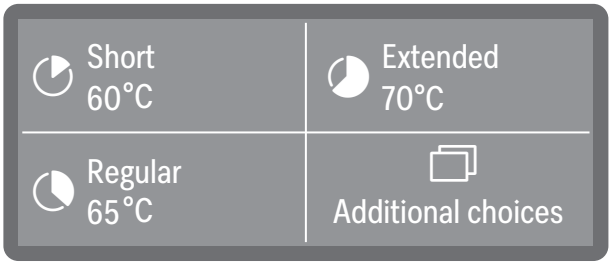
If an upper basket and a lower basket with two modules are being used, nozzle A 802 for powder detergent must be fitted. The operating instructions for the modules describe how to do this.

Selecting a program

Always select the correct program depending on the application, type of wash items and type of soiling.

- You can find a list of all programs along with application descriptions in 🕮 “Program overview”.
- All released programs are available for selection.

Tip: To release or block programs; see
▸ Extended settings ▸ Release programs



■ Select a favorite program.

Tip: To set favorites; see ▸ Extended settings ▸ Set Favorites.

Alternatively, you can also select a program from the program list.

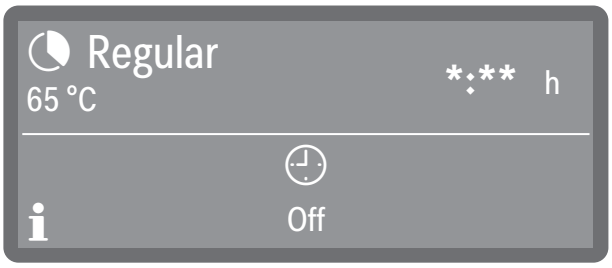
■ Tap Further choices.

■ Tap Programs and select a program from the list; see 🕮 “Program overview”.

As soon as you have selected a program, the *Start/Stop* button starts to flash.

Use the ⮌ Cancel button to return to the program selection screen before the program starts, e.g., to select a different program. This is no longer possible once the program has started.

Program information



(:** Program runtime varies depending on configuration)*

In the program display, you can use the information symbol **i** to call up information about the program or, while a program is running, information about the current wash block.

Starting a program

Starting a program immediately

- Press the *Start/Stop* button (the LED of the *Start/Stop* button will light up).

Once a program has been started, it can no longer be changed. You can interrupt a program that is in progress; see “Interrupting a program”, or end it prematurely by canceling it; see “Canceling a program”.

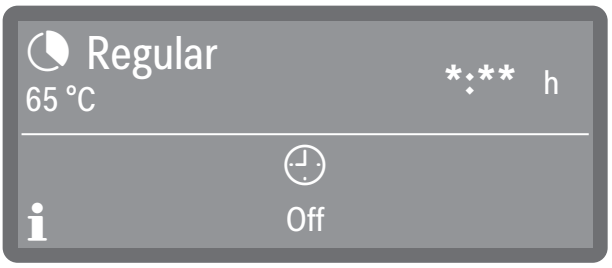
Starting the program using a timer

The start of a program can be delayed; for example, to benefit from economy rates of electricity at night. You can set a start time at which the program should start (Start at) or a finish time by which the program should end at the latest (Finish at). The times depend on the set time of day.

Tip: To set the time of day; see ▸ Settings ▸ Time

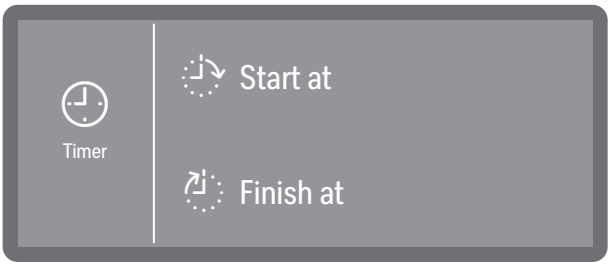
Setting the timer

- Select a program.

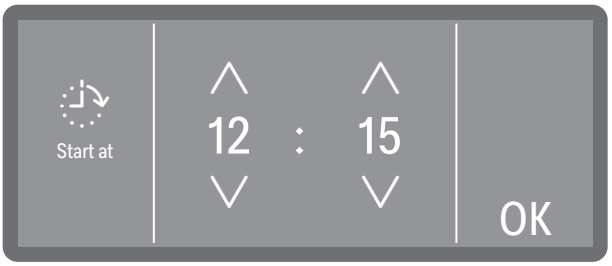


(:** Program runtime varies depending on configuration)*

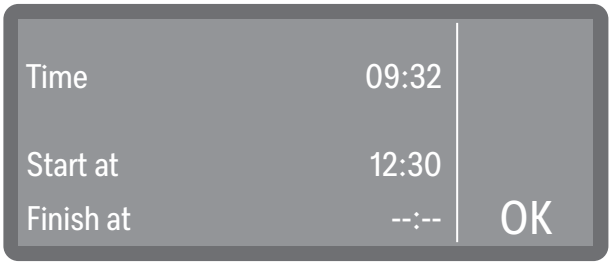
- Tap Timer.



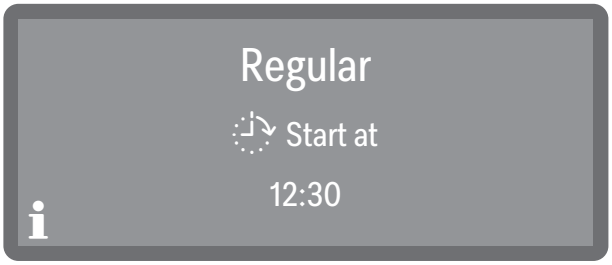
- Select the start time (Start at) or finish time (Finish at).



- Use the ∧ and ∨ sensor controls to set the time and press OK to confirm what you have entered.



- A summary follows, which you must confirm by pressing OK.



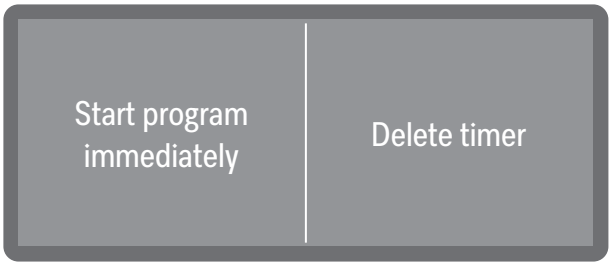
This activates the timer. Some time after the last input, the machine switches to Standby mode until the program starts.

Changing the timer

- Press the ⮌ button to return to the program view.
- Tap the ◴ Timer symbol.
- Re-enter the start or finish time.

Deleting the timer

- Press the *Start/Stop* button.



You will then be asked whether you want to start the program immediately (Start) or whether you want to delete the timer (Delete).

- Select an option.

Tip: Alternatively, you can switch off the Laboratory Glasswasher with the ⏻ On/Off sensor control or press the ⮌ sensor control to call up the program view, then tap ◴ Timer and delete the timer via the settings that follow.

Program cycle display

Once a program has started, the display shows the program name, the name of the current wash phase, and the time left until the program is finished.



(:** Program runtime varies depending on configuration)*

During the program sequence, program information can be called up by tapping the information symbol **i**.

Only the parameters that are set for the wash block that is currently in progress are shown, for example:

- Temperature as actual value and setpoint if a temperature has been specified for the wash block
- Activation time as actual value and setpoint if an activation time has been set

End of the program

After a program has ended normally, the LED of the *Start/Stop* button will go out and the following will appear on the display:



An audible signal sounds for approx. 3 seconds and is repeated 3 times every 30 seconds.

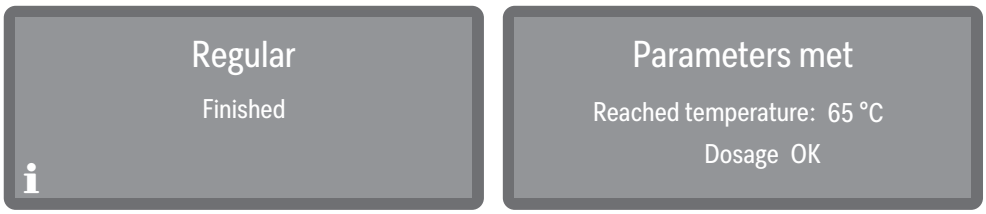
Tip: The audible signal settings can be found at ▸ ⚙ Settings ▸ Volume ▸ Buzzer tones.

Acknowledging the end of the program

■ Tap the display to acknowledge the end of the program.

If system messages are pending at this time, these are then output, e.g., if a lack of salt or process chemicals has been detected or a notification regarding when the next maintenance is due. Every message needs to be acknowledged individually by pressing OK.

Displaying program information



At the end of the program, tap the information symbol **i** to call up program information, for example:

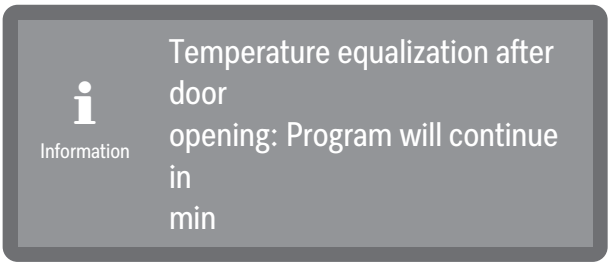
- Parameters met or Parameters partially not met
  All or some of the program parameters have been fulfilled.
- Reached temperature:
  The maximum temperature reached during the program.
- Dosage OK or Dosage Not OK
  The dispensing of the process chemicals was successful (OK = OK) or unsuccessful (Not OK = not OK).

Interrupting a program

A program that is in progress may only be interrupted if strictly necessary, e.g., if the wash items are moving significantly. To interrupt the program, the door of the wash cabinet must be opened.

⚠ Danger of scalding, burning, and chemical burns due to hot wash items, wash water, or escaping vapors.
The wash items and the wash cabinet may be very hot. Hot wash water or steam may also escape.
Be careful when opening the door. Open the door slowly and do not stand in the rising vapors.

- Open the door.
- Rearrange the wash items so that they are stable.
- Close the door to continue the program.



If the temperature inside the wash cabinet is more than 140°F (60°C) at this point, the pressure is equalized first. Then the program continues.

Canceling a program

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

⚠ Danger of scalding, burning, and chemical burns due to hot wash items, wash water, or escaping vapors.
The wash items and the wash cabinet may be very hot. Hot wash water or steam may also escape.
Be careful when opening the door. Open the door slowly and do not stand in the rising vapors.

Program canceled due to a fault

The program stops and a fault message appears on the display.

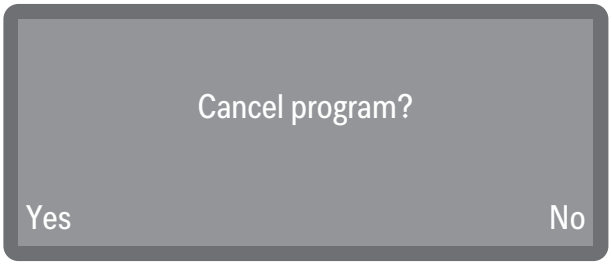
- Take appropriate steps to resolve the fault, depending on its cause; see “Frequently asked questions”.

Canceling a program manually

A program that is in progress may only be canceled if strictly necessary, e.g., if the wash items are moving significantly.

- Press the *Start/Stop* button.

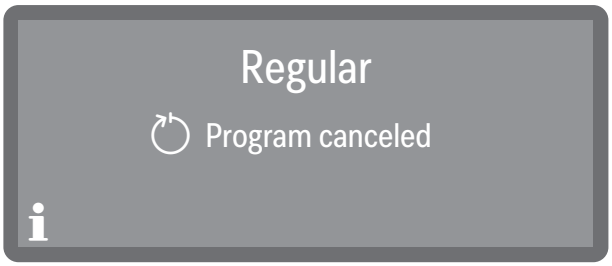
The following will appear on the display:



- Select Yes to cancel the program.

The program will only be canceled when Yes is confirmed. If no button is pressed for several seconds, or if the process is canceled using the ⮌ button, the display will revert to the program sequence display.

The following message will appear on the display:



The door must be opened to acknowledge the message. Open the door a little.

Restarting the program

- Before restarting the program, check whether powder cleaning agents need to be added.
- Restart the program or select a new program.

Menu structure

The Machine functions menu includes relevant functions to support daily routine tasks.

The factory settings are indicated by a tick ✓. A description of how to configure settings is provided after the overview.

- Additional choices
  - Machine functions
    - Dispensing paths
      - Fill dispensing paths
      - Rinse dispensing paths

Dispensing systems

The dispensing systems for liquid media can only dispense reliably if the dispensing system has been purged of air and contains no deposits.

Filling dispensing paths

The dispensing hoses need to be filled in the following situations:

- If the dispensing hose is being used for the first time.
- If air has been sucked in or the system has been drained.
- If canisters for liquid media have been changed or refilled.
- If the dispensing hose has been rinsed.

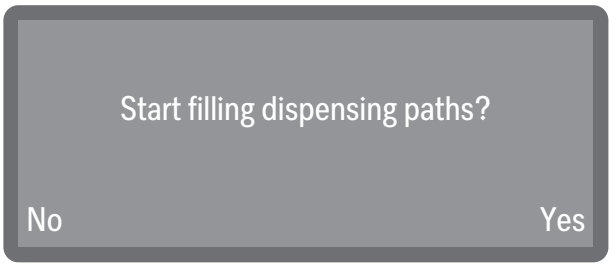
Before filling the dispensing paths, make sure that the canisters are full and that the suction lances are screwed securely to the canisters and that they cannot suck in air.

The menu is saved under the following input path.

- Additional choices
  - Machine functions
    - Dispensing paths
      - Fill dispensing paths

■ Select the Fill dispensing paths menu option.
■ Select the dispensing hose that you want to fill.

You will then be asked if you want to start the filling process:



- Yes

  Starts the process. The dispensing hose is filled automatically. The message Fill dispensing paths completed is displayed following successful completion. If filling is interrupted prematurely, the process must be repeated.

- No

  Cancels the process without filling the dispensing hose.

■ Select an option.

Rinsing dispensing paths

A dispensing hose must be rinsed in the following situations:

- If a dispensing hose was accidentally filled with the wrong medium.
- If deposits have formed in the dispensing paths or in the canisters which could completely or partially clog the systems. Deposits can form, for example, after long periods of downtime or when the canisters are refilled instead of being replaced.

