Operating and Installation instructions
# Washing Machine
PW 413
PW 418

Caring for the environment

Disposal of packaging material

The cardboard box and packing materials protect the machine during shipping. They have been designed to be biodegradable and recyclable.

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

Disposal of your old machine

Old electrical machines often still contain valuable materials. However, they also contain harmful substances that were essential for the proper functioning and safe use of the equipment. Handling these materials improperly or disposing of them in your household waste can be harmful to your health and the environment. Therefore, please do not dispose of your old machine with regular household waste.
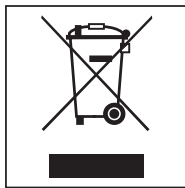
Energy saving tips

Energy and water consumption

– Water consumption and energy usage are determined by the size of the load.
To make the most out of your machine load the **maximum** dry load for the program you are using.

Detergent

– Do not exceed the amounts of detergent recommended by the manufacturer on the packaging.

– Reduce the amount of detergent for smaller loads.

When drying with a tumble dryer

Selecting the highest possible spin speed for the wash program will save energy when drying in a tumble dryer afterwards.

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IMPORTANT SAFETY INSTRUCTIONS

This washing machine complies with current safety requirements. Inappropriate use can, however, lead to personal injury and damage to property.

To avoid the risk of accidents and damage to the machine, please read these instructions carefully before using it for the first time. They contain important information on its safety, installation, use and maintenance.

If other persons are being shown how to operate the machine, they must be given or informed of these important safety instructions.

Keep these operating instructions in a safe place and pass them on to any future user.

Proper use

▶ The washing machine is designed for industrial use.

▶ The washing machine is intended for use in a industrial environment.

▶ If the washing machine is operated in a industrial environment, it must only be operated by instructed / trained personnel or specialists. If the machine is operated in a publically accessible area, the operator must ensure its safe use.

▶ This washing machine is only intended for items of laundry which have not been impregnated with dangerous or inflammable substances.

▶ Only machine wash articles which have a care label stating that they are suitable for machine washing or for wet cleaning.

▶ This machine must be used as described in these instructions and must be checked on a regular basis to make sure it is functioning correctly. Maintenance must be carried out when necessary.

▶ The washing machine is not intended for outdoor use.

▶ Do not install the washing machine in a room where there is a risk of frost. Frozen hoses may burst or split. The reliability of the electronic control unit may be impaired at temperatures below freezing point.

▶ The machine must not be used in a non-stationary location (e.g. on a ship).

▶ This washing machine can only be used by people with reduced physical, sensory or mental capabilities, or lack of experience or knowledge, if they are supervised while using it or have been shown how to use it in a safe way and understand and recognize the consequences of incorrect operation.

▶ Children must be kept away from the washing machine unless they are constantly supervised.

▶ Please supervise children in the vicinity of the washing machine and do not let them play with it.

▶ Disinfection programs must not be interrupted as this could compromise the result. It is the operator's responsibility to ensure that the standard of disinfection in thermal as well as chemo thermal procedures is maintained (in accordance with local and national health and safety regulations) by carrying out suitable validation tests.

▶ Any uses other than those listed above are prohibited. The manufacturer accepts no liability in such cases.

IMPORTANT SAFETY INSTRUCTIONS

Preventing problems

▶ Do not use chemical cleaning agents such as those used for dry cleaning in this machine.
Danger of fire or explosion.

▶ When washing with high temperatures please be aware that the porthole glass can get hot.
Danger of burning.

▶ Close the drum door after each cycle. This is to avoid the risk of children trying to climb into the machine or hide things it and animals getting into the drum.

▶ Do not damage, remove or bypass the safety components or control elements of this washing machine.

▶ Machines with a damaged control panel, wires, or cables must not be used until they have been repaired.

▶ Water used for washing in this machine is not drinking water. It must be discharged into a proper drainage system in accordance with local codes.

▶ Always make sure that the drum is stationary before reaching in to remove laundry. Reaching into a moving drum is extremely dangerous.

▶ When closing the door take care not to trap extremities between the door and the frame.
Caution! The door locks automatically as soon as the program starts.

▶ If the detergent compartment drawer is open and the chute is missing, there is a **danger of scalding from splashing water**.
Do not operate the machine if any of its components are missing!

▶ Always follow the instructions of the chemical manufacturer when using cleaning agents and special application chemicals. Only use such chemicals for the purpose and in the situation specified by the manufacturer in order to avoid the danger of adverse chemical reactions and material damage.

Technical safety

▶ Installation and repair work to electrical machines must only be carried out by a qualified person in strict accordance with current local and national safety codes. Repairs and other work by unqualified persons could be dangerous.

▶ Before setting up the washing machine, check it for any externally visible damage. Do not install or use a damaged machine.

▶ The electrical safety of this washing machine can only be guaranteed if it is grounded properly. It is essential that this standard safety requirement is met. If in any doubt, please have building's wiring system inspected by a qualified electrician. Miele cannot be held liable for the consequences of an inadequate grounding system (e.g. electric shock).

▶ Unauthorized repairs could result in unforeseen dangers for the user, for which the manufacturer cannot accept liability. Repairs should only be undertaken by a Miele authorized service technician, otherwise any subsequent damage will not be covered by the warranty.

▶ Do not make any alterations to the machine, unless authorized to do so by Miele.

▶ The machine must be isolated from the power supply when cleaning and maintaining the machine and in the event of a fault. The machine is only completely isolated from the power supply when:

 – it is switched off at the wall socket and the plug is withdrawn, or

 – the fuse is removed from the building wiring or

 – the circuit breaker has been tripped.

See "Installation and connection - Electrical connection".

▶ The machine must only be connected to the on-site water supply using a new hose kit. Old hose kits must not be re-used. Check the condition of the hoses regularly so that you can replace them in good time and avoid the risk of any water damage.

▶ In the event of a leak, disconnect the washing machine from the power supply immediately and rectify the cause of the leak before using the washing machine again.

▶ In the case of a fault with the steam heating there can be increased temperatures in the vicinity of the door, the detergent compartment panel and in the drum interior (especially at the edges). Danger of burning.
This only applies for machines with steam heating.

▶ Faulty components may only be replaced by Miele original parts. Only when these parts are fitted can Miele guarantee the safety standards of the machine.

▶ If this machine is being used in a industrial environment, please ensure that all relevant health and safety regulations are obeyed and testing is carried out in compliance with local and national regulations. The test book for all necessary test documentation is available from Miele Technical Service.

▶ Please observe the instructions in "Installation and connection" and "Technical data".

▶ The plug (if so equipped) for the washing machine must always be kept accessible so that it can be easily disconnected from the power supply.

▶ If the machine is hard wired, a quick means of disconnect must be installed.

IMPORTANT SAFETY INSTRUCTIONS

▶ For hard-wired machines, a quick means of disconnect must be provided on site. The isolator must be located in the immediate vicinity of the washing machine and be easily recognizable, accessible without hindrance and easy to operate.

Correct use

▶ The maximum dry laundry weight for the PW 413 is 31 lb (14 kg) and for the PW 418 it is 44 lb (20 kg). See the "Program chart" for the maximum recommended loads for individual programs.

▶ Before using the machine for the first time, check that the shipping struts at the rear of the machine have been removed (see "Installation - Removing the shipping struts"). During spinning, a shipping strut which is still in place may result in damage to both the machine and adjacent furniture or appliances.

▶ Never try to open the washing machine door using force. The door can only be opened when a corresponding message appears in the display.

▶ Do not push the swinging unit of the machine backwards while the machine is in operation.

▶ When closing the door there is a danger of crushing and shearing between the door frame and the drum opening and also the hinges. Take care as the door locks automatically when the machine starts!

▶ Turn off the water supply if the machine is to be left for any length of time (e.g. vacation), especially if there is no floor drain (gully) in the immediate vicinity.

▶ Take care to ensure that foreign objects (e.g. nails, pins, coins, paper clips) do not find their way into the machine with the laundry. These may damage components of the machine (e.g. suds container, drum), which in turn can result in damage to the laundry.

▶ If the correct amount of detergent is dispensed, the machine should not need to be descaled. If, however, you do wish to descale it, only use proprietary non-corrosive descaling agents and strictly observe the instructions on the packaging. A special descaling agent is available to order from Miele (see "Optional accessories").

▶ Textiles which have been pre-treated in solvent based cleaning agents must be thoroughly rinsed in clean water before being placed in the machine.

▶ Do not use solvent based cleaning agents, e.g. those containing benzene, in this machine, as this may result in damage to component parts and create toxic fumes. Such agents also pose a **fire and explosion hazard.**

▶ Do not store or use benzene, petrol, paraffin, or other easily flammable liquids near the machine. Do not use the machine lid as a resting place.
Danger of fire or explosion.

▶ Do not store chemicals (liquid detergent etc.) on the machine lid. They can damage lacquered surfaces and cause discoloration. Accidental chemical spillages must be thoroughly removed using a wet cloth.

▶ A fan outlet is located on the rear of the tumble dryer. This area must not be blocked. Please ensure that the minimum gap required, as shown on the installation drawing, is maintained.

▶ Only use dyes specified by the manufacturer as being suitable for use in a domestic washing machine. Always observe the manufacturer's instructions carefully.

IMPORTANT SAFETY INSTRUCTIONS

▶ Color run and dye removers contain sulphur compounds which can cause damage such as corrosion. Use these products only if the manufacturer expressly states that they are suitable for use in a washing machine.

▶ The stainless steel surfaces must not come into contact with liquid cleaning and disinfecting agents which contain chlorine or sodium hypochlorite. These agents can have a corrosive effect on stainless steel. Aggressive vapors containing chlorine can also be corrosive. Do not store containers of these agents near the machine.

▶ Do not use a power washer or hose to clean the machine.

Chlorine and component damage

▶ Frequent use of chlorine products increases the risk of damage to components.

Notes on using chlorine bleach

The use of agents containing chlorine, such as sodium hypochlorite and chlorine bleach in powder form, can damage the protective upper surface of stainless steel and cause corrosion to components. Factors affecting this are chlorine concentration levels, contact time, and temperature. It is therefore advisable to avoid the use of such agents. Oxygen based bleaching agents should be used instead.

If you still need to use chlorine-based bleach for specific soiling, you will need to perform a neutralizing step each time. If this is not done machine components and laundry can suffer irreparable damage.

Antichlorine treatment

Anti-chlorine treatment has to be carried out immediately after chlorine bleach has been used. The use of hydrogen peroxide or an oxygen based cleaning or bleaching agent is recommended and the laundry should not be drained in between.

With thiosulfate, especially when used with hard water, gypsum can form, which can lead to incrustations on laundry or deposits in the machine, on the laundered items or a build-up of deposits in the machine. The use of hydrogen peroxide is preferable as it aids the chlorine neutralizing process.

The exact quantity of additives and the treatment temperatures required must be set and tested on site in accordance with the dosage recommendations of the detergent and additive manufacturers. The laundry must also be tested to check whether it contains any active chlorine residues.

IMPORTANT SAFETY INSTRUCTIONS

Accessories

▶ Accessory parts may only be fitted when expressly approved by Miele. If other parts are used, any claims from the warranty will be void.

Disposal of your old machine

▶ Before disposing of a washing machine, render the door lock inoperable so that children cannot lock themselves in the machine by mistake and endanger their lives.

> Miele cannot be held liable for damage caused by failure to comply with these safety instructions and warnings.

Models with detergent dispenser drawer (WEK)
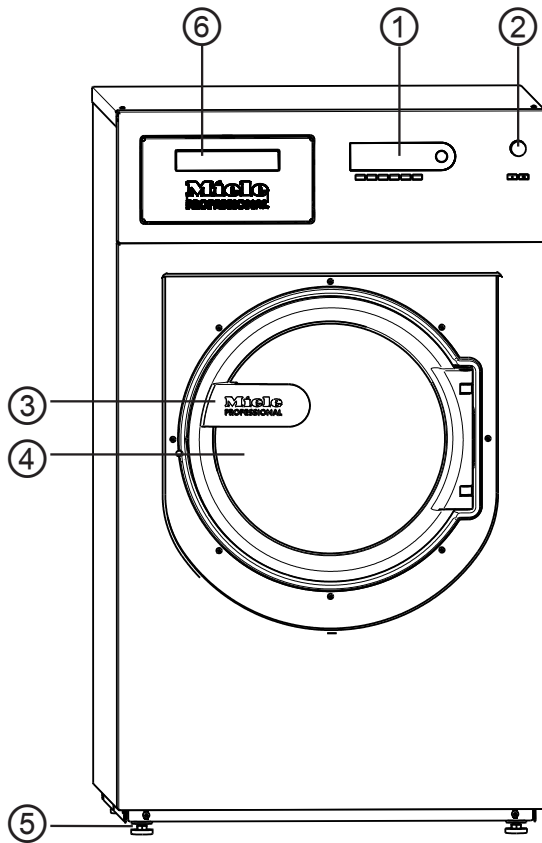
① **Display**
see "Control panel"

② **Emergency shut-off switch**
see "Control panel"

③ **Door handle**

④ **Drum door**

⑤ **Four height adjustable feet**

⑥ **Detergent dispenser drawer**

⑦ **Electrical connection**

⑧ **Cold water connection**
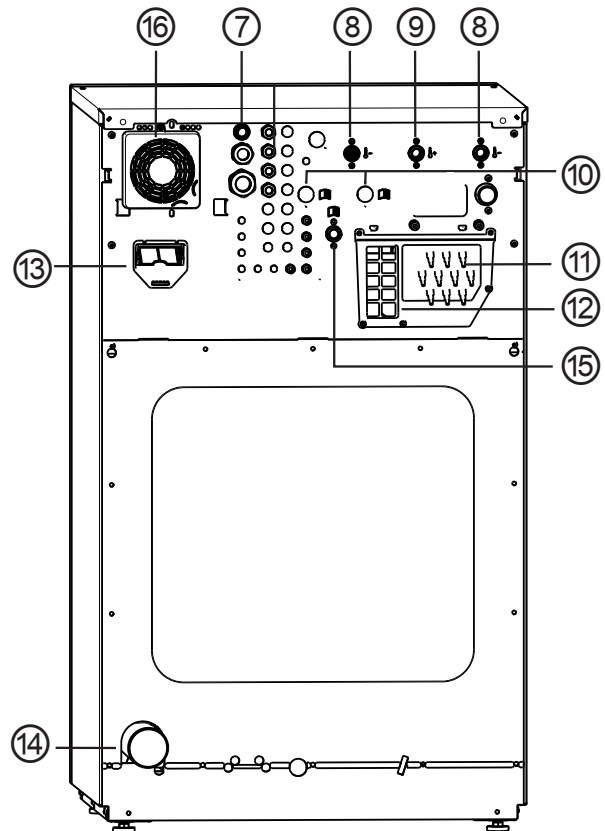
⑨ **Hot water connection**

⑩ **2 x hard water connection**
(Optional)

⑪ **Connections for external dispenser pumps**

⑫ **Vapor extraction / free outlet Type AB**

⑬ **Communication module slot**
XKM RS232 communication module available as an optional accessory.

⑭ **Drain valve**

⑮ **Cold water connection for liquid dispensing**
(Optional)

⑯ **Fan casing**

See "Installation and connection"

Operating the washing machine

Control panel

① Display
When the machine is switched on, the welcome screen appears briefly followed by the first program or the last program started.

② Function buttons
These buttons can be allocated specific functions depending on the status of the machine. These appear in the display above the buttons and are highlighted when selected.
The first 6 programs can be selected directly using buttons 1 - 6. Further programs can be selected by pressing and holding button 6 ▶.

③ *Start* button
The light ring around the button flashes when a selected program can be started. The selected program starts when the start button is pressed. After a program has been started, the display content can be shown again by pressing this button.

④ Optical interface PC
Using PC software, data can be transmitted to and from the controls to a PC.
The optical interface on the control panel provides the connection point.

⑤ Power on
For switching the machine on

⑥ Power off
For switching the machine off

⑦ Emergency shut-off
The emergency shut-off switch puts the machine into a safe state in the event of danger or in order to prevent danger. The emergency shut-off must be positioned so that it is directly accessible in the event of an emergency. **Caution**, the machine is not disconnected from the power supply!
When the hazard has been removed, the switch is released by turning it clockwise.
When the "START" button is pressed again, the interrupted program continues.

Function buttons

▽ Stop/Finish

When a program has started, the right-hand function button acts as a stop button.

After pressing the button the selected program is stopped, if pressed again the program is cancelled.

+⊔ Block plus.

The program block in question (e.g. Pre-wash) is added to the program.

⊔⊔⊔ Starch stop

Press this button if the laundry is to be starched.

⌀ Without spin

Press this button if a final spin is not required after the final rinse.

⏴⇄ Settings

🕓 Start time

When this button is pressed before starting the program, information about selecting a start time will appear in the display.

⬅ Back Return to previous display page.

▼/▲ Information on next / previous line

💾 Save

See "Access to supervisor level"

🚰 Water intake

🔒 Program locked

If a program is locked, after 1 minute it can no longer be stopped and cancelled with the finish button.

🔓 Program unlocked

⧗ Data transfer

🔇 Tone (buzzer) off

Commissioning

> ⚠ The machine should be commissioned by a Miele service technician or an authorized Miele dealer only.

■ Open the site non-return valves for water and, if applicable, for steam.

■ Switch the machine on at the site mains switch.

■ Switch on the machine with the **I** "Power on" button.

```
            Míele
        PROFESSIONAL
           PW 4xx
           Welcome
```

The welcome screen will appear on the display.

```
   1    Cottons Hygiene          13,0/13,0kg
 140°F  Main Wash
        Rinse                     1025 rpm
   1      2      3     4►     5      6 ►
```

> The display varies depending on the selected program.

