Operating instructions
Washer-disinfector
PG 8581

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

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dispensing systems</td>
<td>48</td>
</tr>
<tr>
<td>Labelling of the suction lances</td>
<td>48</td>
</tr>
<tr>
<td>DOS modules</td>
<td>49</td>
</tr>
<tr>
<td>Connecting a DOS module</td>
<td>49</td>
</tr>
<tr>
<td>Rinse aid</td>
<td>50</td>
</tr>
<tr>
<td>Adding rinse aid</td>
<td>50</td>
</tr>
<tr>
<td>Refill indicator</td>
<td>51</td>
</tr>
<tr>
<td>Dispensing rinse aid</td>
<td>51</td>
</tr>
<tr>
<td>Neutralizing agent</td>
<td>52</td>
</tr>
<tr>
<td>Refilling neutralizing agent</td>
<td>52</td>
</tr>
<tr>
<td>Refill indicator</td>
<td>53</td>
</tr>
<tr>
<td>Dispensing neutralizing agent</td>
<td>53</td>
</tr>
<tr>
<td>Instrument care products</td>
<td>53</td>
</tr>
<tr>
<td>Detergent</td>
<td>54</td>
</tr>
<tr>
<td>Refilling liquid cleaning detergent</td>
<td>54</td>
</tr>
<tr>
<td>Refill indicator</td>
<td>55</td>
</tr>
<tr>
<td>Dispensing liquid process chemicals</td>
<td>55</td>
</tr>
<tr>
<td>Operation</td>
<td>56</td>
</tr>
<tr>
<td>Selecting a program</td>
<td>56</td>
</tr>
<tr>
<td>Starting a program</td>
<td>56</td>
</tr>
<tr>
<td>Starting a program using delay start</td>
<td>56</td>
</tr>
<tr>
<td>Drying assistance</td>
<td>58</td>
</tr>
<tr>
<td>Program sequence indicator</td>
<td>59</td>
</tr>
<tr>
<td>End of program</td>
<td>59</td>
</tr>
<tr>
<td>Cancelling a program</td>
<td>60</td>
</tr>
<tr>
<td>Program cancelled due to a fault</td>
<td>60</td>
</tr>
<tr>
<td>Cancelling a program manually</td>
<td>60</td>
</tr>
<tr>
<td>Settings</td>
<td>61</td>
</tr>
<tr>
<td>Delay start</td>
<td>62</td>
</tr>
<tr>
<td>Drying</td>
<td>63</td>
</tr>
<tr>
<td>DOS venting</td>
<td>64</td>
</tr>
<tr>
<td>Filter maintenance</td>
<td>65</td>
</tr>
<tr>
<td>Activating and setting the interval</td>
<td>65</td>
</tr>
<tr>
<td>Language</td>
<td>67</td>
</tr>
<tr>
<td>Time of day</td>
<td>68</td>
</tr>
<tr>
<td>Volume</td>
<td>71</td>
</tr>
<tr>
<td>Additional settings</td>
<td>72</td>
</tr>
<tr>
<td>PIN code</td>
<td>74</td>
</tr>
<tr>
<td>Enter PIN code</td>
<td>74</td>
</tr>
<tr>
<td>Date</td>
<td>76</td>
</tr>
<tr>
<td>Log book</td>
<td>78</td>
</tr>
<tr>
<td>Report</td>
<td>79</td>
</tr>
<tr>
<td>Temperature unit</td>
<td>79</td>
</tr>
<tr>
<td>Program settings</td>
<td>79</td>
</tr>
<tr>
<td>Program release</td>
<td>80</td>
</tr>
<tr>
<td>Moving a program: allocating program selection buttons</td>
<td>81</td>
</tr>
<tr>
<td>Test program</td>
<td>82</td>
</tr>
<tr>
<td>Interface</td>
<td>82</td>
</tr>
<tr>
<td>Water hardness</td>
<td>85</td>
</tr>
<tr>
<td>Section</td>
<td>Page</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Display: Temperature</td>
<td>85</td>
</tr>
<tr>
<td>Display: brightness and contrast</td>
<td>86</td>
</tr>
<tr>
<td>Switch off after</td>
<td>87</td>
</tr>
<tr>
<td>Ready for operation (standby)</td>
<td>87</td>
</tr>
<tr>
<td>Auto-Off function</td>
<td>87</td>
</tr>
<tr>
<td>Switching off after activating</td>
<td>88</td>
</tr>
<tr>
<td>Software version</td>
<td>88</td>
</tr>
<tr>
<td><strong>Program settings</strong></td>
<td>89</td>
</tr>
<tr>
<td>Adjusting program settings</td>
<td>89</td>
</tr>
<tr>
<td>Program structure</td>
<td>89</td>
</tr>
<tr>
<td>Program header</td>
<td>89</td>
</tr>
<tr>
<td>Program blocks</td>
<td>90</td>
</tr>
<tr>
<td>Opening the menu</td>
<td>91</td>
</tr>
<tr>
<td>Resetting a program</td>
<td>92</td>
</tr>
<tr>
<td>Altering a program</td>
<td>93</td>
</tr>
<tr>
<td>Allocating wash blocks</td>
<td>93</td>
</tr>
<tr>
<td>Changing water quantity</td>
<td>94</td>
</tr>
<tr>
<td>Increasing drainage time</td>
<td>95</td>
</tr>
<tr>
<td>Drying assistance</td>
<td>96</td>
</tr>
<tr>
<td><strong>Process documentation</strong></td>
<td>98</td>
</tr>
<tr>
<td>Retrospective output of cycle reports</td>
<td>101</td>
</tr>
<tr>
<td>External software</td>
<td>101</td>
</tr>
<tr>
<td>Report printer</td>
<td>101</td>
</tr>
<tr>
<td><strong>Maintenance</strong></td>
<td>102</td>
</tr>
<tr>
<td>Service</td>
<td>102</td>
</tr>
<tr>
<td>Routine checks</td>
<td>103</td>
</tr>
<tr>
<td>Cleaning the filters in the wash cabinet</td>
<td>103</td>
</tr>
<tr>
<td>Cleaning the spray arms</td>
<td>105</td>
</tr>
<tr>
<td>Cleaning the machine</td>
<td>107</td>
</tr>
<tr>
<td>Cleaning the control panel</td>
<td>107</td>
</tr>
<tr>
<td>Cleaning the door and the door seal</td>
<td>107</td>
</tr>
<tr>
<td>Cleaning the wash cabinet</td>
<td>107</td>
</tr>
<tr>
<td>Cleaning the front</td>
<td>107</td>
</tr>
<tr>
<td>Preventing re-soiling</td>
<td>107</td>
</tr>
<tr>
<td>Checking wash carts, baskets, modules and inserts</td>
<td>108</td>
</tr>
<tr>
<td>Performance qualification</td>
<td>109</td>
</tr>
<tr>
<td><strong>Problem solving guide</strong></td>
<td>112</td>
</tr>
<tr>
<td>Technical faults and messages</td>
<td>112</td>
</tr>
<tr>
<td>Dispensing/dispensing systems</td>
<td>113</td>
</tr>
<tr>
<td>Insufficient salt/water softener</td>
<td>115</td>
</tr>
<tr>
<td>Cancel with fault code</td>
<td>116</td>
</tr>
<tr>
<td>Process-related faults and messages</td>
<td>121</td>
</tr>
<tr>
<td>Door</td>
<td>122</td>
</tr>
<tr>
<td>Unsatisfactory cleaning and corrosion</td>
<td>123</td>
</tr>
<tr>
<td>Spray arm monitoring/wash pressure</td>
<td>124</td>
</tr>
<tr>
<td>Water inlet and drainage</td>
<td>124</td>
</tr>
<tr>
<td>Noises</td>
<td>125</td>
</tr>
<tr>
<td>Printer/serial interface</td>
<td>126</td>
</tr>
</tbody>
</table>
Contents

Maintenance ......................................................................................................................... 127
Cleaning the drain pump and non-return valve................................................................. 127
Clean the water intake filters ......................................................................................... 128

After sales service ............................................................................................................ 129
Contacting Miele Service ................................................................................................ 129
Software version............................................................................................................... 130

Installation ........................................................................................................................ 131
Installation and levelling .................................................................................................. 131
Building under a continuous worktop ............................................................................... 132
  Removing the lid............................................................................................................... 132
Electromagnetic compatibility ......................................................................................... 133

Electrical connection ....................................................................................................... 134
Equipotential bonding connection ................................................................................... 134
Peak-load cut-out ............................................................................................................. 135

Water connection ............................................................................................................. 136
Connecting the water supply .......................................................................................... 136
Connecting the water drain ............................................................................................... 139

Program guide .................................................................................................................. 140

Technical data ................................................................................................................. 142

Caring for the environment ............................................................................................. 143
Disposal of the packing material ..................................................................................... 143
Notes about these instructions

Warnings

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

Notes

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

Additional information and comments

Additional information and comments are contained in a box with a simple frame.

Operating steps

Operating steps are indicated by a black square bullet point.

Example:

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

Display

Information given via the display are shown in display messages using the same font as used in the display.

Example:

Menu Settings ▼.
Intended use

This Miele washer-disinfector is a Class II medical device in accordance with Health Canada.

This Miele washer-disinfector can be used to clean, rinse, thermally disinfect and dry a wide range of reusable medical devices for dental use. Follow the manufacturer’s instructions (according to EN ISO 17664; CAN/CSA-Z 17664) on how to reprocess their items by machine.

Instruments such as dental instruments, suction instruments, handpieces etc. can be reprocessed in this washer-disinfector.

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

Reprocessing items by machine achieves reproducible results and should be used in preference to processing them by hand. Where disinfection is required for the protection of staff and/or patients, a thermal disinfection program, e.g. the Vario TD program should be selected.

According to the $A_0$ concept described in EN ISO 15883-1 (CAN/CSA-Z15883), thermal disinfection occurs at 90°C (+ 5 °C, - 0 °C) with 5 min holding time ($A_0$ 3000), depending on the disinfection result required. The efficacy standard $A_0$ 3000 is suitable for deactivating the HBV virus (Hepatitis virus).

Regional and/or other official directives may apply (e.g. CSA Z314.8 Decontamination of reusable Medical Devices in Canada). Refer to your country's local and national health and safety regulations and guidelines.

The cleaning program must be chosen according to the type of soiling and load being processed. The processing chemicals used for reprocessing the products should be selected to suit the level of cleaning required.

The cleaning result must ensure that items can be disinfected correctly, that subsequent sterilization can be carried out and that the items can be used again safely.

Reusable medical devices are best processed using the Vario TD program where applicable.

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

This washer-disinfector is programmed to carry out the final rinse with mains water or with processed water of a quality to suit the application (e.g. purified water, reverse osmosis water or demineralized water).

This washer-disinfector complies with EN ISO 15883 (CAN/CSA-Z15883).
Spray pressure and spray arm monitoring

The washer-disinfector is equipped with a sensor for monitoring the spray pressure during the active cleaning process stages. The monitoring of the spray pressure is carried out according to the validation guideline and routine monitoring of machine cleaning and disinfection processes for thermostable medical products of the Deutsche Gesellschaft fuer Krankenhaushygiene e.V. (Society for Hospital Hygiene) (DHKG), the Deutsche Gesellschaft fuer Sterilgutversorgung e.V. (German society for Sterile Supply) (DGSV) and the Akbeitskreis Instrumentenaufbereitung (Work Group for Instrument Reprocessing) (AKI) in accordance with the EN ISO 15883. The result of the spray pressure monitoring is recorded via the process documentation.

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

### User profiles

**Daily operators**

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

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

**Administration**

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

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

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

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

1. Comfort door locking mechanism
2. Module slot for a communication module (Back, top right)
3. Test point for validation (Top, front right; only visible with lid removed)
4. Upper machine spray arm
5. Rails for baskets and wash carts
6. Lower machine spray arm
7. Data plate
8. Rinse aid reservoir
9. Salt reservoir
10. Filter combination
11. Toe kick cover
12. On the back:
   - Second data plate
   - Electrical and plumbing connections
   - Suction lance(s) for external supply containers
   - Connections for external dispensing modules (optional DOS modules)
13. Connection point for wash carts and baskets
Guide to the machine

Control panel

1. **Button ☀ (On/Off)**
   For switching the machine on and off.

2. **Buttons 1, 2 and 3**
   Program selection buttons.
   Can be configured.

3. **Button 📚 (program list)**
   For accessing the list of all programs.

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

5. **Arrow buttons ▲ and ▼**
   For navigating within the user interface.

6. **Button ⬅️ (cancel)**
   For canceling a process in the user interface
   (not for canceling programs)

7. **Button ‼️ (settings)**
   For accessing the system settings menu.

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

9. **Button ⛔️ (door release)**
   For opening the door before or after a program.

10. **Button ⚛️ (drying assistance)**
    For switching Drying assistance on and off.