■ Fill a clean container, e.g., a bucket, with clear, clean water.

⚠ Damage to the dispensing hose.
Small foreign objects in the water, such as sand, lint, or similar, can be sucked in by the dispensing hose and may clog or damage it.
Make sure that there are no foreign objects in the water.

The menu is saved under the following input path.

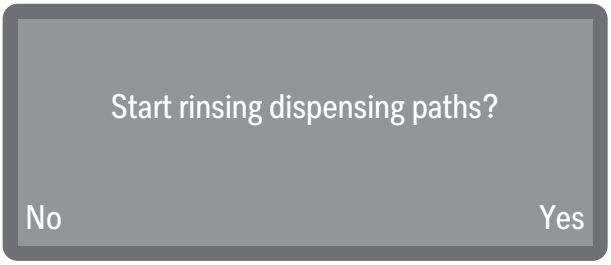
Additional choices
Machine functions
Dispensing paths
Rinse dispensing paths

- Select the Rinse dispensing paths menu option.
- Select the dispensing hose that you want to rinse.

The message Place the suction lance in a bucket with water. is then displayed.

- Place the suction lance in the container with water. The lower end of the suction lance with the suction opening must be thoroughly rinsed.
- Secure the suction lance so that it cannot tip over or fall out of the container.
- Confirm the message with OK.

You will then be asked if you want to start the process:



- Yes

  Starts the process. The dispensing hose is rinsed automatically. The message Rinse dispensing paths completed is displayed following successful completion. If rinsing is interrupted prematurely, the process must be repeated.

- No

  Cancels the process without rinsing the dispensing hose.

- Select an option.

Once the rinse process has finished:

- Reinsert the suction lance into the canister containing the appropriate process chemicals and start the process Fill dispensing paths.

Tip: For information on filling dispensing paths, see ▸ Machine functions ▸ Dispensing paths ▸ Fill dispensing paths.

Menu structure

Basic parameters for machine control are stored in the Settings menu.

The factory settings are indicated by a tick ✓. A description of how to configure settings is provided after the overview.

- Additional choices
  - Settings
    - Time
      - Clock format
        - 24 h ✓
        - 12 h
      - Set time
    - Date
      - Date format
        - DD/MM/YYYY ✓
        - MM/DD/YYYY
        - YYYY/MM/DD
      - Date
    - Display brightness
    - Volume
      - Buzzer tones
      - Keypad tone
    - Sensor reaction
      - Direct ✓
      - Delayed
      - Language selec. delayed
    - Welcome melody
      - On ✓
      - Off

Temperature unit

°C ✓

°F

Time of day

The time of day is required for the display and the delay start, for example. The date format and the current time of day have to be set.

Selecting the clock format

The menu is saved under the following input path.

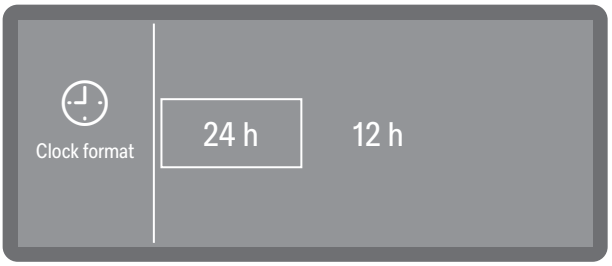
Additional choices

Settings

Time

Clock format

■ Select the Clock format menu option.



- 24 h

  Time of day display in 24-hour format.

- 12 h

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

■ Tap to select a format.

Setting the clock

The menu is saved under the following input path.

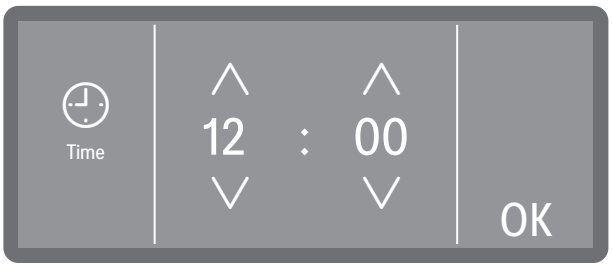
Additional choices

Settings

Time

Set time

- Select the Set time menu option.



- Set the time of day and confirm your selection with the OK button.

Date

The date format and the current date have to be set.

Selecting the date format

The menu is saved under the following input path.

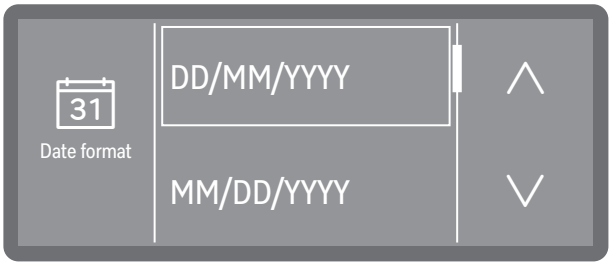
Additional choices

Settings

Date

Date format

- Select the Date format menu option.



- DD = day
- MM = month
- YYYY = year

- Select the format you want.

Setting the date

The menu is saved under the following input path.

Additional choices
Settings
Date
Date

- Select the Set date menu option.



- Set the date in the order of year, month, and day. The order is predefined.
- Press OK to save the setting.

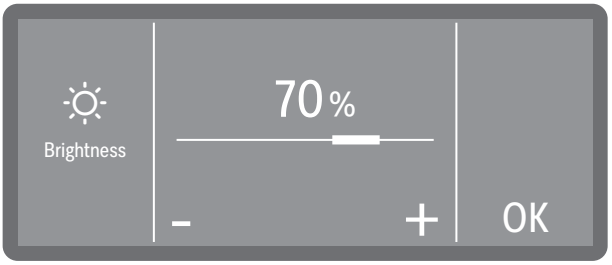
Display brightness

You can also set the brightness of the display.

The menu is saved under the following input path.

Additional choices
Settings
Display brightness

- Select the Display brightness menu option.



- Adjust the brightness of the display and press *OK* to save the setting.

Volume

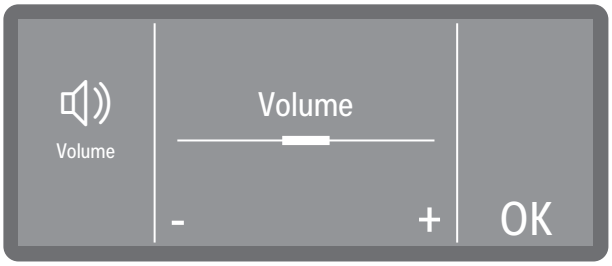
An acoustic signal transmitter is integrated in the control panel, which can provide acoustic feedback in the following situations:

- Keypad tone when operating the buttons
- Buzzer tones at the end of the program or for system messages (notifications)

The menu is saved under the following input path.

Additional choices
Settings
Volume
Buzzer tones
Keypad tone

- Select either Keypad tone or Buzzer tones. The volume is set in the same way for both options.



- Set the volume by tapping the - symbol (quieter) and + symbol (louder). In the lowest setting, the sound is switched off and can be switched on again if required by selecting On (displayed instead of the + symbol).
- Press *OK* to save the setting.

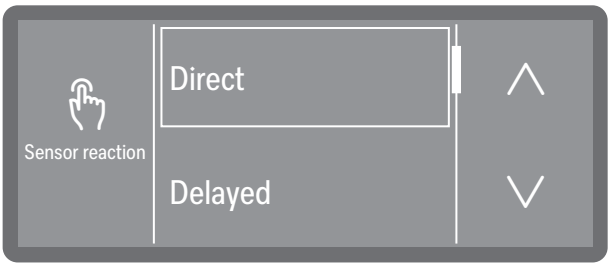
Button reaction

The response time of the sensor controls on the control panel and on the display can be increased to prevent accidental operation caused by brief contact. The sensor controls respond with a delay when they are pressed and must be pressed for longer to activate the functions.

The menu is saved under the following input path.

Additional choices
Settings
Sensor reaction

■ Select the Sensor reaction menu option.



- Direct

  The sensor controls respond immediately when pressed.

- Delayed

  All the sensor controls on the control panel and on the display respond with a delay.

- Language selec. delayed

  Only the language selection sensor control responds with a delay. All other sensor controls respond immediately when pressed.

■ Select an option.

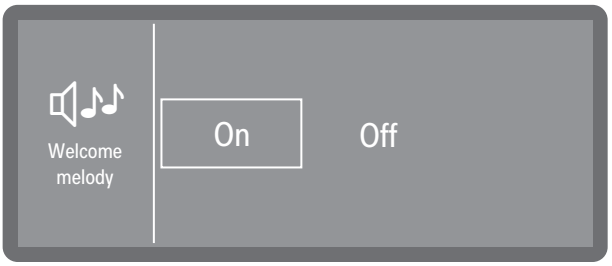
Welcome tone

There is a brief melody when the machine is switched on and off. You can use this option to switch this melody off and back on again.

The menu is saved under the following input path.

Additional choices
Settings
Welcome melody

■ Select the Welcome melody menu option.



- Off

  The melody is switched off.

- On

  A welcome melody is played when the machine is switched on.

■ Select an option.

Temperature unit

The temperature can be shown on the display in °C (degrees Celsius) or °F (degrees Fahrenheit).

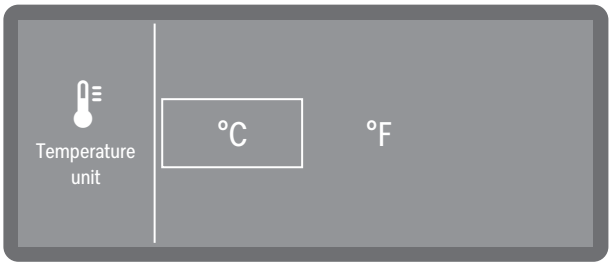
The menu is saved under the following input path.

Additional choices

Settings

Temperature unit

- Select the Temperature unit menu option.



- °C

  Temperature display in Celsius.

- °F

  Temperature display in Fahrenheit.

- Select the desired temperature unit.

Menu structure

The Extended settings menu incorporates all administrative processes and settings.

Access to the Extended settings menu is protected by a PIN code.
You must enter the correct PIN code to open the menu.

The factory settings are indicated by a tick ✓. A description of how to configure settings is provided after the overview.

- Additional choices
  - Extended settings
    - Standby/Off
      - Standby after 10 min ✓
      - Off after 10 min
    - Log book
    - Release programs
      - All programs ✓
      - Selection
    - Set Favorites
    - Configure programs
      - ■ Select program
        - Cleaning temperature
        - Main wash holding time
        - Final rinse temperature
        - Final rinse holding time
        - Increas. water quantity
        - Interim rinse
        - Reset
    - Dispensing system
      - Cleaning agent door
      - Clean. agent canister
      - Rinse aid door

- Cycles until empty *)
- Program lock DOS
  - On
  - Off ✓
- Water hardness
  - 14°dH (2.5 mmol/L) ✓
- Note reactivation
- Memory
  - On ✓
  - Off
- PIN code
  - Release exte. settings
  - Change PIN code
- Safe mode
  - On
  - Off ✓
- Network/Wi-Fi
  - ▸ *Set up Wi-Fi:*
    - Set up
      - Via WPS
      - Via Soft AP
    - MAC address
  - ▸ *Wi-Fi already set up:*
    - Activate / Deactivate
    - Connection status
    - Set up Wi-Fi again
    - Reset
    - MAC address

- RemoteUpdate
  - On
  - Off ✓
- Showroom
- Software version
- Data plate
- Factory default
- Legal Information

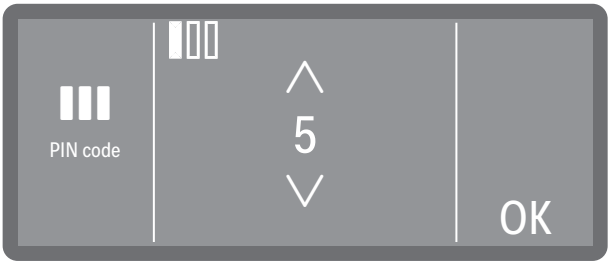
*) Depending on the model

Entering a PIN code

Access to relevant system settings and machine functions that require advanced knowledge of the machine and its processes is protected by a PIN code.

The PIN code is provided by Miele Service or by the authorized technician during commissioning.

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



- Use the ∧ and ∨ sensor controls to set relevant numerical values.
- Confirm each digit individually by pressing OK.

Boxes are shown above the numerical value. Once a number has been entered and confirmed by pressing OK, the box is filled. This allows you to keep track of which number of the PIN code you are currently entering.

You can cancel the process at any time by pressing the ⮌ button.

If the PIN code was entered correctly, the protected area is made available for further use.

If it is entered incorrectly, a corresponding message is displayed and the process is canceled.

Standby/Off

If the machine has not been used for approx. 10 minutes, it can be set to Standby mode or switched off automatically.

In Standby mode, the Lmachine remains switched on and the *Start/Stop* sensor control pulses. The machine can be reactivated by pressing the *Start/Stop* sensor control, touching the display, or opening the door.

After automatic switch-off, the machine is switched off and can be switched on again by pressing the ⏻ On/Off sensor control.

The menu is saved under the following input path.

Additional choices

Extended settings

Standby/Off

■ Select the Standby/Off menu option.



- Standby after 10 min

  Switch to Standby mode after 10 minutes

- Off after 10 min

  Switch off after 10 minutes.

■ Select an option.

Log book

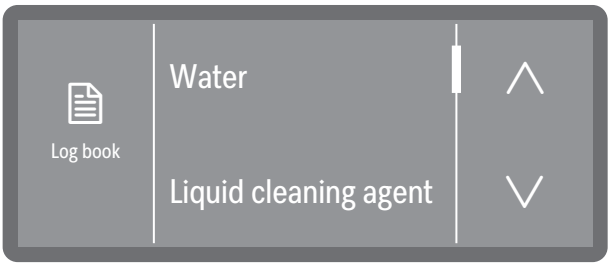
The consumption data for water and process chemicals as well as the operating hours and program sequences are logged in the log book. The entire life cycle of the machine is recorded.

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

The menu is saved under the following input path.