Tip: The first 6 programs can be selected with buttons 1 - 6.
Other programs can be selected by holding down button 6.▶

Preparing the laundry
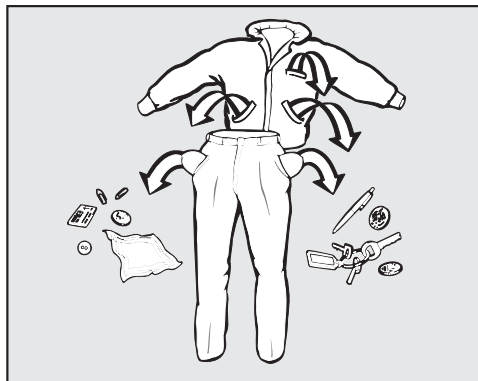
■ Empty all pockets.

> ⚠ Foreign objects (e.g. nails, coins, paper clips, etc.) can cause damage to fabrics and to components in the machine.

Max. load

(dry laundry)

PW 413	PW 418
max. 31 lb (14 kg)	max. 44 lb (20 kg)

Maximum load weights are given in the program chart.

Loading the washing machine

- Switch on the washing machine with the **I** button.

- Pull the door handle to open the drum door.

- Unfold the laundry and load loosely in the drum. Mixing both large and small items gives better wash results and also helps distribute the load evenly during spinning.

The most efficient use of energy and water is achieved when a full load is washed. However, do not overload as this reduces cleaning efficiency and causes creases.

Closing the door

- Close the door by pressing it until the pre-latch engages.

⚠ Make sure that no items are caught between the door and the seal.

The door will engage but not lock. The door locks automatically as soon as the machine is started.

Washing with detergent compartment

Adding detergent using the detergent dispenser compartment.
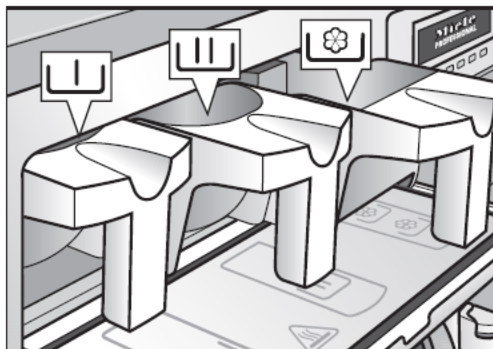
■ For standard wash programs add powder detergent for the main wash to the ⊔⊔ compartment and if desired, add detergent for a pre-wash to the ⊔ compartment. Add fabric softener to the front of the ⊛ compartment.
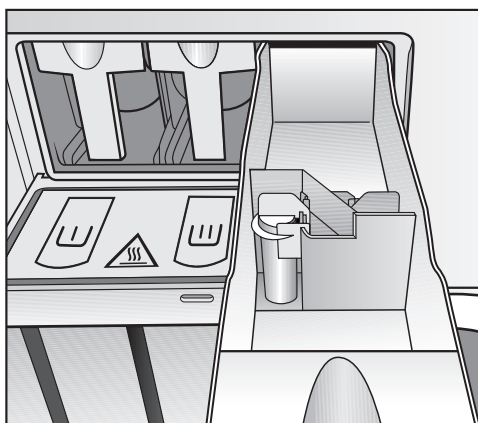
■ Add any other liquid agents to the back of the ⊛ compartment (if this has been programmed).
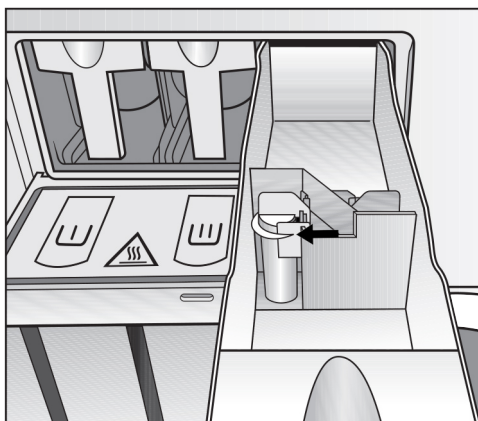
Do not fill compartment ⊛ above the level marker with liquid agents, as they will get through the siphon and into the suds container before needed.
Otherwise they will run straight through the siphon in the suds container.

Bleaching agent

Only use bleach on textiles marked with the Δ symbol on the wash care label.
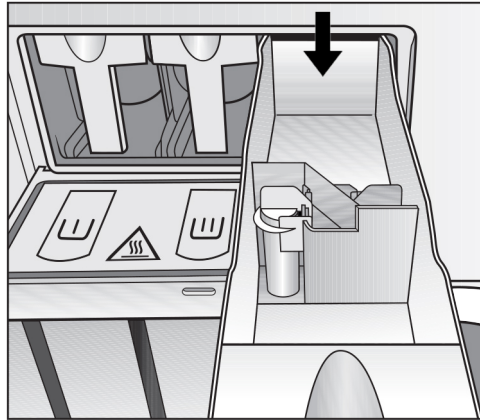
Liquid bleaching agents must only be dispensed through the designated dispenser compartment. The agent will then be dispensed automatically during the 2nd rinse. Liquid bleaching agents should only be used on colored textiles which have a wash care label stating that they are colour fast and suitable for bleaching.

⚠ Frequent use of chlorine products increases the risk of damage to components.

Dyes, dye removers and descaling agents

Proprietary dyes, dye removers and descaling agents may only be used in this machine if the manufacturer expressly states that they are suitable for use in a washing machine. Instructions on the packaging must be observed.

Washing without detergent compartment

Dispensing quantities

Please follow the detergent manufacturer's instructions.

Always follow the instructions of the chemical manufacturer when using cleaning agents and special application chemicals. Only use such chemicals for the purpose and in the situation specified by the manufacturer in order to avoid the danger of adverse chemical reactions and material damage.

Correct dosage also depends on the viscosity of the liquid detergent. It should therefore be allowed to settle to room temperature before being used.

Commissioning the dispenser pumps

Before the liquid dispenser pumps can be used the liquid detergent must be drawn into the system and the set amount to be dispensed.

Continuing program after "Dispensing system fault" message

If the dispensing container is empty the pump and the machine switch off independently. At the same time the machine indicates a lack of liquid detergent.
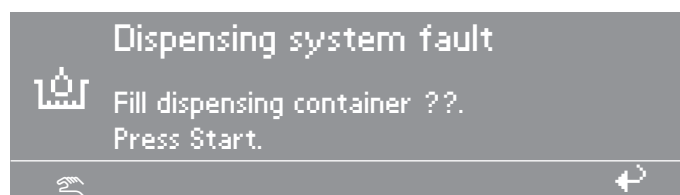
■ Fill the dispenser container.

■ Press the "Start" button to continue the program.

Dispenser calibration

Dispenser calibration is used to measure the throughput of individual dispenser pumps.

To go directly to Dispenser calibration when the machine is switched off:

■ Press and hold multifunction button 2 and switch the machine on using Power On **I**.

```
Dispensing calibration  ► Main menu
Dispensing pump 1
Dispensing pump 2                        ▼
                                    ↵
```

Options:

– Dispenser pump 1 to 13

■ Select a dispenser pump.

When a dispenser pump is selected, the following will appear in the display:

```
Dispensing calibration ► Dispensing pump 1
V:    100 ml      t:   0s      P:      No
                         0/1    🖫      ↵
```

Tip: The dispensing amount can be set from 0 to 9999 ml in 1 ml steps.

■ Press multifunction button 0/1

The dispensing tube will fill up.

■ Press the 0/1 button to stop the process.

■ Place the hose of the dispenser pump which is being checked at an upward gradient in a measuring vessel.

⚠ Irritant detergents.
Irritant for skin and eyes
Avoid contact with skin and eyes, wear protective clothing.

■ Return to the main menu by pressing ↵ "Back".

```
Dispensing calibration  ► Main menu
Dispensing pump 1
Dispensing pump 2                        ▼
                                    ↵
```

■ Select a dispenser pump.

Washing without detergent compartment
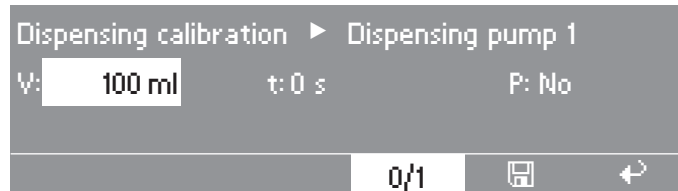
```
Dispensing calibration  ▶  Dispensing pump 1
V:     100 ml        t: 0 s              P: No



                          0/1      🖫       ↵
```

■ Press multifunction button 0/1 .

Stop the pump by pressing the 0/1 button, or it will stop automatically after 60 seconds.

■ Measure the amount of liquid dispensed into the measuring vessel.

```
Dispensing calibration ▶ Dispensing pump 1
V:     100 ml        t: 30 s           P: 200 ml/min



                          0/1      🖫       ↵
```
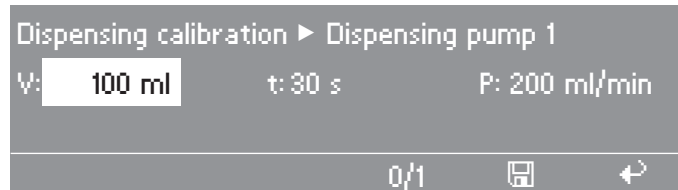
■ Enter the measured value into the "V:" field.

The throughput P is calculated in ml/min. by the controls.

■ Press the 🖫 "Save" button.

The measured value is allocated to the pump.

■ Reconnect the hose.

Detergent dispensing

Detergent dispensing

Avoid dispensing more than the required amount as this can cause excessive foaming.

– Only use low foaming detergents.

– Dispense according to the detergent manufacturer's recommendations.

The amount to dispense will depend on:

– the amount of laundry

– the water hardness level in your area

– the type and level of soiling of the laundry

Detergent dispensing quantity

Please dispense according to water hardness levels and follow the detergent manufacturer's instructions.

Water hardness levels

Hardness range	gpg	ppm
I (soft)	0 - 8.7	0 - 149
II (medium)	8,7 - 14.6	149 - 249
III (hard)	Above 14.6	Above 249

Check with your local water supplier if you do not know the water hardness level in your area.

Selecting a program

The first 6 programs can be selected directly using buttons 1 - 6.

6	Delicates			13,0/13,0 kg	
122°F	Main Wash				
	Rinse			1025 rpm	
1	2	3	4▶	5	6 ▶

■ Other programs can be selected by pressing and holding button 6 ▶.

Tip: The same applies in other displays for buttons 12 and 18.

8	Extra Rinse			13,0/13,0 kg	
	Rinse			1025 rpm	
◀7	8	9	10▶	11	12 ▶

■ Select a program by pressing one of the program buttons.

The following (for example) will appear on the display:

6	New mops			13,0/13,0 kg	
122°F	Main Wash				
	Rinse			1025 rpm	
1	2	3	4▶	5	6 ▶

Washing

Tip: When the program button is pressed again, the additional functions will appear in the last line.

Additional functions

Selecting Pre-wash, Starch stop and Without spin additional functions

■ Confirm your program selection by pressing the program button (e.g. 4).

The following (for example) will appear on the display:

```
 4     Cottons Universal        13,0/13,0 kg
86°F   Main Wash
       Rinse                    1050 rpm
 +⊔      ▦        ⌀        ⊕       -OK+      ↵
```

■ If required, add the Pre-wash program block by pressing the +⊔ "Block plus" function button.

When the +⊔ "Block plus" function button is pressed, the following appears on the display:

```
 1      Cottons Hygiene          13,0/13,0 kg
104°F   Pre-wash
140°F   Main Wash                      ▼
 +⊔      ▦        ⌀        ⊕       -OK+      ↵
```

The "+⊔" field is highlighted on the display.

Tip: The function can be de-selected by pressing the button again.

Tip: Press the ▦ "Starch stop" button to starch the laundry.

Tip: If you do not want a spin after the final rinse, press the ⌀ "Without spin" button.

If you do not want to make any further changes to the program:

■ Press the "START" button.

The wash program will start.

Changes before starting the program

Load

Changes can be made before the start of the program, e.g. load, temperature or spin speed:

The load can be entered manually before the start of the program.

```
 4   Cottons Universal          13,0/13,0 kg
86 °F   Main Wash
        Rinse                    1025 rpm
  1       2        3      4 ▶     5      6 ▶
```

■ Press the program button (e.g. 4).

```
4 Cottons Universal          13,0/13,0 kg
86 °F  Main Wash
       Rinse                 1025 rpm
+⊔      ⫿⫿⫿⫿     ∅      🕐      -OK+         ↵
```

■ Press the -OK+ button.

```
4  Cottons Universal         13,0/13,0 kg
86 °F  Main Wash
       Disinfection          1025 rpm
◄       OK        ►                     ↵
```
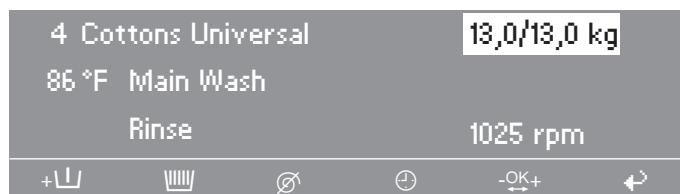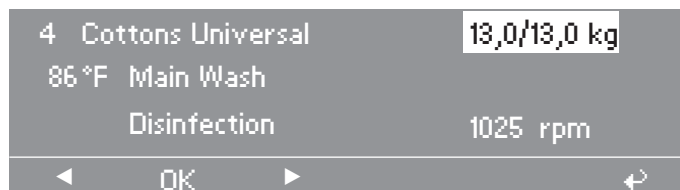
The load display is selected.

■ Press the **OK** button to confirm.

You can now make changes to the display options or input fields.

```
4 Cottons Universal          13,0 /13,0 kg
86°F   Main Wash
       Rinse                 1025 rpm
-       OK        +                     ↵
```
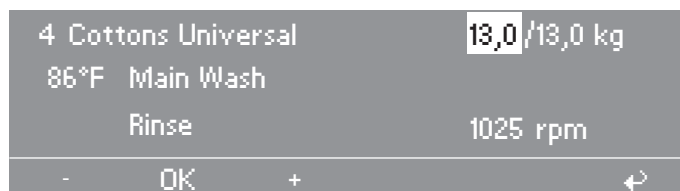
■ Change the load by pressing **–** or **+**.

Press the **OK** button to confirm your changes.

Temperature   Before the program starts, the temperature can be set in 1 °F increments from cold to the maximum temperature.

```
4   Cottons Universal        13,0/13,0 kg
86 °F  Main Wash
       Rinse                 1025 rpm
1       2       3       4 ⚑     5       6 ►
```

■ Press the program button (e.g. 4).

```
4 Cottons Universal          13,0/13,0 kg
86 °F  Main Wash
       Rinse                 1025 rpm
+⊔      ⫿⫿⫿⫿     ∅      🕐      -OK+         ↵
```

■ Press the OK button.

```
4  Cottons Universal         13,0/13,0 kg
86 °F  Main Wash
       Disinfection          1025 rpm
◄       OK        ►                     ↵
```
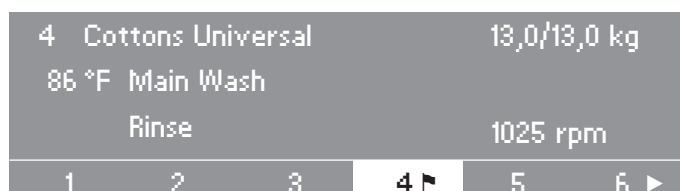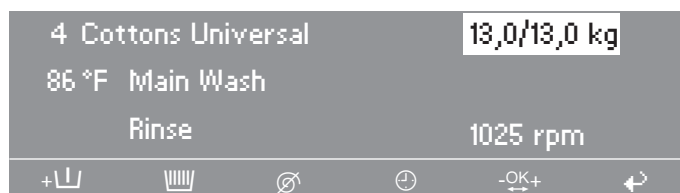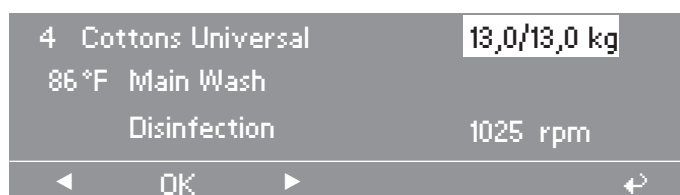
■ Press button ► once to select the temperature display.

■ Press the **OK** button to confirm.

You can now make changes to the display options or input fields.

Washing

```
┌─────────────────────────────────────────┐
│ 4 Cottons Universal        13,0/13,0 kg  │
│ [86] °F  Main Wash                       │
│          Rinse             1025 rpm      │
├─────────────────────────────────────────┤
│   -      OK       +                   ↵  │
└─────────────────────────────────────────┘
```

■ Change the temperature by pressing **–** or **+**.

Press the **OK** button to confirm your changes.

