



## PT Series

Translation of the original operating instructions

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## 1 Introduction

### 1.1 About these operating instructions

These operating instructions contain information that ensures the safe operation of the warewasher. It constitutes a component of the warewasher and must be stored in a place that is accessible for the user. To be able to work safely with the warewasher, the safety and operating instructions provided must be observed. Compliance with the valid national accident prevention regulations and general safety provisions must be ensured.

### 1.2 Copyright

The instructions are protected for the manufacturer by copyright.

The instructions contain guidelines and drawings or parts of drawings of a technical nature, which may not be reproduced, distributed, used for the purposes of competitors without authorisation or shared with others, either in whole or in part.

The operator of the warewasher is permitted to make copies, in whole or part, expressly for internal use relating to the operation of the dishwasher. The manufacturer is entitled to claim damages for any infringements. Further rights reserved.

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### 1.3 Proper use

- The warewasher is intended only for washing dishes, cutlery, glasses, kitchen utensils, pots, trays, plates, and GN containers for gastronomic and similar use.
- The warewasher is a technical device for commercial use and is not intended for private use.
- Always operate the warewasher only as described in these operating instructions.

### 1.4 Improper use

- Do not wash without a wash rack.
- Do not make any changes, additions or modifications without the approval of the manufacturer.
- Winterhalter Gastronom GmbH assumes no liability for any damage caused by improper use of the warewasher.

## 2 Safety

### 2.1 Safety notes

Winterhalter Gastronom GmbH assumes no liability or warranty in the event of non-compliance with these safety and operating instructions.

#### General safety notes

- This warewasher can be used by children aged 8 years and above and by persons with reduced physical, sensory, or mental capabilities, or lack of experience and knowledge, if they are supervised or have been instructed in the safe use of the machine and understand the dangers involved.
- Children must not play with the warewasher.
- Cleaning and user maintenance should not be carried out by children without supervision.
- Read through the safety notes and operating instructions carefully.
- Retain the operating instructions for future reference.
- Only use the warewasher after you have read and understood the operating instructions and the safety notes.
- Allow the Winterhalter Customer Service Department to provide information about the operation and functioning of the warewasher.
- Train operating personnel in handling the warewasher and point out any and all safety notes. To prevent accidents, repeat the training sessions at regular intervals.
- Operate this warewasher only when it is in perfect condition.
- A damaged or leaking warewasher may endanger safety. If malfunctions occur, switch off the warewasher immediately and switch it back on only once the malfunction has been remedied.
- Have the installer or an electrician remedy on-site water and electricity supply malfunctions.
- Have other malfunctions be remedied by an authorised service technician or your dealer.
- Once the work is complete, close the on-site water supply.
- After finishing work, switch off the machine using the self-cleaning programme.

#### Electrical safety

- Do not open any machine covers or machine parts if doing so requires tools. There is a danger of electric shock.
- The electrical safety of this machine is guaranteed only if it is connected to a correctly installed protective circuit. It is crucial that this basic safety requirement is tested and, in case of doubt, that the on-site installation is checked by a qualified electrician.  
Winterhalter cannot be held responsible for damage caused by a missing or broken protective conductor (e.g. electrical shock).
- Work on the electrical system may only be carried out by qualified specialists. When working on the electrical system, observe the electrical engineering safety rules to avoid electrical accidents:
  - Disconnect all power supply points.
  - Secure the machine against being switched on again.
  - Check that there is no voltage present.
  - Earth and short circuit.
  - Cover or cordon off neighbouring parts that are live.
- If the mains cable is damaged, to prevent hazards it must be replaced by Winterhalter, its Customer Service Team or another qualified person. The mains cable must be a H07RN-F type or equivalent.

## Maintenance and repairs

- Service technicians may carry out maintenance work and repairs only if they have been trained and authorised to do so by Winterhalter. Improper maintenance or repairs may cause significant danger to the user, for which Winterhalter is not liable.
- Only original Winterhalter spare parts may be used for maintenance and repairs. Using third-party spare parts voids the warranty.