Additional choices
Extended settings
Log book

■ Select the Log book menu option.



- Water

  Display of water consumption in liters (L)
  If there are several water connections (depending on the model), the consumption is displayed according to the water type.

- Liquid cleaning agent

  Consumption of liquid cleaning agent in liters (L)

- Operating hours

  Number of operating hours

- Program cycles

  Display of all program sequences broken down by program.

- Service interval

  Reminder about the next service. The date of the next service is entered by Miele Service.

■ Tap to select the option you want.

The values in the log book cannot be changed.

■ Press the ⮌ button to exit the menu.

Program release

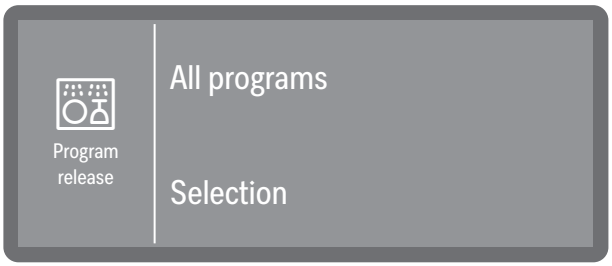
There is an option to block individual programs. Blocked programs are no longer available in the program selection screen. This ensures, for example, that only tested programs are used.

The menu is saved under the following input path.

Additional choices

Extended settings

Release programs



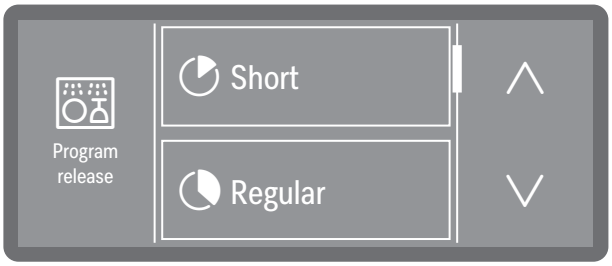
- All programs

  All programs are released for use.

- Selection

  A selection of programs are available.

■ Select an option.



■ Scroll through the program list and select the programs that you want to make available to users. Activated programs are highlighted by a frame. Multiple selection is possible.

■ Press All programs to select all programs at once.

■ Press OK to save the selection.

Setting favorites

You can choose which programs you want to display on the start screen. 1 to 3 programs can be selected. All programs released under ▸ Release programs are available for selection. At least 1 program must be selected. Other favorites can be added or removed. It is possible to select a program multiple times. It is displayed on the start screen the same number of times.

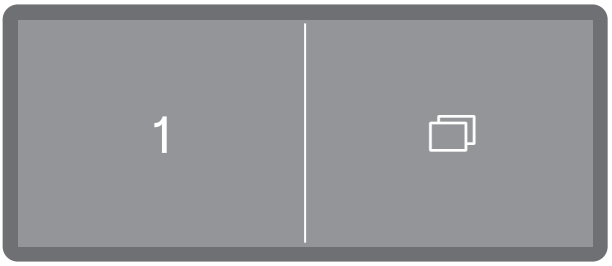
The menu is saved under the following input path.

Additional choices
Extended settings
Set Favorites

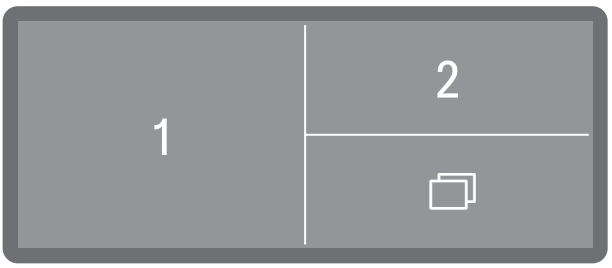
Start screen layout

The layout of the start screen depends on the number of favorite programs selected.

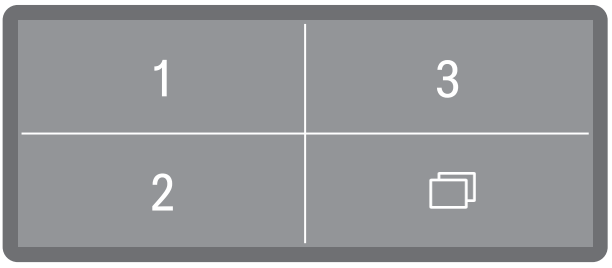
1 favorite program



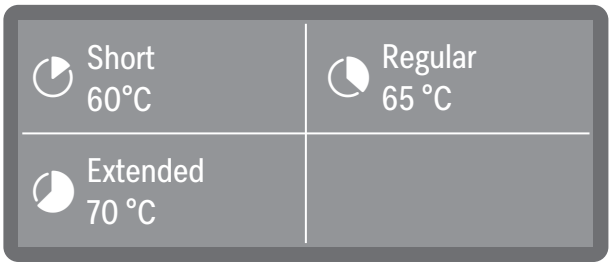
2 favorite programs



3 favorite programs

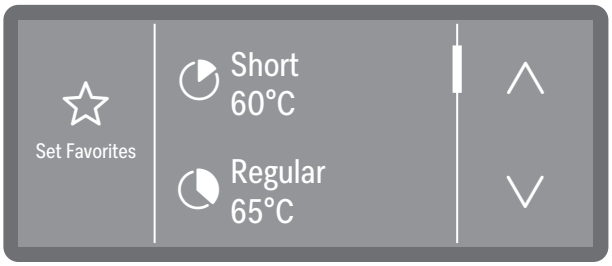


Setting favorites



The display shows the 3 favorites spaces. If a space is taken, the program name is displayed. Unused favorites spaces are marked with + Set Favorites

- Select the favorites space you want to reassign by tapping it.



- Scroll through the program list using the ∧ and ∨ arrow buttons and select the program that you want to appear in the selected favorites space.

A list of all programs released under ▸ Release programs is then displayed, along with an empty option ☆ No Favorite.

- Select a program to assign it to a favorites space. Or select ☆ No Favorite if you want to leave the space unused.

Program parameters

⚠ Risk of damage to the wash items.
Program parameters, such as the temperature or the dispensing concentration of the process chemicals, can have a damaging effect on the individual wash item materials under some circumstances.
Observe the parameters specified by the relevant manufacturer for reprocessing the wash items and adjust the program if necessary.
Consult the wash item manufacturer or Miele Service if necessary.

The program parameters should be adjusted to suit technical requirements and the wash items.

Additional specialist knowledge about the machine and its processes is required to modify program parameters and this should therefore be undertaken only by experienced users or by Miele Service.

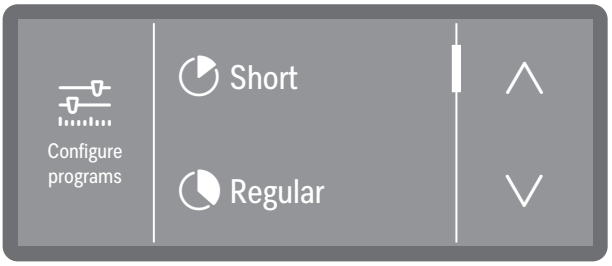
If changes are made to the program parameters of a qualified machine, a new performance qualification may need to be performed.

The menu is saved under the following input path.

Additional choices
Extended settings
Configure programs
■ Select program
Cleaning temperature
Main wash holding time
Final rinse temperature
Final rinse holding time
Increas. water quantity
Interim rinse
Reset

Selecting a program

■ Select the Configure programs menu option.



■ Scroll through the program list and select the program that you want to change.

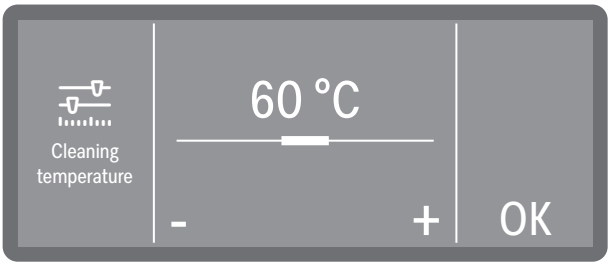
Wash temperature

The wash temperature is reached by heating up the wash water. The temperature needs to be adjusted to the task.

Temperatures above 130°F (55°C) lead to protein denaturation and possibly fixation.
The relevant infection prevention requirements must be observed.

Dispensing of process chemicals occurs at a default dispensing temperature set at the factory.

■ Select the Cleaning temperature menu option.



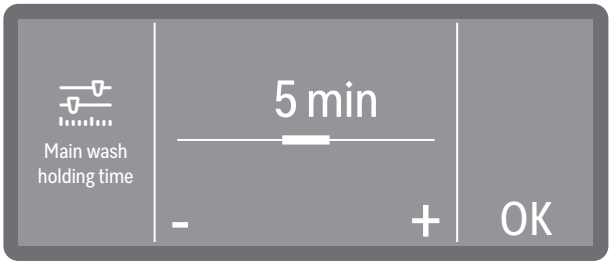
■ Select Set and set the temperature by tapping the - symbol (lower) and + symbol (higher). The adjustment range varies depending on the program.

- If No heating is selected, the wash water is not heated. The temperature in the wash cabinet is the result of the temperature of the previous wash block and the water flowing in.
- Press OK to save the setting.

Main wash holding time

The holding time is a period during which the temperature in the wash block is kept constant.

- Select the Cleaning temperature menu option.

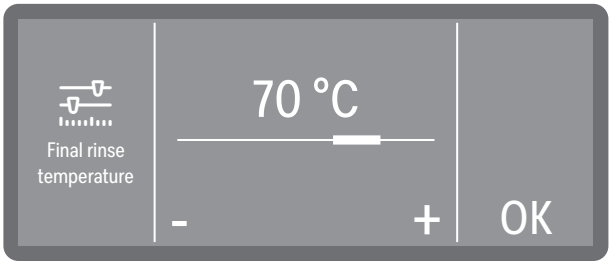


- Set the holding time and press OK to save the setting.

Final rinse temperature

The final rinse temperature is reached by heating up the wash water. The temperature needs to be adjusted to the task.

- Select the Final rinse temperature menu option.

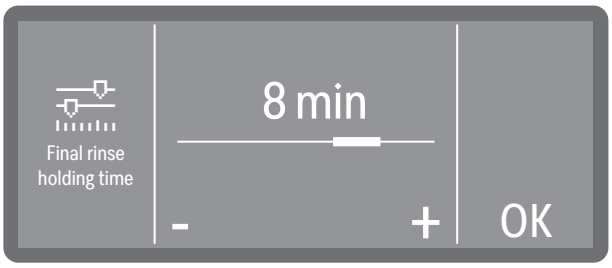


- Select Set and set the temperature by tapping the - symbol (lower) and + symbol (higher). The adjustment range varies depending on the model and program.
- If No heating is selected, the wash water is not heated. The temperature in the wash cabinet is the result of the temperature of the previous wash block and the water flowing in.
- Press OK to save the setting.

Final rinse holding time

The holding time is a period during which the temperature in the wash block is kept constant.

- Select the Final rinse holding time menu option.



- Set the holding time by tapping the - symbol (lower) and + symbol (higher).
- Press OK to save the setting.

Increased water level

It is then advisable to increase the water level when a lot of water is absorbed due to the structure of the wash items or when the type of soiling 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 soiling, and the wash items.

If slightly soiled wash items which absorb a little water are being reprocessed, the water level can be reset to the factory default to save water and energy.

- Select the Increas. water quantity menu option.



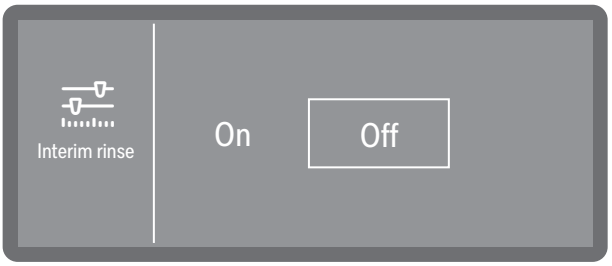
- Set the additional volume of water. The 0.0 L setting corresponds to the factory default water quantity.
- Press OK to save the setting.

Interim rinse

If required, an additional interim rinse block can be activated for selected programs.

You can find out which programs support this function in the program charts; see 🕮 “Program parameters”.

- Select the Interim rinse menu option.



- On

  Activates the additional interim rinse block for the selected program.

- Off

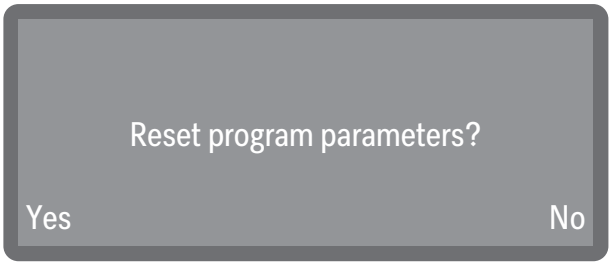
  Deactivates the additional interim rinse block.

- Tap to select an option.

Resetting parameters

You can reset individual programs to the factory default settings. The program parameters and changed program names are reset.

- Select the Reset menu option.



- Select Yes to reset the parameters and program names to the factory default settings.
- Select No to cancel the process.

Dispensing systems

The following menu allows you to activate and deactivate dispensing systems and to set the dispensing concentration for all programs.

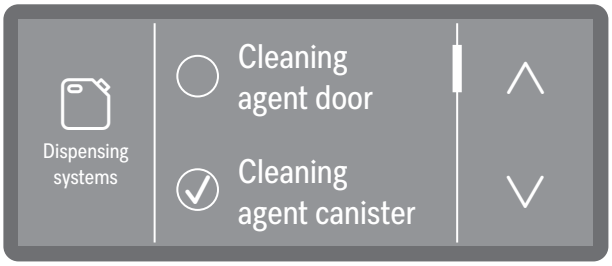
The neutralizing agent or rinse aid is dispensed via a corresponding door dispenser (rinse aid ✳). It is not possible to dispense neutralizing agent and rinse aid at the same time. Dispensing neutralizing agent via the door dispenser is preset at the factory.

Selecting a dispensing system

The menu is saved under the following input path.