Spin speed

Before the program starts, the spin speed can be set in 25 rpm increments from 300 to the maximum spin speed.

```
┌─────────────────────────────────────────┐
│ 4  Cottons Universal       13,0/13,0 kg  │
│ 86 °F  Main Wash                         │
│         Rinse              1025 rpm      │
├─────────────────────────────────────────┤
│  1      2      3    [4 ▐]  5      6 ▶    │
└─────────────────────────────────────────┘
```

■ Press the program button (e.g. 4).

```
┌─────────────────────────────────────────┐
│ 4 Cottons Universal     [13,0/13,0 kg]   │
│ 86 °F  Main Wash                         │
│         Rinse             1025 rpm       │
├─────────────────────────────────────────┤
│ +⎍    ▥    ⊘     ⊕     -OK+         ↵    │
└─────────────────────────────────────────┘
```

■ Press the OK button.

```
┌─────────────────────────────────────────┐
│ 4  Cottons Universal    [13,0/13,0 kg]   │
│ 86 °F  Main Wash                         │
│         Disinfection      1025  rpm      │
├─────────────────────────────────────────┤
│  ◀      OK       ▶                   ↵   │
└─────────────────────────────────────────┘
```

■ Press button ▶ twice to select the spin speed display.

■ Press the **OK** button to confirm.

You can now make changes to the display options or input fields.

```
┌─────────────────────────────────────────┐
│ 4 Cottons Universal        13,0/13,0 kg  │
│ 86°F   Main Wash                         │
│         Rinse            [1025] rpm      │
├─────────────────────────────────────────┤
│   -      OK       +                   ↵  │
└─────────────────────────────────────────┘
```

■ Change the spin speed by pressing **–** or **+**.

Press the **OK** button to confirm your changes.

Maximum spin speeds	PW 413	PW 418
	1025 rpm	950 rpm

The maximum spin speeds depend on the selected programs.

Starting a program

■ Press the "START" button.

The wash program will start.

Once the program has started, progress is shown on the display.

```
1   Mops Standard
104°F Pre-wash                      68°F
140°F Main Wash          Finish at  12:35
+山      ||||||     Ø       ⏲              ⊝
```

In the 2nd line of the display, in this case pre-wash, the current suds temperature is shown.

```
1   Mops Standard
140°F  Main Wash                   140°F
       Rinse   1         Finish at  12:35
+山      ||||||     Ø       ⏲              ⊝
```

If the pre-wash program block is finished, the main wash program block will appear in the second line of the display with the current suds temperature. The next program block, in this case rinse 1, is shown below.

Tip: The "program finished" display on the right shows the time that the program will finish.

Opening the door after the program has finished

At the end of the program, when the drum has stopped rotating and no water is left in the machine, the following (for example) appears on the display:

```
1   Cottons Hygiene
Program finished
Door can be opened.

              🕐         ▸⇄              ↵
```
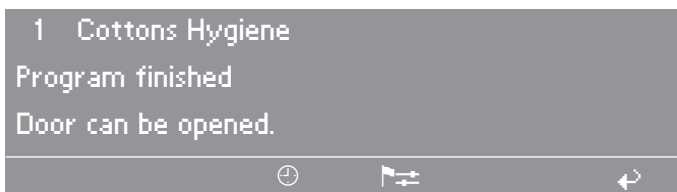
> At the same time, a buzzer sounds for 5 seconds at the end of the program.

The door is unlocked automatically.

■ Pull the door handle to open the door.

> The door catch must be disengaged.

> Never use force to open the door!
> If the door cannot be opened, follow the instructions in "Opening the door in an emergency".

■ Remove the laundry.

Procedure in the event of a program abort

If the program has been cancelled while there is still water in the machine, during spinning or at a high wash temperature, the door will not open.

> The door is locked.
> Do not attempt to open it by force.

The following (for example) will appear on the display:

```
1   Mops Standard
Program finished. Water in the drum.


     ⊔        🕐         ▸⇄              ↵
```
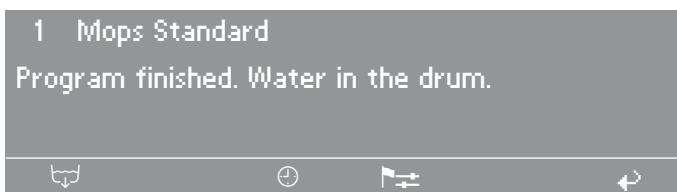
■ Press the "Drainage" ⊔ button or select the "separate spin" program and press "START".

```
1   Mops Standard
Program finished. Drum still rotating.


              🕐         ▸⇄              ↵
```
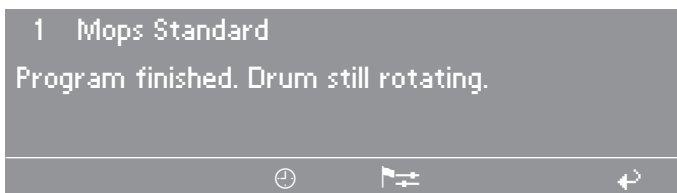
■ Wait until the drum has stopped rotating.

```
1   Mops Standard
Program finished, machine still hot


        ⊕         ⌐⇄                ↵
```
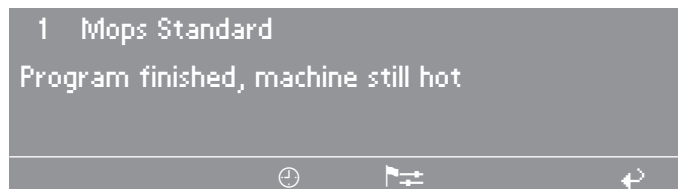
■ Wait until the laundry has cooled down.

The door can then be opened.

If no further wash programs are planned:

■ Switch off the machine with the "Power off" button 0.

■ Switch the machine off with the on-site power switch.

■ Close the site non-return valves for water and steam.

Program chart - BASIC VERSION

Cottons Hygiene program

Cottons Hygiene	194°F / 90°C	Load ratio/Load size
Type of fabric	Cotton, linen and mixed fiber fabrics, for example bed linen and toweling	1:10 - 1:9
Program sequence	+⎵ Pre-wash 104°F (40°C), optional Main wash 194°F (90°C), Cool down can be selected 2 rinses Last rinse hot* Final spin	PW 413 28 - 31 lb (13 - 14 kg) PW 418 39 - 44 lb (18 - 20 kg)

* The standard programs **Cottons Hygiene 90°C (194°F)** and **Cottons 60°C (140°F)** are programmed for hot water rinse. If hot water is available, we recommend using hot water for the final rinse.
- There is less residual moisture in the laundry after spinning.
- The laundry is already warmed.
- This saves time and energy if the laundry is immediately either dried in a tumble dryer or ironed with a rotary ironer.

Cottons Universal / Eco short 122 °F (50 °C)

Colors	140°F / 60°C	Load ratio/Load size
Type of fabric	Normally soiled cotton, linen and mixed fiber fabrics, for example bed linen and toweling	
Program sequence	+⎍ Pre-wash 86°F (30°C), optional Main wash 140°F (60°C) (selectable range cold to 140°F (60°C)) 2 rinses Last rinse hot* Final spin	
Cottons Eco short	**122°F / 50°C**	
Type of fabric	Lightly soiled cotton, linen and mixed fiber fabrics, for example bed linen and toweling	1:10 - 1:9 PW 413 28 - 31 lb (13 - 14 kg) PW 418 39 - 44 lb (18 - 20 kg)
Program sequence	+⎍ Pre-wash 86°F (30°C), optional Main wash 122°F (50°C) 2 rinses Final spin	
Colors	**86°F / 30°C**	
Type of fabric	Normally soiled cotton, linen and mixed fiber fabrics, for example bed linen and toweling	
Program sequence	+⎍ Pre-wash 86°F (30°C), optional Main wash 86°F (30°C) (selectable range cold to 86°F / 30°C) 2 rinses Final spin	

* The standard programs **Cottons Hygiene 194°F (90°C)** and **Cottons 140°F (60°C)** are programmed for hot water rinse. If hot water is available, we recommend using hot water for the final rinse.
- There is less residual moisture in the laundry after spinning.
- The laundry is already warmed.
- This saves time and energy if the laundry is immediately either dried in a tumble dryer or ironed with a rotary iron.

Program chart - BASIC VERSION

Minimum iron program

Minimum iron	140 °F (60 °C)	Load ratio/Load size
Type of fabric	Normally soiled synthetic fabrics, for example mixed fiber fabrics	1:20 PW 413 - 14 lb (6.6 kg) PW 418 - 19 lb (9 kg)
Program cycle	+⊔ Pre-wash 86 °F (30 °C), optional Main wash 140 °F (60 °C) (selectable range cold to 140 °F / 60 °C) 2 rinses Final spin	

Delicates / Woolens programs

Delicates	86 °F (30 °C)	Load ratio/Load size
Type of fabric	Synthetic and artificial fibers	1:25 PW 413 - 11.5 lb (5.2 kg) PW 418 - 15.9 lb (7.2 kg)
Program cycle	Main wash 86 °F (30 °C) Wash rhythm "gentle" 2 rinses Final spin	
Woolens	86 °F (30 °C)	
Type of fabric	Machine washable woolens and wool mixtures with a woolens care label	
Program cycle	Main wash 86 °F (30 °C) Wash rhythm "very gentle" 2 rinses Final spin	

Separate rinse program

Separate rinse		
Type of fabric	Fabrics that only need to be rinsed and spun	
Program cycle	1 rinse Final spin	

Separate spin program

Separate spin		
Type of fabric	Items which only need to be spun	
Program cycle	Final spin	

Separate drain program

Separate drain		
Type of fabric		
Program cycle	Drainage	

Starch program

Starch		
Type of fabric	For starching freshly laundered items such as ta-ble cloths, napkins and workwear	
Program cycle	1 rinse* Final spin	

* Starch concentrates can be added to the front right or back dispenser compartment ⊠ before the program starts.
Large quantities of starch solution can be added manually with the water using the dispenser compartments ⊔ or ⊔.

Program chart - BASIC VERSION

"Clean machine" program

For cleaning the detergent dispenser drawer, drum, suds container and the drainage system.

■ If you use low temperature or disinfection programs on a regular basis, or to remove coarse soiling, the Clean machine program should be carried out frequently.

Clean machine		
Type of fabric	No load	
Program se-quence	+⊔ Clean 158 °F / 70°C, optional 2 rinses	

* The **Cleaning** block which takes water in through all inlets and has the temperature increased to 158 °F / 70 °C. can be selected with this program by pressing the Block Plus button. If the Cleaning block is included in the Maintenance program, detergent needs to be dispensed.

Contract cleaning programs

These programs are suitable for washing, disinfecting and conditioning (at various humidity levels) cotton, blended or microfiber mop covers, polishing pads and cleaning cloths used in facility management.

> To avoid recontamination, the water for the rinse cycles in the disinfection programs is not supplied via the detergent dispenser.

Mop program

For avoiding large bits of dirt in the machine.

∎ Shake out the mops before putting them in the machine.

Mops standard*	140 °F (60 °C) / 194 °F (90 °C)	Load ratio/Load size
Type of fabric	Cotton, viscose, polyester and microfiber mops	1:10 PW 413 - 28 lb (13 kg) PW 418 - 39 lb (18 kg) For number, see "Mops per load" table
Program cycle	Pre-spin Pre-rinse +⊔ 2nd pre-rinse, optional Main wash 140 °F (60 °C) (selectable: cold to 194 °F / 90 °C), Cool down available 2 rinses Final spin	
Mop thermal disinfection*🔒 194 °F (90 °C)		
Type of fabric	Cotton, viscose, polyester and microfiber mops	
Program cycle	Pre-spin Pre-rinse +⊔ 2nd pre-rinse, optional Disinfection 194 °F (90 °C), 10 min., Cool down available 3 rinses Final spin	

* The **Cooldown** block can be activated if required, e.g. for gently cooling down microfiber mops.

** Program locked. If a program is locked, after 1 minute it can no longer be stopped and cancelled with the finish button.

*** The disinfection parameters for **chemo-thermal disinfection** (temperature, temperature holding time, and dosages) must be set on site to suit cleaning agents and disinfectants.

Program chart - MOPSTAR

Mop chemo-thermal dis-infection***🔒**	140 °F (60 °C)	Load ratio/Load size
Type of fabric	Cotton, viscose, polyester and microfiber mops	
Program cycle	Pre-spin Pre-rinse +⎍ 2nd pre-rinse, optional Disinfection*** 140 °F (60 °C), 20 min. 3 rinses Final spin	
New mops*	**140 °F (60 °C) / 194 °F (90 °C)**	
Type of fabric	For washing new mops	
Program cycle	Main wash 140 °F (60 °C) (selectable range cold to 194 °F / 90 °C), Cool down available 2 rinses Final spin	1:10 PW 413 - 28 lb (13 kg) PW 418 - 39 lb (18 kg) For number, see "Mops per load" table
Mops standard + finish*	**140 °F (60 °C) / 194 °F (90 °C)**	
Type of fabric	Cotton, viscose, polyester and microfiber mops	
Program cycle	Program as for Mops standard, then: Finishing agent, damp or activate block: Damp, wet, dripping wet	
Mop thermal disinfection + finish* 🔒	**194 °F (90 °C)**	
Type of fabric	Cotton, viscose, polyester and microfiber mops	
Program cycle	Program as for Mops thermal disinfection, then: Finishing agent, damp or activate block: Damp, wet, dripping wet	

* The **Cooldown** block can be activated if required, e.g. for gently cooling down microfiber mops.

** Program locked. If a program is locked, after 1 minute it can no longer be stopped and cancelled with the finish button.

Mops chemo-thermal dis-infection + finish***🔒**	140 °F (60 °C)	Load ratio/Load size
Type of fabric	Cotton, viscose, polyester and microfiber mops	1:10 PW 413 - 28 lb (13 kg) PW 418 - 39 lb (18 kg) For number, see "Mops per load" table
Program cycle	Program as for Mops chemo-thermal disinfection*, then: Finishing agent, damp or activate block: Damp, wet, dripping wet	
Mops finish		
Type of fabric	Cotton, viscose, polyester and microfiber mops	
Program cycle	1 rinse Finishing agent, damp or activate block: Damp, wet, dripping wet	

* The **Cooldown** block can be activated if required, e.g. for gently cooling down microfiber mops.

** Program locked. If a program is locked, after 1 minute it can no longer be stopped and cancelled with the finish button.

*** The disinfection parameters for **chemo-thermal disinfection** (temperature, temperature holding time, and dosages) must be set on site to suit cleaning agents and disinfectants.

Information on Mops...+ finish program

The **Mops . . . + finish** programs prepare mops for use by treating them with cleaning agent or disinfectant: a finishing step with a final spin is added after the washing or disinfecting stage.
Amounts dispensed must be set on site and the standard of disinfection must be checked.

Information on Mops finish program

The **Mops finish** program is suitable for clean and dry mops. A disinfectant solution is added during finishing.
Amounts dispensed must be set on site and the standard of disinfection must be checked.

Program chart - MOPSTAR

Mop loads (cotton)

Mop size/weight	15 3/4" (40 cm) 6.7 oz (190 g) mops	19 11/16" (50 cm) 7.7 oz (220 g) mops	23 5/8" (60 cm) 9.8 oz (280 g) mops	31 1/2" (80 cm) 12.7 oz (360 g) mops	43 5/16" (110 cm) 1.1 lb (510 g) mops	51 3/16" (130 cm) 1.3 lb (610 g) mops	63" (160 cm) 1.6 lb (720 g) mops
PW 413	68	59	46	36	25	21	18
PW 418	95	82	64	50	35	30	25

Tip: More microfiber mops can be washed per load as they are lighter.

Mop loads (microfiber)

Mop size/weight	15 3/4" (40 cm) 4.2 oz (20 g) mops	19 11/16" (50 cm) 6 oz (170 g) mops
PW 413	108	76
PW 418	150	106

Cleaning cloth programs

Cloths standard 140 °F (60 °C)		Load ratio/Load size
Type of fabric	Cotton, viscose, polyester and microfiber cleaning cloths	
Program cycle	Pre-rinse +⊔ Pre-wash 86°F (30 °C), optional Main wash cold to 140 °F (60 °C), 10 min. 2 rinses Final spin	
Cloths thermal disinfection* 🔒** 194 °F (90 °C)		1:20
Type of fabric	Cotton, viscose, polyester and microfiber cleaning cloths	PW 413 0.5 oz (16 g) per cloth approx. 415 cloths = 14.6 lb (6.6 kg)
Program cycle	Pre-rinse +⊔ Pre-wash, optional Disinfection 194 °F (90 °C), 10 min., Cool down available 3 rinses Final spin	0.7 oz (22 g) per cloth approx. 300 cloths = 14.6 lb (6.6 kg) PW 418 0.5 oz (16 g) per cloth approx. 565 cloths = 20 lb (9 kg)
chemo-thermal disinfection* 🔒** 158 °F (70 °C)		0.7 oz (22 g) per cloth approx. 409 cloths = 20 lb (9 kg)
Type of fabric	Cotton, viscose, polyester and microfiber cleaning cloths	
Program cycle	Pre-rinse +⊔ Pre-wash, optional Disinfection 158 °F (70 °C), 10 min. 3 rinses Final spin	

* The **Cooldown** block can be activated if required.

** Program locked. If a program is locked, after 1 minute it can no longer be stopped and cancelled with the finish button.

Program chart - MOPSTAR

Cloths standard+finish 140 °F (60 °C)		Load ratio/Load size
Type of fabric	Cotton, viscose, polyester and microfiber cleaning cloths	
Program cycle	Program as for Cloths standard, then: Finishing agent, damp or activate block: Damp, wet, dripping wet	
Cloths thermal disinfection+finish*🔒 **		
Type of fabric	Cotton, viscose, polyester and microfiber cleaning cloths	
Program cycle	Program as for Cloths thermal disinfection, then: Finishing agent, damp or activate block: Damp, wet, dripping wet	1:20
Cloths chemo-thermal disinfection + finish*** 🔒**		PW 413 0.5 oz (16 g) per cloth approx. 415 cloths = 14.6 lb (6.6 kg) 0.7 oz (22 g) per cloth approx. 300 cloths = 14.6 lb (6.6 kg)
Type of fabric	Cotton, viscose, polyester and microfiber cleaning cloths	PW 418 0.5 oz (16 g) per cloth approx. 565 cloths = 20 lb (9 kg) 0.7 oz (22 g) per cloth approx. 409 cloths = 20 lb (9 kg)
Program cycle	Program as for cloths chemo-thermal disinfection, then: Finishing agent, damp or by activating block: Damp, wet, dripping wet	
Cloths finish		
Type of fabric	Cotton, viscose, polyester and microfiber cleaning cloths	
Program cycle	1 rinse Finishing agent, damp or activate block: Damp, wet, dripping wet	

* The **Cooldown** block can be activated if required.