## 2.2 Operator obligations

This commercial warewasher is intended for use in catering establishments. The operator of the warewasher is therefore subject to the legal obligations for occupational safety. In addition to the warning and safety notes in these operating instructions, the operator must comply with the current provisions regarding safety, accident prevention and environmental protection for the area of application of the warewasher. To ensure safe use of the warewasher, the operator must take the following measures:

- Have the warewasher connected according to the locally applicable standards and the regulations by authorised mechanics (water, waste water, electrical system).
- Provide the user with information on the provisions regarding occupational safety.
- Ensure that all persons working on the warewasher have read the operating instructions and the quick guide. Furthermore, the user must take part in regular training on use of the warewasher and must be informed of any possible danger. If necessary, contact the Winterhalter Customer Service team regarding operation and functioning of the warewasher.
- Provide the user with the operating instructions and quick guide.
- Train the user on use of the chemicals.
- Operate this warewasher only when it is in perfect technical and hygienic condition.

## 2.3 User obligations

In addition to the warning and safety notes in these operating instructions, the operator must comply with the current provisions regarding safety, accident prevention and environmental protection for the area of application of the commercial warewasher.

In particular, the user must take the following measures:

- Adhere to the current provisions regarding occupational safety.
- Properly fulfil the allocated responsibilities for installation, operation, maintenance and cleaning of the warewasher.
- Switch off the warewasher immediately should a malfunction occur.  
Switch the warewasher back on only once the cause of the malfunction has been remedied by an authorised service technician.
- Ensure cleanliness and tidiness around the warewasher.
- Never drink the wash water and avoid contact with the skin.

## 2.4 Mechanical dangers



### Warning

#### Possible risk of injury when loading the wash racks

Be aware of sharp and pointed utensils when loading the wash racks.

- Wash cutlery upright in the cutlery holder or laid in the flat basket.



### Warning

#### Risk of slipping on wet floors

Moisture may build up on the floor around the warewasher when operating it.

- Prevent any build-up of dirt on the floor.
- Wear personal protective equipment (non-slip footwear).



### Caution

#### Possible risk of injury due to sharp edges

Cut injuries may occur when cleaning the warewasher with wet hands.

- Wear protective gloves.

## 2.5 Electrical dangers



### Danger

#### Electric shock from live components

A fatal electric shock can occur when the warewasher and its additional devices are connected to the electrical mains supply.

- The warewasher and its additional devices may be connected to the electrical mains supply only by a specialist company registered within the electrical trade and approved by the energy supplier.
- All locally applicable standards and regulations must be observed during the connection to the electrical mains supply.



### Danger

#### Electric shock from live components

Touching live components can lead to death. Damage to the insulation of cables or faulty on-site installations can be life-threatening.

- A protective circuit must be connected properly.
- In the event of a defect or damage to an electrical component/cable, switch off the power supply immediately and arrange for its repair by a specialist.



### Danger

#### Electric shock from live components

A fatal electric shock can occur during installation and maintenance work and when carrying out repairs.

- Isolate and lockout the mains supply to the warewasher.
- Check that there is no voltage present.

## 2.6 Thermal dangers



### Caution

#### Damage due to hot components

Insufficient distance between electrical cables or dosing tubes and hot components when installing accessory devices can lead to damage.

- Ensure to lay electrical cables or dosing tubes at a sufficient distance.

## 2.7 Handling of chemicals



### Danger

#### Risk of chemical burns due to chemicals

Contact between chemicals with the skin or eyes can lead to severe burns or serious eye damage.

- In the event of contact with the eyes or skin, rinse thoroughly with tap water. Seek medical attention as required.
- Wear protective clothing, protective gloves and protective goggles.
- Observe the danger and safety notes on the canister and safety data sheet.



### Danger

#### Risk of poisoning due to chemicals

Oral contact with the chemicals can lead to severe poisoning.

- Never drink chemicals or transfer them to other containers.
- Observe the danger and safety notes on the canister and safety data sheet.



## 2.8 Safety settings

The commercial warewasher has been built in accordance with the applicable legal provisions and is safe to operate. Danger areas that cannot be excluded by design are fitted with safety devices.

- Hood limit switch

All safety devices must be present and functional when operating the commercial warewasher.

Safety devices must not be changed or modified.