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

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

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

<table>
<thead>
<tr>
<th>Button</th>
<th>LED</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Button</td>
<td>ON</td>
<td>The machine is switched on.</td>
</tr>
<tr>
<td></td>
<td>FLASHES</td>
<td>The machine is ready for use.</td>
</tr>
<tr>
<td></td>
<td>OFF</td>
<td>The machine is switched off.</td>
</tr>
<tr>
<td>Program selection buttons</td>
<td>ON</td>
<td>The respective program has been selected. At the end of the program the LED will remain lit until a different program is selected.</td>
</tr>
<tr>
<td></td>
<td>OFF</td>
<td>The program is not selected or the program settings are being changed.</td>
</tr>
<tr>
<td>Button</td>
<td>ON</td>
<td>A program has been selected from the program list. At the end of the program the LED will remain lit until a different program is selected.</td>
</tr>
<tr>
<td></td>
<td>OFF</td>
<td>No program has been selected from the list or the program settings are being changed.</td>
</tr>
<tr>
<td>Button</td>
<td>ON</td>
<td>The additional &quot;Drying Assistance&quot; function has been activated for the selected program (not available for all programs; see &quot;Program chart&quot;).</td>
</tr>
<tr>
<td></td>
<td>OFF</td>
<td>The additional &quot;Drying Assistance&quot; function has been deactivated.</td>
</tr>
<tr>
<td>Start/Stop button</td>
<td>ON</td>
<td>A program is running.</td>
</tr>
<tr>
<td></td>
<td>FLASHES GREEN</td>
<td>A program has been selected, but not yet started.</td>
</tr>
<tr>
<td></td>
<td>FLASHES RED</td>
<td>A fault has occurred (see &quot;Problem solving guide&quot;).</td>
</tr>
<tr>
<td></td>
<td>OFF</td>
<td>A program has finished.</td>
</tr>
<tr>
<td>Button</td>
<td>ON</td>
<td>The door is closed (locked) and there is no program running.</td>
</tr>
<tr>
<td></td>
<td>FLASHES</td>
<td>A program has finished and the door is closed (locked).</td>
</tr>
<tr>
<td></td>
<td>OFF</td>
<td>A program is running or the door is open (unlocked).</td>
</tr>
</tbody>
</table>
Warning and Safety Instructions

This machine complies with all statutory safety requirements. Inappropriate use can, however, lead to personal injury and material damage. Read these instructions carefully before using it for the first time to avoid the risk of accidents and damage to the machine. Keep these instructions in a safe place and make sure they are available at all times to any user of the machine.

Correct application

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

Risk of injury

Please pay attention to the following notes to avoid injury!

- The washer-disinfector should be commissioned, maintained and repaired by a Miele service technician only. To ensure compliance with Medical Device Regulations and Guidelines, a Miele service contract is recommended. Unauthorised repairs can pose considerable risks or cause personal injury to the user.
- Do not install the machine in an area where there is any risk of explosion or of freezing conditions.
- In order to reduce the risk of water damage, the area around the machine should be limited to furniture and fittings that are designed for use in commercial environments.
- Some metal parts pose a risk of injury/being cut. Wear cut-resistant protective gloves when transporting and setting up the machine.
- If the machine is built under, it must only be installed under a continuous worktop run which is firmly secured to adjacent units to improve stability.
Warning and Safety Instructions

- The electrical safety of this machine can only be guaranteed when it is correctly grounded. It is essential that this standard safety requirement is met. If in any doubt, please have the electrical installation tested by a qualified electrician. Miele cannot be held liable for the consequences of an inadequate earthing system (e.g. electric shock).

- A damaged or leaking machine is dangerous and poses a safety hazard. Immediately disconnect the machine at the power switch and contact the Miele Service Department.

- Personnel operating the machine should be trained on a regular basis. Untrained personnel must not be allowed access to the machine or its controls.

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

- Always exercise caution when handling the process chemicals for this machine. These products may contain irritant, corrosive or toxic ingredients. Always comply with safety requirements and the manufacturer's safety instructions (see safety data sheets)! Use protective eyewear and gloves!

- The machine is designed to operate with water and the recommended process chemicals only. Organic solvents or flammable liquid agents must not be used in it! This could cause an explosion, property damage due to the destruction of rubber and plastic components, and the resulting leakage of liquids.

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

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

- Do not sit or lean on the opened door. This could cause the machine to tip or become damaged.

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

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

- When operating the washer-disinfector, bear in mind the possibility of high temperatures. If the door is opened bypassing the safety lock, there is a danger of burning, scalding and chemical burns.
Warning and Safety Instructions

▶ Should personnel accidentally come into contact with toxic vapours or processing chemicals, consult the manufacturer's safety data sheets for emergency procedures.

▶ Always allow wash carts, baskets, modules, inserts, and loads to cool down before unloading. Any water remaining in concave items could still be very hot. Empty them into the wash cabinet before taking them out.

▶ Never clean the machine or surrounding area with a water hose or a pressure washer.

▶ The machine must be disconnected from the mains electricity supply before any maintenance or repair work is carried out.
Quality assurance
The following points should be observed, to assist in maintaining quality standards when reprocessing medical devices, in order to protect patients, and to avoid damage to property.

- If it is necessary to interrupt a program in exceptional circumstances, this may only be done by authorised personnel.
- The standard of cleaning and disinfection in the disinfection programs must be routinely confirmed by the user. The process should be regularly tested and documented, both thermo-electrically and through inspection.
- For thermal disinfection, the appropriate temperatures and holding times, as required by microbiological and public health standards and guidelines, must be used to achieve the required degree of infection control.
- Make sure items being washed are suitable for machine processing and are in good condition. Plastic items must be thermally stable. Nickel plated items and anodised aluminum items can be machine processed using special procedures only. Items containing iron, and soiling containing residual rust must not be placed in the cabinet.
- Under certain circumstances process chemicals can cause damage to the machine. Always follow the recommendations of the process chemical manufacturers. In case of damage or doubt about compatibility, please consult with Miele.
- Instrument care products based on paraffin oils (white oils) can damage elastomers and plastics in the machine. Such care products may not be dispensed as chemical agents in these machines even if they are recommended for machine use by the care product manufacturer.
- Abrasive substances must not be placed in the machine as they could cause damage to the mechanical components of the water supply. Any residues of abrasive substances on items to be washed must be removed without trace before reprocessing in the machine.
- Pre-treating (e.g. with cleaning agents or disinfectants), some types of soiling and the interaction of certain processing chemicals can cause foaming. Foam can have an adverse effect on the cleaning and disinfection results obtained.
- The process must be set so that no foam escapes the wash compartment. Escaping foam jeopardizes the safe operation of the machine.
- The process must be checked regularly in order to detect any foaming.
To prevent material damage to the machine and accessories used from the effects of process chemicals, soiling and their interaction, follow the notes in chapter "Chemical Processes and technology".

Even when a chemical additive (e.g. cleaning chemical) is recommended on technical application grounds, the machine manufacturer takes no responsibility for the effect of such chemicals on the material of the items being cleaned. Note that formulation changes, storage conditions, etc., that are not disclosed by the chemical manufacturer may adversely affect the cleaning results obtained.

When using process chemicals, always follow the instructions of the chemical's manufacturer. The process chemicals must only be used for the application it is designed for and in the situation specified to avoid material damage and such dangers as a severe chemical reaction (e.g. an explosive oxyhydrogen gas reaction).

Always follow the relevant manufacturer's instructions on storage and disposal of process chemicals.

Particles ≥ 0.8 mm are removed by the filters in the wash chamber. Smaller particles may find their way into the circulation system. For this reason, processing of wash loads with narrow openings requires additional filtering of the wash water.

For critical applications, where very stringent reprocessing requirements have to be met, it is strongly recommended that all process-related factors (processing chemicals, water quality, etc.) are discussed in advance with Miele.

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

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

Empty all containers and hollow utensils before loading them into the machine.

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

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

To avoid corrosive damage, make sure the stainless steel housing does not come into contact with solutions or steam containing hydrochloric acid.

After any plumbing work the water pipework to the machine will need to be vented. If this is not done, components can be damaged.
The gaps between a built-in machine and adjacent cabinetry must not be filled with silicone sealant as this could compromise the ventilation of the circulation pump.

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

Using accessories

► Only Miele accessories should be connected to this machine for the appropriate application. Consult Miele for details on the type of equipment to use.

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

Symbols on the machine

Attention: 
Observe the operating instructions!

Attention:
Danger of electric shock!

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

Risk of being cut:
Wear cut-resistant protective gloves when transporting and setting up the machine!
Disposing of your old appliance

Please note that the machine may have contamination from blood, bodily fluids, pathogenic germs and facultative pathogenic germs in it and must be decontaminated before disposal. For environmental and safety reasons ensure the machine is completely drained of any residual chemical agent. Observe safety regulations and wear protective eyewear and gloves. Remove the door lock, or make it inoperable, so that children cannot accidentally shut themselves in. Then make appropriate arrangements for its safe disposal.

Miele will not be held liable for damage caused by failure to comply with these Warning and Safety Instructions.
Operation

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

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

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

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

The machine must be connected to the electrical supply.

Press the \( \textcircled{\bigcirc} \) button until the LED lights up.

After that, the display will show the following:

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

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

Switching off

Press the \( \textcircled{\bigcirc} \) button.

Auto-Off function

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

Use the \( \textcircled{\bigcirc} \) button to switch the machine on again.

Ready for operation (standby)

When it is ready for use (standby), the machine remains switched on, the \( \textcircled{\bigcirc} \) button flashes and the time is shown on the display. Pressing any button reactivates the machine. Standby can be switched on and off as required (see "Further settings/Switch off after").
**Operation**

**User interface in the display**

The user interface of the machine is controlled by menus. The menus are displayed in a 3-line display on the control panel.

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

```
1 | 2 | Settings
3 | Language
   | Date
```

**Menu operation**

**Settings button**

For accessing the system settings menus.

**\[\text{\textasciitilde}\]** and **\[\text{\textasciitilde}\]**

**Arrow buttons**

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

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

**OK**

**OK button**

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

**\[\text{\textasciitilde}\]**

**Cancel button**

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

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

**Input procedure**

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

Example:

-  ’≡ button
  - Settings
  - Time of day
  - Time format

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

**Display view**

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

Example:

-  1
-  2
-  3

**Extras**

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

Example:

-  12 h
  - Time of day display in 12-hour format (am/pm).
-  24 h
  - Time of day display in 24-hour format.

**Method**

Then further instructions are given.

Example:

- Select an option using the ▲ and ▼ arrow buttons.
- Press OK to save the setting.
Operation

Symbols in the display

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

Use the ▲ and ▼ arrow buttons on the control panel to navigate through the menu.

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

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

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

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

Fault messages
In the event of a fault, a warning triangle is shown in place of the □ symbol. See "Problem solving guide" and "After sales service" for more information.
Electronic door locking
The machine is equipped with a Comfort door lock. When the door is closed, the Comfort door lock automatically pulls the door into the correct position, electronically locking the door.

Opening the door
An electronically locked door can only be opened if:
– the machine is connected to the electrical supply and is switched on (the LED for the button is lit up),
– there is no program running,
– the temperature in the wash cabinet is less than 60 °C and
– the LED is lit up.
Press the button to open the door.
The Comfort door lock opens the door slightly. The LED goes out as soon as the door is unlocked.

The control panel of the machine is also a door handle.

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

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

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

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

Opening the door using the emergency release

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

⚠️ If the emergency release is operated during a program cycle, hot water and process chemicals can escape. Risk of scalding, burning and chemical burns.

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

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

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

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

- Switch the washer-disinfector off and on again with the button.
- Acknowledge the fault message by entering your PIN code. The standard PIN code is "8000".


**Water softener**

**Water hardness**

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

Mains water with a water hardness of .7 mmol/l (4 gr/gal) must be softened. This occurs automatically in the built-in water softener. The water softener must be set to the exact hardness of the mains water (see “Water softener/Setting the water hardness”).

Your local water authority can give you information about the exact water hardness in your area. It is useful to know your water hardness so that you can provide the service technician with this information in the event of any subsequent service calls. For this reason, record the hardness of the mains water here:

________________________mmol/l or gr/gal

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

If the hardness level of your water is constantly less than .7 mmol/l (= 4 gr/gal), salt is not required for the water softener. The water hardness level must, however, still be set.
Setting the water hardness level

Water hardness can be set between 0 - 70 gr/gal.

- Open the menu as follows:
  - Button "≡" Additional settings
  - Water hardness

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

Where the water hardness fluctuates, e.g. between 8 - 17 gr/gal, always program the machine to the higher value, 17 gr/gal in this example.