** Program locked. If a program is locked, after 1 minute it can no longer be stopped and cancelled with the finish button.

*** The disinfection parameters for **chemo-thermal disinfection** (temperature, temperature holding time, and dosages) must be set on site to suit cleaning agents and disinfectants.

Information on Cloths standard program

The program **Cloths Standard** is suitable for cleaning cloths that are not to be used immediately after washing, but are to be stored after drying.

Information on Cloths...+ finish program

The **Cloths . . . + finish** programs prepare cloths for use by treating them with cleaning agent or disinfectant: a finishing step with a final spin is added after the washing or disinfecting stage.
Amounts dispensed must be set on site and the standard of disinfection must be checked.

Information on Cloths finish program

The **Cloths finish** program is suitable for clean and dry cloths. A disinfectant solution is added during finishing.
Amounts dispensed must be set on site and the standard of disinfection must be checked.

Pads program

Pads	104 °F (40 °C) / 140 °F (60 °C)	Load ratio/Load size
Type of fabric	Polishing pads	1:50 PW 413 - 5.7 lb (2.6 kg) PW 418 - 8 lb (3.6 kg)
Program cycle	Pre-rinse +⊔ 2nd pre-rinse, optional Main wash 104 °F (40 °C) (selectable range: cold to 140 °F / 60 °C) 3 rinses Final spin	

Mats program

Mats	104 ° (40 °C)	Load ratio/Load size
Type of fabric	Door mats	1:15 PW 413 max. 19.4 lb (8.8 kg) PW 418 max. 26.5 lb (12 kg)
Program cycle	Pre-rinse Main wash 104 °F (40 °C) 3 rinses Final spin	

Tip: The number of mats per load may vary depending on the size, stiffness and thickness of the mats.

Program chart - MOPSTAR

Curtains program

Curtains	104 ° (40 °C)	Load ratio/Load size
Type of fabric	Synthetic and artificial fibers	1:25 - 1:20
Program cycle	+⊔ Pre-wash 86 °F (30 °C), optional Main wash 104 °F (40 °C) 3 rinses Final spin	PW 413 - 12.8 lb (5.8 kg) PW 418 - 17.6 lb (8 kg)

Program without spin, curtains

Curtains program, program without spin

■ Press the ∅ "Without spin" button.

■ End the program in "Without spin" mode with water still in the machine by pressing the ⊘ "Stop/Finish" button.

■ Select the ⊔┘ "Drainage" button.

Cottons Universal program

Cottons Universal	140 °F (60 °C)	Load ratio/Load size
Type of fabric	Normally soiled cotton, linen and mixed fiber bed linen and towels	1:10
Program cycle	+⊔ Pre-wash 86 °F (30 °C), optional Main wash 140 °F / 60 °C 2 rinses Last rinse hot Final spin	PW 413 - 28 lb (13 kg) PW 418 - 39 lb (18 kg)

Separate rinse program

Separate rinse		
Type of fabric	Fabrics that only need to be rinsed and spun	
Program cycle	1 rinse Final spin	

Separate spin program

Separate spin		
Type of fabric	Items which only need to be spun	
Program cycle	Final spin	

Separate drain program

Separate drain		
Type of fabric		
Program cycle	Drainage	

"Clean machine" program

For cleaning the detergent dispenser drawer, drum, suds container and the drainage system.

■ If you use low temperature or disinfection programs on a regular basis, or to remove coarse soiling, the Clean machine program should be carried out frequently.

Clean machine		
Type of fabric	No load	
Program se-quence	+⊔ Clean 158 °F / 70°C, optional 2 rinses	

* The **Cleaning** block which takes water in through all inlets and has the temperature increased to 158 °F / 70 °C. can be selected with this program by pressing the Block Plus button. If the Cleaning block is included in the Maintenance program, detergent needs to be dispensed.

Program chart - SLUICE

Sluice programs

The Sluice programs are for extremely heavily soiled underwear, and heavily soiled towels and bed linen.
Disinfection is specified by national requirements. There are two different disinfection options: 149 °F (65 °C) for 10 min. or 160 °F (71 °C) for 3 min.

Sluice sensitive	149 °F (65 °C)	Load ratio/Load size
Type of fabric	Heavily soiled underwear, toweling and bed linen	
Program cycle	2 pre-rinse cycles Pre-wash 140 (60 °C), 5 min. Disinfection 149 °F (65 °C), 10 min. 3 rinses Final spin	1:10 PW 413 - 28 lb (13 kg) PW 418 - 39 lb (18 kg)
Sluice	**160 °F (71 °C)**	
Type of fabric	Heavily soiled underwear, toweling and bed linen	
Program cycle	2 pre-rinse cycles Pre-wash 140 °F (60 °C), 5 min. Disinfection 160 °F (71 °C), 3 min. 3 rinses Final spin	

Sluice program

Sluice sensitive 149 °F (65 °C)					
Stage	**Liquid ratio ***	**Thermostop**	**Temperature**	**Temperature holding time (wash time 2)**	**Programmed wash time approx.**
Pre-rinse 1	1:7	No	Cold	-	5 min.
Pre-rinse 2	1:7	No	Cold	-	4 min.
Pre-wash	1:7	Yes	140 °F (60 °C)	5 min.	-
1-minute spin					
Disinfection	1:5	Yes	149 °F (65 °C)	10 Min.	- **
2-minute spin					
Rinse 1	1:5	No	Cold	-	5 min.
1-minute spin					5 min.
Rinse 2	1:5	No	Cold	-	5 min.
1 min. spin at max. speed					
Rinse 3	1:4	No	Cold	-	5 min.
5 min. spin at max. speed					
Sluice 160 °F (71 °C)					
Pre-rinse 1	1:7	No	Cold	-	5 min.
Pre-rinse 2	1:7	No	Cold	-	4 min.
Pre-wash	1:7	Yes	140 °F (60 °C)	5 min.	-
1-minute spin					
Disinfection	1:5	Yes	160 °F (71 °C)	3 min.	- **
2-minute spin					
Rinse 1	1:5	No	Cold	-	5 min.
1-minute spin					
Rinse 2	1:5	No	Cold	-	5 min.
1 min. spin at max. speed					
Rinse 3	1:4	No	Cold	-	5 min.
5 min. spin at max. speed					

* Depends on the load and textile type
** Depends on the type of heating and, with a hot water connection, on the hot water temperature

Program chart - SLUICE

Disinfection programs

All programs are **locked**. 1 minute into a program, the program can therefore no longer be canceled, stopped or parts skipped.

To avoid recontamination, the water for the rinse cycles in the disinfection programs is not supplied via the detergent dispenser.

| Chemo-thermal disinfection 140 °F (60 °C)		Load ratio/Load size
Type of fabric	Cotton and linen, e.g. bed linen and toweling	
Program cycle	+⊔ Pre-wash 104 °F (40 °C), optional Disinfection 140 °F (60 °C), 20 min. 2 rinses Final spin	
Chemo-thermal disinfection 104 °F (40 °C)		1:10 PW 413 - 28 lb (13 kg) PW 418 - 39 lb (18 kg)
Type of fabric	Cotton and mixed fiber up to 104 °F (40 °C)	
Program cycle	+⊔ Pre-wash 86 °F (30 °C), optional Disinfection 104 °F (40 °C), 20 min. Wash rhythm "gentle" 2 rinses Final spin	

* The disinfection parameters for chemo-thermal disinfection (temperature, temperature holding time, and dosages) must be set on site to suit cleaning agents and disinfectants.

"Clean machine" program

For cleaning the detergent dispenser drawer, drum, suds container and the drainage system.

■ If you use low temperature or disinfection programs on a regular basis, or to remove coarse soiling, the Clean machine program should be carried out frequently.

Clean machine		
Type of fabric	No load	
Program se-quence	+⎍ Clean 158 °F / 70°C, optional 2 rinses	

* The **Cleaning** block which takes water in through all inlets and has the temperature increased to 158 °F / 70 °C. can be selected with this program by pressing the Block Plus button. If the Cleaning block is included in the Maintenance program, detergent needs to be dispensed.

Separate drain program

Separate drain		
Type of fabric		
Program cycle	Drainage	

Cottons Hygiene program

Cottons Hygiene	194 °F (90 °C)	Fill ratio/Load size
Type of fabric	Cotton, linen and mixed fiber fabrics, for example bed linen and toweling	1:10 PW 413 - 28 lb (13 kg) PW 418 - 39 lb (18 kg)
Program se-quence	+⎍ Pre-wash 104 °F (40 °C), optional Main wash 194 °F (90 °C), Cool down can be se-lected 2 rinses Last rinse hot* Final spin	

* The standard programs **Cottons Hygiene 90°C (194°F)** and **Cottons 60°C (140°F)** are programmed for hot water rinse. If hot water is available, we recommend using hot water for the final rinse.
- There is less residual moisture in the laundry after spinning.
- The laundry is already warmed.
- This saves time and energy if the laundry is immediately either dried in a tumble dryer or ironed with a rotary iron.

Program chart - SLUICE

Minimum iron program

Minimum iron	140 °F (60 °C)	Load ratio/Load size
Type of fabric	Normally soiled synthetic fabrics, for example mixed fiber fabrics	1:20
Program cycle	+⊔ Pre-wash 86 °F (30 °C), optional Main wash 140 °F (60 °C) (selectable range cold to 140 °F / 60 °C) 2 rinses Final spin	PW 413 - 14 lb (6.6 kg) PW 418 - 19 lb (9 kg)

Delicates programs

Delicates	86 °F (30 °C)	Load ratio/Load size
Type of fabric	Synthetic and artificial fibers	1:25
Program cycle	Main wash 86 °F (30 °C) Wash rhythm "gentle" 2 rinses Final spin	PW 413 - 11.5 lb (5.2 kg) PW 418 - 15.9 lb (7.2 kg)

Curtains program

Curtains	104 ° (40 °C)	Load ratio/Load size
Type of fabric	Synthetic and artificial fibers	1:25 - 1:20
Program cycle	+⊔ Pre-wash 86 °F (30 °C), optional Main wash 104 °F (40 °C) 3 rinses Final spin	PW 413 - 12.8 lb (5.8 kg) PW 418 - 17.6 lb (8 kg)

Separate rinse program

Separate rinse		
Type of fabric	Fabrics that only need to be rinsed and spun	
Program cycle	1 rinse Final spin	

Separate spin program

Separate spin		
Type of fabric	Items which only need to be spun	
Program cycle	Final spin	

Laundromat program chart

These programs are suitable for washing all machine-washable fabrics in the commercial laundry sector.

Cottons Universal programs

Cottons Universal	140 °F (60 °C)	Load ratio/Load size
Type of fabric	Normally soiled cotton, linen and mixed fiber fabrics, for example bed linen and toweling	
Program cycle	+⊔ Pre-wash 86 °F (30 °C), optional Main wash 140 °F (60 °C) (selectable range cold to 140 °F (60 °C)) 2 rinses Last rinse hot* Final spin	
Cottons Universal	**104 ° (40 °C)**	
Type of fabric	Normally soiled cotton, linen and mixed fiber fabrics, for example bed linen and toweling	1:10 PW 413 - 28 lb (13 kg) PW 418 - 39 lb (18 kg)
Program cycle	+⊔ Pre-wash 86 °F (30 °C), optional Main wash 104 °F (40 °C) 2 rinses Final spin	
Cottons Universal	**86 °F (30 °C)**	
Type of fabric	Normally soiled cotton, linen and mixed fiber fabrics, for example bed linen and toweling	
Program cycle	+⊔ Pre-wash 86 °F (30 °C), optional Main wash 86 °F (30 °C) (selectable range cold to 86 °F / 30 °C) 2 rinses Final spin	

* The standard program **Cottons Universal 140 °F (60 °C)** is a program with a hot rinse. If hot water is available, it is a good idea to carry out the final rinse with hot water.
- There is less residual moisture in the laundry after spinning.
- The laundry is already warm.
- If you then immediately put the laundry in a dryer or rotary iron, this saves power and time.

Program chart - LAUNDROMAT

| Cottons Universal 140 °F (60 °C) intensive + pre-wash		Load ratio/Load size
Type of fabric	Heavily soiled cotton, linen and mixed fiber fabrics, for example bed linen and toweling	1:10
Program cycle	Pre-wash 86 °F (30 °C), optional Main wash 140 °F (60 °C) 2 rinses Last rinse hot* Final spin	PW 413 - 28 lb (13 kg) PW 418 - 39 lb (18 kg)

* The standard program **Cottons Universal 140 °F (60 °C)** is a program with a hot rinse. If hot water is available, it is a good idea to carry out the final rinse with hot water.
- There is less residual moisture in the laundry after spinning.
- The laundry is already warm.
- If you then immediately put the laundry in a dryer or rotary iron, this saves power and time.

Comforter programs

These programs are suitable for washing quilted (box stitch and baffle box) and unquilted down, synthetic and natural hair comforters.

> These wash programs are only suitable for washing fabrics with a care label stating that they are suitable for machine washing.

Down comforters	104 °F (40 °C)	Load ratio/Load size
Type of fabric	Normally soiled down and feather comforters and pillows	See "Comforter loads"
Program cycle	Deflating +⊔ Pre-wash 86 °F (30 °C), optional Main wash 104 °F (40 °C) 2 rinses Final spin	
Synthetic comforters	**104 °F (40 °C)**	
Type of fabric	Normally soiled synthetic comforters and pillows	
Program cycle	+⊔ Pre-wash 86 °F (30 °C), optional Main wash 104 °F (40 °C) 2 rinses Final spin	

Comforter loads

The maximum loads are set out in the table below. The loads given are approximate only and vary depending on the size and thickness of the comforters.

Type	Quantity*
PW 413	3 pillows or 1 pillow + 1 comforter
PW 418	4 pillows or 2 pillows +1 comforter or 2 comforters

* One comforter roughly equals two pillows.

Tip: Unquilted comforters must be tied in several places to keep the filling as evenly spread as possible and ensure effective washing.
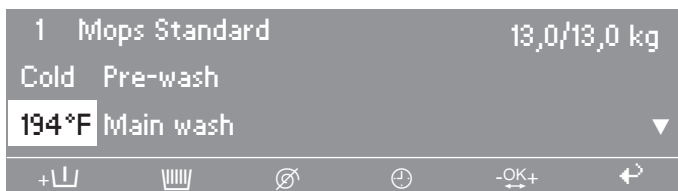
Additional functions

Start time

Setting a start time

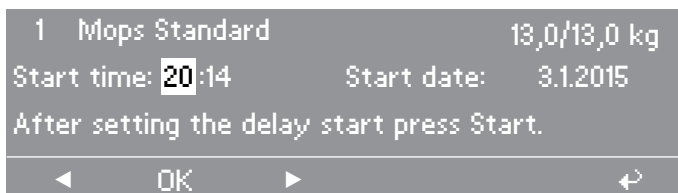A later wash start time can be set for a program using the ⊕ "Start time" button.

■ Select the wash program.

Once a program has been selected, the following (for example) will appear on the display:

1 Mops Standard	13,0/13,0 kg
Cold Pre-wash	
194°F Main wash	▼
+⎍ ⫿⫿⫿ ∅ ⊕ -OK+ ↵	

■ Press the Start time ⊕ button.

The following (for example) will appear on the display:

1 Mops Standard	13,0/13,0 kg
Start time: **20**:14	Start date: 3.1.2015
After setting the delay start press Start.	
◄ OK ► ↵	

> The current time and date always appear. The entry field for hours is highlighted.

■ Press **OK** .

The entry field for hours will be enabled.

■ Press the - or + button to change the hours.

■ Press **OK** to confirm your entry.

■ Press ► to select the "Minutes" field, and confirm with **OK**.

■ Press the - or + button to change the minutes.

■ Press ► to select the "Start day" field, and confirm with **OK**.

■ Press the - or + button to change the day.

■ Change the month and year in the same way if required.

■ Once you have set the start time, press "START".

The display will show the current time and date and the start time.

1 Mops Standard	13,0/13,0 kg
Pre-wash	
20:50 - 3.1.2015	Start: 6:00 - 4.1.2015
+⎍ ⫿⫿⫿ ∅ ⊕ ↵	

Tip: If the door is opened again, the "START" button must be pressed again. Opening the door clears the start time set.

Cancelling the start time	■ Press the ⏰ "Start time" or ↵ "Back" button.
	The changes will not be saved.

With Pre-wash

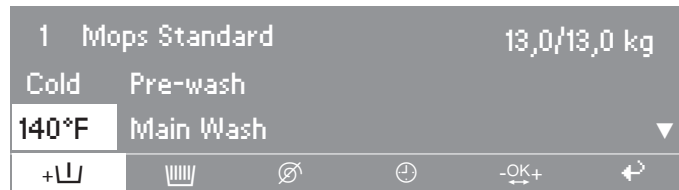|	
Selecting pre-wash	In programs with a pre-wash option, a pre-wash can be added for heavily soiled laundry before the program has started.

■ Press the +⊔ "Block plus" button.