## 2.9 Notes on spare parts

Only original Winterhalter spare parts may be used for maintenance and repairs. Using third-party spare parts voids the warranty. The information in the spare parts catalogues is absolute in this respect.

Service technicians may only carry out maintenance work and repairs if they have been trained and authorised to do so by Winterhalter. Improper maintenance or repairs may cause significant danger to the user, for which Winterhalter is not liable.

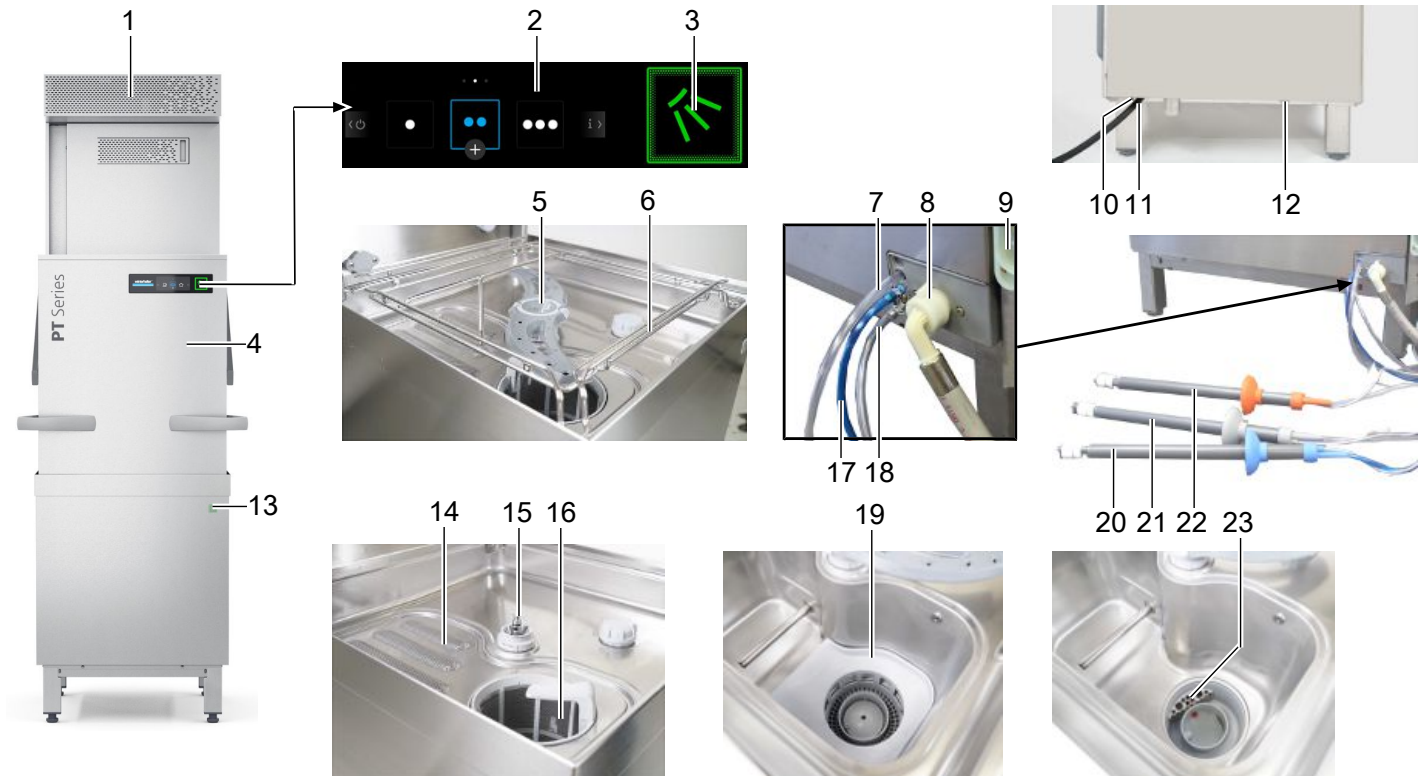
### 3 Machine description

#### 3.1 Description of function

After the warewasher is switched on, the boiler and the tank are filled and heated up to the operating temperature. Once the target temperatures are reached, the warewasher is ready for use.

The warewasher is fully automatic with programmes consisting of three steps: Wash, Drain and Rinse.