- Set the water hardness level using the arrow buttons (▲ = higher and ▼ = lower).
- Press OK to save the setting.
### Settings table

<table>
<thead>
<tr>
<th>gr/gal</th>
<th>ppm CaCO₃</th>
<th>mmol/l</th>
<th>Display</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>20</td>
<td>0.2</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>40</td>
<td>0.4</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>50</td>
<td>0.5</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>70</td>
<td>0.7</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>90</td>
<td>0.9</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>110</td>
<td>1.1</td>
<td>6</td>
</tr>
<tr>
<td>7</td>
<td>130</td>
<td>1.3</td>
<td>7</td>
</tr>
<tr>
<td>8</td>
<td>140</td>
<td>1.4</td>
<td>8</td>
</tr>
<tr>
<td>9</td>
<td>160</td>
<td>1.6</td>
<td>9</td>
</tr>
<tr>
<td>10</td>
<td>180</td>
<td>1.8</td>
<td>10</td>
</tr>
<tr>
<td>11</td>
<td>200</td>
<td>2.0</td>
<td>11</td>
</tr>
<tr>
<td>12</td>
<td>220</td>
<td>2.2</td>
<td>12</td>
</tr>
<tr>
<td>13</td>
<td>230</td>
<td>2.3</td>
<td>13</td>
</tr>
<tr>
<td>14</td>
<td>250</td>
<td>2.5</td>
<td>14</td>
</tr>
<tr>
<td>15</td>
<td>270</td>
<td>2.7</td>
<td>15</td>
</tr>
<tr>
<td>16</td>
<td>290</td>
<td>2.9</td>
<td>16</td>
</tr>
<tr>
<td>17</td>
<td>310</td>
<td>3.1</td>
<td>17</td>
</tr>
<tr>
<td>18</td>
<td>320</td>
<td>3.2</td>
<td>18</td>
</tr>
<tr>
<td>19</td>
<td>340</td>
<td>3.4</td>
<td>19 *)</td>
</tr>
<tr>
<td>20</td>
<td>360</td>
<td>3.6</td>
<td>20</td>
</tr>
<tr>
<td>21</td>
<td>380</td>
<td>3.8</td>
<td>21</td>
</tr>
<tr>
<td>22</td>
<td>400</td>
<td>4.0</td>
<td>22</td>
</tr>
<tr>
<td>23</td>
<td>410</td>
<td>4.1</td>
<td>23</td>
</tr>
<tr>
<td>24</td>
<td>430</td>
<td>4.3</td>
<td>24</td>
</tr>
<tr>
<td>25</td>
<td>450</td>
<td>4.5</td>
<td>25</td>
</tr>
<tr>
<td>26</td>
<td>470</td>
<td>4.7</td>
<td>26</td>
</tr>
<tr>
<td>27</td>
<td>490</td>
<td>4.9</td>
<td>27</td>
</tr>
<tr>
<td>28</td>
<td>500</td>
<td>5.0</td>
<td>28</td>
</tr>
<tr>
<td>29</td>
<td>520</td>
<td>5.2</td>
<td>29</td>
</tr>
<tr>
<td>30</td>
<td>540</td>
<td>5.4</td>
<td>30</td>
</tr>
<tr>
<td>31</td>
<td>560</td>
<td>5.6</td>
<td>31</td>
</tr>
<tr>
<td>32</td>
<td>580</td>
<td>5.8</td>
<td>32</td>
</tr>
<tr>
<td>33</td>
<td>590</td>
<td>5.9</td>
<td>33</td>
</tr>
<tr>
<td>34</td>
<td>610</td>
<td>6.1</td>
<td>34</td>
</tr>
<tr>
<td>35</td>
<td>630</td>
<td>6.3</td>
<td>35</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>gr/gal</th>
<th>ppm CaCO₃</th>
<th>mmol/l</th>
<th>Display</th>
</tr>
</thead>
<tbody>
<tr>
<td>36</td>
<td>650</td>
<td>6.5</td>
<td>36</td>
</tr>
<tr>
<td>37</td>
<td>670</td>
<td>6.7</td>
<td>37</td>
</tr>
<tr>
<td>38</td>
<td>680</td>
<td>6.8</td>
<td>38</td>
</tr>
<tr>
<td>39</td>
<td>700</td>
<td>7.0</td>
<td>39</td>
</tr>
<tr>
<td>40</td>
<td>720</td>
<td>7.2</td>
<td>40</td>
</tr>
<tr>
<td>41</td>
<td>740</td>
<td>7.4</td>
<td>41</td>
</tr>
<tr>
<td>42</td>
<td>760</td>
<td>7.6</td>
<td>42</td>
</tr>
<tr>
<td>43</td>
<td>770</td>
<td>7.7</td>
<td>43</td>
</tr>
<tr>
<td>44</td>
<td>790</td>
<td>7.9</td>
<td>44</td>
</tr>
<tr>
<td>45</td>
<td>810</td>
<td>8.1</td>
<td>45</td>
</tr>
<tr>
<td>46</td>
<td>830</td>
<td>8.3</td>
<td>46</td>
</tr>
<tr>
<td>47</td>
<td>850</td>
<td>8.5</td>
<td>47</td>
</tr>
<tr>
<td>48</td>
<td>860</td>
<td>8.6</td>
<td>48</td>
</tr>
<tr>
<td>49</td>
<td>880</td>
<td>8.8</td>
<td>49</td>
</tr>
<tr>
<td>50</td>
<td>900</td>
<td>9.0</td>
<td>50</td>
</tr>
<tr>
<td>51</td>
<td>920</td>
<td>9.2</td>
<td>51</td>
</tr>
<tr>
<td>52</td>
<td>940</td>
<td>9.4</td>
<td>52</td>
</tr>
<tr>
<td>53</td>
<td>950</td>
<td>9.5</td>
<td>53</td>
</tr>
<tr>
<td>54</td>
<td>970</td>
<td>9.7</td>
<td>54</td>
</tr>
<tr>
<td>55</td>
<td>990</td>
<td>9.9</td>
<td>55</td>
</tr>
<tr>
<td>56</td>
<td>1000</td>
<td>10.0</td>
<td>56</td>
</tr>
<tr>
<td>57</td>
<td>1020</td>
<td>10.2</td>
<td>57</td>
</tr>
<tr>
<td>58</td>
<td>1040</td>
<td>10.4</td>
<td>58</td>
</tr>
<tr>
<td>59</td>
<td>1060</td>
<td>10.6</td>
<td>59</td>
</tr>
<tr>
<td>60</td>
<td>1070</td>
<td>10.7</td>
<td>60</td>
</tr>
<tr>
<td>61</td>
<td>1090</td>
<td>10.9</td>
<td>61</td>
</tr>
<tr>
<td>62</td>
<td>1110</td>
<td>11.1</td>
<td>62</td>
</tr>
<tr>
<td>63</td>
<td>1130</td>
<td>11.3</td>
<td>63</td>
</tr>
<tr>
<td>64</td>
<td>1150</td>
<td>11.5</td>
<td>64</td>
</tr>
<tr>
<td>65</td>
<td>1160</td>
<td>11.6</td>
<td>65</td>
</tr>
<tr>
<td>66</td>
<td>1180</td>
<td>11.8</td>
<td>66</td>
</tr>
<tr>
<td>67</td>
<td>1200</td>
<td>12.0</td>
<td>67</td>
</tr>
<tr>
<td>68</td>
<td>1220</td>
<td>12.2</td>
<td>68</td>
</tr>
<tr>
<td>69</td>
<td>1240</td>
<td>12.4</td>
<td>69</td>
</tr>
<tr>
<td>70</td>
<td>1250</td>
<td>12.5</td>
<td>70</td>
</tr>
</tbody>
</table>

*) Factory default setting
Filling the salt reservoir

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

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

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

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

- Lift up the funnel.

The reservoir takes approx. 1.4 - 2 kg (3 - 4.4 lbs) of salt, depending on the type of salt and how much is remaining in the reservoir.
Do not fill the reservoir with water. The reservoir could overflow when filled with salt.

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

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

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

- Close the reservoir.

- Run the **Rinse** program after refilling salt.

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

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

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

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

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

If there is no saline solution left in the water softener, a relevant message will appear in the display and the machine will be locked for further use. The machine can be used again a few seconds after the salt has been refilled.
Wash carts, baskets, modules and inserts

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

Select accessories which are appropriate for the application.

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

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

Water supply

Wash carts and baskets with spray arms are equipped with one or more connection points to the water supply. When loading baskets, wash carts, etc. into the machine, connect these to the water connection points in the back panel of the wash cabinet. The wash carts and baskets are held in place by the wash cabinet door when closed.

Any free connections in the back panel are closed mechanically.

Older models of wash carts and baskets

Only use older models of wash carts and baskets in this machine in consultation with Miele. In particular wash carts and baskets with water supply pipes for spray arms and injector manifolds must be converted to the new type of water connector.

Conversion must be carried out by Miele Service and is only available for selected models.

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

Following conversion, wash carts and baskets can no longer be used in older models of the machine.
Upper basket height adjustment

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

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

- A stainless steel plate with 2 openings,
- a plastic connection piece and
- 6 screws

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

To adjust the upper basket:

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

To adjust the upper basket to the ...

... upper position:

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

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

... lower position:

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

Then check:

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

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

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

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

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

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

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

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

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

- Arrange the load so that water can access all surfaces. This ensures that it gets properly cleaned.
- Do not place items to be cleaned inside other pieces where they may be concealed. Do not place items so close together that cleaning is hampered! Do not place items so close together that cleaning is hampered.
- Hollow items must be thoroughly cleaned, internally and externally.
- Ensure that items with long narrow hollow sections can be flushed through properly before placing them in a fitting or when connecting them to a water connection.
- Hollow vessels should be inverted and placed in the correct mobile units, baskets, modules and inserts to ensure that water can flow in and out of them unrestricted.
- Deep-sided items, e.g. trays, should be placed at an angle to make sure water runs off them freely.
- Take apart any items which can be dismantled according to the manufacturer’s instructions and process the individual parts separately from each other.
- Lightweight items should be secured with a cover net (e.g. the A 6 or the A 810) and small items placed in a mesh tray to prevent them from blocking the spray arms.
- The spray arms must not be blocked by items which are too tall or which hang down in their path.
- Broken glass can result in serious injury when loading or unloading. Broken glass items must not be processed in the machine.
- Nickel and chrome plated items and items made of aluminium require special procedures and are not generally suitable for machine reprocessing. They require special processing conditions.
- It is advisable to use only instruments made of special application steel which are not susceptible to corrosion.
Application technology

- Only reprocess small items and micro components in special inserts, mesh trays with lids or mesh inserts.
- Plastic items must be thermally stable.

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

Preparing the load

- Empty the load before sorting
- Ensure that no acid or solvent residues, especially hydrochloric acid or chlorides, get inside the wash cabinet.
- Dismantle the items for washing where possible according to the manufacturer's instructions and open any valves or taps.
- Follow the instructions of the manufacturer regarding pre-cleaning and pre-treatment as necessary.
- Thoroughly rinse items which have been pre-treated with chemicals (see "Wet loading")

Dry loading

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

Dry loading is preferable for contaminated medical items.

Wet loading

Chemically pre-treated items must be rinsed thoroughly by hand or using the Rinse program before reprocessing in the washer-disinfector to avoid a significant build-up of foam.
Carry out a visual check before starting a program:

– Is everything correctly loaded/connected for cleaning?
– Was the recommended loading template followed?
– Can the lumen / narrow sections of hollow items be accessed by the wash fluid?
– Are the spray arms clean, and can they rotate freely?
– Are the filters clean?
  Remove any coarse soiling and clean the filters if necessary.
– Are the removable modules, injector nozzles, irrigation sleeves and other rinsing fittings securely connected?
– Are the baskets and modules or wash carts correctly connected to the water supply and are the water connectors undamaged?
– Are all chemical containers sufficiently filled?

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

– Carry out a visual check of the load for cleanliness.
– Check that all hollow items are still securely located on their injector nozzles.

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

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

Recontamination  Take appropriate measures to prevent recontamination of processed items, e.g.:

- Wear clean gloves when removing the wash load.
- Remove the entire wash load from the carriers before reloading them.

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

**Instruments**

Any deposits such as dental cement, composite, polishing paste or similar must be removed immediately after examination of the patient, e.g. with a swab, before it hardens.

Instruments with particularly complex functional ends or very stubborn deposits may require ultrasonic pre-treatment.

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

After thermal disinfection, manual secondary cleaning can be undertaken according to relevant bio-substance regulations without danger of infection, although the process must be monitored as necessary.

**Transmission instruments**

Transmission instruments with light guide rods can be regarded as durable, whereas fiber optic bundles can be susceptible to more rapid wear.

For cleaning, use a neutral to mild alkaline liquid detergent. If deposits occur a neutralizer based on citric acid should be dispensed.

To avoid clogging of the fine channels in the transmission instruments by treatment residues from the wash water, the wash water must be filtered prior to the use for internal cleaning. Therefore, to reprocess transmission instruments, use the upper injector basket A 105 in combination with the reusable filter tube A 800 and the receptacle for transmission instruments A 803 or the holder AUF 1.

The upper injector basket, the filter tube and the holder AUF 1 come with their own manuals.

- After processing dry internal sections of transmission instruments with sterilized compressed air and then sterilize as required following manufacturer’s instructions. Observe national health and safety regulations.

Before using transmission instruments again following reprocessing, a function check must be carried out, e.g. by spraying into a basin, to ensure they are clear.
Mirrors

⚠️ Not all glass mirrors can be reprocessed by machine. Always follow the manufacturer’s instructions.

Rhodium-coated mirrors, because of their delicate surface, must be loaded in such a way that the mirror surfaces cannot sustain mechanical damage during reprocessing, e.g. by knocking against other instruments.

Mouth rinse beakers

Mouth rinse beakers should preferably only be reprocessed in the upper basket. There is a greater risk of stress cracking and corrosion in the lower basket due to larger temperature fluctuations and risk of mechanical damage.