The following will appear on the display:

```
 1   Mops Standard              13,0/13,0 kg
Cold    Pre-wash
140°F   Main Wash                            ▼
  +⊔       ▥        ⌀        ⏰      -OK+      ↵
```

The "+⊔" field is highlighted on the display.

Tip: The function can be de-selected by pressing the button again.
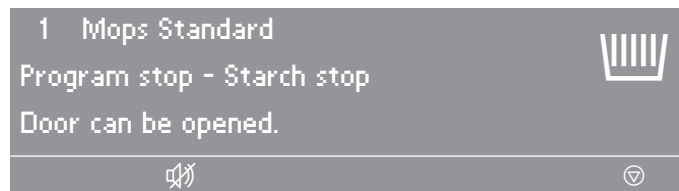
Starch

Adding from the dispenser drawer	Starching can be selected before the program starts by pressing the ▥ "Starch stop" button.

■ Press the ▥ "Starch stop" button.

The "▥" field will be highlighted on the display.

Tip: The function can be de-selected by pressing the button again.

```
 1   Mops Standard                      ▥
Program stop – Starch stop
Door can be opened.
           ⊄                        ⊖
```

When the "Starch stop" stage is reached, "Starch stop" will flash on the display.

■ Prepare the starch according to manufacturer's instructions and add to the front compartment ⊛.

This automatically extends the wash time by 4 minutes.

Tip: If the water and starch solution is still too thick, add more water.

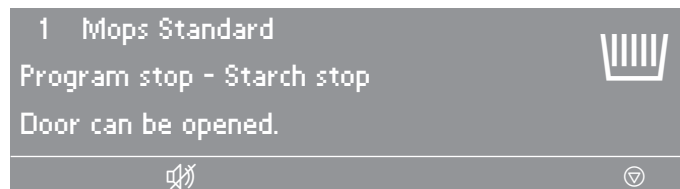■ Press the "Start" button to continue the program.

Additional functions

Adding directly to the drum

The "Starch stop" stage has been reached.

- Prepare the starch according to manufacturer's instructions, open the door and add the starch.

- Close the door.

The following message will appear on the display again:

```
1   Mops Standard
Program stop - Starch stop
Door can be opened.

         ⊄∅                        ⊝
```

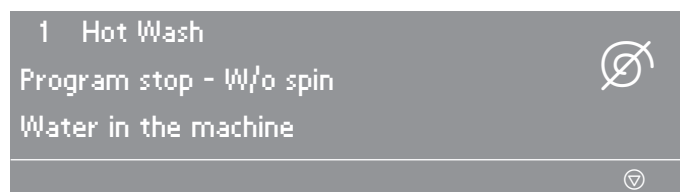- Press the "Start" button to continue the program.

Without spin

Without spin can be selected before the program starts⌀.

- Press the "Without spin" button.

The "⌀" field will be highlighted on the display.

Tip: The function can be de-selected by pressing the button again.

```
1   Hot Wash
Program stop - W/o spin                ⌀
Water in the machine

                                       ⊝
```

When the "Without spin" stage is reached, "Without spin" will flash on the display.

- End the program without a spin and with water still in the machine by pressing the ⊝ "Stop/Finish" button.
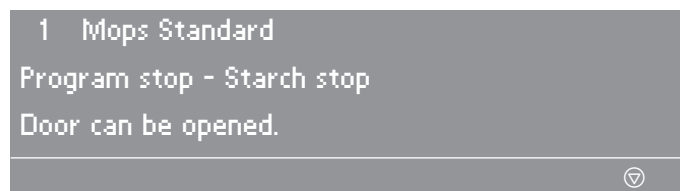
Tip: The program can be continued with a spin by pressing the "START" button.

Program stop

For stopping the program.

- Press the ⊝ "Stop/Finish" button to end the program.

The program will stop.

```
1   Mops Standard
Program stop - Starch stop
Door can be opened.

                                       ⊝
```

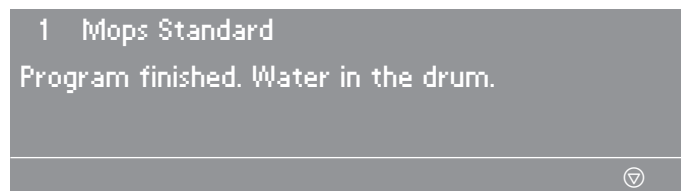**Tip:** The program can be continued by pressing the "START" button.

Canceling a program

This function allows you to cancel the program.

■ Press the ⊽ "Stop/Finish" button twice in succession.

The program will be canceled.

If the program has been canceled while there is still water in the machine or during spinning, the following will appear on the display:

```
1   Mops Standard
Program finished. Water in the drum.


                                          ⊽
```

or

```
1   Mops Standard
Program finished. Drum still rotating.


                                          ⊽
```
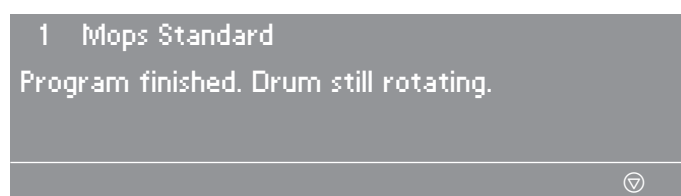
Tip: To open the door, press the 🗘 "Drainage" button or select the Separate spin program and press the "START" button.

Additional functions

Cancelling a locked program

It is not possible to stop or cancel a locked program.

```
2 Mop Thermal Disinfection
140°F  Main Wash                    140°F
       Locked              Finish at  12:35
                          🔓              ↵
```
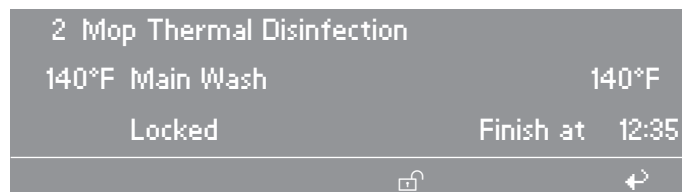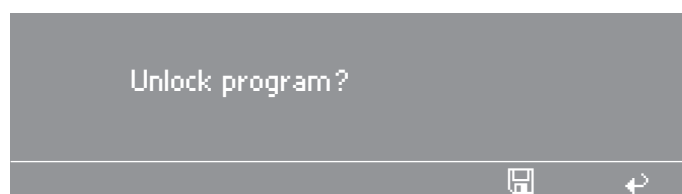
The display will show the locked state if an attempt is made to cancel the program by pressing the ▽ "Stop/Finish" button.

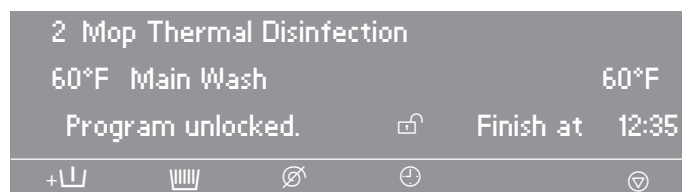**Tip:** The program can be unlocked by pressing the 🔓 "Unlock" button and entering the password.

■ Press the 🔓 "Unlock" button and enter the password.

When the password is entered, the following will appear on the display:

```

        Unlock program?


                          💾              ↵
```

■ Press the 💾 "Save" button.

The normal display content will appear and the program can now be cancelled.

```
2 Mop Thermal Disinfection
60°F  Main Wash                     60°F
  Program unlocked.    🔓   Finish at  12:35
+⊔   ▥▥▥    Ø       🕐                  ▽
```
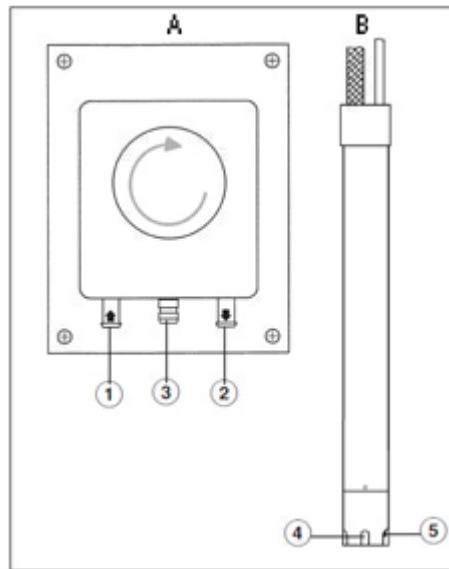
Communication module

The machine can be connected to a PC (personal computer) using the communication module.

The slot for the module is located at the back of the machine.

An editor program is available from Miele.

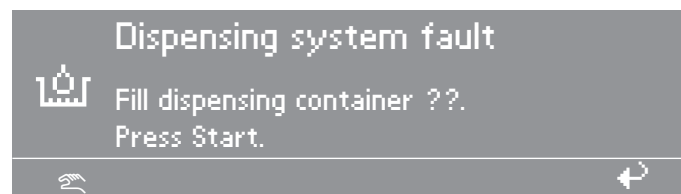## Liquid dispensing (optional for machines with detergent compartment)

A Dispenser pump

B Siphon tube

① Hose connection socket (suction side)

② Hose connection socket (pressure side)

③ Outlet (in case of hose leakage)

④ Suction inlet opening

⑤ Display indicator level checker. When the dispenser is empty the pump and the machine switch themselves off.

Continuing program after "Dispensing system fault" message

If the dispensing container is empty the pump and the machine switch off independently. At the same time the machine indicates a lack of liquid detergent.

```
Dispensing system fault
    Fill dispensing container ??.
    Press Start.
```

■ Fill the dispenser container.

■ Press the "Start" button to continue the program.

Optional modules

Dispensing quantities

Please follow the detergent manufacturer's instructions.

> Always follow the instructions of the chemical manufacturer when using cleaning agents and special application chemicals. Only use such chemicals for the purpose and in the situation specified by the manufacturer in order to avoid the danger of adverse chemical reactions and material damage.

Correct dosage also depends on the viscosity of the liquid detergent. It should therefore be allowed to settle to room temperature before being used.

Cleaning and maintenance of the dispensing system

Avoiding blockages and corrosion in the dispensing system

- Rinse out the siphons with water.

- Put the siphons in a container with warm water (104 - 122 °F / 40 - 50 °C).

- Activate the dispenser calibration switch in each pump, until the dispensing system is rinsed through.

- Check the connections, hoses, dispensing sockets and seals for leaks.

> Rinse the dispensing system with hot water every 2 weeks, or before shutting the dispenser pumps down for any length of time, to avoid the system getting clogged up and corroded.
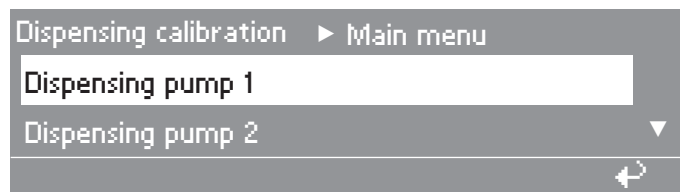
Commissioning the dispenser pumps

Before the liquid dispenser pumps can be used the liquid detergent must be drawn into the system and the set amount to be dispensed.

Dispenser calibration

Dispenser calibration is used to measure the throughput of individual dispenser pumps.

To go directly to Dispenser calibration when the machine is switched off:

- Press and hold multifunction button 2 and switch the machine on using Power On **I**.

Dispensing calibration ▶ Main menu
Dispensing pump 1
Dispensing pump 2   ▼
↵

Options:

– Dispenser pump 1 to 13

- Select a dispenser pump.

When a dispenser pump is selected, the following will appear in the display:

```
Dispensing calibration ▶ Dispensing pump 1
V:     100 ml        t:   0s      P:        No

                              0/1    🖫      ↵
```

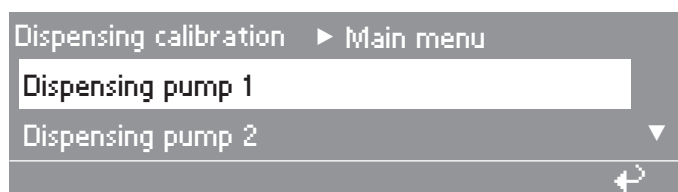**Tip:** The dispensing amount can be set from 0 to 9999 ml in 1 ml steps.

■ Press multifunction button 0/1

The dispensing tube will fill up.

■ Press the 0/1 button to stop the process.

■ Place the hose of the dispenser pump which is being checked at an upward gradient in a measuring vessel.

⚠ Irritant detergents.
Irritant for skin and eyes
Avoid contact with skin and eyes, wear protective clothing.

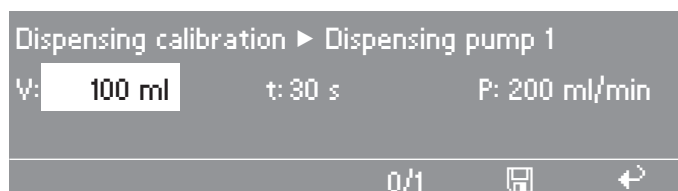■ Return to the main menu by pressing ↵ "Back".

```
Dispensing calibration   ▶ Main menu
Dispensing pump 1

Dispensing pump 2                        ▼
                                         ↵
```

■ Select a dispenser pump.

```
Dispensing calibration  ▶  Dispensing pump 1
V:     100 ml       t: 0 s          P: No

                              0/1    🖫      ↵
```

■ Press multifunction button 0/1 .

Stop the pump by pressing the 0/1 button, or it will stop automatically after 60 seconds.

■ Measure the amount of liquid dispensed into the measuring vessel.

```
Dispensing calibration ▶ Dispensing pump 1
V:     100 ml       t: 30 s       P: 200 ml/min

                              0/1    🖫      ↵
```

■ Enter the measured value into the "V:" field.

The throughput P is calculated in ml/min. by the controls.

■ Press the 🖫 "Save" button.

The measured value is allocated to the pump.
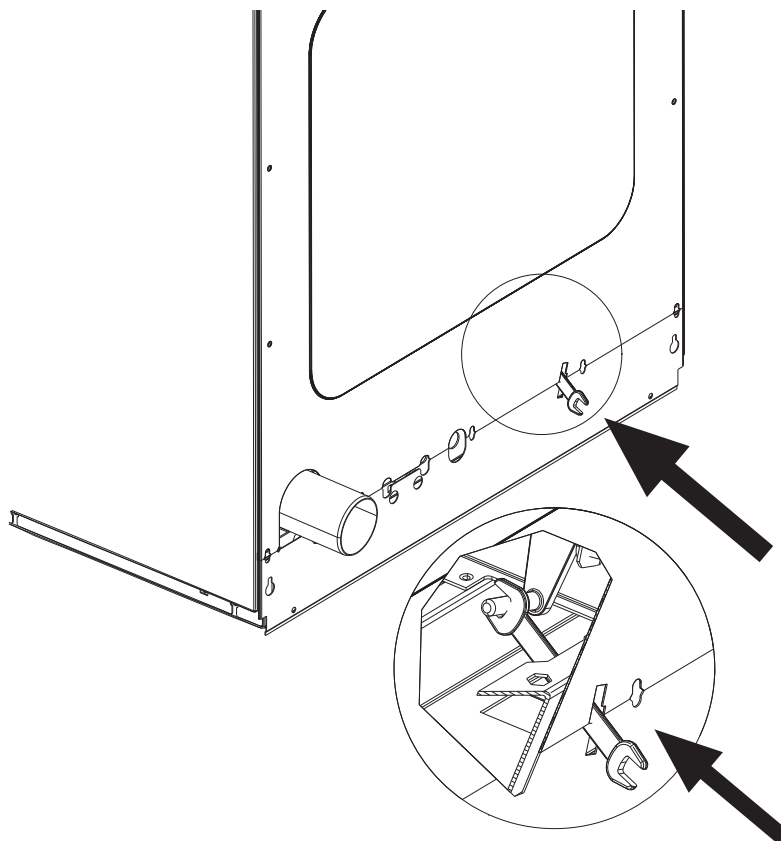
■ Reconnect the hose.

Problem solving guide

Opening the door and drain valve in an emergency

Power failure during the washing process

- ◾ Switch off the machine.

- ◾ Switch the machine off at the on-site power switch.

- ◾ Close the on-site non-return valves for water or steam.

> To remove the laundry, first open the drain valve manually and then manually unlock the door.

- ◾ Insert a wrench (max. size 10/11 mm) into the slot in the back of the machine.

- ◾ Open the drain valve by pushing on the lever behind the back panel of the machine.