#### 3.2 Overview



Item	Description	Item	Description
1	Energy module (optional)	13	Start button (only for automatic hood mechanisms)
2	Display	14	Strainer
3	Start button	15	Wash field bearing
4	Hood	16	Filter cylinder
5	Lower wash field	17	Rinse aid connection
6	Rack guide	18	Detergent connection
7	Defoamer hose guide	19	Filter bottom
8	Inlet water hose	20	Rinse aid suction tube
9	Multifunction interface	21	Suction tube for detergent (optional)
10	Connection for on-site equipotential bonding system	22	Suction tube for defoamer (optional)
11	Mains cable	23	Pump protection strainer
12	Waste water connection		

**Automatic hood start**

Closing the hood automatically starts a washing programme. The automatic hood start can be deactivated by an authorised service technician (P572). Every washing programme will then need to be started by pressing the start button.

**Automatic hood mechanism (optional for PT-M and PT-L)**

The hood opens automatically after every washing programme and can be closed again using the start button on the front cover.

**EnergyPlus (optional)****Note: Cold water connection required.**

The Energy module above the warewasher includes a fan motor and a heat exchanger. The fan motor extracts the moist, warm air (= vapours) out of the washing compartment and transfers the generated energy to the cold inlet water via a heat exchanger. A waste water heat exchanger provides an additional energy gain.

**ClimatePlus (optional for PT-M and PT-L)****Note: Cold water connection required.**

The heat pump module above the warewasher includes a fan motor and a heat pump. The fan motor extracts the moist, warm air (= vapours) out of the washing compartment and the area around the warewasher and transfers the generated energy to the cold inlet water via a heat exchanger.

**Cool (optional)****Note: Cold water connection required.**

The rinse temperature can be changed for warewashers with this option. Glasses are ready to be used again faster with cold rinsing.

**Utensil (optional for the PT-L and PT-XL)**

Warewashers with this option combine two applications and can wash both utensils (e.g. pots, trays) and dishes. Two tank heaters are installed to maintain the tank water temperature.

**Integral water softener (optional)**

Warewasher with built-in salt container for regeneration salt. The regeneration salt softens the inlet water and thus prevents a build-up of limescale inside the warewasher and on the items being washed.

**PAY PER WASH (optional)**

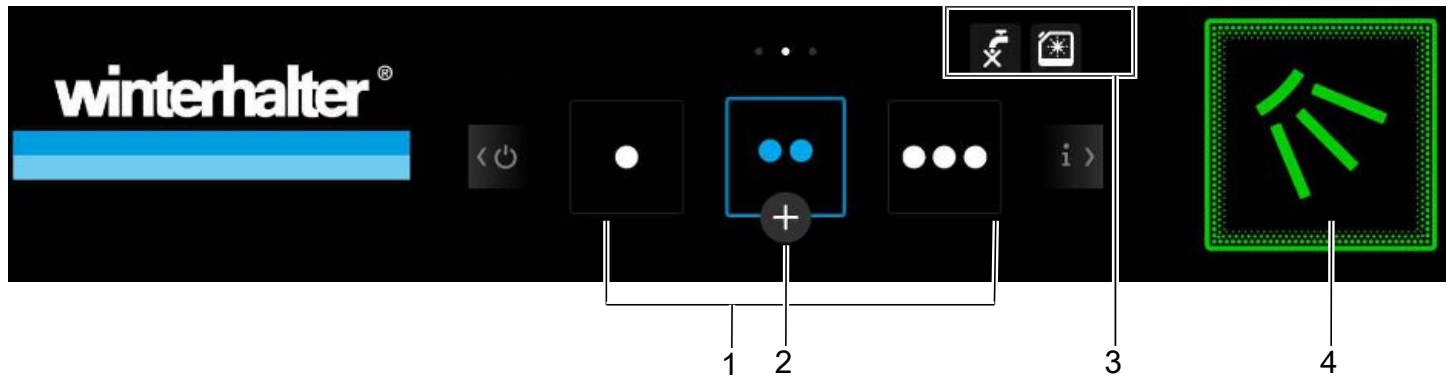
Further information is available on our homepage.  
[www.pay-per-wash.com](http://www.pay-per-wash.com)

**CONNECTED WASH**

Further information is available on our homepage.  
[www.connected-wash.com](http://www.connected-wash.com)

### 3.3 Display

Operating the display is similar to operating the display of a smartphone. The display responds to light touches. Therefore, operate the display only with your fingers and do not use any sharp objects. You can also operate the display and start button with wet hands or rubber gloves.