Opal glass is particularly suitable for reprocessing in a washer-disinfector.
In this section you will find a description of the causes of common chemical reactions which can occur between different types of soiling, processing chemicals and the components of the machine, along with their remedies as necessary.

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

### General information

<table>
<thead>
<tr>
<th>Problem</th>
<th>How to resolve it</th>
</tr>
</thead>
</table>
| If elastomers (seals and hoses) and plastic components in the machine are damaged, this can lead to, for example, swelling, shrinking, hardening or brittleness of materials leading to the development of tears and cracks. Components can then not function correctly and this generally leads to leaks. | – Establish the cause of the damage and rectify it.  
See also the information on "Process chemicals", "Soiling" and "Reaction between processing chemicals and soiling". |
| Heavy foaming during a program affects cleaning and rinsing results. Foam escaping from the wash cabinet can cause damage to the washer-disinfector. Cleaning processes cannot be regulated where there has been a build-up of foam. | – Establish the cause of the foam and rectify it.  
– Check the process used regularly to monitor foaming levels.  
See also the information on "Process chemicals", "Soiling" and "Reaction between processing chemicals and soiling". |
| Corrosion to stainless steel of the wash cabinet and to accessories has various appearances:  
– rust formation (red spots / discolouration),  
– black spots / discolouration,  
– white spots / discolouration (etched surface).  
Corrosive pitting can lead to the washer-disinfector not being water-tight. Depending on application, corrosion can influence cleaning and rinsing results or cause corrosion to stainless steel items in the cabinet. | – Establish the cause of the corrosion and rectify it.  
See also the information on "Process chemicals", "Soiling" and "Reaction between processing chemicals and soiling". |
## Connected processing chemicals

<table>
<thead>
<tr>
<th>Problem</th>
<th>How to resolve it</th>
</tr>
</thead>
</table>
| The ingredients in chemical agents have a strong influence on the longevity and functionality (throughput) of the dispensing system. | - Only use process chemicals supplied and approved by Miele in this machine. The instructions and recommendations of the process chemicals must be observed.  
- Carry out a regular visual check of the dispensing system (suction lances, hoses, dispensing containers etc.) for any damage.  
- Regularly check the flow rate of the dispensing system.  
- Ensure that the regular cycle of maintenance is observed.  
- Please contact Miele Service for advice. |
| Process chemicals can damage elastomers and plastics in the washer-disinfector and accessories. | - Only use process chemicals supplied and approved by Miele in this machine. The instructions and recommendations of the process chemicals must be observed.  
- Carry out a regular visual check of any accessible elastomers and plastics for damage. |
| The following process chemicals can cause large amounts of foam to build up:  
- cleaning and rinsing agents containing tensides.  
Foam can occur:  
- in the program block in which the process chemical is dispensed,  
- in the subsequent program block due to carry-over,  
- in the subsequent program with rinse aid due to carry-over. | - Process parameters in the wash program, such as dispensing temperature, dosage concentration etc. must be set to ensure the whole process is foam free or very low foaming.  
- Observe the instructions of the manufacturer of the processing chemicals. |
### Connected processing chemicals

<table>
<thead>
<tr>
<th>Problem</th>
<th>How to resolve it</th>
</tr>
</thead>
<tbody>
<tr>
<td>De-foaming agents, particularly silicone-based de-foaming agents, can cause the following:</td>
<td></td>
</tr>
<tr>
<td>– deposits in the wash cabinet,</td>
<td></td>
</tr>
<tr>
<td>– deposits on the load,</td>
<td></td>
</tr>
<tr>
<td>– elastomers and plastics in the washer-disinfector can be damaged,</td>
<td></td>
</tr>
<tr>
<td>– damage to certain plastics (e.g. polycarbonate and plexiglass) in the load being processed.</td>
<td>- De-foaming agents should be used in exceptional cases only, for instance when absolutely essential for the process.</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>De-foaming agents should be used in exceptional cases only, for instance when absolutely essential for the process.</td>
<td>- The wash cabinet and accessories should be periodically cleaned without a load and without de-foaming agent using the Special 93°C-10’ program.</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>The wash cabinet and accessories should be periodically cleaned without a load and without de-foaming agent using the Special 93°C-10’ program.</td>
<td>- Please contact Miele Service for advice.</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Soiling

<table>
<thead>
<tr>
<th>Problem</th>
<th>How to resolve it</th>
</tr>
</thead>
<tbody>
<tr>
<td>The following substances can lead to a heavy build-up of foam during washing and rinsing:</td>
<td></td>
</tr>
<tr>
<td>– agents such as disinfection agents, dishwashing detergents etc.</td>
<td></td>
</tr>
<tr>
<td>– active foaming agents such as tensides.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Thoroughly rinse items in water beforehand.</td>
<td></td>
</tr>
<tr>
<td>Select a wash program with one or more short pre-rinses with cold or hot water.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>The following substances can cause corrosion to the stainless steel in the wash cabinet and the accessories:</td>
<td></td>
</tr>
<tr>
<td>– hydrochloric acid,</td>
<td></td>
</tr>
<tr>
<td>– other substances containing chlorides such as sodium chloride etc.,</td>
<td></td>
</tr>
<tr>
<td>– concentrated sulphuric acid,</td>
<td></td>
</tr>
<tr>
<td>– chromic acid,</td>
<td></td>
</tr>
<tr>
<td>– particles of iron and shavings.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Thoroughly rinse items in water beforehand.</td>
<td></td>
</tr>
<tr>
<td>Put the drip-dry items to be washed into the wash carts, baskets, modules and inserts and start a program as soon as possible after placing in the machine.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Reactions between processing chemicals and soiling

<table>
<thead>
<tr>
<th>Problem</th>
<th>How to resolve it</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soiling containing high protein levels such as blood can cause a heavy build-up of foam when processed with alkaline processing chemicals.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Select a wash program with one or more short pre-rinses with cold water.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-precious metals such as aluminum, magnesium and zinc can release hydrogen when processed with very acidic or alkaline process chemicals (oxyhydrogen reaction).</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Observe the instructions of the manufacturer of the processing chemicals.</td>
<td></td>
</tr>
</tbody>
</table>
Using process chemicals

⚠️ Only use process chemicals designed specifically for use in this machine and follow the manufacturer’s instructions on their application. Please observe carefully any instructions relating to non-toxic residues.
Miele recommends the use of Miele process chemicals to ensure maximum cleaning performance, material compatibility and machine longevity. The use of other process chemicals might result in discoloration or other material compromises, excess foaming or premature equipment failure.

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

Contact Miele for information about suitable process chemicals.
**Dispensing systems**

The machine is equipped with a number of internal dispensing systems for process chemicals:

- **Rinse aid**
  This is dispensed via a storage reservoir in the door.

- **Neutralisation agent**
  This is dispensed using a suction lance.

- **Liquid cleaning detergent**
  This is dispensed via a suction lance.

**Labelling of the suction lances**

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

Miele uses and recommends the following:

- **Blue:** for cleaning detergent
- **Red:** for neutralizing agent
- **Green:** for chemical disinfection agents or an additional second cleaning detergent
- **White:** for acidic process chemicals
- **Yellow:** for free choice
Adding and dispensing process chemicals

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

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

The DOS module is supplied with its own installation instructions.

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

1. Power supply for DOS 1, cleaning detergent.
2. Connection for dispensing hose.
   - Connect the module to the machine's power supply.
   - To connect the dispensing hose, release the hose clip on a free connector and remove the safety cap.
   - Push the dispensing hose onto the connector and secure it with a hose clip.

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

Rinse aid

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

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

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

Adding rinse aid

⚠️ Do not fill with cleaning chemicals.
This would damage the reservoir.
Only fill the rinse aid reservoir with rinse aid for washer-disinfectors.

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

The rinse aid reservoir holds approx. 10 oz./300 ml.

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

Close the reservoir.

Wipe up any spilled rinse aid. This prevents over-foaming occurring during the next program.

**Refill indicator**

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

- Confirm the message shown with OK and
- refill the rinse aid as described.

**Dispensing rinse aid**
The dispensing concentration is set by Miele Service.

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

- In either case contact Miele Service and have the dispensing concentration reset.
Neutralizing agent

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

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

Where there is build-up of deposits on the load, a neutralizing agent based on citric acid must be used.

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

Refilling neutralizing agent

- Place the neutralizing agent container (red marking) on the open cabinet door or on a surface which is robust and easy to clean.
- Unscrew and remove the suction lance. Place the suction lance on the open cabinet door.
- Replace the empty container with a full one.
- Push the suction lance into the opening of the container and screw it on tightly. Observe the colour coding.
- Wipe up any spilled process chemical thoroughly.
- Place the container on the floor next to the machine or in an adjacent cupboard. The container must not be placed on top of or above the machine. Make sure that the dispensing hose is not kinked or trapped.
- The dispensing system must then be vented (see "Settings / Venting DOS").
Adding and dispensing process chemicals

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

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

- Confirm the message shown with OK and
- Refill the neutralising agent as described.

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

Dispensing neutralizing agent
The dispensing concentration is set by Miele Service.

Instrument care products

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

If necessary, you can use instrument care products based on paraffin oil for instrument care following the machine reprocessing. Observe the instructions of the manufacturers of the instrument and the care products. It is safe to reprocess instruments, which have been treated with this type of care products, in this washer-disinfector.
Detergent

⚠️ Only use cleaning detergent which is suitable for this type of machine. Consult Miele for available detergents from Miele. Do not use detergent for domestic dishwashers.

The machine is designed exclusively for use with liquid cleaning detergent. The liquid cleaning detergent is dispensed from an external supply container via a suction lance.

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

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

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

Refilling liquid cleaning detergent

Liquid cleaning detergent is dispensed from an external canister.

- Place the liquid cleaning detergent container (blue marking) on the open cabinet door or on a surface which is robust and easy to clean.
- Unscrew and remove the suction lance. Place the suction lance on the open cabinet door.
- Replace the empty container with a full one.
- Push the suction lance into the opening of the container and screw it on tightly. Observe the colour coding.
- Wipe up any spilled process chemical thoroughly.
Adding and dispensing process chemicals

- Place the container on the floor next to the machine or in an adjacent cupboard. The container must not be placed on top of or above the machine. Make sure that the dispensing hose is not kinked or trapped.

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

Checking consumption

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

Refill indicator

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

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

If the liquid cleaning detergent has run out, the machine will be locked for further use.
It will be ready for use again when the supply container has been replaced.

Dispensing liquid process chemicals

The dispensing concentration is set by Miele Service.
Selecting a program

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

- Press the □ button and

- use the ▲ and ▼ arrow buttons to highlight a program and confirm your selection with OK.

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

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

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

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

Starting a program

- Close the door.
  When the door is closed, the LED in the ◀ button will light up.

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

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

Delay start must be switched on in the Settings menu (see “Settings ◄/Delay start”).

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

- Select a program.
- Press the OK button before starting the program.
- Use the arrow buttons \( \wedge \) (higher) and \( \vee \) (lower) to set the hours and confirm your selection with the OK button.

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

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

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

Activating delay start

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

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

Deactivating delay start

- Press the \( \leftarrow \) button or switch the machine off using the \( \bigcirc \) button.
**Operation**

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

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

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

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

When the drying function is activated, the program runs approx. 2 minutes longer.

**Activating and deactivating drying**

- Select a program.
- Press the button before the program starts. The LED in the button indicates whether drying is on or off.
Program sequence indicator

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

- Program name.

Middle line

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

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

Bottom line

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

End of program

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

Top line

- Program name.

Middle line

Continuously alternating between:

- Parameter met/not met,
- A₀ value
- Cycle number,

Bottom line

- Program finished.

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

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

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

Program cancelled due to a fault

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

Take appropriate steps to resolve the fault, depending on its cause (see "Problem-solving guide").

Cancelling a program manually

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

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

  ![Program cancellation view]

- Use the ⬆️ and ⬇️ arrow buttons to select Yes.

- Pressing the OK button interrupts the program. Entry of a code may also be required (see "Further settings/Code").

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

Restarting the program

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

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

Settings

- Delay start
  - No ✔
  - Yes □

- Drying
  - No □
  - Yes ✔

- Priming DOS system
  - DOS_ □

- Filter maintenance
  - Filter combination/Tubular filter
    - Reset (Yes/No)
    - Interval ◇ 10

- Language
  - deutsch □
  - english (GB) ✔
  - ... □

- Time of day
  - Set
  - Display
    - On □
    - "On" for 60 seconds □
    - Do not display ✔
  - Time format
    - 12 h □
    - 24 h ✔

- Volume
  - Keypad tone
  - Buzzer tones
    - Program end
    - Warning
**Delay start**

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

- Open the menu as follows:

  Button ➞

  ➤ Settings ➞

  ➤ Delay start

- **No**
  
  Delay start is deactivated.

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

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

- Press OK to save the setting.
Drying

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

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

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

- Open the menu as follows:

  Button ‘≡
   ▶ Settings  
   ▶ Drying

- No

  The drying function is automatically deactivated for all programs.