- ◾ Maintain the pressure on the lever until the machine has drained completely.
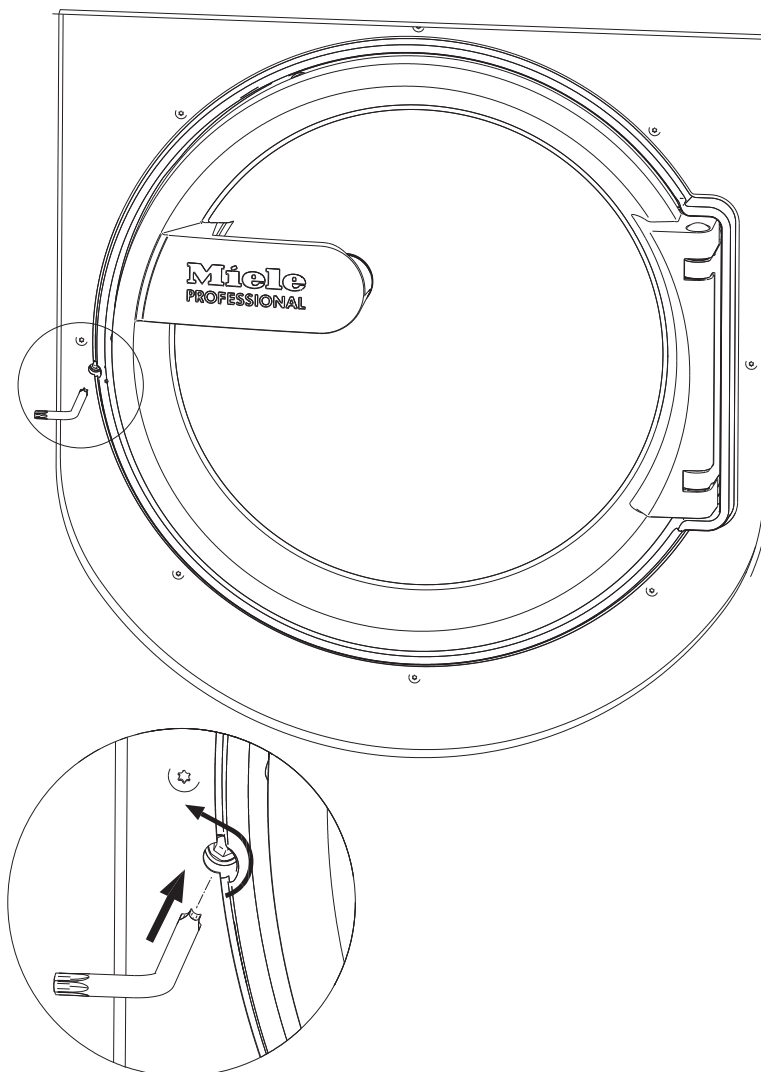
The wash water will drain.

> The emergency drain closes automatically when you remove the wrench.

Opening the door in an emergency in case of a power failure

The door cannot be opened.

⚠ Caution! Rotating drum and risk of scalding.
Before inserting the Torx wrench, make sure that the machine is disconnected, the drum has stopped and there is no water in the machine.

■ Turn the release element with a T 40 Torx wrench two whole revolutions **counter-clockwise (left)**.

Tip: Pushing on the door at the same time makes it easier to turn the emergency unlock mechanism.

The release element is located opposite the door catch at the same height as the handle (see illustration).

The release element must not be turned to the right.
This damages the door lock.

The resistance to turning will decrease noticeably. When the release element moves freely, the door is unlocked.

Tip: It is not necessary to turn the release element back.

Problem solving guide

The door can now be opened.

Service interval and BGR display

If the following message appears after "Power On" in the machine display, either a service or the annual BGR check must be carried out.

⚠ **Maintenance interval   1**
Call Technical Service.

↵

⚠ **BGR CHECK**
Call Technical Service.

↵

The display will go out after 5 seconds

Fault messages

⚠ Repairs to electrical or steam heated machines should only be performed by a suitably qualified service technician to ensure safety. Unauthorized repairs could be dangerous.

Malfunctions occurring before or after the start of a program will be shown in the display

The display remains dark. There is no power to the machine.

■ Check the plug connectors, power switch and (on-site) fuses.

Power failure
Program stop.
Press Start.

■ When the power has been restored press "START".

Tip: This error message can mean: The motor thermo-switch of the drive motor has been triggered.
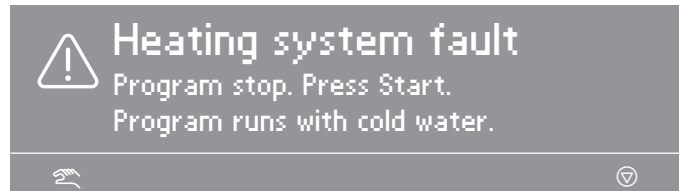
■ Allow the motor to cool down.

Water intake fault
Call Technical Service
if restart w/o success.

■ Check the faucet and press the "START" button.

> **⌐○ Door lock fault**
> Call Technical Service
> if restart w/o success.

■ If the door lock failure occurs again after a restart, proceed as described in "Opening the door in an emergency". If this still cannot be done, call Miele Technical Service.

> **⚠ Heating system fault**
> Program stop. Press Start.
> Program runs with cold water.

■ Press the "START" button to continue the program without heating.

Tip: Disinfection programs will be cancelled if this fault message appears.

■ Contact Miele Technical Service.

> **Ⓜ Drive motor fault**
> Program stop. Press Start.
> Motor temperature too high.

■ Allow the motor to cool down.

Too large an imbalance. The imbalance switch has been triggered.

> **⚠ Imbalance fault**
> Call Technical Service
> if restart w/o success.

■ Turn the machine on and press "START".

> **Drain valve fault**
> Call Technical Service
> if restart w/o success.
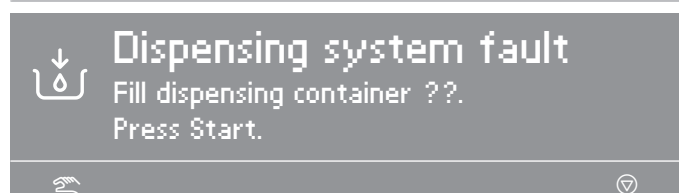
■ Check on-site drain system and press "START".

> A defective drain valve must only be repaired by Miele Technical Service.

> **Dispensing system fault**
> Fill dispensing container ??.
> Press Start.

■ Change the dispenser container.

Problem solving guide

```
⚠  Card fault
   Reinsert card correctly in card reader.

                                    ▽
```
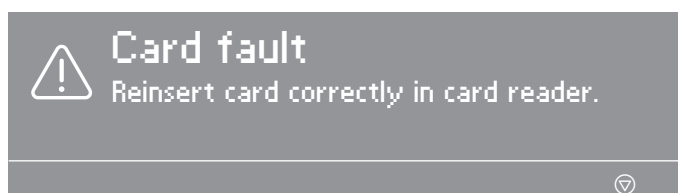
■ Insert the card into the card reader correctly.

Technical service   In the event of a any faults please call Miele Technical Service.

When contacting your dealer or the Technical Service Department, please quote the model and serial number of your machine, both of which are shown on the data plate:

Model			
SN:		/ o o o o o o o o	
Art.-Nr.		Mat -Nr.	
IBN			

The data plate is visible above the porthole glass when the drum door is open, or on the back of the machine at the top.

Please also pass on the error message appearing in the machine display to the Technical Service Department.

Use only genuine Miele original spare parts. The Service department will also require model, serial number(SN) and material number (M-No.) when ordering.

Problem solving guide

With the help of the following guide, minor faults in the performance of the machine, some of which may result from incorrect operation, can be resolved without contacting Miele Technical Service. This will save time and money.

The following guide may help you to find the reason for a fault, and how to correct it. You should, however, note the following:

> ⚠ Repair work to electrical appliances must only be carried out by a suitably qualified person in strict accordance with current local and national safety codes. Repairs and other work by unqualified persons could be dangerous.

The program does not start

Problem	Possible cause and solution
The display remains dark.	There is no power to the machine. ■ Check that the washing machine is switched on. ■ Check that washing machine is connected to the power supply. ■ Check whether the fuse or circuit breaker has tripped.
A fault message appears in the display	A program cannot be started while there is a fault message in the display. ■ Note what is shown in the display. ■ Press the multi-function selector to confirm the message. The fault message is deleted.
The display is dark and the _Start_ button indicator light is flashing slowly.	The display has switched off automatically to save energy (Standby mode). ■ Press any button. Standby comes to an end.

Frequently Asked Questions

An unsatisfactory wash result

Problem	Possible cause and solution
Liquid detergent does not give the required result.	Liquid detergents usually contain no bleaching agents. They do not remove fruit, coffee and tea stains. ■ Use a general purpose powder detergent containing a bleaching agent. ■ Pour stain removers into compartment ⊔⫿⊔ of the dispenser drawer and liquid detergent into a dispenser ball. ■ Never put stain removers and liquid detergent together in the detergent dispensing drawer.
Grey, greasy particles cling to washed laundry.	Insufficient amounts of detergent were used to break down the particles of grease in heavily soiled laundry. ■ Use more detergent for heavily soiled laundry or use liquid detergent. ■ Before washing the next load run a Cottons 203 °F / 60 °C program with powder detergent but without a load.
White residues which look like powder detergent are seen on dark textiles after washing.	The detergent contained compounds (zeolites) to aid water softening which are not soluble in water. These have ended up on the laundry. ■ Try and brush off the residues with a soft brush once the laundry is dry. ■ Wash dark textiles using a detergent which contains no zeolites. Liquid detergents usually contain no zeolites.
Textiles with particularly greasy soiling are not completely clean.	■ Select a program with a Pre-wash. Use liquid detergent for the pre-wash and a powder detergent for the main wash. ■ Use a commercially available powder detergent for the main wash.
	The use of heavy-duty detergent is recommended in the main wash for very heavily soiled work clothing. Please follow the manufacturer's instructions.

General problems with the washing machine

Problem	Possible cause and solution
The machine vibrates during the spin cycle.	The machine feet are not level. ■ Level the machine and adjust the feet.
Large amounts of detergent residue remain in the detergent dispenser drawer.	The water pressure is too low. ■ Clean the filters in the water inlet.
	Powder detergent used in conjunction with water softeners tends to become sticky. ■ Clean the detergent dispenser drawer and in future add washing powder into the dispenser drawer first, then add the water softener.
Fabric softener is not completely dispensed or too much water remains in the ❀ compartment.	The siphon tube is not correctly positioned or is clogged. ■ Clean the siphon (see "Cleaning and care - Cleaning the detergent dispenser drawer").
The display is in a different language.	A different language has been selected in "Settings" ⚐ "Language" ⚐. ■ Set the language you want. The flag symbol will guide you.
The pillow program is taking longer than the time originally displayed.	The pillow cover fabric has swelled up and the air cannot escape. ■ Reduce the wash temperature and push the pillow into a narrow washing bag, or tie it with a piece of string.
The door will not open.	There is no power to the machine. ■ Check that the machine is switched on. ■ Check that the power supply to the machine is switched on. ■ Check whether the fuse or circuit breaker has tripped.
	Power failure ■ Open the drum door as described in the next section.
	There is still water in the drum and the machine is unable to drain. ■ Check if the drain system is blocked. Clean the drainage system as described in the next section.
	For safety reasons the drum door cannot be opened if the suds temperature is higher than 122 °F / 50°C.

To continue a program after an interruption to the power supply

If a running program is interrupted, e.g. by a power failure, the program can be continued when power is restored.

■ Switch on the washing machine with the **I** button.

■ Then press the *Start* button.

The program will then continue with the next program stage.

Frequently Asked Questions

Possible reasons for increased levels of foaming

Problem	Possible cause and solution
Excessive foaming	Detergent type ■ Only use detergent suitable for use in industrial washing machines. Domestic detergent is not suitable.
	Too much detergent ■ Dispense detergent in accordance with the instructions on the packaging and on the basis of the local water hardness.
	Detergent creates too much foam ■ Use a lower foaming detergent or contact your detergent application specialist.
	Very soft water ■ In areas with hardness level 1, add less detergent in accordance with the detergent manufacturer's instructions.
	Soiling level of the laundry ■ For lightly soiled laundry, add less detergent in accordance with the detergent manufacturer's instructions.
	Residues, e.g. detergent left on laundry ■ Run an additional pre-rinse without detergent and without selecting a temperature. Laundry which has been pre-treated before washing must be thoroughly rinsed before washing.
	Small loads ■ Reduce the amount of detergent accordingly.
	Drum speed too high during the wash cycle ■ Reduce the drum speed and wash cycle.

Stretching of large items

Problem	Possible cause and solution
Stretching of large items during spinning	■ Please contact Miele Technical Service.
	Stretching of large items can occur during spinning.

Cleaning and care

■ Clean and care for the machine after use if possible.

> Do not use a pressure washer or hose to clean the machine.

■ Clean the **machine casing, control panel and plastic parts** only with a mild, non-abrasive detergent or a soft damp cloth. Wipe dry with a soft cloth.

> Scouring agents will scratch the surface.

■ Clean stainless steel parts of the casing with a standard commercial stainless steel cleaner.

■ Remove any deposits from the door seal with a damp cloth.

> Do not allow cleaning agents to penetrate the electrical components.

■ When disinfecting the surfaces, use a damp cloth only to clean the front and around the door lock. Do not spray the surface with the fluid.

Tip: Vacuum the fan casing if it is very dusty. The fan casing is located on the rear of the machine.

Build-up of rust

The drum is manufactured from rust-free stainless steel. However, water with a high iron content or foreign bodies in the wash (e.g. paper clips or metal buttons) may lead to the formation of superficial rust spots in the drum. Stainless steel components should be cleaned regularly and as soon as rust spots appear with standard commercial cleaning agent for stainless steel. Door seals should also be regularly cleaned and checked to make sure that nothing has become trapped. These preventive measures should be carried out on a regular basis.
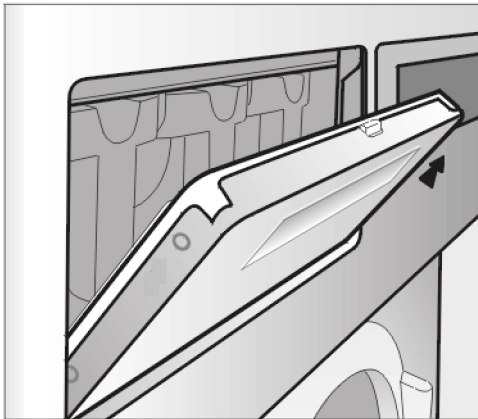
Cleaning the detergent dispenser drawer and siphon

■ After use, the detergent dispenser drawer should be cleaned with warm water to remove any detergent residues.

■ If the machine is not going to be used for a longer time, leave the flap of the detergent dispenser drawer open.

■ Also clean the siphons in the special dispenser drawers.
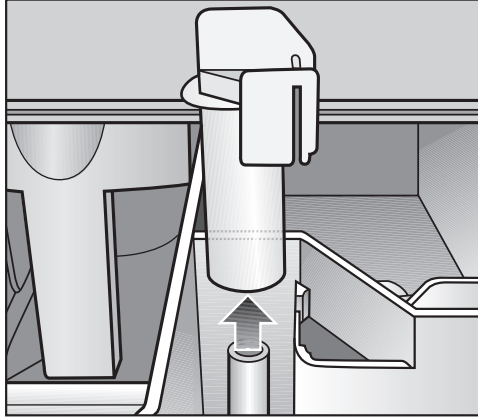
■ Remove the siphons, clean with hot water and replace.

Cleaning and care

Cleaning the drip channel and siphon

■ Open the flap on the dispenser drawer on the right side to an angle of 45°.

If the drip channel and associated drain connection are blocked, clean them.

■ Check the grille of the vapor vent on the rear of the machine for soiling from time to time and clean when necessary.
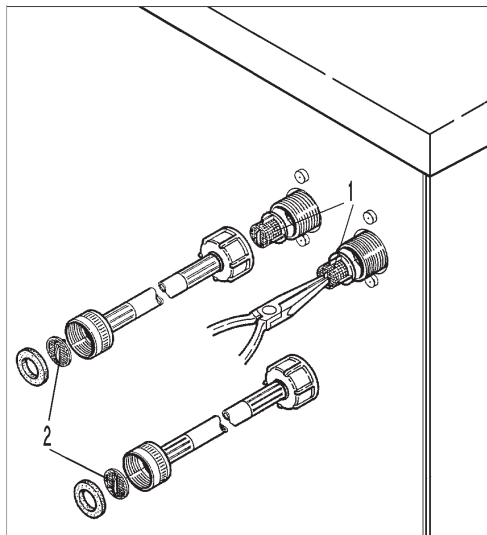
■ The filters in the water inlet valves (1) and the inlet hoses (2) must be checked for soiling from time to time and cleaned as necessary.

Installing the washing machine

> The washing machine must be installed by Miele Service or by an authorized dealer. Follow the instructions on the installation plan.

> This washing machine is only intended for items of laundry that have not been proofed with dangerous or inflammable substances.

■ To avoid the risk of frost damage, the machine must not be located in rooms which may be subject to very low temperatures

■ Transport the machine inside the room on a pallet jack.

> Do not remove or alter the feet of the machine.
> They could be damaged.

■ Remove packaging carefully with a suitable tool.

■ Lift the machine off the pallet using a pallet jack.

General operating conditions

This washing machine is intended only for use in a industrial environment and must only be operated indoors.

Ambient temperature in installation room: 32 °F (0°C) to 140 °F (40°C).

Relative humidity: non-condensing

Depending on the nature of the installation site, sound emissions and vibration may occur.

Tip: Have the installation site inspected and seek the advice of a professional in instances where increased noise may cause a nuisance.
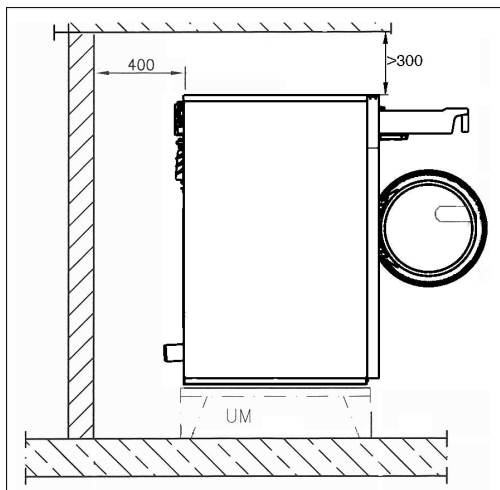
Installation and connection

Facilitating maintenance

For ease of future maintenance and servicing, the minimum distance to the wall must be observed to enable access.

∎ You must observe the minimum clearances and distance from the wall.

Minimum distance to the wall approx. 16" / 400 mm to allow for maintenance.

∎ Adjust the washing machine screw feet until the machine is level.