Additional choices
→ Extended settings
→ Dispensing system
→ Cleaning agent door
→ Clean. agent canister
→ Rinse aid door

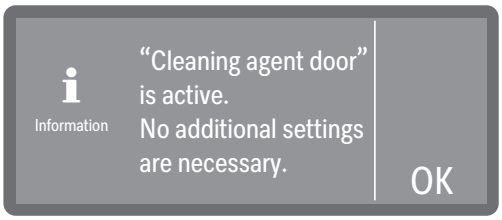
Only the available dispensing systems are displayed. Activated dispensing systems are highlighted by a ✓ check. Deactivated dispensing systems are preceded by a ○ circle symbol.



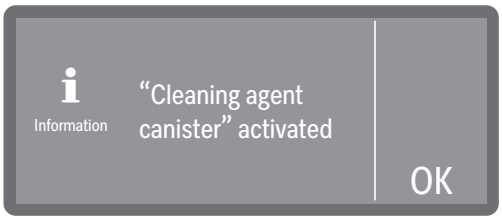
- Select a dispensing system.

Cleaning agent door

■ Select the Cleaning agent door menu option.



- Door dispenser activated



- Dispensing from the canister activated.

■ Confirm the message by pressing OK.
No further settings are possible.

If you want to change dispensing to the powder dispenser, select the Clean. agent canister option and deactivate dispensing from the canister.

Cleaning agent canister

■ Select the Clean. agent canister menu option.

The following options are available.

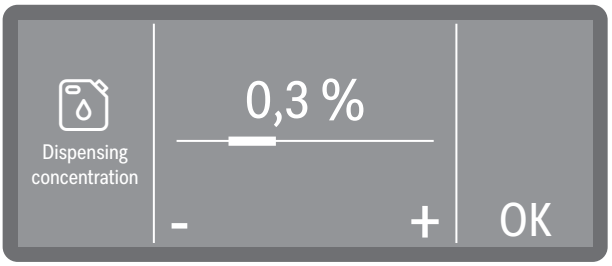
Dispens. concentration
Deactivate / Activate
Fill dispensing paths
Rinse dispensing paths

Dispensing concentration

The dispensing concentration for liquid process chemicals is set in the same way for all dispensing systems. The setting applies to all programs.

■ Start by selecting a dispensing hose.

■ Select the Dispens. concentration menu option.

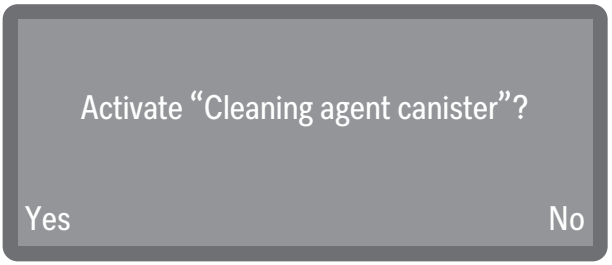


■ Set the dispensing concentration.

■ Press OK to save the setting.

Activating dispensing from the media canister

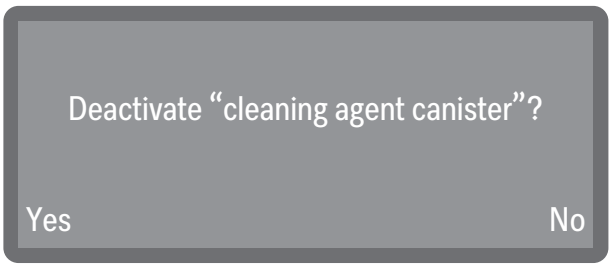
■ Select the Cleaning agent canister menu option.



■ Select Yes to activate dispensing from the canister. This change will take place immediately. Select No to cancel the process.

Deactivating dispensing from the media canister

■ Select the Cleaning agent canister menu option.



■ Select Yes to deactivate dispensing from the canister. This change will take place immediately. Select No to cancel the process.

Filling dispensing paths

See Machine functions

Rinsing dispensing paths

See Machine functions

Rinse aid door

■ Select the Rinse aid door menu option.

The following options are available.

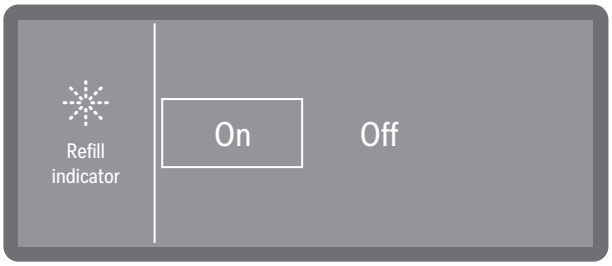
Refill indicator

Dispens. concentration

Refill indicator

The refill indicator indicates a lack of process chemicals in the door dispenser. If you want to stop dispensing via the door dispenser, you need to switch off the refill indicator.

■ Select the Refill indicator menu option.



- On

  The display indicates a lack of rinse aid in the door dispenser.

- Off

  The display does not indicate a lack of rinse aid.

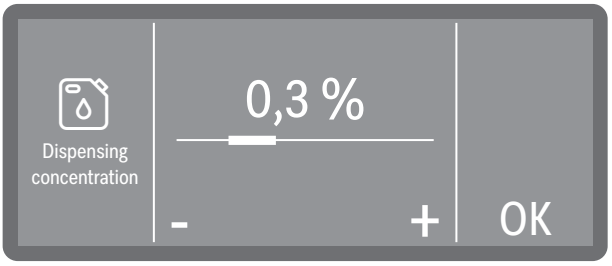
■ Select an option.

Dispensing concentration

The dispensing concentration for liquid process chemicals is set in the same way for all dispensing systems. The setting applies to all programs.

■ Start by selecting a dispensing hose.

■ Select the Dispens. concentration menu option.



- Set the dispensing concentration.
- Press OK to save the setting.

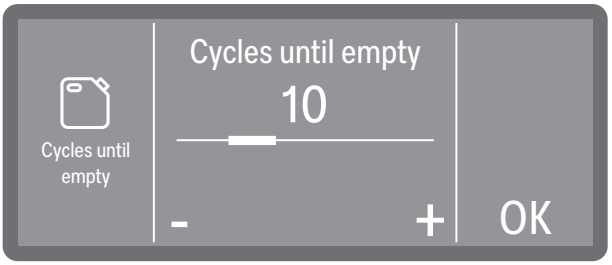
Cycles until empty

This function is only available on machines with fill level detection (depending on the model).

When dispensing liquid process chemicals from external media canisters, the fill level in the canister is monitored. You can use the following function to set the number of program sequences (cycles) from which you want to be warned about the imminently empty media canisters. The message is displayed after switching on the machine and before every program start.
You can set the number of cycles from 1-150 cycles or select Off to deactivate the message.

The menu is saved under the following input path.

- Select the Cycles until empty menu option.



- Set the number of cycles.
- Press OK to save the setting.

DOS program lock

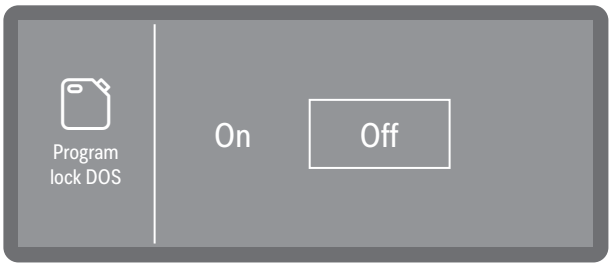
This function is intended solely for dispensing systems that dispense liquid process chemicals from external canisters.

Once the supply of a process chemical has been used up, the machine is locked to prevent further use. If necessary, you can disable the automatic lock. Programs can then be started regardless of the fill level of the dispensing system. If at least one process chemical is empty, a message is displayed before each program starts stating that reprocessing will be carried out without the relevant chemical. The messages must be confirmed before each program is started.

The menu is saved under the following input path.

Additional choices
Extended settings
Dispensing system
Program lock DOS

■ Select the Program lock DOS menu option.



- On

  Once the supply of a process chemical has been used up, the machine is locked to prevent further use.

- Off

  Programs can be started regardless of the fill level of the dispensing system. If a process chemical is empty, a corresponding message must be acknowledged before each program is started.

■ Select an option.

Water hardness

To set the water hardness, follow the instructions and notes in “Water hardness”.

Reactivation notification

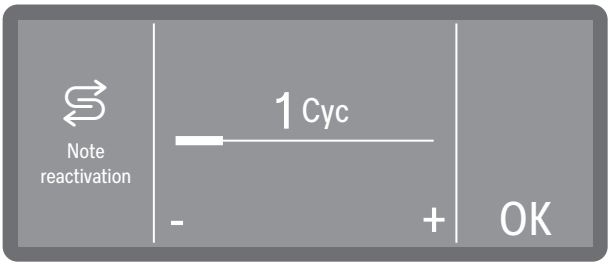
In order to plan wash phases more effectively, you can have the remaining number of wash cycles before the next reactivation displayed as a notification.
When the set number of cycles before the next reactivation has been reached, a notification is displayed after each completed program.
You can set the number of cycles from 0–20 cycles; at 0, no notification is displayed.

Additional choices

Extended settings

Note reactivation

- Select the Note reactivation menu option.



- Set the number of cycles.
- Press OK to save the setting.

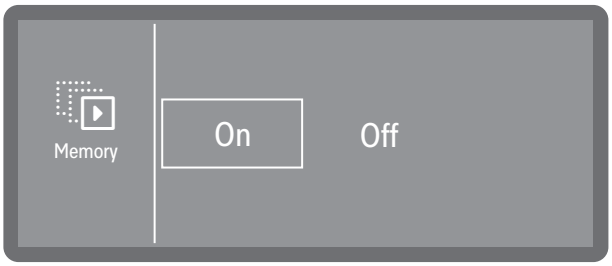
Memory

If you are always using the same program in a continuous sequence, you can use the memory function. This automatically suggests the most recently selected program so that you can start the program immediately after loading. The program selection screen is therefore not displayed, but it is still available.

The menu is saved under the following input path.

Additional choices
Extended settings
Memory

- Select the Memory menu option.



- Off

  The programs need to be selected via the program selection screen.

- On

  The most recently selected program is pre-selected before the next program starts.

- Select an option.

PIN code

Access to relevant system settings and machine functions that require advanced knowledge of the machine and its processes is protected by a PIN code.

The PIN code is provided by Miele Service or by the authorized technician during commissioning.

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

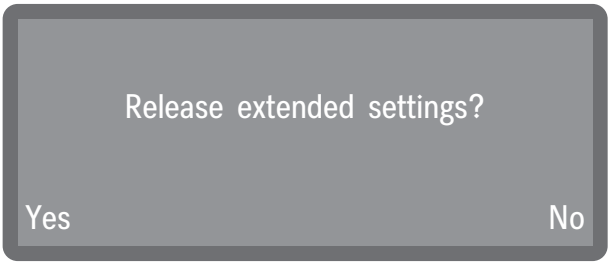
Blocking further settings or making them available

Access to the Extended settings menu can be protected by a PIN code or can be made available to all users.

The menu is saved under the following input path.

Additional choices
Extended settings
PIN code
Release exte. settings

- Select the Release exte. settings menu option.



- Yes

  The Extended settings menu is available to all users.

- No

  The Extended settings menu can only be accessed by entering the PIN code.
  If you activate the lock after a release, you need to assign a new PIN code; see “Changing the PIN code”.

■ Select an option.

Changing the PIN code

If necessary, you can reassign the PIN code for accessing the Extended settings menu.

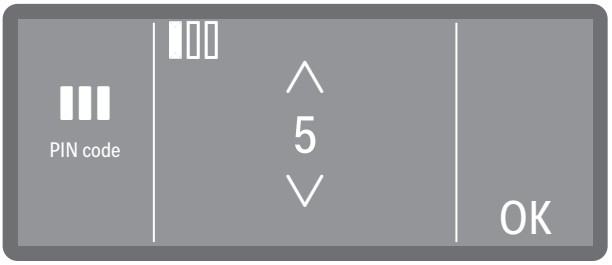
When a new PIN code is entered, the old PIN code is overwritten and is permanently deleted. It is therefore not possible to reinstate the old code.
If a PIN code is lost, a new code must be issued by Miele Service.

The menu is saved under the following input path.

Additional choices
→ Extended settings
→ PIN code
→ Change PIN code

Assign a new PIN code by selecting the Change PIN code option in the menu. A PIN code consists of 3 numbers from 0–9 in any order. Logical sequences, e.g., 1 2 3, are blocked by the system for security reasons.

■ Follow the instructions on the display and start by entering the current PIN code.



■ Use the ∧ and ∨ sensor controls to set relevant numerical values.

■ Confirm each digit individually by pressing OK.

Boxes are shown above the numerical value. Once a number has been entered and confirmed by pressing OK, the box is filled. This allows you to keep track of which number of the PIN code you are currently entering.

You can cancel the process at any time by pressing the ⮌ button.

- Then enter the new code.
- Confirm the new PIN code by entering it again.

If both entries match, the old PIN code is replaced by the new code.

If the entries do not match, a corresponding message is shown on the display and the old PIN code remains in use.

Safe mode

Safe mode provides additional protection against unauthorized access via the machine display. When Safe mode is enabled, access to all menus on the machine is disabled. Only the favorite programs and the released programs from the program selection can be selected and started via the display.

Tip: To release or block programs; see ▸ Extended settings ▸ Release programs

Tip: To set up favorite programs, see ▸ Extended settings ▸ Set Favorites.

The menu is saved under the following input path.

Additional choices
Extended settings
Safe mode

- Select the Safe mode menu option.



- Off

  Safe mode is deactivated.

- On

  Activates Safe mode.
  If you want to use Safe mode, you must switch the machine off and then back on again using the ⏻ On/Off sensor control after selecting On. When the machine is switched back on, Safe mode is activated.

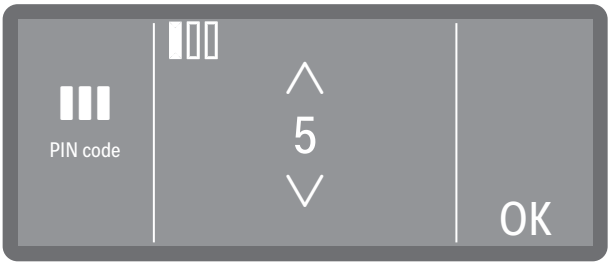
- Select an option.