Item	Name
1	Washing programmes
2	Selection of additional and special programmes
3	Display area for error pictograms
4	Start button

#### Start button (4)

Colour	Meaning
Not lit	Washer is switched off.
Orange	Washer is filling and heating up.
Green	Washer is ready for use.
Flashing green	Washing programme is ended; hood has not been opened yet.
Blue	Washer is washing.
Flashing blue	Soaking programme is running. Only for washers with automatic hood mechanism: The hood moves down, a washing programme then starts automatically.
Flashing green-blue	Only for washers with Energy module or heat pump module: Warm, humid air is being extracted. The washing programme is completed only once the start button flashes green.
Red	The washer no longer washes because there is a serious error.




On machines with an automatic hood, the start button on the front panel behaves in the same way as the start button on the display.

#### Screen saver

The display is dimmed if it is not used for a long time. Washing can also be carried out when the display is darkened.





### 3.4 Washing programmes




Programme 2 is pre-selected as soon as the warewasher is ready.

Pictogram <sup>1</sup> / washing programme	Soiling of the dishes
 Programme 1	Light
 Programme 2	Normal
 Programme 3	Severe

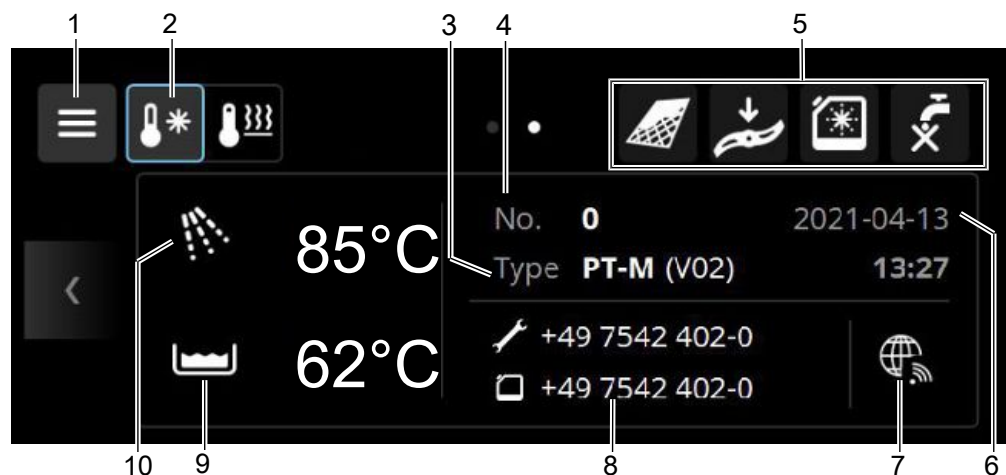
<sup>1</sup> Additional pictograms are available in the chef menu.

The authorised service technician can adjust programmes to your dishes (temperature, wash pressure, dosing and programme length).

Pictogram / additional programme	Meaning
 Intensive programme	Longer contact time for heavy-duty soiling
 Silence programme	Quieter washing programme due to reduced wash pressure and longer contact time
 ECO programme	Longer contact time with fewer resources used
 Short programme	Shortened contact time with slightly higher detergent consumption

Pictogram / special programme	Meaning
 Soaking programme	Programme for soaking and dissolving dried-on residues.
 Basic cleaning programme	Menu-guided programme for the thorough cleaning of dishes, for example to remove starch residues.
 Descaling programme	Menu-guided programme for descaling the interior of the warewasher.

### 3.5 Info menu



Item	Name
1	Access to the dishwashing staff menu / chef menu
2	Cool (optional): Switching the rinse water temperature
3	Machine model
4	Machine number
5	Display area for error pictograms
6	Date / time
7	CONNECTED WASH: The warewasher is connected to the Internet
8	Telephone number for service technician and chemical supplier
9	Current tank temperature
10	Current rinse water temperature

### 3.6 Chemicals



#### Caution

##### Risk of chemical burns when handling chemicals

Contact with chemicals can occur when changing the canister.