The machine must be completely level to ensure smooth operation.

Installation on a base

When installed on a raised base, the machine must be secured to the base and the base must be secured to the floor. When installed on a concrete base, the machine must be secured to the base.

Shipping struts
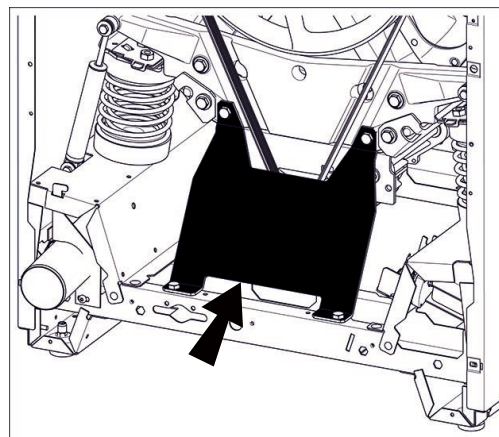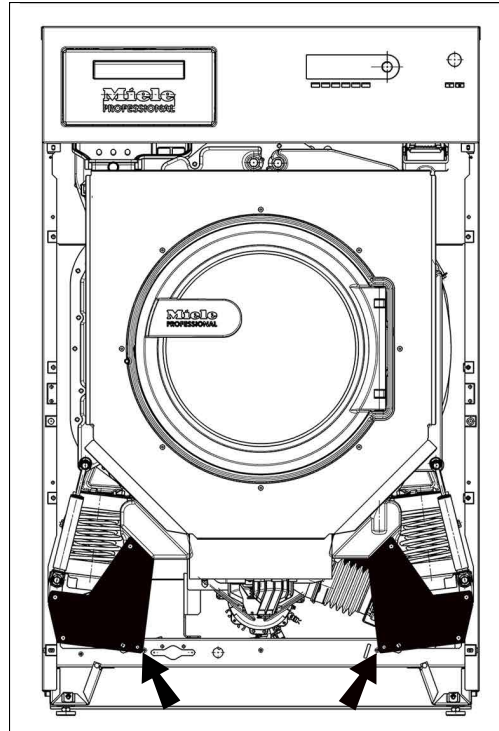
Remove the shipping struts.

The 2 shipping safety devices at the front are each secured with 3 hexagonal screws. The 2 at the back are secured with 4 hexagonal screws. The shipping struts must only be removed when the machine is in place, before it is commissioned.

■ Remove front and back panel.

■ Unscrew the screws at the bottom of the front panel and remove the panel.

Installation and connection

■ Unscrew the screws at the bottom edge of the rear panel and remove the panel.

■ Loosen the hexagonal screws to remove the shipping struts.

> Retain the shipping struts. They need to be refitted should the machine ever need to be moved again.

Water connection

> Water pressure (flow pressure) of a minimum 1 bar (100 kPa) / maximum 10 bar (1000 kPa) is required to guarantee problem free program operation.
>
> The machine must be connected to the water supply using the inlet hoses provided.

Hoses must be replaced with hoses tested for a burst pressure of at least 70 bar (7,000 kPa) overpressure and for water temperatures of a minimum of 194 °F / 90 °C.
This also applies for associated connection fittings. Miele original replacement parts fulfil these requirements.
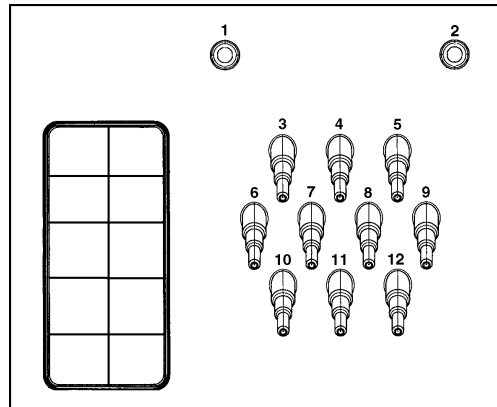
Tip: The hot water supply must not exceed a maximum temperature of 158 °F / 70 °C.
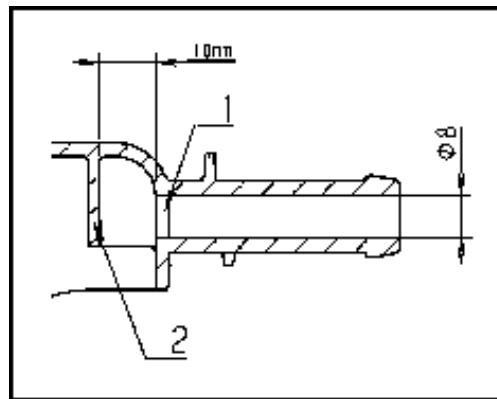
Connection to the cold water supply
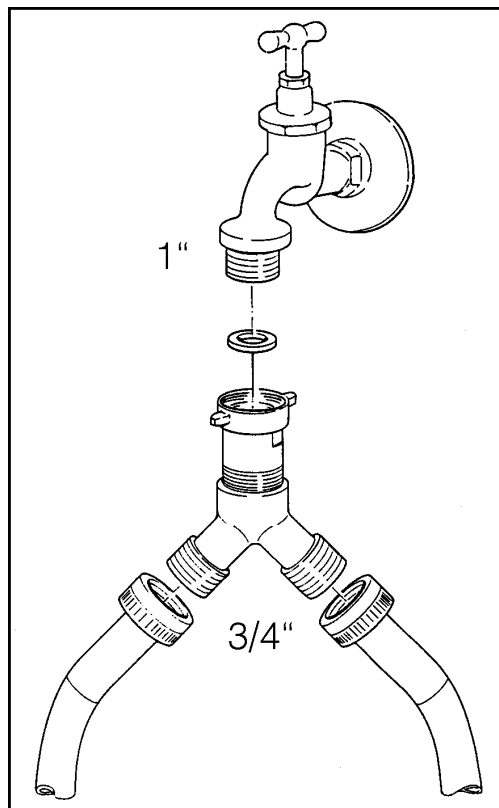
The Y-piece is supplied with the machine.

Dispensing agent connection to the liquid dispensing mixing compartment

> Connections **1** and **2** are provided for viscous detergents. These connection sockets are sealed and need to be drilled out with an 1/3" / 8 mm drill bit.

Use caution when drilling through the outer wall (1) only, as there is a deflecting wall (2)10 mm behind it.
If the drilled out connections are no longer required, they must be re-sealed.

Connections **3** to **12** are for liquid dispensing. These connection sockets are sealed and must be cut to the diameter of the hose with a suitable saw. If the cut out connections are no longer required, they must be resealed.

Drainage

2 1/2" (DN 70) **AV** drain valve, at the machine, 2 1/2" (DN 70) sleeve on-site. Volumetric flow rate 52 gal/min 200 l/min.
If the slope for drainage is extremely steep, the piping must be vented so prevent formation of a vacuum in the machine's drain system.

BWS suds drain and vapor vent
If excessive suds form, suds may escape from the vapor vent. To drain the suds, an optional vapor vent kit can be installed.

Electrical connection

The electrical connections must be carried out by a certified electrician in accordance with national codes and regulations.

Tip: Open the machine lid to access the connection points.

If you install a residual current device (RCD), it must be **Type B**.

The machine electrical systems comply with standards EN 60335-1 and EN 50571.

The voltage is stated on the data plate.

For hard-wired machines, an all-pole means of deactivation must be provided on site. Switches with a minimum contact gap greater than 1/8" (3 mm) are suitable disconnectors. These include circuit breakers, fuses, and contactors (VDE 0660).

The plug connection or the disconnector must be accessible at all times.

You must be able to lock the disconnector or monitor the point of disconnection at all times if the machine has to be disconnected from the power supply.

Please check the enclosed wiring diagram.

Connecting the dispenser pumps

Connection terminals for 4 time-controlled dispenser pumps, which can be operated without a multifunction module, are located behind the cover adjacent to the electrical connection. See the attached wiring diagram.

Once the machine has been successfully installed and connected, replace all the external parts that were removed.

Control panel

① **Display**
See the following pages for more information.

② **Shortcut buttons**
For selecting an individual wash program quickly. These buttons can be programmed to select your own favorite wash programs.

③ *Start* **button**

④ **Optical interface PC**
Testing and transmission point for Miele Service.

⑤ **Power on button**

⑥ **Power off button**

⑦ **Emergency shut-off**

(Not part of all machine versions, see **Availability of emergency stop / emergency stop devices**)

Function buttons

▽ **Stop/Finish**
When a program has started, the right-hand function button acts as a stop button.
After pressing the button the selected program is stopped, if pressed again the program is cancelled.

+⨆ **Block plus.**
The program block in question (e.g. Pre-wash) is added to the program.

⨆⨆⨆ **Starch stop**
Press this button if the laundry is to be starched.

⌀ **Without spin**
Press this button if a final spin is not required after the final rinse.

⌐⇄ **Settings**

🕐 **Start time**
When this button is pressed before starting the program, information about selecting a start time will appear in the display.

↵ **Back** Return to previous display page.

▼/▲ **Information on next / previous line**

🖫 **Save**

See "Access to supervisor level"

🚰 **Water intake**

🔒 **Program locked**

If a program is locked, after 1 minute it can no longer be stopped and cancelled with the finish button.

🔓 **Program unlocked**

⧗ **Data transfer**

🔇 **Tone (buzzer) off**

Overview of function levels

Operator Access with Power on.	Supervisor Access with ⚑ "Settings" button and password.	
Program start for all programs	Menu options in main menu	
Program start only after insertion of coins or with pre-paid card	**Language** Choice of user language for the duration of a program	**Time/Date** Setting the time/date
	Dispensing Changing dispensing settings for individual programs	**Change password**
	Settings Memory function Buzzer Temperature unit Seconds unit Minute unit Hours unit Length unit Mass unit Volume unit Pressure unit Speed unit Max. temperature selection Display standby Contrast setting Time of day Date display Dispensing calibration Dispensing throughput (D1 to 13) Dispensing correction factor (D1 to D13) Dispenser level reminder (D1 to 13) Password Medium water pressure Heat Customer details: - Sector - Last name - First name - Street - House number - Town/city - Zip code - Telephone - System address - Installation date Currency	

Access to supervisor level / changing the password

Password

The supervisor level is accessed by entering a four-digit password from the character set provided. It can only be selected before the program starts or once the program is finished.
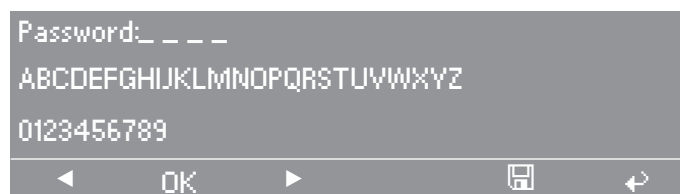
■ Press the ⚑ button until the symbol changes to ⚑⇄.

■ Press the button again.

The following will appear on the display:

Settings	Back ↵
Main menu	Language ⚑
	Supervisor level
◄ OK ►	⚑⇄ ↵

Select "Supervisor level" and press **OK**. The password screen will appear.

> The first time you access the supervisory level, enter the password "M1LE".

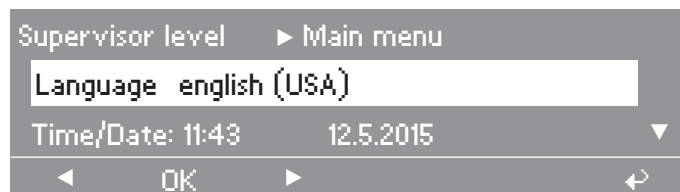| Password:_ _ _ _ |
|---|
| ABCDEFGHIJKLMNOPQRSTUVWXYZ |
| 0123456789 |
| ◄   OK   ►   🖫   ↵ |

■ Select a letter or digit and confirm your entry with the **OK** button.

When **OK** is pressed, the character selected will appear in the corresponding position.

■ Press the 🖫 "Save" button once you have entered all four characters.

The supervisor level will open once you have entered the password.

| Supervisor level   ► Main menu |
|---|
| Language   english (USA) |
| Time/Date: 11:43   12.5.2015   ▼ |
| ◄   OK   ►   ↵ |

> If no function is carried out within 30 seconds, the ↵ button is pressed or an incorrect password is entered, the same display is shown as after a power interruption.
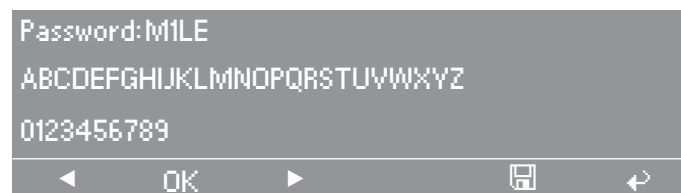
Change password

You can change the password with this menu option.

■ Select supervisor level / main menu.

```
Supervisor level      ► Main menu
Settings                              ▲
Change password                       ▼
     ◄        OK        ►              ↵
```
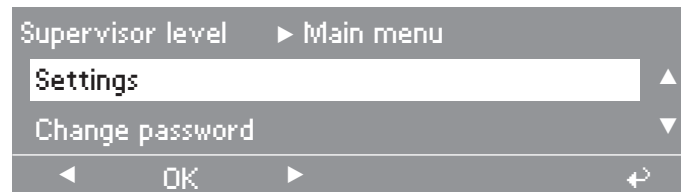
■ Select "Change password" and confirm your entry with the **OK** button.

Once "Change password" is selected and **OK** is pressed, the following will appear on the display:

```
Password:M1LE
ABCDEFGHIJKLMNOPQRSTUVWXYZ
0123456789
     ◄        OK        ►         🖫      ↵
```

■ Select a letter or digit and confirm your entry with the **OK** button.

When **OK** is pressed, the character selected will appear in the corresponding position.

■ Confirm your entry with the 🖫 "Save" button.

Once you have entered the password and pressed 🖫 "Save", the confirmation prompt will appear.

```
Overwrite existing data?


                                 🖫      ↵
```

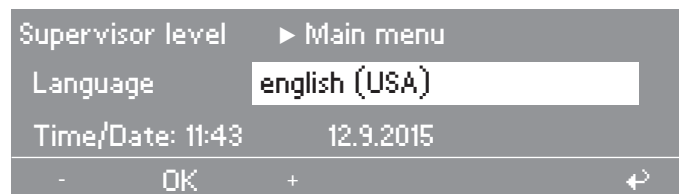■ Press the 🖫 "Save" button.

Language / Time, Date

Main menu options

– Language

– Time/Date

– Dispensing

– Settings

– Change password

Language option

Select the required language.

■ Select the language menu option.

Supervisor level	▶ Main menu
Language	english (USA)
Time/Date: 11:43	12.9.2015
- OK +	↵

Once the language is set, the display will immediately change to the language selected to ensure that the display can be read by all users. It then switches back to the main menu.

Options:
- German - English (GB) - English (USA) - Espanol - Français - Italiano - Nederlands - Norsk - Portugues - Greek - Russian

If a button or the 💾 "Save" button is not pressed within 30 seconds of you accessing the supervisor level "Language", the display will return to the main menu.
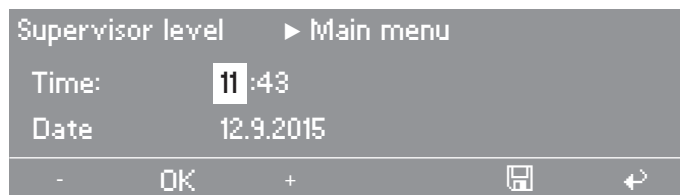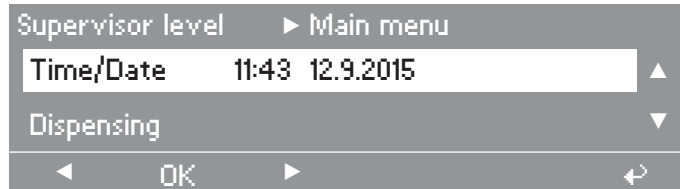
Time, Date option

This menu option is used to set the current date and time.

In the event of a power outage these are retained for approx. 6 weeks. After this time they will need to be reset.

■ Select the Time of day, Date menu option:

The following will appear on the display:

Supervisor level	▶ Main menu	
Time/Date	11:43 12.9.2015	▲
Dispensing		▼
◄	OK ▶	↵

Supervisor level	▶ Main menu	
Time:	11:43	
Date	12.9.2015	
-	OK +	🖫 ↵

■ Press the 🖫"Save" button.

The setting is saved once the 🖫 "Save" button has been pressed and the display has returned to the main menu.

If a button or the 🖫 "Save" button is not pressed within 30 seconds of you accessing the supervisor level "Time/Date", the display will return to the main menu.

Dispensing option

This menu option allows you to change individual dispensing settings.

```
Supervisor level    ▶ Main menu
 Dispensing                          ▲
 Settings                            ▼
      ◄        OK        ▶           ↵
```

■ Select "Dispensing".

The following will appear on the display:

```
Supervisor level▶ Dispensing
 1 Mops Standard              140°F    ▲
 2 Mop Thermal Disinfection   194°F    ▼
      ◄        OK        ▶              ↵
```

■ Select the relevant program.