Canceling Safe mode

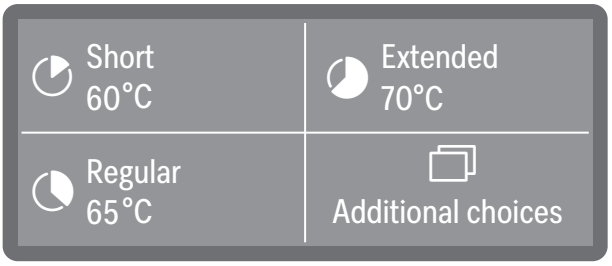
The PIN code is required to cancel Safe mode.

You can temporarily cancel Safe mode to adjust settings in the menus. Proceed as follows:

- Switch off the machine using the ⏻ On/Off sensor control.
- Press and hold the *Start/Stop* sensor control.
  The *Start/Stop* sensor control is not backlit when the machine is switched off and is only activated when it is switched on again.
- Switch the machine back on again using the ⏻ On/Off sensor control. Hold down the *Start/Stop* sensor control until you are prompted to enter the PIN code.



- Enter the PIN code.



Access to the machine menus is now temporarily enabled, and you can adjust the settings. Safe mode remains active as is.

- To put the machine back into Safe mode, you must switch it off and on again using the ⏻ On/Off sensor control.

If necessary, you can disable Safe mode via the relevant menu.

Tip: To enable and disable Safe mode, see ▸ Extended settings ▸ Safe mode.

Networking/Wi-Fi

Miele cleaning machines can be integrated into local networks in order to document the reprocessing procedures or to use the digital solutions from Miele. The cleaning machines are equipped with an integrated Wi-Fi module for this purpose. Integrated modules cannot be retrofitted.

⚠ Unauthorized access poses a risk.
Settings in the machine, e.g., parameters for dispensing process chemicals, may be changed as a result of unauthorized access via the network.
Under no circumstances should it be possible to access the machine via the Internet or other public or unsecured networks, either directly or indirectly (e.g., using port forwarding).

Only use terminal devices (PC, tablets, printers, etc.) compliant with IEC/EN 62368.

Range and availability of Wi-Fi signal

The Wi-Fi range or signal strength is dependent on on-site conditions. Reinforced concrete walls and ceilings, metal surfaces, metal-vaporized films, glass screens, and fire protection constructions can muffle or divert the signal, thereby reducing the range.

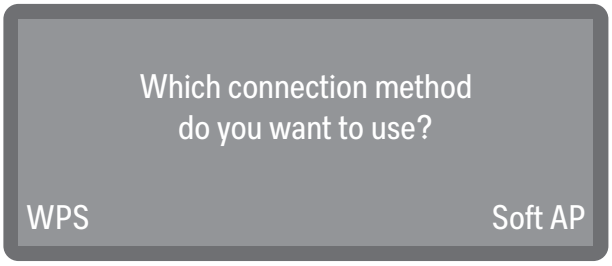
Wi-Fi setup

You can connect your machine to a Wi-Fi network either via WPS or via Soft AP.

The menu is saved under the following input path.

Additional choices
Extended settings
Network/Wi-Fi
Set up

■ Select the Set up menu option.



- Via WPS

  Integration via WPS (Wi-Fi Protected Setup)

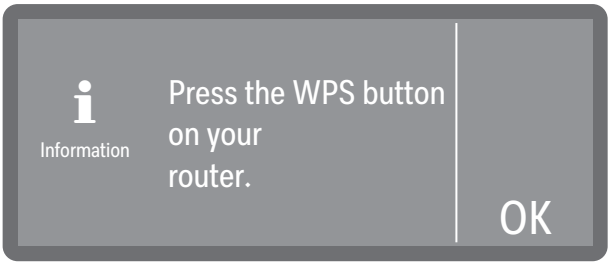
- Via Soft AP

  Integration via soft AP (software-enabled access point)

WPS

Setting up a Wi-Fi connection via WPS requires a WPS-enabled router.

■ Select the WPS option.



■ Within the displayed minutes, you have to activate the WPS function on your router and press OK to confirm this message.

- If the connection was successful, this is confirmed with the Connection established message.
- If the connection setup has failed, the message Connection failed is displayed. The WPS function on the router may not have been activated quickly enough, the machine may be out of range of the router, or the router signal may not be visible to the machine. In the latter case, check the security settings on your router.

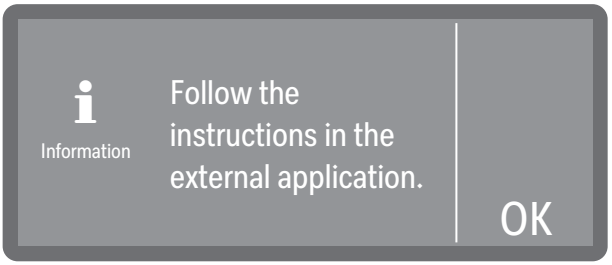
■ Confirm the message with OK. In the event of an unsuccessful attempt, you can repeat the process.

Soft AP

You can also integrate the machine into a network via soft AP, e.g., if a WPS connection is not possible.

A soft AP (software-enabled access point) is a wireless access point that is provided by your machine that can be used by other machines with wireless interfaces in the vicinity. With soft AP, the machine is not connected to the Internet. A Soft AP is only used to network two machines locally via Wi-Fi.

■ Select the Soft AP option.



■ Press OK to confirm the message and follow the instructions.

The display shows the message Waiting for connection for approx. 10 minutes.

- If the connection is successful, the message Connection established is then displayed.
- If the connection setup has failed, the message Connection failed appears.

■ Confirm the message with OK. In the event of an unsuccessful attempt, you can repeat the process.

MAC address

The MAC address for integration into your network can be found under the following input path.

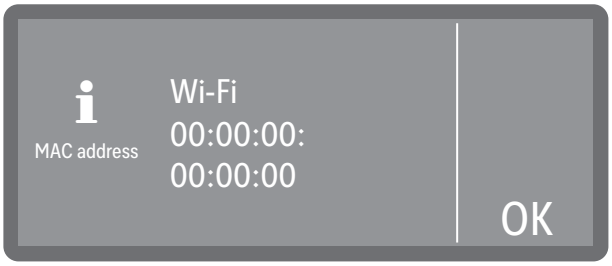
Additional choices

Extended settings

Network/Wi-Fi

MAC address

- Select the MAC address menu option.

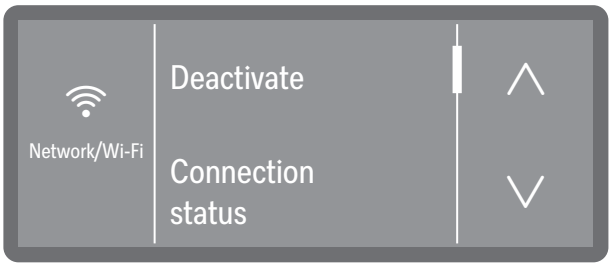


The MAC address appears on the display. No settings are possible.

- Exit the menu with OK.

Wi-Fi already set up

If the Wi-Fi interface has already been set up, the following options are available:



- Activate or Deactivate

  Activates or deactivates the interface. The existing settings are retained.

- Connection status

  Displays the status of the connection and the settings.

- Set up again

  Setting up the Wi-Fi interface again; see “Wi-Fi setup”.

- Reset

  Resets the Wi-Fi connection to the factory default settings.

- MAC address

  Displays the MAC address.

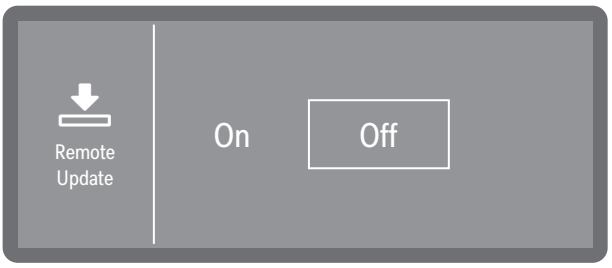
RemoteUpdate

This function can be used to install software updates remotely. This requires an Internet connection to have been established with the machine and registration with the Miele cloud.

Tip: To register with the Miele cloud, the machine must be connected to a Wi-Fi network, ▸ Extended settings ▸ Network/Wi-Fi.

The menu is saved under the following input path.

Additional choices
Extended settings
RemoteUpdate



- On

  You will be notified of available updates and upgrades, which you can download and install if required.

- Off

  It is not possible to install updates and upgrades remotely.

■ Select an option.

Demo mode

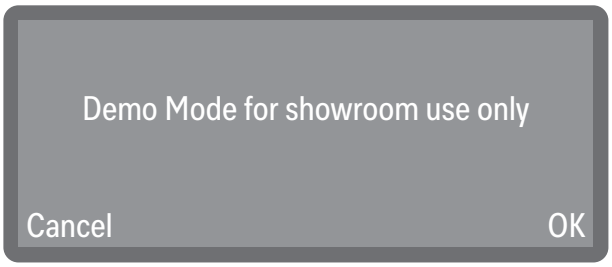
For dealer demonstration purposes only.

The machine has a Demo mode (Demo Mode). This allows processes and program sequences to be simulated on the display without the machine consuming water or process chemicals.

The menu is saved under the following input path.

Additional choices
Extended settings
Showroom
Demo Mode

- Select the Demo Mode menu option.



Firstly, you will be informed that the function is only intended for dealer showroom use.

- Confirm the message as required with OK or cancel the process at this point.
- Once you have pressed OK, you can now select whether you want to switch the mode on (On) or off (Off).
- After making your selection (On or Off), press and hold OK for the duration of the seconds displayed.

After the displayed seconds have elapsed, activation or deactivation is confirmed with a message on the display and the machine restarts automatically. Depending on what you have selected, the machine will either be in Demo mode or in normal operating mode after the restart.

Software version

When contacting Miele Service, you may need the software version numbers of individual control elements.

The menu is saved under the following input path.

Additional choices
→ Extended settings
→ Software version

The software units are listed on the display.

You cannot change any settings in this menu.

For software updates and upgrades, please contact Miele Service or a suitably qualified specialist.

- Exit the menu with OK.

Data plate

Shows the data plate with all important information, such as the model number, electrical connection, etc., on the display.

The menu is saved under the following input path.

Additional choices
→ Extended settings
→ Data plate

You cannot change any settings in this menu.

■ Exit the menu with OK.

Factory default settings

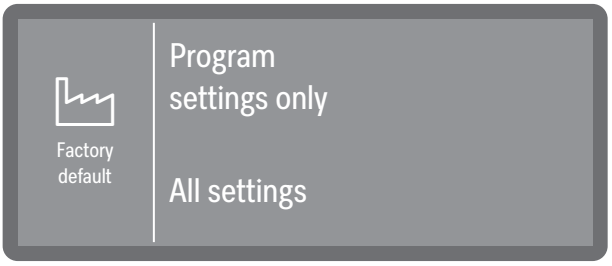
If necessary, the changed parameters or programs can be reset to the factory default settings.

Only restore the factory default settings in consultation with Miele Service.

The menu is saved under the following input path.

Additional choices
Extended settings
Factory default

■ Select the Factory default menu option.



- Program settings only

  Changes to the program parameters are reset to the factory default settings, with the exception of self-created programs.

- All settings

  All changes are reset to the factory default settings.

■ Select an option.

You will then be asked whether you want to reset the settings (Yes) or cancel the process (No).

Legal information

This menu contains legal information such as the imprint, information on data protection, and the terms of use.

The menu is saved under the following input path.

Additional choices
Extended settings
Legal Information

The information appears on the display. No settings are possible.

■ Exit the menu with OK.

Maintenance

The machine should be serviced **every 1000 hours of operation, or at least once every 12 months**, by Miele 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., IEC 60364-4-41 or the local regulations)
- 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
- wash mechanism/wash pressure
- 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

External documentation software and computer networks are not tested by Miele Service.

Routine checks

Before the start of each working day, the supervisor must conduct a series of routine checks.

The following items must be checked:

- Filters in wash cabinet
- Machine spray arms and spray arms of load carriers
- Wash cabinet and door seal
- Dispensing hoses
- Load carriers, e.g., baskets, modules, and inserts, as well as any irrigation connectors that may be present

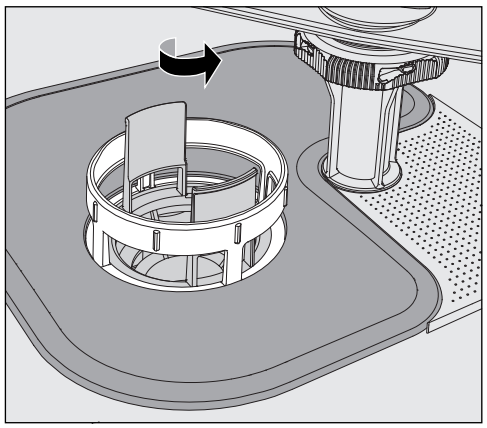
Cleaning the filters in the wash cabinet

⚠ 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.

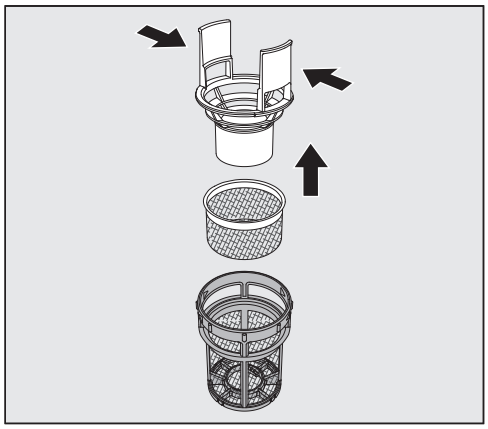
The filters in the floor of the wash cabinet prevent coarse soiling from coming into contact with the circulation system. Filters can become blocked by soiling, so they need to be checked every day and cleaned as necessary.