- Observe the danger and safety notes on the canister and safety data sheet.
- Wear protective clothing, protective gloves and protective goggles.

Use only products that are suitable for commercial warewashers. We recommend using Winterhalter products that are specially adapted to Winterhalter warewashers. The correct dosage is based on the information on the product packaging.

##### Rinse aid

Rinse aid is necessary to ensure that water on the items being washed drains off after washing as a thin film. This ensures that the wash items dry quickly.

Rinse aid is automatically dispensed using an integrated or external dosing device.

##### Detergent

A detergent is necessary to dissolve food residues and dirt on the wash items. Detergent is automatically dispensed using an (optional) integrated or external dosing device.

To avoid damaging the warewasher and to achieve a good wash result:

- Do not use acidic detergents.
- Do not use foaming products (e.g. manual washing-up liquid) for pre-treating the wash items.

##### Defoamer

Defoamer is necessary if heavy foam formation prevents a good wash result. Defoamer is automatically dispensed using an (optional) integrated dosing device.

### 3.7 Suction tube with level control



Colour (cover cap)	Canister
Orange	Defoamer (optional)
grey	Detergent (optional)
blue	Rinse aid

Item	Name
1	Float switch for level control

The float switch (1) can detect a defect in the chemicals and indicates this on the display. ▶ 44

### 3.8 Technical data

Description	Note	Unit	Value		
			PT-M	PT-L	PT-XL
Rack dimensions		mm	500 x 500	500 x 500	500 x 500
				500 x 600	500 x 600
Tank capacity	PT Standard, PT EnergyPlus, PT Cool	L	35		
	PT Utensil		-	36	
Noise emission	PT Standard, PT EnergyPlus, PT Cool, PT Utensil	dB(A)	max. 62		
	PT ClimatePlus		max. 70		
	Measurement uncertainty	dB	2.5		
Splash guard			IP X5		
Minimum flow pressure	PT Standard, PT Cool, PT Utensil	kPa (bar)	100 (1.0)		
	PT ClimatePlus, PT EnergyPlus		150 (1.5)		
Max. inlet pressure (Back pressure)		kPa (bar)	1000 (10.0)		
Flow rate		l/min	min. 4		
Inlet water temperature	PT Standard, PT Utensil	°C	max. 60		
	PT Cool, PT ClimatePlus, PT EnergyPlus		max. 20		

#### Exhaust air

Observe local guidelines, e.g. DIN EN 16282 / VDI guideline 2052 when constructing the ventilation system.

#### Operating conditions

Name	Unit	Value
Temperature at the installation site	°C	0 - 40
Relative air humidity at the installation site	%	< 95
Storage temperature	°C	> -25
Max. height of the installation location above sea level	m	3000

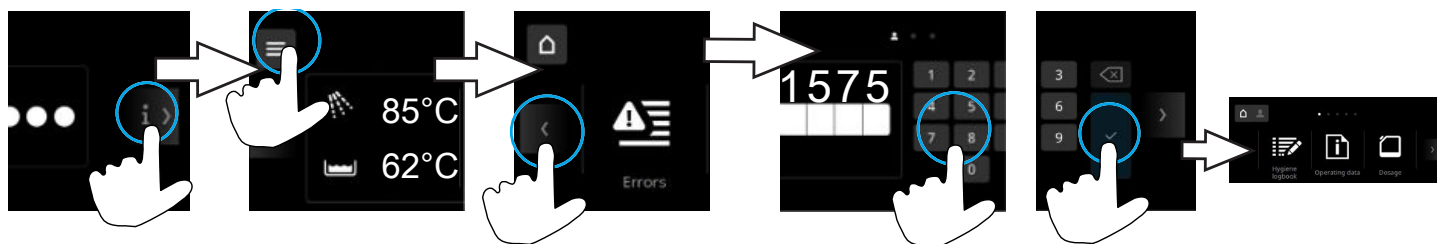


## 4 Software

### 4.1 Chef menu

In this menu the chef can change settings to the warewasher and access information. The warewasher switches off when the menu is accessed. After leaving the menu, the warewasher must be switched back on.