Once the program is selected, the dispensing parameters will appear:

```
Dispensing ▶ 1 Mops Standard
 Area 1:    Pre-wash
 Block 1: Pre-wash                   ▼
      ◄        OK        ▶           ↵
```

■ Select the required range and block.

```
Dispensing▶ 1 Mops Standard
 Dispensing type    No               ▲
 Dispensing phase 1:  🔒             ▼
      ◄        OK        ▶           ↵
```

The options will appear:

– No

– Quantity in ml

– Concentration ml/l

– Concentration ml/kg

> When "Dispensing method: No" is set, dispensing phases 1 and 2 are disabled.

```
Dispensing▶ 1 Mops Standard
 Dispensing phase 1    No             ▲
 Dispensing phase 2    No             ▼
      ◄        OK        ▶      💾     ↵
```
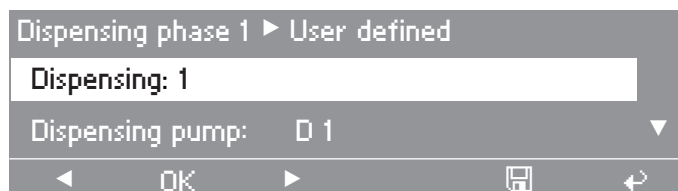
> With the quantity and concentration settings, you can select "No" or "User-defined" for dispensing phases 1 and 2.

```
Dispensing phase 1 ▶ User defined
 Dispensing: 1
 Dispensing pump:    D 1                    ▼
    ◄         OK         ►            🖫        ↵
```
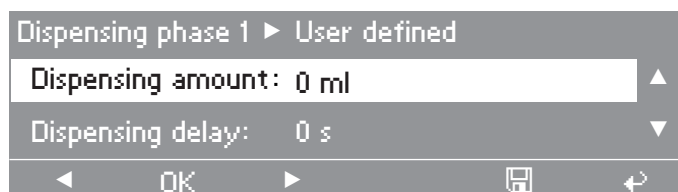
Options:

– Dispensing 1 to 6

  Dispenser pump:

– No

– D1 to D13

```
Dispensing phase 1 ▶ User defined
 Dispensing amount: 0 ml                    ▲
 Dispensing delay:    0 s                   ▼
    ◄         OK         ►            🖫        ↵
```

Dispensing amount: 0 to 9999 depending on dispensing method:

– ml

– ml/l

– ml/kg

Dispensing delay:

– No

– 0 to 999 s

■ Select 🖫 "Save" with the multifunction selector and save the modified dispensing settings,
  or
  press ↵ to return to the program list without saving your changes.

Return to program list with or without saving your changes to the dispensing settings.

Tip: If the correction factor has been changed, it may need to be corrected.
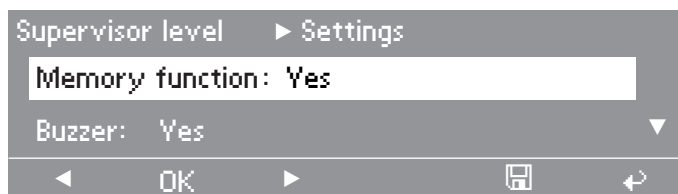
Settings option

Access the settings option.

```
Supervisor level    ▶ Main menu
 Settings                              ▲
 Change password                       ▼
    ◀       OK       ▶          🖫      ↵
```

■ Use the arrow buttons to access the following content:

```
Supervisor level    ▶ Settings
 Memory function: Yes
 Buzzer:  Yes                          ▼
    ◀       OK       ▶          🖫      ↵
```

Sub-menu options:

- Memory function
- Buzzer
- Temperature unit
- Seconds unit
- Minutes unit
- Hours unit
- Length unit
- Mass unit
- Volume unit
- Pressure unit
- Speed unit
- Max. temperature
- Display standby
- Contrast setting
- Time of day
- Date display
- Dispenser calibration
- Dispensing throughput (D1 to D13)
- Dispensing correction factor (D1 to D13)
- Dispenser level reminder (D1 to D13)
- Password
- Medium water pressure
- Heat
- Customer details

– Currency

Save the specified parameters.

■ Specify the parameters.

■ Press the 🖫"Save" button to save the specified parameters.

The parameters are saved and the display switches back to the sub-menu.

Tip: If you press ⬅ or no button is pressed within 30 seconds, the settings are not saved and the display returns to the main menu.

Memory function

The temperature and spin speed program parameters for those programs which can be changed before program start are saved after the program is started. The button functions are not reset at the end of the program, and reappear with the next program selection.

Options:

– No

– Yes

Unit options

When "auto" is set, the unit for temperature, seconds, minutes, hours, length, mass, volume, pressure or revolutions in the set language is used.

Temperature unit
Options:

– auto

– °C

– °F

Seconds unit
Options:

– auto

– s

– sec

– sg

– sek

Minutes unit
Options:

– auto

– min

– mn

Settings option

Hours unit

Options:

– auto

– h

– timer

– tim

– uur

– time

– hr

Length unit

Options:

– auto

– mm

– inches

Mass unit

Options:

– auto

– kg

– l

Volume unit

Options:

– auto

– l

– USA gal

– CDN gal

Pressure unit

Options:

– auto

– bar

– psi

Speed unit

Options:

– auto

– U/min

– T/min

– rpm

– t/mn

– giri/min

– kierr/min

– r/min

– omdr/min

– v/min

– o/min

Buzzer

If "Yes" is programmed, the buzzer is activated along with program stop signal 1 and 2, the block end signal and the fault stop signal. The buzzer frequency increases with the fault stop signal. The buzzer switches off if a button is pressed, and automatically after 5 minutes.

If "No" is programmed, the buzzer is not activated.

Options:

– No

– Yes

Maximum temperature

This value can be set from cold to 203°F (95°C) in 1° increments and limits all temperature settings in the programs to the selected value. This means that when 140°F (60°C) is selected, for example, the water will not be heated to more than 140°F (60°C) in any program even if a higher temperature is programmed for the selected program.

Options:

– Cold

– 59 to 203°F (15 to 95°C)

Display standby

With the setting "Display standby: Yes", the display is switched on when one of the controls is operated. If there are no further operations, the display switches to standby after 10 minutes. The start button light ring flashes to let you know this has happened. The display is switched on again by operating any control; the last screen active then appears.

When "Display standby: No" is set, the display is permanently on.

■ Choose from the following options:

– Yes

– No

Settings option

Contrast setting

Display contrast can be altered from 1 to 10 so the display can be optimized for specific working conditions. The contrast changes as soon as you alter the setting.

Options:

– 1 to 10

Time of day

You can select either the 24-hour or 12-hour clock for the display.

Options:

– 24 h

– 12 h

Date display

Various different display formats are used in line with the language set.

■ Select the date format from the table below.

■

Country	Format
Germany, United Kingdom, Netherlands, France, Italy, Finland, Portugal, Spain, Denmark, Norway, Greece	Day/Month/Year
Sweden	Year/Month/Day
USA	Month/Day/Year

**Tip:** The date format can be changed in line with the country.

Options:

– auto

– Day/Month/Year

– Year/Month/Day

– Month/Day/Year

Dispenser calibration

Dispenser calibration is used to measure the throughput of individual dispenser pumps.

To go directly to "dispenser calibration" when the machine is switched off:

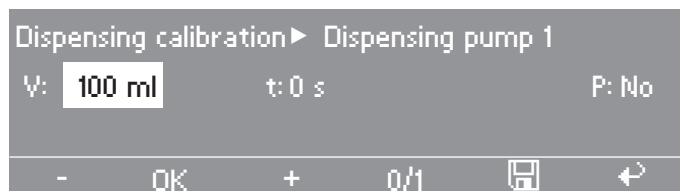■ Press and hold multifunction button 2 and switch the machine on with "Power on".
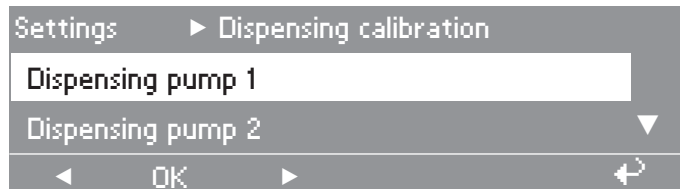
Settings	► Dispensing calibration	
Dispensing pump 1		
Dispensing pump 2		▼
◄	OK	►	↵

Options:

– Dispenser pump 1 to 13

■ Select a dispenser pump.

When a dispenser pump is selected, the following will appear on the display:

Dispensing calibration ► Dispensing pump 1					
V: 100 ml	t: 0 s			P: No	
-	OK	+	0/1	🖫	↵

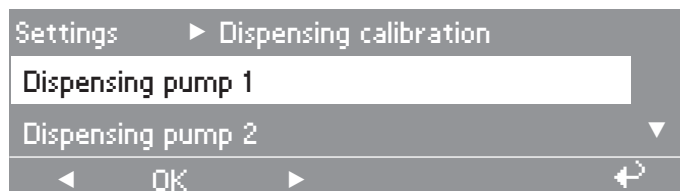**Tip:** The dispensing amount can be set from 0 to 9999 ml in 1 ml increments.

■ Press multifunction button 0/1.

The dispensing hose will fill up.

■ Stop the process by pressing button 0/1.

■ Run the hose of the dispenser pump that is being checked upwards into a measuring vessel.

⚠ Irritant.
Can cause skin and eye irritation.
Avoid contact with skin and eyes, wear protective clothing.

■ Return to the main menu by pressing ↵ "Back".

Settings	► Dispensing calibration	
Dispensing pump 1		
Dispensing pump 2		▼
◄	OK	►	↵

■ Select a dispenser pump.

```
Dispensing calibration ▶ Dispensing pump 1
V:  100 ml          t: 0 s                    P: No

  -       OK        +       0/1       💾       ↵
```
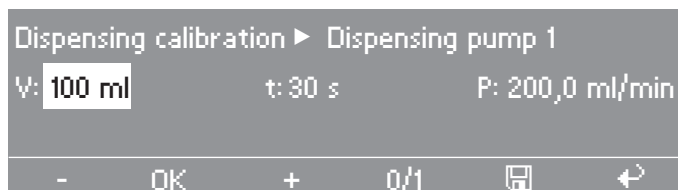
■ Press multifunction button 0/1.

Stop the pump by pressing button 0/1, or the pump will stop automatically after 60 seconds.

■ Measure the required amount into the measuring vessel.

```
Dispensing calibration ▶ Dispensing pump 1
V: 100 ml           t: 30 s        P: 200,0 ml/min

  -       OK        +       0/1       💾       ↵
```

■ Enter the amount measured in field "V:".

The throughput P is calculated in ml/min. by the controls.

■ Press the "Save" 💾 button.

The measured value is assigned to the pump.

■ Reattach the hose.
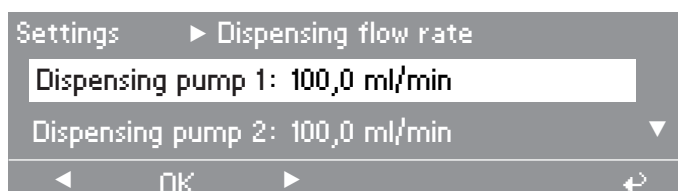
Dispensing throughput (D1 to D13)

The throughput of the connected dispenser pumps can be set from 0 ml/min to 9999 ml/min in 1 ml increments.

■ Access the following content:

```
Supervisor level    ▶ Settings
Dispensing flow rate                          ▲
Dispensing correction factor                  ▼
  ◄       OK        ►                         ↵
```

■ Select "Dispensing throughput".

The following will appear on the display:

```
Settings       ▶ Dispensing flow rate
Dispensing pump 1: 100,0 ml/min
Dispensing pump 2: 100,0 ml/min               ▼
  ◄       OK        ►                         ↵
```
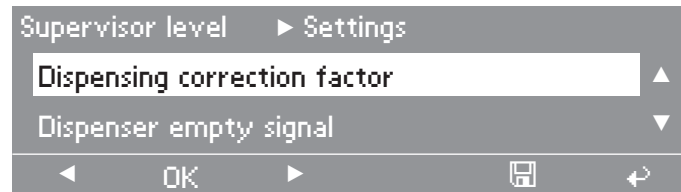
Options:

– No

– 1 to 9999.0 ml/min

Dispensing correction factor (D1 to D13)

The correction factor can be used if an adjustment is made to liquid dispensing. If, for example, the dispensing agent for dispenser pump D 1 has been altered (to a higher concentration), a rapid adjustment can be made with the correction factor.
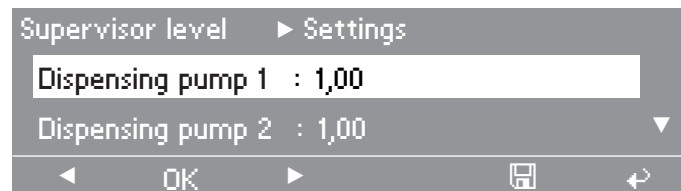
■ Calculate the correction factor using the following formula:

$$\text{Correction factor D1} = \frac{\text{New quantity Dos-p. D1}}{\text{Current quantity Dos-p. D1}}$$

■ Access the following content:

Supervisor level ▶ Settings	
Dispensing correction factor	▲
Dispenser empty signal	▼
◀ OK ▶ 🖫 ↵	

■ Select "Dispensing correction factor".

Supervisor level ▶ Settings	
Dispensing pump 1 : 1,00	
Dispensing pump 2 : 1,00	▼
◀ OK ▶ 🖫 ↵	

You have the following options:

– 0.01 to 1.99

– 2

Once you exit the supervisor level, the new dispensing amounts are used in the programs but the programming is not changed.

Settings option

Dispenser level reminder (D1 to D13)

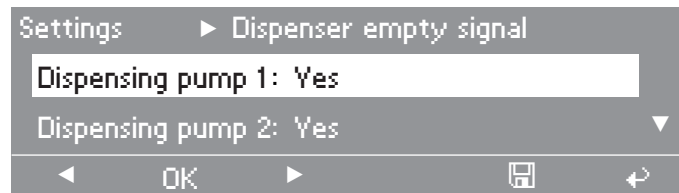Programming is required for the relevant input if a level reminder is required.

```
Supervisor level    ▶ Settings
Dispenser empty signal                        ▲
Password use:        Yes                       ▼
    ◄        OK        ▶              🖫        ↵
```

■ Select "Dispenser level reminder".

```
Settings       ▶ Dispenser empty signal
Dispensing pump 1: Yes
Dispensing pump 2: Yes                         ▼
    ◄        OK        ▶              🖫        ↵
```

Options:

– Yes

– No

Password

The use of a password can be deselected.

■ Set whether or not you want to use a password.
  Options:

– Yes

– No

> However, if a password has already been assigned and the operator then selects "No", they will be prompted to enter the current password when they press ↵ .

Medium water pressure

Medium water pressure must be set in order to calculate consumption. This value is, for example, used for calculating water quantities in individual blocks or for a whole program.

Options:

– 0.1 to 50 bar

– 1 to 800 psi

Heat

> The heater voltage is required for calculating heat output.

Options:

– 0.0 to 999.9 kW

Customer details

> Customer details can be entered here.

Options:

- Sector	- Town/city
- Last name	- Zip code
- First name	- Telephone
- Street	- System address
- House number	- Installation date

Sector

> A sector can be selected here.

Options:

– Nursing home

– Medical practice

– Rest home

- Fire service/rescue services
- Café
- Industrial laundry
- Small business
- Hotel/guesthouse
- Industry
- Youth hostel
- Hospital
- Stables
- School
- Dry cleaners
- Apartments
- Other:
  - Surname and first name
  - Street and house number
  - Town/city and zip code
  - Telephone
  - System address: a 10-digit system address for the machine can be entered here.
  - Installation date

Currency

Options:

- auto	(in line with selected language)
- EUR	euros
- GBP	pounds sterling
- CHF	Swiss francs
- USD	American dollars
- RUB	Russian rubles
- CAD	Canadian dollars
- CZK	Czech koruna
- DKK	Danish kroner
- PLN	Polish zloty
- SEK	Swedish kroner
- TRL	Turkish lira
- SKK	Slovakian kroner

PW 413 machine data

Electrical connection

Connection voltage	See data plate
Frequency	See data plate
Power rating	See data plate
Rated current	See data plate
Fuse rating	See data plate
Heat	See data plate

Installation dimensions

Casing width (without add-on components)	31.3" (795 mm)
Casing height (without add-on components)	53.2" (1350 mm)
Casing depth (without add-on components)	35.4" (897 mm)
Overall machine width	31.5" (799 mm)
Overall machine height	53.3" (1352 mm)
Overall machine depth	39.8" (1010 mm)
Minimum width of transport opening	31.7" (805 mm)
Minimum distance between wall and machine front	53.2" (1350 mm)

Weight and floor load

Net weight	see installation plan
Maximum floor load during operation	see installation plan

Emission levels

Sound pressure level in accordance with EN ISO 11204/11203	< 70 dB(A) re 20 µPa
Sound power level, EN ISO 9614-2	<80 dB(A)

Product safety

Product safety standard	US Field Evaluation UL 206 NFPA 70Bonding and Grounding Only

Technical data

PW 418 machine data

Electrical connection

Connection voltage	See data plate
Frequency	See data plate
Power rating	See data plate
Rated current	See data plate
Fuse rating	See data plate
Heat	See data plate

Installation dimensions

Casing width (without add-on components)	36.3" (920 mm)
Casing height (without add-on components)	57.1" (1450 mm)
Casing depth (without add-on components)	33.8" (857 mm)
Overall machine width	36.4" (924 mm)
Overall machine height	57.2" (1452 mm)
Overall machine depth	35.5" (950 mm)
Minimum width of transport opening	36.7" (930 mm)
Minimum distance between wall and machine front	49.3" (1250 mm)

Weight and floor load

Net weight	see installation plan
Maximum floor load during operation	see installation plan

Emission levels

Sound pressure level in accordance with EN ISO 11204/11203	< 70 dB(A) re 20 μPa
Sound power level, EN ISO 9614-2	<80 dB(A)

Product safety

Product safety standard	US Field Evaluation UL 206 NFPA 70Bonding and Grounding Only

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