Removing and cleaning filters

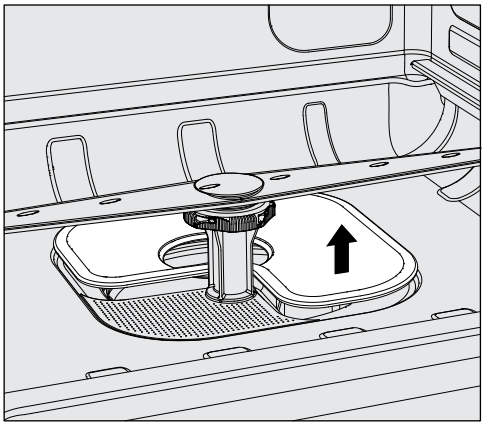
⚠ Danger of injury from sharp and pointed objects.
There is a danger of injury from sharp or pointed objects (e.g., glass shards or needles) retained in the filters. Small glass shards in particular are not always immediately visible in the filter.
Therefore, take extra care when removing and cleaning the filters.



- Loosen the microfine filter by turning it 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 upward 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.

- The flat filter must lie flat in the base of the wash cabinet.
- The coarse filter must securely click into place in the microfine filter.
- The microfine filter is screwed in tight 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 or 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

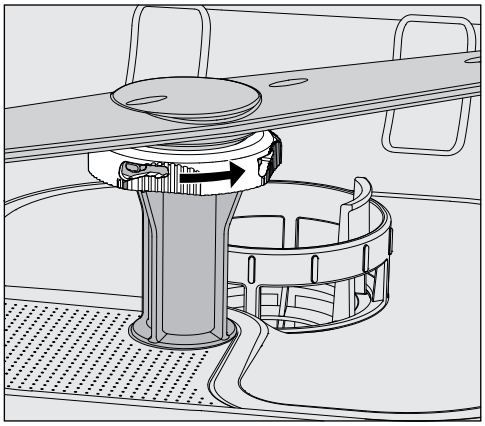
To clean the machine, the spray arms of the machine, mobile units, and baskets must be dismantled as follows:

- Remove the mobile unit or the baskets from the machine.

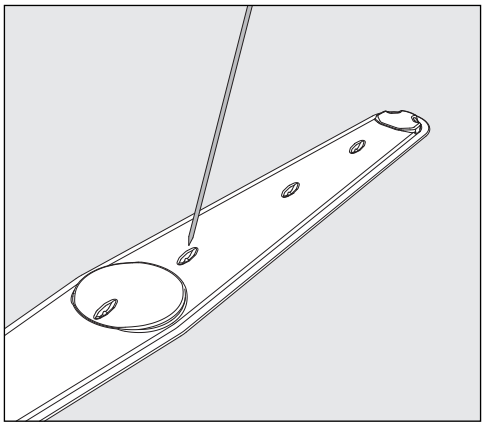
The upper machine spray arm is attached with a plug connection.

- Pull the upper machine spray arm downward.

The lower machine spray arm and the spray arms of the load carriers are fastened with bayonet catches.



- Loosen the knurled bayonet catches by turning them as far as they will go in the direction of the arrow.
- You can then pull the spray arms up or down.



- Use a pointed object to push particles into the spray arm.
- Rinse the spray arm thoroughly under running water.
- 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 installed.

The spray arms of the load carriers are each labeled with a number that is also embossed on the water inlet pipes in the bayonet catch area, e.g., 03. When installing, make sure that the numbers on the spray arms match the numbers on the water inlet 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.

For surface disinfection, use a cleaning agent recommended and listed by the manufacturer, e.g., an alcohol-based agent with a maximum alcohol content of 70%.

Cleaning the control panel

⚠ Do not use any abrasive materials or all-purpose cleaners to clean the control panel.
Due to their chemical composition, these can cause considerable damage to the glass and plastic surfaces and to the onset control buttons.

- Clean the control panel with a damp all-purpose cloth and liquid dish soap or with a non-abrasive stainless steel cleaner.
- You can also use commercially available glass or plastic cleaners to clean the display and the plastic underside.

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 soiling from the door sides and hinges.
- Regularly clean the groove in the base panel under the door with a damp cloth.

Cleaning the wash cabinet

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

Cleaning the machine front

- Clean the stainless steel surface with a damp cleaning cloth and liquid dish soap or a non-abrasive stainless steel cleaning agent.

Preventing re-soiling

- To help prevent re-soiling of stainless steel surfaces (fingerprints, etc.), a suitable stainless steel care product can be used after cleaning.

Checking the load carriers

Load carriers must be checked daily to make sure they are functioning correctly.

The following points need to be checked:

- If the load carriers have rollers, are the rollers in good condition, and are they securely attached to the load carrier?
- Are the water connectors present and undamaged?
- Are height-adjustable water connectors adjusted to the correct height and securely fixed?
- Are all nozzles, irrigation sleeves, and hose adapters securely attached to the load carrier?
- 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 manifolds?
- Are the caps in the water connectors of load carriers in the modular system 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?

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

⚠ Danger due to unauthorized repairs.
Unauthorized repairs can expose the user to considerable risk.
Repairs may only be carried out by Miele Service or a suitably qualified specialist.

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 unexpected behavior

Problem	Possible cause and solution
The display is dark and all backlit buttons are out.	The machine is not switched on. ■ Switch the machine on using the ⏻ On/Off switch.
	A breaker is faulty or has tripped. ■ Refer to the minimum breaker rating on the data plate. ■ Reset the breaker switch. ■ If the breaker trips again, call Miele Service.
	The machine is not plugged in. ■ Insert the electrical plug.
The machine has switched itself off.	This is not a fault. The Standby/Off function switches the machine off automatically after a preset waiting time to save energy. ■ Switch the machine on using the ⏻ On/Off switch.
The display is dark and the *Start/Stop* button is pulsing.	This is not a fault. The machine is ready for use. ■ Press the *Start/Stop* button to reactivate the machine.
Power outage during operation	If a temporary power outage occurs during a program sequence, no measures are required. The program which was running continues without interruption. If the temperature in the wash cabinet drops below the minimum value required for the program block during the power outage, the program block is repeated.
A program has ended, but the machine has not washed the items.	This is not a fault. The demo mode for simulating processes and program sequences on the display is activated. ■ Deactivate demo mode; see ▸ Demo Mode.
Peak-load negotiation: Heating mode temporarily disabled.	This is not a fault. Individual components of the machine are paused while there is a peak load signal from your energy management system.
Temperature equalization after door opening: Program will continue in min	This is not a fault. If the door is opened while a program is running and the temperature inside the wash cabinet is more than 140°F (60°C), the pressure will equalize once the door is closed.

Troubleshooting

Problem	Possible cause and solution
Access to all menus is disabled.	This is not a fault. The machine is in Safe mode. You can temporarily cancel Safe mode to adjust settings in the menus. The **PIN code is required** to do this. ■ Switch off the machine using the ⏻ On/Off sensor control. ■ Press and hold the *Start/Stop* sensor control. ■ Switch the machine back on again using the ⏻ On/Off sensor control. Hold down the *Start/Stop* sensor control until you are prompted to enter the PIN code. ■ Enter the PIN code. The menus are released. ■ To reactivate Safe mode, switch the machine off and then back on again using the ⏻ On/Off sensor control. ■ To enable or disable Safe mode, see ▸ Safe mode.

Maintenance and testing

Problem	Possible cause and solution
Next service due on: or in hours	This is not a fault. Miele Service has recommended a date for the next service visit. ■ Arrange an appointment with Miele Service or have the maintenance carried out by a suitably qualified specialist.

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
Change canister	During a program sequence, a low fill level was measured in a canister for liquid process chemicals. ■ Replace the empty canister with a full one.
Fill dispensing paths	This is not a fault. A dispensing hose is currently being filled automatically Wait until the process is complete.
Fill dispensing paths cancelled	Filling of the dispensing hose was canceled because an insufficient flow rate was identified. A dispensing hose may be kinked or the suction lance blocked. ■ Check the dispensing hose for kinks and leaks. Position it so that it cannot become kinked. ■ Check the suction opening of the suction lance for blockages and remove them as necessary. ■ Start the process again.
	Contact Miele Service if there are leaks in the dispensing hose or a fault with the suction lance.

Highly viscous (thick) process chemicals can affect the dispensing 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 - appliance will be locked shortly.	The salt supply in the water softener has been used up. Reactivation is no longer possible. The machine will be locked for further use with the next reactivation. ■ Refill with reactivation salt.
F561 Machine locked insufficient salt: Refill regeneration salt. Machine will unlock after a few seconds. Then start the "Cold water rinse" program.	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 short while after the salt container has been refilled. Reactivation will occur automatically during the next program sequence.
Close salt container lid	The salt container is not closed properly. Salt residues are preventing it from closing. ■ Remove all salt residues from the edge of the salt refilling opening, the lid, and the seal. Do **not** use running water to rinse away salt residues as this can cause the container to overflow. ■ Close the container properly.
	The salt container flap has sprung open during a program. ⚠ When the door is opened, hot steam, and process chemicals can escape! ■ Open the door and close the container flap.

Cancel with fault code

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

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

- Follow the instructions on the display.
- Switch the machine off using the ⏻ On/Off sensor control.
- Wait approximately 10 seconds before switching the machine on again with the ⏻ On/Off sensor control.
- Start the previously selected program again.

If the same fault message appears again:

- Make a note of the fault message.
- Switch the machine off using the ⏻ On/Off sensor control.
- Notify Miele Service or a suitably qualified specialist.

Please also read the notes regarding the following fault codes.

Problem	Possible cause and solution
F403 – F405 **Check water inlet**	One or more water connections are closed. ■ Open the water connections.
	Insufficient water is reaching the machine. ■ Clean the water inlet filters; see 🕮 “Cleaning the filters in the water inlet”. ■ Turn on the faucets fully.
	The flow pressure at the water connection is too low. ■ Refer to the specifications for flow pressure in the 🕮 “Technical details”. ■ Contact a qualified plumber.
F406 – F408 **Flow pressure in the water inlet too low**	A program was canceled because the water flow rate is insufficient. ■ Check that the water connections are fully open. ■ Refer to the information regarding minimum flow pressure; see 🕮 “Connecting the water supply” and 🕮 “Technical details”. ■ Check the water inlet filters; see 🕮 “Cleaning the filters in the water inlet”. ■ Contact Miele Service or a suitably qualified specialist and ask what action needs to be taken.
F412 – F414 **Flow pressure in the water inlet too high**	A program was canceled because the water flow rate is too high. ■ Refer to the information regarding recommended flow pressure and maximum permissible static water pressure; see 🕮 “Connecting the water supply” and 🕮 “Technical details”. ■ Contact Miele Service or a suitably qualified specialist and ask what action needs to be taken.

Problem	Possible cause and solution
F433, F438 **Door blockage**	Objects in the closing area of the door or outside in front of the door prevent the door from being opened or closed automatically. ■ Remove all objects in front of the door of the machine, e.g., mobile units or boxes. ■ Open the door and remove all objects that protrude into the closing area of the door. For example, sort the wash items so that they do not protrude into the door area and remove all objects that protrude into the door area from the outside, e.g., hanging all-purpose cloths. ■ Switch the machine off and then back on again.
F492, F541 **Wash pressure too low**	A program was canceled because the wash pressure is too low or water in the wash cabinet is only being pumped away slowly or not at all. The filters in the wash cabinet may be blocked or the non-return valve may be jammed. ⚠ Danger of injury from glass shards, needles, etc. retained in the filters. ■ Check and clean the filters in the wash cabinet; see 🕮 “Cleaning the filters in the wash cabinet”. ■ Check and clean the non-return valve; see 🕮 “Cleaning the drain pump and non-return valve”.
F511 **Dispenser pump**	Technical defect with the dispenser pump. ■ Notify Miele Service or a suitably qualified specialist.
F550 **Waterproof**	The Waterproof system has been activated. One of the water inlet hoses may have a leak. ■ Close the water inlets. ■ Notify Miele Service or a suitably qualified specialist.
F578 **Peak-load negotiation**	The peak-load negotiation has lasted longer than 2 hours. ■ Have your power supply and your energy management system tested by a specialist.

Unsatisfactory cleaning and corrosion

Problem	Possible cause and solution
White deposits remain on the wash items.	The water softener settings are too low. ■ Program the water softener to the appropriate water hardness.
	The salt in the container has been used up. ■ Refill with reactivation salt.
	The quality of the water for the final rinse was not sufficient. ■ Use water with low conductivity. ■ If the machine is connected to a demineralization cartridge, check its condition and replace it if necessary.
	The water entering via the DI water connection is not sufficiently demineralized. ■ Check the upstream demineralization systems. If necessary, the demineralization cartridge of the water purifier must be replaced.
The wash items are flecked.	The rinse aid container is empty. ■ Refill the container.
	The rinse aid concentration is set too low. ■ Contact Miele Service and have the dispensing concentration reset.
The cleaning results are unsatisfactory.	Load carriers were not suitable for the wash items. ■ Select load carriers which are suitable for the task.
	The load carriers were loaded incorrectly or overloaded. ■ Arrange the wash items correctly according to the information in the operating instructions. ■ Avoid overloading the load carriers.
	The reprocessing program was not suitable for the soiling. ■ Select a suitable program. Or ■ Adjust the program parameters to suit the task.
	Soiling has been left to dry on the wash items for too long. ■ Soiling should not be left on the wash items for more than 6 hours before machine reprocessing.
	A spray arm is blocked. ■ Ensure the spray arms are not obstructed when arranging the wash items.
	The nozzles of the spray arms are clogged. ■ Check the nozzles and clean them as necessary.
	The filters in the wash cabinet are soiled or not inserted correctly. ■ Check the filters and clean them if necessary.
	Load carriers were not correctly mounted on the water connection.

Problem	Possible cause and solution
	■ Check the adapter.
Items made of glass are showing signs of corrosion.	The items are not suitable for machine reprocessing. ■ Only use items which are declared by their manufacturer as suitable for machine reprocessing.
	Neutralization has not taken place during the program. ■ Check the level in the reservoir and vent the dispensing system if necessary.
	The wash temperature was too high. ■ Select a different program. or ■ Reduce the wash temperature.
	The process chemicals used were too alkaline. ■ Use a milder process chemical. or ■ Reduce the concentration of process chemicals.
Stainless steel items are showing signs of corrosion.	The stainless steel is of insufficient quality for machine reprocessing. ■ Only use stainless steel items made of high quality stainless steel and follow the instructions of the manufacturer regarding machine reprocessing.
	The chloride content in the water is too high. ■ Have a water analysis check carried out. Connection to an external water processing unit and the use of demineralized water may be necessary.
	Neutralization has not taken place during the program. ■ Check the level in the supply container and vent the dispensing system if necessary.
	Rust or superficial rust has built up in the wash cabinet, e.g. due to an excessively high iron content in the water or rust on other wash load items. ■ Check the installation. ■ Discard any rusty items.