- Yes

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

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

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

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

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

Open the menu as follows:

Button ‘≡’

› Settings

› Priming DOS system

› DOS... (name of dispensing system)

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

Select a dispensing system using the ‹ and › arrow buttons.

Press OK to start the venting process.

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

Dispensing system 
successfully primed

OK
Filter maintenance

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

Cleaning the A 800 tubular filter
The A 800 tubular filter can be used in special injector bars on various carts and baskets and must be cleaned at least once a week. Follow the cleaning instructions in the operating instructions for the tubular filter.
For the weekly cleaning, a counter in the controls can be activated to remind you of the required cleaning at regular intervals.

Activating and setting the interval
■ Open the menu as follows:

Button ‘≡’
¬ Settings
¬ Settings
¬ Filter maintenance
¬ Filter combination and/or Tubular filter

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

¬ Inactive
The cleaning interval is deactivated.

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

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

- Yes
  The counter is reset.

- No
  The counter will not be reset.

Select an option using the \( \uparrow \) and \( \downarrow \) arrow buttons and confirm your selection with OK.

Setting the interval

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

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

Miele recommends that you clean the tubular filter after every 10 program sequences.

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

- Use the arrow buttons \( \uparrow \) (higher) and \( \downarrow \) (lower) to set the Interval.
- Press OK to save the setting.
Language

The language set will be used in the display.

- Open the menu as follows:
  Button ≡
  ▶ Settings ≡
  ▶ Language ≡

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

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

The factory default language is set as english (GB). For Canada select "English (CA)" or "Français (CA).

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

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

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

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

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

- Open the menu as follows:

  Button ‘≡’
  
  - Settings
  
  - Time of day
  
  - Time format

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

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

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

To set the format for the time of day:

- Open the menu as follows:

  Button "≡"
  ➔ Settings
  ➔ Time of day
  ➔ Set

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

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

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

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

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

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

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

- Open the menu as follows:

  Button ➠
  ➔ Settings ➠
  ➔ Time of day ➔
  ➔ Display

- On

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

- "On" for 60 seconds

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

- Do not display

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

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

- Press OK to save the setting.
**Volume**

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

- When buttons are pressed (keypad tone)
- End of program
- System messages (information)

Open the menu as follows:

Button ‘≡’

- Settings
  - Volume

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

- Keypad tone
  Setting the buzzer volume for keypad tone.

Select an option using the [Louder](#) and [Quieter](#) arrow buttons.

Confirm your selection with OK.

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

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

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

Press OK to save the setting.
Additional settings

The Additional settings menu incorporates all administrative processes and settings.

The Additional settings menu can only be accessed by using a PIN code. The standard PIN code is "8000" and can be changed to a custom 4-digit code.
If you do not have the PIN code, contact a user with appropriate access rights or cancel the process using the button.

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

Additional settings

- Code
  - Change code
- Date
  - Date format
    - DD:MM:YY ✓
    - MM:DD:YY
  - Set
- Log book
  - Consumption: Water
  - Consumpt.:Cleaning agent
  - Consumpt.: Rinse aid
  - Consumpt.: Neutralizer
  -...
- Operating hours
- Program cycle counter
- Service interval
- Report
  - Short ✓
  - Long
- Temperature unit
  - °C ✓
  - °F
- Program settings
  - Change program
    -...
  - Reset program
    -...
- Release program
  - All ✓
  - Selection
    -...


Additional settings

- Move program
  - 1. Vario TD
  - 2. Rinse
  - 3. Drain

- Test program
  - No
  - Laboratory
  - Validation

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

- Water hardness 19

- Display view
  - Actual temperature
  - Required temperature ✓

- Display
  - Contrast
  - Brightness

- Switch off after
  - Yes ✓
  - No

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

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

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

Enter PIN code
When the Additional settings menu is selected, you will be prompted to enter the code.

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

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

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

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

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

- Confirm the message with OK.

Access remains blocked and the display reverts to the menu selection.
Change the PIN code

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

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

- Open the menu as follows:

  Button ‘≡’
  - Additional settings
  - Code
  - Change code

- Use the arrow buttons ⬆ (higher) and ⬇ (lower) to enter the relevant digits.

- Confirm each digit individually with the OK button.

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

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

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

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

- Open the menu as follows:

  Button ‘≡
  ▶ Additional settings
  ▶ Date
  ▶ Date format

- DD = Day
- MM = Month, and
- YY = Year.

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

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

- Open the menu as follows:

  Button ➔
  ▶ Additional settings
  ▶ Date
  ▶ Set

Use the arrow buttons ▲ (higher) and ▼ (lower) to set the day/month and confirm your entry using the OK button.

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

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

- Use the arrow buttons ▲ (higher) and ▼ (lower) to set the year and press the OK button to save the date.

The date will be saved when the OK button is pressed for the last time.
Log book
The entire life cycle of the machine, including consumption data for water and process chemicals, as well as operating hours and program cycles are recorded in the log book.
Miele Service can also use the log to calculate a recommendation for service intervals.
- Open the menu as follows:

Button ‘≡’
- Additional settings
- Log book

- Consumption: Water
  Display the total amount of water used in litres (L).
- Consumpt.: Cleaning agent
  Display the total amount of liquid cleaning detergent used in litres (L).
  Powder cleaning detergent is not shown.
- Consumpt.: Rinse aid
  Display the total amount of rinse aid used in litres (L).
- Consumpt.: Neutralizer
  Display the total amount of neutralizing agent used in litres (L).
- Operating hours
  Display the total number of operating hours.
- Program cycle counter
  Total of all completed programs. There is no breakdown of individual programs. Cancelled programs are not included.
- Service interval
  Date of the next service (entered by Miele Service).
- Select an option using the ∧ and ∨ arrow buttons and confirm your selection with OK.

Values in the machine log book cannot be altered.
- Press the ⇪ button to exit the menu.
Report
You can choose between two different report formats of process reports for the purpose of archiving.

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

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

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

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

■ Open the menu as follows:

Button ‘ ’
   ▶ Additional settings
      ▶ Temperature unit

   °C
Display temperature in degrees Celsius.

   °F
Display temperature in degrees Fahrenheit.

■ Select an option using the ↑ and ↓ arrow buttons.
■ Press OK to save the setting.

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

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

More information can be found in "Program settings".
Additional settings

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

- Open the menu as follows:

  Button ‘≡
  → Additional settings
  → Release program

- All
  All programs are released for use.

- Selection
  A selection of programs are available for use.

Select an option using the ∨ and ∧ arrow buttons and confirm your selection with OK.

The Selection option displays a list of all programs.

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

- Programs can be released or blocked using the arrow buttons ∨ and ∧ and by confirming with OK.

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

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

Open the menu as follows:

Button ➮

→ Additional settings
→ Move program

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

1. Vario TD on program selection button 1
2. Rinse on program selection button 2
3. Drain on program selection button 3
4. Vario TD Intensive
etc.

Use the ▲ and ▼ arrow buttons to select the program you would like to move.

Confirm your selection with OK.

Now you can move this program within the list.

Use the ▲ and ▼ arrow buttons to move the program to the position you want.

Press OK to save the program to the selected position.

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

The process can be repeated as often as you wish.

Press the ➩ button to exit the menu.
**Additional settings**

**Test program**
Various programs are available for monitoring cleaning performance in routine testing.
See "Maintenance" for more information on these programs.

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

| Only use devices (computers, printers, etc.) which comply with EN/IEC 60950 and CAN/CSA-C22.2 No. 60950-1 or UL 60950-1. |
| Contact Miele for more information on communication modules, software and suitable printers. |

| Ethernet   | The XKM 3000 L Med communication module enables the establishment of an Ethernet interface for digital archiving of process data via external software. The module can be connected to a WLAN network via an existing wireless access point. |
| RS232      | An XKM RS232 10 Med communication module is required for direct connection to a report printer. The XKM RS232 10 Med module can also be used for connection to a terminal or terminal emulator. The data are transmitted in ASCII code. |
Additional settings

Configuring the interface

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

- Open the menu as follows:
  
  Button 「≡」
  
  ▶ Additional settings
  
  ▶ Interface

- Ethernet
  
  Configuration of an Ethernet interface.

- RS232
  
  Configuration of a serial RS232 interface

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

The parameters for the interface must be configured next.

Ethernet

- Module status
  
  Connection status displayed (Active/Inactive)

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

- DHCP
  
  The Ethernet interface can either be implemented via a Dynamic Host Configuration Protocol (DHCP) or by setting the following parameters:

  - IP address
  - Subnet mask
  - Standard gateway
  - DNS Server - automatic
  - DNS Server 1
  - DNS Server 2
  - Port type
  - Port
Additional settings

RS-232

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

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

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

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

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

Following parameters are preconfigured:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baud rate</td>
<td>9600</td>
</tr>
<tr>
<td>Bit</td>
<td>8</td>
</tr>
<tr>
<td>Parity</td>
<td>none</td>
</tr>
<tr>
<td>Stop bits</td>
<td>1</td>
</tr>
</tbody>
</table>
Water hardness
You can use this menu to set the water softener to the water hardness of the mains supply.
For more information see "Water softener".

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

■ Open the menu as follows:

Button ’≡

显露 Additional settings
显露 Display view

显露 1显露 2显露 Display view显露 3显露 显露 OK显露 ⅎ

显露 Actual temperature
显露 Required temperature

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

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

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

■ Select an option using the ˄ and ˅ arrow buttons.

■ Press OK to save the setting.
Additional settings

**Display: brightness and contrast**

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

- Open the menu as follows:

  Button  

  ➤ Additional settings

  ➤ Display

  1 2 3

  Display

  Contrast

  Brightness

- Contrast

  Set the contrast.

- Brightness

  Set the brightness.

- Select an option using the \( \wedge \) and \( \vee \) arrow buttons.

- Confirm your selection with OK.

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

- Use the arrow buttons \( \wedge \) (Higher/Brighter) and \( \vee \) (Lower/Darker) to set the brightness and contrast you want.

- Press OK to save the setting.
### Additional settings

#### Switch off after

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

**Ready for operation (standby)**

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

- To activate standby, the Auto-Off function must be enabled under Additional settings/Switch off after and a standby time set.

- In addition, an option to display the time of day must be selected in Settings/Time of day/Display.

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

#### Auto-Off function

To save energy, the Auto-Off function can be activated. If the machine has not been used for a specific time period, it switches itself off automatically.

- To activate the Auto-Off function, it must first be enabled under Additional settings/Switch off after and a standby time set.

- Then, the option Do not display must be selected under Settings/Time of day/Display.

After the standby time has elapsed, the machine switches off automatically.

- Use the button to switch the machine on again.
Additional settings

Switching off after activating

Open the menu as follows:
Button "≡
  ▶ Additional settings
  ▶ Switch off after

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

- No
  The Auto-Off function is deactivated.

Select an option using the ▲ and ▼ arrow buttons.
Press OK to save the setting.

Setting the standby duration

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

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

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

Software version

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

For more information see "Service".
**Adjusting program settings**

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

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

Program and dispensing changes must be documented.

**Program structure**

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

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

**Program header**

- **Water volume change**
  
  Each program block is allocated a nominal water quantity. The water quantity can be raised or lowered incrementally for all blocks to the base value in the program chart.

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

Parameters for measuring spray pressure and spray arm monitoring can only be accessed by Miele Service.
**Program blocks**

The wash block sequence is pre-determined and is the same as the sequence in the program overview (see "Program guide").

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

- **Main wash 1 and 2**
  Depending on the wash load, cleaning generally occurs at temperatures between 113°F/45°C and 149°F/65°C with the addition of an appropriate process chemical.

- **Rinse 1 to 4**
  In the interim rinse stages, the chemical agents from the previous wash blocks are rinsed off and neutralized where necessary by the addition of appropriate neutralizing agents.

- **Final rinse 1 and 2**
  To avoid deposits and corrosion on the wash load demineralized (DI) water should preferably be used if available for the final rinse.

According to the A₀ concept of EN ISO 15883, disinfection occurs thermally at temperatures of 176°F to 203°F/80°C to 95°C and with relevant holding times. According to the A₀ concept of EN ISO 15883, disinfection occurs thermally at temperatures of 176°F to 203°F/80°C to 95°C and with relevant holding times.

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

Program block parameters are accessible only to Miele Professional Service, with the exception of the dispensing of rinse aid and drying parameters.
Opening the menu

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

- Open the menu as follows:
  Button ‘≡
    ▶ Additional settings
      ▶ Program settings

- Change program
  Programs can be adapted to suit specific technical requirements.

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

Resetting a program
Programs can be individually reset to factory default.

Programs stored on a free memory location are irretrievably deleted.

...  
  ▶ Program settings  
  ▶ Reset program

All programs are then listed in the display.
- Use the ▲ and ▼ arrow buttons to select the program and confirm your selection with OK.

- Yes
  The program will be reset to factory default.

- No
  Program parameters will not be changed.
- Use the ▲ and ▼ arrow buttons to select an option and confirm your selection with OK.
Altering a program

A program is changed in two steps:

- The program change begins with a list of all wash blocks assigned to the program. First this list must be confirmed.
- Then individual program parameters can be changed.

Document all changes of factory settings in case of a subsequent Service call.