Water inlet and drainage

Problem	Possible cause and solution
F404 Water inlet, cold too low: check water inlet.. Open water supply fully. Turn appliance off and on. Restart program. If fault persists, contact service. Service phone: Serial number: **or** F406 DI water volume too low: Check water inlet. Open water supply fully. Turn appliance off and on. Restart program. If fault persists, contact service. Service phone: Serial number:	The relevant water connection is closed. ■ Open the water connection.
	Insufficient water is reaching the machine. ■ Clean the water inlet filters; see 🕮 "Cleaning the filters in the water inlet". ■ Turn on the faucets fully.
	The flow pressure at the water connection is too low. ■ Refer to the specifications for flow pressure in the 🕮 "Technical details". ■ Contact a qualified plumber.
F541 Water drainage: Switch appliance off and on. Start "Drain" program. Clean filter combination and non-return valve. If fault persists, contact service. Service phone: Serial number:	A program was canceled because the water in the wash cabinet is only being pumped away slowly or not at all. – The drain hose is blocked. ■ Remove any kinks or large loops in the drain hose. ■ Restart the program. – The filters in the wash cabinet are blocked. ■ Clean the filters in the wash cabinet; see 🕮 "Cleaning the filters in the wash cabinet". ⚠ Danger of injury from glass shards, needles, etc. retained in the filters. ■ Restart the program. – The drain pump or the non-return valve is blocked. ■ Clean the inlet to the drain pump and the non-return valve; see 🕮 "Cleaning the drain pump and non-return valve". ■ Restart the program. – The drainage system cannot take in enough water because it is blocked. ■ Contact a qualified plumber.

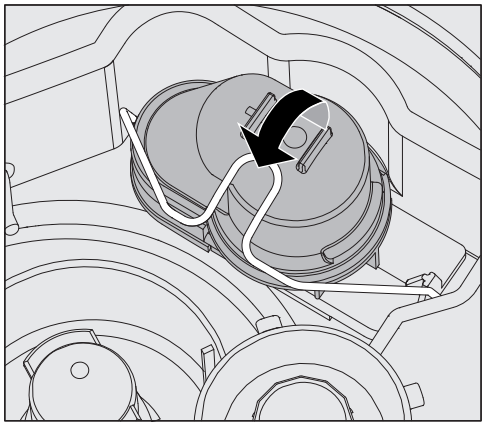
Noises

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 noises in the water line.	This may be caused by the on-site installation or the cross-section of the water line being too small. This does not affect the function of the machine. ■ Contact a qualified plumber.

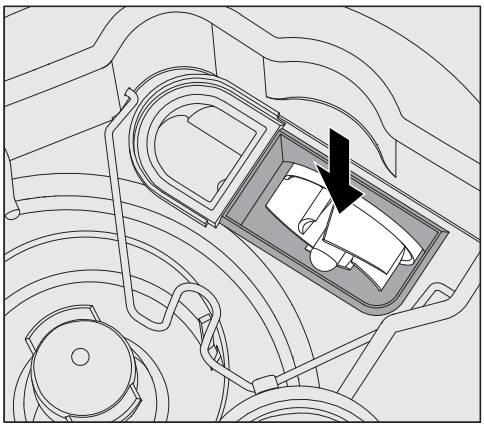
Cleaning the drain pump and non-return valve

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.

- Remove the filter combination from the wash cabinet; see “Cleaning the filters in the wash cabinet”.



- 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.

- Check the impeller for foreign objects and remove them if necessary before reinstalling the non-return valve.
- Carefully replace the non-return valve and secure it with the locking clamp.

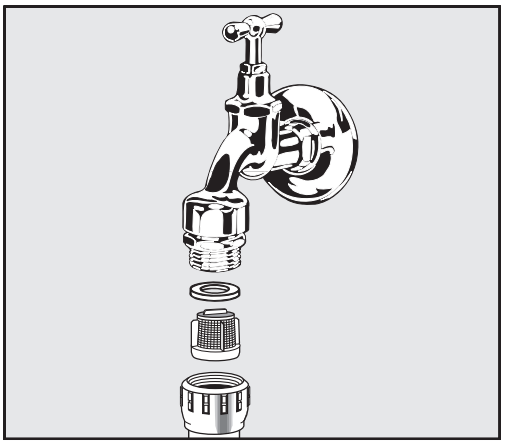
Cleaning the filters in the water inlet

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 the electrical plug, 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 needle-nose 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 Service.

Contacting Miele Service

⚠ Repairs should only be carried out by Miele Service or an authorized technician.
Unauthorized repairs can expose the user to considerable risk.

To avoid unnecessary customer service visits, you should check whether this fault can be remedied yourself using the instructions in 🕮 “Frequently asked questions” the first time a fault message occurs.

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

The contact details can be found on the back of these 🕮 operating instructions or on the Miele homepage, e.g., at www.miele.com/professional.

If possible, please have the following information ready when contacting us:

- model and serial number of the machine

  This information can be found on the data plate. The position of the data plates is described in the machine overview or can be called up via the display at ▸ ⚙🔒 Extended settings ▸ Data plate.
- the fault message and the fault number from the display
- the software versions of the machine components

  This information can be found on the display at ▸ ⚙🔒 Extended settings ▸ Software version.

Setup and alignment

Further information can be found in the installation plan. The installation plan is available online.

⚠ Unauthorized access poses a risk.
Settings in the machine, e.g., parameters for dispensing process chemicals, may be changed as a result of unauthorized access via the machine display.
Set up the machine in a room with restricted access. Only give the PIN code to people you trust.

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

⚠ Risk of injury when lifting the machine.
Due to their heavy weight, the machines must not be lifted by a single person.
If possible, always have 2 or more people lift the machines. Follow the instructions on occupational safety, e.g., ensure an ergonomic posture when lifting.
Use suitable aids such as pallet trucks or hand trucks for longer transport distances.

⚠ Material damage during transport with pallet trucks, hand trucks, or other transport aids.
Pallet trucks, hand trucks, or other transport aids can dent components in the base of the machine and damage them.
When transporting the machine using pallet truck, hand truck, or other transport aids, the machine must be in its original packaging or placed on a stable, continuous support.
When transporting the machine using a hand truck, do not lift it from the front as this could damage the control panel or the door.

⚠ Material damage during transport or installation.
Do not lift, pull, or push the machine by protruding parts, such as the control panel, the open door, drawers (if present), components on the back of the machine, hoses, or cables, as these could be damaged or torn off.
To lift, pull, or push the machine, hold it by the housing if possible.

Installation variants

The machine is suitable for the following installation variants:

- Freestanding.
- Slot-in:

  The machine should be placed next to other machines, furniture, or in a niche. The niche must be at least 23 5/8" (600 mm) wide and 23 5/8" (598 mm) deep.
- Built-under:

  The machine should be placed under a continuous countertop or sink drain. The installation space must be at least 23 5/8" (600 mm) wide, 23 5/8" (598 mm) deep, and 32 5/16" (820 mm) high.

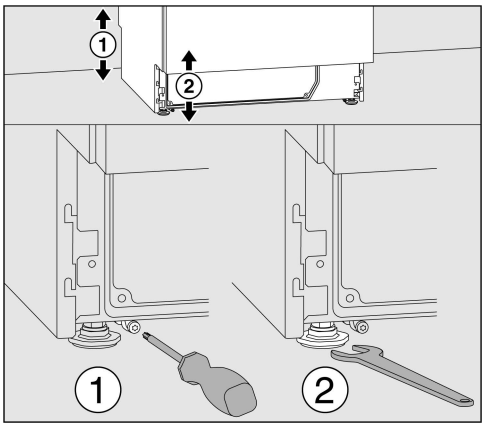
Freestanding machines or machines positioned in a niche must be equipped with machine lids.

Matching lids are available from Miele.

Leveling out uneven floors

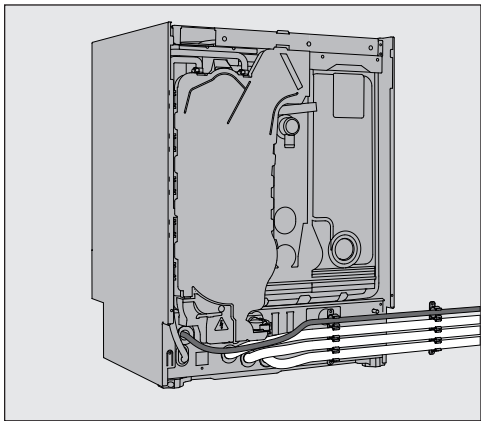
The machine must be stable and horizontal.

Any unevenness in the floor level and machine height can be compensated for by adjusting the 4 feet. The adjustable feet can be screwed out to a maximum of 2 3/8" (60 mm).



The front adjustable feet can be adjusted with an open wrench (wrench size 13); the rear ones with a T20 Torx screw.
If the skids of the rear adjustable feet are not installed, the adjustable feet can also be adjusted with the open wrench.
They are adjusted upward when turned clockwise and downward when turned counterclockwise.

Hose holder



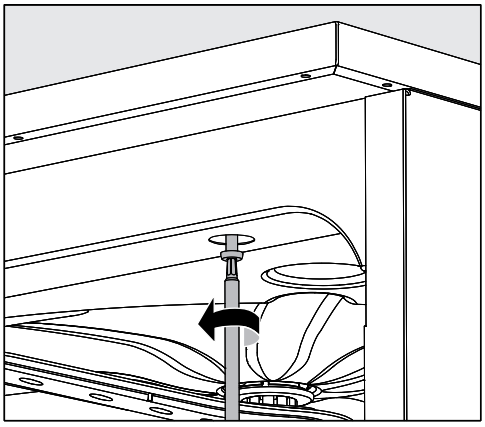
The supplied hose holders can be used to lay the power cord and the hoses for supply and waste water in a way that saves space.
The hose holder prevents kinking or crushing of hoses when installing the machine in tight niches.
The power cord and hoses can be laid either on the left or the right, depending on the connection situation.

Lid

The lids must be screwed to the machine. The side with the screw threads on the underside belongs at the front; the side with the brackets for the securing screws protruding downward at the rear.

Installation instructions are included with lids that can be purchased separately.

- Place the lid on the machine. The lid must lie flush.
- Tighten the two securing screws on the back of the machine.
- Open the door.



- Remove the cover caps on the left and right and tighten the retaining screws. Then reinstall the cover caps.

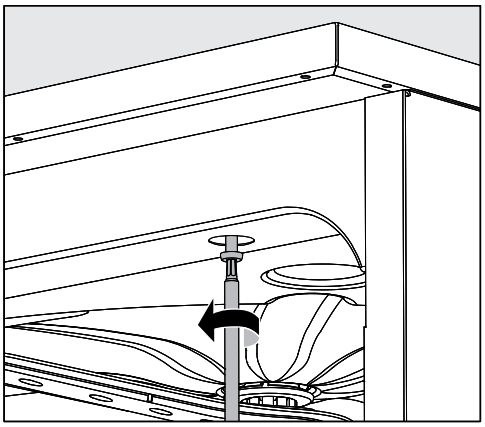
Built-under a continuous countertop

⚠ Damage caused by condensation.
When the machine is in operation, vapors escape which can condense on the cabinetry and fittings in the immediate vicinity.
In order to reduce the risk of water damage, the area around the machine should be limited to cabinetry and fittings that are designed for use in commercial environments.

Removing the machine lid

When building under a continuous countertop, the machine lid must be removed as follows:

- Unscrew the two securing screws on the back of the machine that hold the lid in place.
- Open the door.

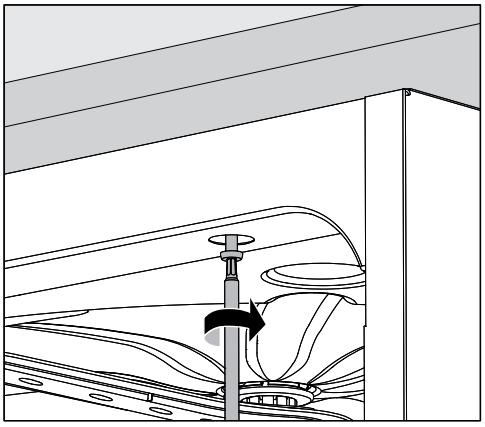


- Unscrew the left and right retaining screws.
- Lift the lid off.

Securing to the countertop

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

- Open the door.



- Remove the cover caps on the left and right. Screw the machine to the continuous countertop through the holes in the front trim. Then reinstall the cover caps.

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 ventilation of the circulation pump.

Vapor barrier for countertops

The vapor barrier supplied protects the countertop from damage caused by steam when the door is opened. It must be positioned underneath the countertop above the machine door.

Electromagnetic compatibility (EMC)

The Laboratory Glassware Washer has been tested for electromagnetic compatibility (EMC) in accordance with EN 61236-1 class B and is suitable for operation in commercial environments such as laboratories and other similar environments which are connected to the public supply network.

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 at the installation site must be wood, concrete, or tiled. Synthetic flooring must be able to withstand a relative humidity level of at least 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. Check that the power supply voltage is within a range of +/10% of its nominal value.

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

- The electrical installation must be carried out in accordance with IEC 60364-4-41 or the local regulations.
- 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 maintenance work.
- If the machine is hard-wired to the power supply or connected via an outlet, 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 1/8" mm (3 mm), and also be lockable in the off position. The power switch must be accessible after the machine has been installed.
- If necessary, equipotential bonding must be carried out.
- The rated loads are specified on the data plate and in the circuit diagram.
- For added safety, the machine should be protected by a type A residual current device with a trip current of 30 mA. The installation of the residual current device must be carried out on site by the supervisor.
- The power supply cord may only be replaced by an original spare part from the manufacturer.

Further information on the electrical connection can be found in the installation plan. The installation plan is available online.

The machine must only be operated with the voltage, frequency, and fuse rating shown on the **data plate**.

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

The **data plates** are attached to the machine. The positions are described in the machine overview.