Program and dispensing changes must be documented.

Select the program you want to alter.

For more information see "Allocating wash blocks".

Every program change starts with a list of the wash blocks.

Select the option Accept and confirm with OK.

Further settings follow. You can edit these in any order.
Program settings

Changing water quantity

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

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

...  
Water volume change

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

- Use the arrow buttons ∧ (higher) and ∨ (lower) to alter the water quantity.
- Press OK to save the setting.
If there is still water remaining in the wash cabinet at the end of a wash block, because e.g. the on-site drainage system is inadequate, the following error message will be displayed to enable water to be drained out of the wash cabinet within the designated time:

In this case, the drainage time can be increased.

- Standard
  The standard drainage time setting applies.

- Extended
  Drainage time is increased by a strictly preset increment. Program duration will increase with this setting.

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

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

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

**Wash chamber cool down phase**
A cool down pause follows the wash phase. During this pause, water vapor is extracted from the wash chamber and condensed by the steam condenser. This reduces the moisture level in the wash chamber, which promotes drying. In addition, this cools the wash chamber slightly.

...  

- **Cabinet cooling down time**

  ![Cabinet cooling time](image)

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

  - Use the arrow buttons \( \wedge \) (higher) and \( \vee \) (lower) to set the cooling down duration.
  - Press \( \text{OK} \) to save the setting.
Program settings

Drying time

After the cool down time, the comfort door closing aid opens the door slightly to allow the moisture and heat remaining in the wash chamber to dissipate. At this point, the door is unlocked and can be opened at any time. After the drying time elapses, the message Program finished appears on the display. Opening the door before the drying time elapses ends the program prematurely.

... Drying time

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

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

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

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

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

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

Memory

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

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

Adding cycle number

Miele Service can add subsequent cycle numbers, e.g. in the event of software updates or if the machine controls are replaced.
Process documentation

Communication module for external archiving

A module slot is integrated into the back of the machine for a Miele communication module for permanent archiving of cycle reports. The module enables the installation of an Ethernet interface for documentation using documentation software or an RS-232 interface for connection to a report printer.

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

Only use devices (computers, printers, etc.) which comply with EN/IEC 60950 and CAN/CSA-C22.2 No. 60950-1 or UL 60950-1.

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

Process documentation using external software (option)

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

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

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

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

Problems with data transmission

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

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

In the event of network or report software problems contact your system or network administrator.
Process documentation using a report printer (option)

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

Report formats

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

- In long format all recorded data is included.
- Short format includes only selected parameters.

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

- Open the menu as follows:

  Button ‘≡’
  
  ▶ Additional settings
  ▶ Report

  ![Report menu](image)

  - Short
    
    Print in short format
  
  - Long
    
    Print in long format

- Select an option using the `>` and `<` arrow buttons.

- Press OK to save the setting.
**Process documentation**

**Retrospective output of cycle reports**
Internally stored reports can be output retrospectively from the machine.

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

**Report printer**
The following options are available for printing reports retrospectively.
- Open the menu as follows:
  Button ‘≡’
  ▶ Additional settings
  ▶ Interface
  ▶ RS232
  ▶ Print reports

- Last report
  Output of the last cycle report.
- Current work day
  Output of all cycle reports for the current working day.
- Last working day
  Output of all cycle reports for the previous working day.
- All
  Output of all saved reports.
- Select an option using the \( \uparrow \) and \( \downarrow \) arrow buttons.
- Data transmission is started by pressing the OK button.

Data transmission runs in the background so the machine can go on being used.
Service
Periodic checks must be carried out by Miele Service after 1000 operating hours or every 12 month, at the latest after 24 months.

Maintenance covers the following:
– electrical integrity
– Door mechanism and door seal
– Any screw connections and connectors in the wash cabinet
– Water inlet and drainage
– Internal and external dispensing systems
– Spray arms
– Filter combination
– Sump including drain pump and non-return valve
– All wash carts, baskets, inserts, and modules
– Steam condenser
– Wash pressure sensor

If there is a communication module:
– Connected printer
– Network connection

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

The following operational tests will be carried out within the framework of the maintenance:
– A program test run
– Seals will be tested for water tightness
– All relevant measuring systems will be safety tested, including fault displays, thermo electrical measurements will be taken
– Safety features
Routine checks
Before each day's use, the operator must conduct a series of routine checks. A routine checklist is supplied with the machine.

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

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

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

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

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

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

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

Remove the flat filter last.

Clean the filters.

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

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

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

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

- To do this remove the wash carts and the baskets.
- Visually check the spray arms for soiling and blocked jets.
- Also check that the spray arms can turn easily.

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

Cleaning the spray arms

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

- Remove the wash cart or baskets from the machine.

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

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

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

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

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

**Wash cart and basket spray arms with knurled nuts:**
The spray arms of older types of wash carts and baskets are secured with knurled nuts. These must be unscrewed and the spray arms pulled downwards to remove them.

- Metal knurled nuts have a left-hand thread.
- Ceramic knurled nuts have a right-hand thread.
Maintenance

Use a pointed object to push particles into the spray arm.

Rinse the spray arm thoroughly under running water.

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

Check the spray arm bearings for visible signs of wear.

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

Replace the spray arms after cleaning.

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

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

⚠️ Never clean the machine or surrounding area with a water hose or a pressure washer.

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

Cleaning the control panel

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

- Clean the control panel with a damp cloth and a solution of dishwashing liquid or with a non-abrasive stainless steel cleaner.
- Proprietary glass or plastic cleaning agents can also be used to clean the display.
- For surface disinfection only use low-level surface disinfectants. Do not use high-level disinfectants such as Hydrogen Peroxide and Paracetic Acid.

Cleaning the door and the door seal

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

Cleaning the wash cabinet

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

Cleaning the front

- To clean the stainless steel front, use a damp cloth with a solution of dishwashing liquid and hot water, or with a non-abrasive cleaning agent for use on stainless steel. For surface disinfection only use low-level disinfectants. Do not use high-level disinfectants such as Hydrogen Peroxide and Paracetic Acid.

Preventing re-soiling

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

Checking wash carts, baskets, modules and inserts

Wash carts, baskets, modules and inserts should be checked daily to make sure they are functioning correctly. The machine is supplied with a check list.

Check the following points:

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

Where applicable:

– Do the spray arms rotate freely?
– Are the spray jets blocked? See the section on "Cleaning the spray arms".
– Are the magnets integrated into the spray arms free of any metallic objects sticking to them?
– Need the tubular filters to be cleaned or filter plates, e.g. in an E 478/1, to be replaced?

Maintenance of wash carts, baskets, modules and inserts

Periodic checks must be carried out by Miele Service after 1000 operating hours or every 12 month, at the latest after 24 months.
Performance qualification

It is the responsibility of the operator to check that the required cleaning and disinfection standards are always met.

Test point for measuring sensors

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

- Open the door.

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

Or

- Pull the machine out by approx. 6" (15 cm) from under the countertop.
Various programs are available for monitoring cleaning performance in the course of routine testing. The test programs are not separate processing programs. Rather, they are additional functions that can be activated prior to starting any processing program.

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

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

The following test programs can be selected:

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

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

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

- Open the menu as follows:

  Button '≡

  - Additional settings
  - Test program

- No
  The menu is exited without selecting a program.

- Laboratory
  Activates the Laboratory test program.

- Validation
  Activates the Validation test program.

- Select an option using the ▲ and ▼ arrow buttons.
- Press OK to activate the test program for the next program start.

You can now start the performance test.

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

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

If you want to deactivate the test program before the performance test you need to go to the next menu level up and select the No option.
Problem solving guide

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

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

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

Technical faults and messages

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible cause and remedy</th>
</tr>
</thead>
</table>
| The display is dark and all LEDs are out.   | - The machine is not switched on.  
  - Switch the machine on using the button.  
  - A breaker is defective or has tripped  
  - Refer to the minimum fuse rating on the data plate.  
  - Reset the trip switch.  
  - If the mains breaker trips again, call Miele Service.  
  - The machine is not plugged in.  
  - Insert the plug.                                                                                   |
| The machine has switched itself off.         | This is not a fault.  
  - The Auto-Off function switches the machine off automatically after a pre-set duration to save energy.  
  - Switch the machine on again using the button.                                                      |
| The time appears on the display.             | This is not a fault.  
  - The machine is ready for use.  
  - Press any button to reactivate the machine.                                                        |
| Power failure during operation               | If a temporary power failure occurs during a program cycle, no action is required.  
  - The program which was running continues from the point of interruption.  
  - If the temperature in the wash cabinets falls below a minimum value required for the program block at the time of the power failure, the program block is repeated.  
  - When a power failure lasts ≥ 20 hours, the entire program will be repeated.  
  - Each power failure is being documented in the process documentation.                                 |
| Next service due on:                         | This is not a fault.  
  - Miele Service has recommended a date for the next service visit.  
  - Please contact the Miele Service Department to arrange a service visit.                            |
Dispensing/dispensing systems

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible cause and remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Refill DOS</strong></td>
<td>During a program sequence a low level of liquid process chemical in a container has been identified.  ■ Replace the empty container with a full one.</td>
</tr>
<tr>
<td><strong>Prog. start not possible. Prime dispenser pump DOS</strong></td>
<td>A program cannot be started because ...  ... there is air in the dispensing system.  ... the dispensing system has been sucked completely dry.  ■ Check the fill level in the supply container. Replace the empty container with a full one if needed.  ■ Vent the dispensing system.</td>
</tr>
<tr>
<td><strong>Dispensing system DOS priming</strong></td>
<td>This is not a fault. The dispensing system will now be automatically vented. Wait until the venting process is finished.</td>
</tr>
<tr>
<td><strong>Priming DOS canceled. Priming must be repeated</strong></td>
<td>Priming of the dispensing system was canceled because an insufficient flow rate was identified. A dispensing hose may be kinked or the siphon blocked.  ■ Check the dispensing hose for kinks and leaks. Position it so that it cannot become kinked.  ■ Check the suction opening of the siphon for blockages and remove them as necessary.  ■ Start the priming process again.  Contact Miele Service if there are leaks in the dispensing hose or a fault with the suction lance.</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible cause and remedy</th>
</tr>
</thead>
</table>
| Check container/lance DOS     | Little or no flow has been identified.  
  ■ Check the level in the supply container. Replace an empty container with a full one, if necessary.  
  ■ Check the suction aperture of the suction lance for deposits.  
  ■ Prime the dispensing system.  
  The dispensing hose is kinked.  
  ■ Remove any kinks from the dispensing hose. Position it so that it cannot become kinked.  
  ■ Check the dispensing hose for leaks.  
  ■ Prime the dispensing system.  
  Contact Miele Service if there are leaks in the dispensing hose or a fault with the suction lance. |

Highly viscous (thick) process chemicals can affect the dispenser monitoring and lead to inaccurate data. In this instance please contact Miele Professional Service for advice.
## Insufficient salt/water softener

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible cause and remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Refill salt</td>
<td>Salt is running low in the water softener.</td>
</tr>
<tr>
<td></td>
<td>■ Refill the reactivation salt before starting the next program.</td>
</tr>
<tr>
<td>Machine locking soon</td>
<td>Insufficient salt</td>
</tr>
<tr>
<td>Insufficient salt</td>
<td>Salt in the water softener is completely used up and reactivation is no longer possible. The machine is locked for further use.</td>
</tr>
<tr>
<td></td>
<td>■ Refill with reactivation salt.</td>
</tr>
<tr>
<td>Salt container empty,</td>
<td>The water softener cannot reactivate because there is insufficient salt. The machine is locked for further use.</td>
</tr>
<tr>
<td>Program locked</td>
<td>■ Refill with reactivation salt.</td>
</tr>
<tr>
<td></td>
<td>The machine is unlocked a few seconds after the salt reservoir is refilled. Reactivation will occur automatically during the next program sequence.</td>
</tr>
<tr>
<td>Salt container lid not closed</td>
<td>The salt container is not closed properly.</td>
</tr>
<tr>
<td>correctly</td>
<td>■ Close the container properly.</td>
</tr>
<tr>
<td></td>
<td>Salt residues are preventing it from closing.</td>
</tr>
<tr>
<td></td>
<td>■ Remove the residues from the refilling funnel, the lid and the seal. <strong>Do not use</strong> running water as this can cause the salt container to overflow.</td>
</tr>
<tr>
<td></td>
<td>■ Close the container properly.</td>
</tr>
<tr>
<td></td>
<td>The salt container flap has sprung open during a program.</td>
</tr>
<tr>
<td></td>
<td>▼ When the door is opened, hot steam and process chemicals can escape!</td>
</tr>
<tr>
<td></td>
<td>■ Open the door and close the container flap.</td>
</tr>
</tbody>
</table>
Cancel with fault code

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

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

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

If the same message appears again:

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

Please also read the notes regarding the following fault numbers:

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible cause and remedy</th>
</tr>
</thead>
</table>
| Fault 403-405 | A program has been canceled because water intake by the machine was insufficient or severely restricted.  
- Turn on the faucets fully.  
- Follow the further information provided in the Check water intake message. |
| Fault 406-408 | A program was canceled because the water inlet volume is insufficient.  
- Check whether the faucets are fully turned on.  
- Refer to the information regarding minimum flow pressure in "Connection to the water supply" and "Technical data."  
- Check the filter in the water inlet.  
- Contact Miele Technical Service for advice. |
| Fault 412-414 | A program was canceled because the water intake volume is too high.  
- Refer to the information regarding recommended maximum flow pressure and maximum permitted static water pressure in "Connection to the water supply" and "Technical data."  
- Contact Miele Technical Service for advice. |
| Fault 432 | The door was opened using the emergency release.  
- See "Opening the door using the emergency release". |
| Fault 433 | Protruding wash load items or other objects are preventing the door from being closed properly by the Comfort lock.  
- Remove all objects and sort the wash load so that it does not obstruct the door.  
- Close the door. |
<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible cause and remedy</th>
</tr>
</thead>
</table>
| Fault 440   | The float switch in the base of the machine has not been activated. The switch might be blocked.  
  ■ Remove the filter combination.  
  ■ Check the float switch to make sure it moves freely. The float switch is located in the base of the machine behind the spray arm. |
| Fault 460-462 | A program was interrupted due to the spray arm speed dropping below the set value because:  
  ■ items are obstructing the machine or basket spray arms.  
  ■ Arrange the load so that the spray arms can turn easily and start the program again.  
  ■ wash pressure is too low due to a heavy build-up of foam.  
  ■ Follow the instructions regarding foam build-up in "Chemical processes and technology".  
  ■ Spilled rinse aid was not wiped away after filling or rinsed away by the program Rinse, which lead to a strong foam build-up during the next program sequence.  
  ■ Start the Rinse program to clean the wash chamber.  
  ■ Then reprocess the items again. |
| Fault 492, 504 | A programme has been cancelled because there is not enough water pressure. The filters in the wash chamber may be blocked.  
  ⚠️ Danger of injury from glass shards, needles etc. which are retained in the filters.  
  ■ Check and clean the filters in the wash chamber (see "Maintenance/Cleaning the filters in the wash chamber"). |
## Problem solving guide

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible cause and remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fault 518-521</td>
<td>No flow was detected when dispensing from an external supply container.</td>
</tr>
</tbody>
</table>

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

- Check the level in the containers and replace empty ones with filled ones.
- Check the suction openings of the suction lance and remove any deposits.
- Check the hose connections on the suction lance, the machine and any DOS modules.
- Remove any kinks from the dispensing hoses and check the hoses for leaks. Position the dispensing hoses so that they cannot kink.
- Vent the dispensing system.

If you identify any leaks in the dispensing hoses or defects on the suction lances contact Miele Service.
<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible cause and remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fault 526</td>
<td>The supply pressure has dropped below the minimum value.</td>
</tr>
<tr>
<td></td>
<td>- The water pressure is too low due to a heavy build-up of foam. Spilled rinse aid may not</td>
</tr>
<tr>
<td></td>
<td>have been cleaned up after being added.</td>
</tr>
<tr>
<td></td>
<td>■ Follow the instructions regarding foam build-up in &quot;Chemical processes and technology&quot;.</td>
</tr>
<tr>
<td></td>
<td>■ Start the <strong>Rinse</strong> program to clean the wash chamber.</td>
</tr>
<tr>
<td></td>
<td>- The carriers were loaded incorrectly or overloaded.</td>
</tr>
<tr>
<td></td>
<td>■ Use only carts, baskets, modules and inserts suitable for the particular application.</td>
</tr>
<tr>
<td></td>
<td>■ Arrange hollow or deep-sided wash load items so that water runs off them freely.</td>
</tr>
<tr>
<td></td>
<td>- The water lines are clogged or leaking.</td>
</tr>
<tr>
<td></td>
<td>■ Check and clean the filters in the wash chamber and spray arms.</td>
</tr>
<tr>
<td></td>
<td>■ Check the injector bars for possible leaks, e.g.:</td>
</tr>
<tr>
<td></td>
<td>- Are all caps and end caps in place?</td>
</tr>
<tr>
<td></td>
<td>- Are all connections fitted with nozzles, irrigation sleeves, hose adapters or other</td>
</tr>
<tr>
<td></td>
<td>washing attachments?</td>
</tr>
<tr>
<td></td>
<td>- Are installed silicone hoses undamaged?</td>
</tr>
<tr>
<td></td>
<td>■ Check the washer’s water connectors in the back panel of the wash cabinet to ensure</td>
</tr>
<tr>
<td></td>
<td>that they are attached tightly and remove any blockages.</td>
</tr>
<tr>
<td></td>
<td>- The amount of water may be insufficient for the application.</td>
</tr>
<tr>
<td></td>
<td>■ Increase the amount of water (see &quot;Program settings&quot;). If necessary, consult Miele</td>
</tr>
<tr>
<td></td>
<td>Professional Service.</td>
</tr>
<tr>
<td>Fault 542</td>
<td>A program was canceled because the water in the wash chamber is only being pumped away</td>
</tr>
<tr>
<td></td>
<td>slowly or not at all.</td>
</tr>
<tr>
<td></td>
<td>- The drain hose is blocked.</td>
</tr>
<tr>
<td></td>
<td>■ Remove any kinks or large loops in the drain hose.</td>
</tr>
<tr>
<td></td>
<td>- The filters in the wash chamber are blocked.</td>
</tr>
<tr>
<td></td>
<td>¡ Danger of injury from glass shards, needles etc. which are retained in the filters.</td>
</tr>
<tr>
<td></td>
<td>■ Clean the filters in the wash chamber.</td>
</tr>
<tr>
<td></td>
<td>- The drain pump or non-return valve is blocked.</td>
</tr>
<tr>
<td></td>
<td>■ Clean the supply line to the drain pump and the non-return valve.</td>
</tr>
<tr>
<td></td>
<td>- The drainage system cannot accommodate the water because it is blocked.</td>
</tr>
<tr>
<td></td>
<td>■ Contact a qualified plumber.</td>
</tr>
<tr>
<td>Problem</td>
<td>Possible cause and remedy</td>
</tr>
<tr>
<td>-----------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| Fault 550 | The waterproof system has been activated. There might be a leak in one of the water inlet hoses.  
  - Close the water taps.  
  - Contact Miele Professional Service.                                                                 |
| Fault 555 | Too much water has accumulated in the steam condenser.  
  - Restart the machine. Excess water is pumped out automatically.                                                                                       |
| Fault 559 | There is a problem with the process documentation interface. The machine has detected a module for an Ethernet interface, but only a serial interface is activated in the controls (RS232).  
  Deactivate the RS232 interface:  
  - Open the menu for configuring the interface Additional settings/Interface and then select Ethernet.  
  - Wait approx. 90 seconds. The Ethernet module XKM 3000 L Med needs this time for initialization. It may be necessary to reconfigure the interface.  
  Or  
  - Replace the Ethernet module XKM 3000 L Med with a XKM RS232 10 Med module to set up a serial interface. |
| Fault 578 | The peak-load cut-out has lasted longer than 3 hours.  
  - Have your electrical system and your energy management system tested by a suitably qualified person.                         |
## Process-related faults and messages

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

### Door

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

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

**Unsatisfactory cleaning and corrosion**

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible cause and remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>There are white deposits on the wash load.</td>
<td>The water softener is set too low.</td>
</tr>
<tr>
<td></td>
<td>- Set the water softener to the correct water hardness.</td>
</tr>
<tr>
<td></td>
<td>There is no salt in the salt reservoir.</td>
</tr>
<tr>
<td></td>
<td>- Refill with reactivation salt.</td>
</tr>
<tr>
<td></td>
<td>The quality of the water for the final rinse was insufficient.</td>
</tr>
<tr>
<td></td>
<td>- Use demineralized water (DI) with a low conductivity.</td>
</tr>
<tr>
<td></td>
<td>- If the machine is connected to a water demineralization cartridge, check the conductivity level and replace resins as necessary.</td>
</tr>
<tr>
<td></td>
<td>If the machine is connected to a DI water purification system, consult the manufacturer of the purification system.</td>
</tr>
<tr>
<td></td>
<td>The water from the DI water connection is not sufficiently demineralized.</td>
</tr>
<tr>
<td></td>
<td>- Check the external demineralization system. If necessary, replace the demineralization cartridge with a new one.</td>
</tr>
<tr>
<td>The wash load is spotty.</td>
<td>The rinse aid reservoir is empty.</td>
</tr>
<tr>
<td></td>
<td>- Refill the reservoir.</td>
</tr>
<tr>
<td></td>
<td>The rinse aid concentration is set too low.</td>
</tr>
<tr>
<td></td>
<td>- Contact Miele Service to have the dispensing concentration reset.</td>
</tr>
</tbody>
</table>
**Spray arm monitoring/wash pressure**

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

**Water inlet and drainage**

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible cause and remedy</th>
</tr>
</thead>
</table>
| Check water intake       | One or more faucets are turned off.  
  
  ▪ Turn on the faucets.  
  
  There was insufficient water in the machine.  
  
  ▪ Clean the water intake filters.  
  
  ▪ Turn on the faucets fully.  
  
  Water flow pressure is too low. Refer to the technical data.  
  
  ▪ Contact a qualified plumber. |
<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible cause and remedy</th>
</tr>
</thead>
</table>
| Knocking noise in the wash cabinet. | One or more spray arms are knocking against the wash load.  
  ■ Cancel the program. To do this follow the instructions in "Cancelling a program".  
  ■ Arrange the wash load so it cannot obstruct the spray arms.  
  ■ Make sure the spray arms can rotate freely.  
  ■ Re-start the program. |
| Rattling noise in the wash cabinet. | Items are insecure in the wash cabinet.  
  ■ Cancel the program. To do this follow the instructions in "Cancelling a program".  
  ■ Rearrange the load so that items are secure.  
  ■ Re-start the program. |
| Knocking noise in the water pipes. | This may be caused by the on-site installation or the cross-section of the piping. It has no influence on the function of the machine.  
  ■ Contact a suitably qualified plumber. |
## Problem solving guide

### Printer/serial interface

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

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

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

- Open the locking clamp.

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

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

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

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

- Carefully replace the non-return valve and secure it with the clamp.
Clean the water intake filters

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

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

To clean the filter

- Disconnect the machine from the mains (switch the machine off, unplug it or disconnect or disable the breaker).
- Turn off the tap.
- Unscrew the water inlet valve.
  
  ![Diagram of water inlet valve]

  - Carefully pull the large surface area filter 1 out.
  - Take the seal ring out of the screw connection.
  - Withdraw fine filter 2 using pointed pliers.
  - Clean the filters or replace them with new ones if necessary.
  - Replace the filters and seals, making sure they are sitting correctly.
  - Reconnect the hose to the water tap, making sure the union goes on straight and not cross-threaded.
  - Turn the tap back on. If the connection leaks it might be too loose or cross-threaded. Unscrew and reconnect the water inlet valve correctly before tightening it.
Contacting Miele Service

⚠️ Repairs should only be carried out by Miele Service. Unauthorized or incorrect repairs could cause personal injury or damage the machine.

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

If, having followed the advice in the operating instructions, you are still unable to resolve a problem, please call Miele Service (see the end of this booklet for contact details).

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

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

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

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

- Open the menu as follows:

  Button ‘≡
  ▶ Additional settings
  ▶ Software version

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

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

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

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

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

- LNG Id: XXXXX
  Language package version.

You cannot change any settings in this menu.

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

- Exit the menu with the OK or ← buttons.
Installation and levelling

Please refer to the installation diagram provided.

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

The machine must be stable and horizontal.

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

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

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

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

The machine is suitable for the following types of installation:

- Freestanding.
- Slot-in:
  The machine can be installed beside other appliances or furniture or in a suitable niche. The niche must be at least 600 mm wide and 600 mm deep.
- Built-under:
  The machine can be built under a continuous worktop. The space provided must be at least 600 mm wide, 600 mm deep and 820 mm high.
Building under a continuous worktop

Removing the lid
To build the machine under a continuous worktop the lid must be removed as follows:

■ Unscrew both securing screws from the lid at the back of the machine.

■ Open the door.

■ Unscrew the left and right fixing screws.

■ Lift the lid off.

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

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

■ Open the door.

■ Screw the machine to the continuous worktop through the holes in the front trim on the left and right.

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

Please contact Miele to secure it at the sides to adjacent cabinetry.
A cover plate/countertop protector is available from Miele and may be advisable, depending on installation location. The cover plate protects the lower edge of the countertop from steam damage.

**Electromagnetic compatibility**

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

The machine’s HF emissions are very low and are therefore unlikely to interfere with other electronic appliances in the vicinity.

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

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

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

- The electrical installation must be in compliance with current local and national safety regulations.
- The plug connection must comply with national regulations, the socket must be accessible after the machine has been installed. This is to facilitate access for safety checks, for example when the machine is being commissioned or serviced.
- For hard-wired machines, connection should be made via a suitable mains switch with all-pole isolation. The contact opening between all open contacts must be at least 3 mm wide and the mains switch must be lockable in the open position.
- An equalization of the potentials should be carried out.
- For technical data, see the data plate or the attached wiring diagram!
- For increased safety, it is recommended to protect the machine with a 30 mA residual current device (RCD).
- If replacing the power cord, use only original Miele replacement parts or a suitable cord with core cable ends.

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

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

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

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

The wiring diagram is supplied with the machine.

WARNING

THIS APPLIANCE MUST BE GROUNDED

Equipotential bonding connection

There is a screw connection point marked ▼ at the back of the machine, to which additional equipotential bonding can be connected.
Peak-load cut-out

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

Please contact Miele Professional Service for further information.

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

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

1. Vario TD
2. Temperature 55°C
3. Peak load cut-out

...
Connecting the water supply

⚠️ Water from the wash cabinet must not be consumed.

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

- The water supply must at least meet the standards for drinking water. If the water supply has a high iron content, there is a danger of corrosion occurring on stainless steel items being cleaned in the machine, as well as the machine itself. If the chloride content in the water exceeds 100 mg/l, the risk of corrosion to stainless steel items being cleaned is greatly increased.

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

- The machine is equipped with a safety system for the protection of drinking water and may be connected to the water supply without a non-return valve, if national regulations permit.

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

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

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

- The Minimum flow pressure for cold water is 14.5 psi (100 kPa) pressure, for hot water 5.8 psi (40 kPa) pressure and for DI water connection is 4.4 psi (30 kPa) pressure.

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

- The maximum permissible static water pressure is 145 psi (1,000 kPa).

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

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

- A tap valve with a ¾", garden hose thread and male connection, must be provided on site. It should be easily accessible so that the water supply can be turned off when the machine is not in use.

- The inlet hose is approx. 1.7 m long (5.5 ft) terminating in a ¾" female garden hose thread. On no account may the inlet filter be removed.
Install the filter (supplied in accessory pack) between the stopcock valve and the inlet hose. The filter for DI water is made of chromium-nickel steel and can be recognized by its dull surface and green label.

⚠️ Do NOT shorten or otherwise damage the inlet hoses.

See installation diagram supplied.
### Water connection

<table>
<thead>
<tr>
<th>Pressurized DI water connection (30-1,000 kPa) - depending on version</th>
<th>Depending on the version, the machine can be connected to pressurized DI water with a pressure between 30-1,000 kPa (4.4-145 psi). If the water pressure is below 200 kPa (29 psi) the water intake time will be automatically increased.</th>
</tr>
</thead>
<tbody>
<tr>
<td>■ The pressure tested hose for DI water, coded green, has a ¾ inch female connection with garden hose thread and is connected to the onsite DI water tap.</td>
<td></td>
</tr>
<tr>
<td>! Warning: If the machine is not going to be connected to DI water, the DI water connection has to be deactivated by a Miele Service technician. The inlet hose remains in position at the back of the machine.</td>
<td></td>
</tr>
<tr>
<td>Demineralized water ring line</td>
<td>The machine can be connected to a ring line system for demineralized water. For this purpose, it must be technically adapted and the controls reset by Miele Professional Service.</td>
</tr>
<tr>
<td>Please contact Miele Professional Service for further information.</td>
<td></td>
</tr>
</tbody>
</table>
Connecting the water drain

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

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

⚠️ Typically, the drain water of the machine will reach temperatures greater than 60°C (140°F). Some on-site drain material may not be compatible with the discharge temperature. The operator is responsible to verify the compatibility of all utility services including drainage, however Miele offers as an optional effluent cool down kit to reduce the drain temperature to 60°C (140°F).

– The on-site connection point, measured from the lower edge of the machine, should be positioned at a height between 0.3 m and 1.0 m (1-3.2 ft). If it is lower than 0.3 m, the drain hose must be laid in a coil at a height of at least 0.3 m.

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

– The drainage hose is approx. 1.4 m (4.6 ft) long and flexible with an internal diameter of 22 mm (7/8"). Hose clips for the connection are supplied.

– The drain hose must not be shortened.

– The drain hose can be extended using a connection piece to attach a further length of hose up to 4.0 m (13 ft) long. The drainage length must not exceed 4.0 m.

– Drainage noise can be considerably reduced if the drainage hose is positioned in an arc at a minimum height of 0.6 m and a max. height of 1.0 m (2-3.2 ft) measured from the bottom edge of the machine.

See installation diagram supplied.
## Program guide

<table>
<thead>
<tr>
<th>Program</th>
<th>Application</th>
<th>Pre-rinse</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Free memory)</td>
<td>Programmable program for special applications; programming by arrangement with Miele Professional Service.</td>
<td></td>
</tr>
<tr>
<td>(Free memory)</td>
<td>Programmable program for special applications; programming by arrangement with Miele Professional Service.</td>
<td></td>
</tr>
<tr>
<td>Vario TD</td>
<td>Cleaning and disinfection program according to EN ISO 15883 for processing wash loads with normal soiling.</td>
<td>(X) CW</td>
</tr>
<tr>
<td>Vario TD Intensive</td>
<td>Cleaning and disinfection program according to EN ISO 15883 for processing wash loads with heavy soiling.</td>
<td>CW 1 Min</td>
</tr>
<tr>
<td>Special 93°C-10'</td>
<td>For cleaning and thermal disinfection at 199°F/93°C with 10 minutes temperature holding time (exposure time).</td>
<td></td>
</tr>
<tr>
<td>Rinse</td>
<td>For flushing out saline solution (see &quot;Water softener / Adding salt&quot;), rinsing heavily soiled loads, e.g. for pre-rinsing soiling, residual disinfecting agent, or to prevent items drying out and to prevent incrustation before running a full load.</td>
<td></td>
</tr>
<tr>
<td>Drain</td>
<td>For draining chamber wash solution, e.g. after a program cancellation (see &quot;Water softener / Canceling a program&quot;).</td>
<td></td>
</tr>
</tbody>
</table>
### Program sequence

<table>
<thead>
<tr>
<th>Main wash</th>
<th>Interim rinse</th>
<th>Final rinse</th>
<th>Drying</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CW70 158°F/55°C DOS 1 5 Min</th>
<th>HW</th>
<th>HW</th>
<th>DI 199°F/93°C</th>
<th>X</th>
</tr>
</thead>
<tbody>
<tr>
<td>CW 113°F/45°C DOS 1 20 Min</td>
<td>DI 113°F/45°C DOS 1 5 Min</td>
<td>DI 149°F/65°C DOS 1 1 Min</td>
<td>DI 199°F/93°C</td>
<td>X</td>
</tr>
<tr>
<td>CW 199°F/93°C DOS 1 10 Min</td>
<td>HW</td>
<td>HW</td>
<td>DI 167°F/75°C</td>
<td>X</td>
</tr>
<tr>
<td>CW = cold water</td>
<td>HW = hot water</td>
<td>CW = cold water as percentage (CW70 = 70 % CW + 30 % HW)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DI = aqua destillata, fully demineralised water, demineralized water</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Min = Holding time in minutes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(x) = Optional program block;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Activation on request through Miele Technical Service.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DOS 1 = Cleaning detergent</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DOS 2 = Rinse aid (Door dispensing)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DOS 3 = Neutralizing agent</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Technical data

<table>
<thead>
<tr>
<th></th>
<th>Imperial</th>
<th>Metric</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height with machine lid</td>
<td>32 7/8&quot;</td>
<td>835 mm</td>
</tr>
<tr>
<td>Height without machine lid</td>
<td>32 5/16&quot;</td>
<td>820 mm</td>
</tr>
<tr>
<td>Width</td>
<td>23 9/16&quot;</td>
<td>598 mm</td>
</tr>
<tr>
<td>Depth</td>
<td>23 9/16&quot;</td>
<td>598 mm</td>
</tr>
<tr>
<td>Depth with door open</td>
<td>47 1/4&quot;</td>
<td>1,200 mm</td>
</tr>
<tr>
<td>Wash cabinet dimensions:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>height</td>
<td>20 9/16&quot;</td>
<td>520 mm</td>
</tr>
<tr>
<td>width</td>
<td>21 1/8&quot;</td>
<td>530 mm</td>
</tr>
<tr>
<td>depth</td>
<td>20 9/16&quot;</td>
<td>520 mm</td>
</tr>
<tr>
<td>Weight (net)</td>
<td>163 lbs</td>
<td>74 kg</td>
</tr>
<tr>
<td>Max. load capacity of open door</td>
<td>81.6 lbs</td>
<td>37 kg</td>
</tr>
<tr>
<td>Voltage, rated load, fuse rating</td>
<td>See data plate</td>
<td>See data plate</td>
</tr>
<tr>
<td>Power cord</td>
<td>Approx. 5’ 9” ft.</td>
<td>Approx. 1.8 m</td>
</tr>
<tr>
<td>Water temperature water connection:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cold water / Steam condenser</td>
<td>max. 68 °F</td>
<td>max. 20 °C</td>
</tr>
<tr>
<td>Hot water (optional) / DI water (optional)</td>
<td>max. 149 °F</td>
<td>max. 65 °C</td>
</tr>
<tr>
<td>Static water pressure</td>
<td>max. 145 psi</td>
<td>max. 1,000 kPa</td>
</tr>
<tr>
<td>Minimum flow pressure water connection:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cold water / steam condenser</td>
<td>14.5 psi</td>
<td>100 kPa</td>
</tr>
<tr>
<td>Hot water (optional)</td>
<td>5.8 psi</td>
<td>40 kPa</td>
</tr>
<tr>
<td>DI water (optional)</td>
<td>4.4 psi</td>
<td>30 kPa</td>
</tr>
<tr>
<td>Recommended flow pressure water connection:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cold water / hot water (optional)</td>
<td>29 psi</td>
<td>≥ 200 kPa</td>
</tr>
<tr>
<td>DI water (optional)</td>
<td>29 psi</td>
<td>≥ 200 kPa</td>
</tr>
<tr>
<td>Steam condenser</td>
<td>14.5 psi</td>
<td>≥ 100 kPa</td>
</tr>
<tr>
<td>Drainage pumping height</td>
<td>min. 11 3/4” ft, max. 3’ 3” ft</td>
<td>min. 0.3 m, max. 1.0 m</td>
</tr>
<tr>
<td>Drain hose length</td>
<td>max. 13’ 1” ft</td>
<td>max. 4.0 m</td>
</tr>
<tr>
<td>Operation:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ambient temperature</td>
<td>40 °F to 104 °F</td>
<td>5 °C to 40 °C</td>
</tr>
<tr>
<td>Relative humidity maximum</td>
<td>80 % for temperatures up to 88 °F</td>
<td>80 % for temperatures up to 31 °C</td>
</tr>
<tr>
<td>linear decreasing to</td>
<td>50 % for temperatures up to 104 °F</td>
<td>50 % for temperatures up to 40 °C</td>
</tr>
<tr>
<td>Storage and transport conditions:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ambient temperature</td>
<td>- 4 °F to 140 °F</td>
<td>- 20 °C to 60 °C</td>
</tr>
<tr>
<td>Relative humidity</td>
<td>10 % to 85 %</td>
<td>10 % to 85 %</td>
</tr>
<tr>
<td>Air pressure</td>
<td>7.25 psi to 15.37 psi</td>
<td>500 hPa to 1060 hPa</td>
</tr>
<tr>
<td>Altitude above sea level</td>
<td>up to 4,921 ft*</td>
<td>up to 1,500 m*</td>
</tr>
<tr>
<td>Ingress protection (as per IEC 60529)</td>
<td>IP21</td>
<td></td>
</tr>
<tr>
<td>Degree of soiling (as per IEC/EN 61010-1)</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Overvoltage category (according to IEC 60664)</td>
<td>II</td>
<td></td>
</tr>
<tr>
<td>Noise level in dB (A), sound pressure LpA during cleaning and drying phases</td>
<td>&lt; 59</td>
<td></td>
</tr>
<tr>
<td>Manufacturer’s address</td>
<td>Miele &amp; Cie. KG, Carl-Miele-Strasse 29, 33332 Gütersloh, Germany</td>
<td></td>
</tr>
</tbody>
</table>

* If installed above 4,921 ft (1,500 m) the boiling point of water will be lower. In this case the disinfecting temperature and the holding time will need to be reset.
Caring for the environment

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

Recycling the packaging reduces the use of raw materials in the manufacturing process and also reduces the amount of waste in landfill sites.

Disposing of your old appliance
Old electrical and electronic equipment often still contain valuable materials. However, they may also include harmful substances that were essential for proper functioning and safe use. Improperly disposing of these items in your household waste can be harmful to your health and the environment. Therefore, please do not dispose of your old appliance in your regular household waste.

Instead, use your local community waste collection and recycling centre for electric and electronic appliances. Contact your dealer for more information.

Ensure that your old appliance does not pose a danger to children while being stored for disposal.
Canada
Importer
Miele Limited

Professional Division
161 Four Valley Drive
Vaughan, ON L4K 4V8
Phone: 1-888-325-3957
Fax: 1-800-803-3366
www.mieleprofessional.ca
professional@miele.ca

Miele Professional Technical Service
Phone: 1-888-325-3957
Fax: 1-800-803-3366
serviceprofessional@miele.ca

Germany
Manufacturer
Miele & Cie. KG
Carl-Miele-Straße 29
33332 Gütersloh