The **circuit diagram** is available online.

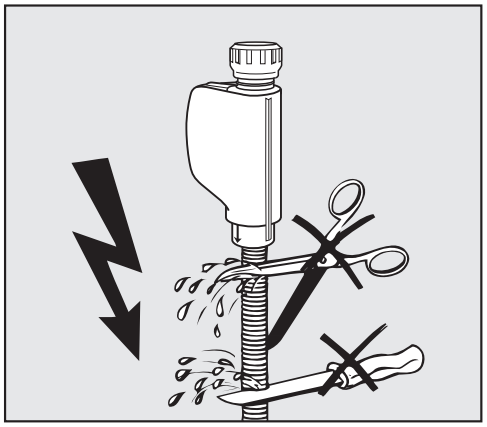
Additional equipotential bonding

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

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.
- To improve electrical safety, the water supply pipe must be connected to an equipotential bonding and grounding system; see the I-Plan.
- 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.
- In certain regions (e.g., mountainous areas), the water composition may cause precipitates to form, requiring the use of softened water in the steam condenser.
- The machine complies with the applicable standards for the protection of drinking water.
- The machine is equipped as standard for connection to cold water (blue marking) **or** hot water (red marking) up to max. 149°F (65°C). Connect the water inlet hose to the corresponding supply valves for cold or hot water.
- The **minimum flow pressure** is 5.8 psi (40 kPa) for the cold and hot water connections and 4.4 psi (30 kPa) for the DI water connection.
- The **recommended water connection pressure** is ≥ 29 psi (200 kPa) for the cold and hot water connections and ≥ 29 psi (200 kPa) for the DI water connection in order to avoid excessively long water intake times.
- The **maximum permissible static water pressure** is 145 psi (1,000 kPa).
- If water pressure is not within the specified range, please contact Miele Service for advice.
- Shut-off valves with a ¾ inch male garden hose 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 5' 7" (1.7 m) long pressure hoses, DN 10, with ¾ inch female thread. The filters in the screw threads must not be removed.



⚠ Risk of electric shock from voltage.
There are electrical components in the water inlet hoses.
Do not shorten or otherwise damage the water inlet hoses supplied with the machine.

Further information can be found in the installation plan. The installation plan is available online.

In line with national provisions relating to the protection of drinking water, non-return valves must be installed between the water connection and the water inlet hose on all water inlet hoses present. The connection for DI water is excluded.

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 Service.

DI water connection for 4.4-145 psi (30-1,000 kPa) – pressure-proof (optional)

The machine is optionally supplied for a pressurized system operating between 4.4-145 psi (30-1,000 kPa). At a water pressure (water connection pressure) below 29 psi (200 kPa), the water intake time extends automatically.

- Connect the pressure-tested, green-marked DI water inlet hose with the ¾" threaded union to the on-site ball valve for DI water.

DI water inlet for 8.5-60 kPa – unpressurized

For connection to 8.5-60 kPa, the machine must be equipped with a feed pump for DI water. Installation is carried out by Miele Service or a suitably qualified specialist.

With an unpressurized DI water container, the outlet nozzle must be at least level with the top edge of the machine; see I-Plan.

Non-pressurized (gravity feed) DI water connection 1.3 - 8.7 psi (8.5 - 60 kPa)

If DI water is supplied from a DI water reservoir with gravity feed or low pressure, an optional DI water booster pump supplied by Miele is required.
The pressure for gravity feed or low pressure ranges between 1.3 - 8.7 psi (8.5 - 60 kPa). The external DI water booster requires an external power supply with 120V. For further details refer to install diagram.
The installation must only 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, the machine must be technically adapted and the controls reset by Miele Service.

Please contact Miele Service for further information.

Connecting the water drain

- The machine drainage system is equipped with a non-return valve, which prevents dirty water from flowing back into the machine via the drain hose.
- The machine drainage hose should be connected to a separate on-site drainage system for the machine only. If a separate connection is not available, it is recommended to connect the hose to a dual-chamber siphon.

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

- The on-site connection must be 12" and 3.3' (0.3 m and 1.0 m) in height, **measured from the lower edge of the machine**. If the connection is lower than 12" (0.3 m), the drain hose must be laid with a bend in it and be at least 12" (0.3 m) high.
- The drainage system must be able to accommodate a minimum drainage flow of 16 L/min.
- The drain 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 included.
- The drain hose must not be shortened.
- The drain hose can be extended using a connecting piece to attach a further length of hose up to 13' (4.0 m). The drainage length must not be longer than 13' (4.0 m).
- The drain noise can be significantly reduced if the drain hose is laid with a bend in it with a minimum height of 1.9' (0.6 m) and a maximum height of 3.3' (1.0 m), measured from the lower edge of the machine.

Further information can be found in the installation plan. The installation plan is available online.

To adjust the program parameters, see ▸ Extended settings ▸ Configure programs.

General program information

Program	Area of application
Short	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

Additional programs

Program	Area of application
Cold water rinse	Program for rinsing the wash cabinet, for rinsing overflowing brine after refilling reactivation salt or for rinsing heavily soiled wash items, e.g., for pre-rinsing soiling, residual disinfectant, or to prevent items drying out and to prevent incrustation before running a full program. Cold water is used for rinsing, holding time: 2 min
DI water rinse	Program for rinsing the wash cabinet and for rinsing wash items with DI water, holding time: 2 min.
Drain	For draining wash water, e.g., after a program cancelation.
Clean machine	**Do not use for reprocessing wash items!** Service program for cleaning the wash cabinet.

Program overview

Program selection depending on the components 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
✓		✓			
	✓	✓			
			✓		
✓			✓	+ 1.5 L	
	✓		✓		⚠ not permitted

Short

Program header
▸ Increas. water quantity [l] _____

Wash block			Pre-wash			Main wash		Interim rinse				Final rinse	
Parameter			1	2	3	1	2	1	2 (+)	3	4	1	2
Water type						CW			CW			DI	
Dosage	1	Dispensing system				DOS 1			DOS 2				
		Dispensing temperature [°F/°C]				104/40							
		▸ Dispens. concentration [%]				0.3			0.1				
▸ Temp. wash block [°F/°C]						140/60						158/70	
▸ Holding time [min]						3			2			1	

Regular

Program header
▸ Increas. water quantity [l] _____

Wash block			Pre-wash			Main wash		Interim rinse				Final rinse	
Parameter			1	2	3	1	2	1	2 (+)	3	4	1	2
Water type						CW		CW	CW			DI	
Dosage	1	Dispensing system				DOS 1		DOS 2					
		Dispensing temperature [°F/°C]				104/40							
		▸ Dispens. concentration [%]				0.3		0.1					
▸ Temp. wash block [°F/°C]						149/65						158/70	
▸ Holding time [min]						3		2	1			1	

▸ = Customizable parameters

CW = Cold water
DI = DI water

(+) = Optional program block

min = Holding time in minutes

DOS 1 = Cleaning agent
DOS 2 = Neutralizing agent **or** rinse aid (door dispenser)

Program parameters

Extended

Program header
▸ Increas. water quantity [l] _____

Wash block		Pre-wash			Main wash		Interim rinse				Final rinse	
Parameter		1	2	3	1	2	1	2 (+)	3	4	1	2
Water type		CW			CW		CW	CW			DI	
Dosage	Dispensing system				DOS 1		DOS 2					
1	Dispensing temperature [°F/°C]				104/40							
	▸ Dispens. concentration [%]				0.3		0.1					
▸ Temp. wash block [°F/°C]					158/70						158/70	
▸ Holding time [min]		1			3		2	1			1	

▸ = Customizable parameters

CW = Cold water
DI = DI water

(+) = Optional program block

min = Holding time in minutes

DOS 1 = Cleaning agent
DOS 2 = Neutralizing agent **or** rinse aid (door dispenser)

Customer program 1

Program header	
▸ Increas. water quantity [l]	Name:

Wash block			Pre-wash			Main wash		Interim rinse				Final rinse	
Parameter			1	2	3	1	2	1	2	3	4	1	2
Water type													
Dosage	1	Dispensing system											
		Dispensing temperature [°F/°C]											
		▸ Dispens. concentration [%]											
▸ Temp. wash block [°F/°C]													
▸ Holding time [min]													

Customer program 2

Program header	
▸ Increas. water quantity [l]	Name:

Wash block			Pre-wash			Main wash		Interim rinse				Final rinse	
Parameter			1	2	3	1	2	1	2	3	4	1	2
Water type													
Dosage	1	Dispensing system											
		Dispensing temperature [°F/°C]											
		▸ Dispens. concentration [%]											
▸ Temp. wash block [°F/°C]													
▸ Holding time [min]													

▸ = Customizable parameters

CW = Cold water
DI = DI water

Name: = enter changed program names here.

min = Holding time in minutes

DOS 1 = Cleaning agent
DOS 2 = Neutralizing agent **or** rinse aid (door dispenser)

Program parameters

Customer program 3

Program header	
▸ Increas. water quantity [l]	Name:

Wash block			Pre-wash			Main wash		Interim rinse				Final rinse	
Parameter			1	2	3	1	2	1	2	3	4	1	2
Water type													
Dosage	1	Dispensing system											
		Dispensing temperature [°F/°C]											
		▸ Dispens. concentration [%]											
▸ Temp. wash block [°F/°C]													
▸ Holding time [min]													

Customer program 4

Program header	
▸ Increas. water quantity [l]	Name:

Wash block			Pre-wash			Main wash		Interim rinse				Final rinse	
Parameter			1	2	3	1	2	1	2	3	4	1	2
Water type													
Dosage	1	Dispensing system											
		Dispensing temperature [°F/°C]											
		▸ Dispens. concentration [%]											
▸ Temp. wash block [°F/°C]													
▸ Holding time [min]													

▸ = Customizable parameters

CW = Cold water
DI = DI water

Name: = enter changed program names here.

min = Holding time in minutes

DOS 1 = Cleaning agent
DOS 2 = Neutralizing agent **or** rinse aid (door dispenser)

	Metric	Imperial
Height With machine lid Without machine lid	 835 mm (adjustable + 60 mm) 820 mm (adjustable + 60 mm)	 32 7/8" (adjustable + 2 3/8") 32 5/16" (adjustable + 2 3/8")
Width	598 mm	23 9/16"
Depth + control panel Depth with door open	598 mm + 41 mm 1.200 mm	23 9/16" + 1 5/8 47 1/4"
Wash cabinet dimensions: Height Width Depth of upper basket/lower basket	 520 mm 530 mm 474 mm/520 mm	 20 9/16" 21 1/8" 20 3/8"/20 9/16"
Weight (net)	68 kg	150 lbs
Max. load capacity of open door	37 kg	81.6 lbs
Maximum load weight Upper basket + lower basket/mobile unit Mobile unit/lower basket (without upper basket)	 8 kg + 16 kg 24 kg	 17.6 lbs + 35.3 lbs 53 lbs
Voltage, rated load, fuse rating	See data plate	See data plate
Power cord	Approx. 1.8 m	Approx. 5' 9"
Water connection temperature: Cold water/hot water DI water (optional)	 Max. 65°C Max. 65°C	 Max. 149°F Max. 149°F
Static water pressure	1,000 kPa overpressure	145 psi
Minimum water connection flow pressure: Cold water/hot water DI water (optional)	 100 kPa overpressure 30 kPa overpressure	 14.5 psi pressure 4.4 psi pressure
Recommended water connection flow pressure: Cold water/hot water DI water (optional)	 ≥ 200 kPa overpressure ≥ 200 kPa overpressure	 ≥ 29 psi pressure ≥ 29 psi pressure
DI water connection without pressure (optional)	8,5–60 kPa	1.2–8.7 psi pressure
Water inlet hose	Approx. 1.7 m	Approx. 5' 7"
Drain hose	Approx. 1.4 m	Approx. 4.7'
Delivery head	Min. 0.3 m, max. 1.0 m	Min. 12", max. 3.3'
Drainage length	Max. 4.0 m	Max. 13'

Technical details

Operation (according to UL 61010-1, CSA C22.2 No. 61010-1): Ambient temperature Relative humidity maximum linear decrease to Relative humidity minimum	 5°C to 40°C 80% for temperatures up to 31°C 50% for temperatures up to 40°C 10%	 40°F up to 140°F 80% for temperatures up to 88°F 50% for temperatures up to 104°F 10%
Storage and transportation conditions: Ambient temperature Relative humidity Air pressure	 -20°C to 60°C 10% to 85% 500 hPa to 1060 hPa	 -4°F to 140°F 10% to 85% 7.25 psi to 15.37 psi
Altitude above sea level (according to UL 61010-1, CSA C22.2 No. 61010-1)	Up to 2.000 m *)	Up to 6,561 ft *)
Protection category (according to IEC 60529)	IP21	IP21
Degree of soiling (according to UL 61010-1, CSA C22.2 No. 61010-1)	2	2
Overvoltage category (according to IEC 60664)	II	II
Wi-Fi standard	802.11 b/g/n	
WiFi frequency band	2,400-2,483.5 MHz	
Maximum WiFi transmission power	< 100 mW	
VDE radio suppression, EMC equipment class (according to EN 61236-1)	B FCC part 15	
MET electrical safety	UL 61010-1, CSA C22.2 No. 61010-1, UL 61010-2-040, CSA-C22.2 No. 61010-2-040	
Manufacturer’s address	Miele & Cie. KG, Carl-Miele-Strasse 29, 33332 Gütersloh, Germany	

* If installation site is above 1.500 m, the boiling point of the wash water will be lower. In this case, the disinfecting temperature and the holding time might need to be adjusted.

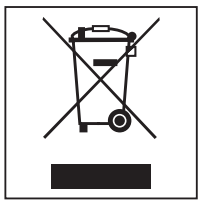
Disposal of packaging material

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!

Disposing of your old machine

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



Instead, please make use of officially designated collection and disposal points to dispose of and recycle electrical and electronic appliances in your local community. By law, you are solely responsible for deleting any personal data from the appliance prior to disposal. You are legally obliged to remove any old batteries which are not securely enclosed by the appliance and to remove any lamps without destroying them, where this is possible. These must be taken to a suitable collection point where they can be handed in free of charge. Please ensure that your old machine poses no risk to children while being stored for disposal.

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

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