#### Access the chef menu



A PIN protects the menu from unauthorised access. The PIN is 1575. If you enter your PIN incorrectly three times in a row, input will be blocked for 10 minutes.

#### Navigation



Item	Description
1	Continue to the next window by tapping or swiping
2	Exit the menu
3	“Chef menu” symbol
4	Number of windows at the same level
5	One level back
6	Scroll up or down

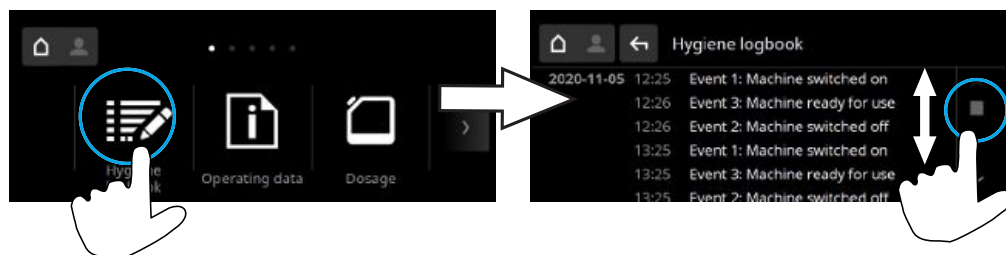
#### The following menus are available:

Menu	Menu
Hygiene logbook	Brightness
Operating data	Sounds
Water hardness	Date / time
Dosage	Language
Timer	Units
Pictograms	CONNECTED WASH
Basic cleaning	Water countdown meter
Descaler	

The number of menus depends on the configuration of the warewasher.

### 4.1.1 Hygiene logbook

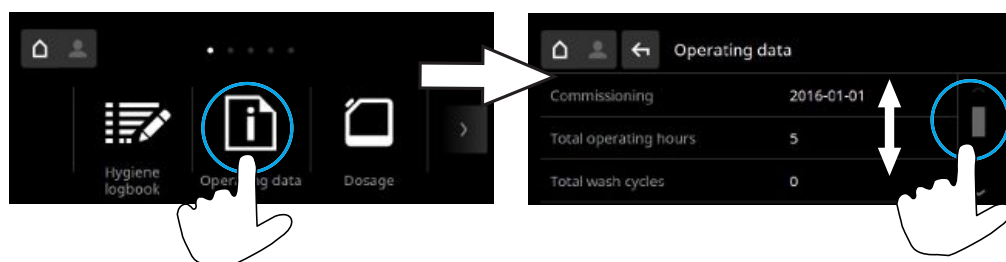
In this menu the daily operating states are shown in chronological order.



### 4.1.2 Operating data

In this menu the operating data, e.g. consumptions and operating hours, are shown.

Water consumptions are reference values and are not based on precise measurements.



### 4.1.3 Water hardness

**Note: Only for machines with an integral water softener.**

The water hardness of the inlet water is entered in this menu.

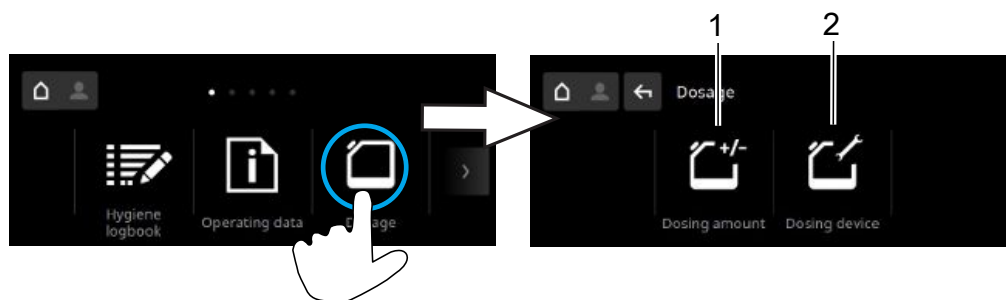


#### Calculation table

		°dH	°e	°TH	mmol/l
German hardness	1°dH=	1.0	1.253	1.78	0.179
English hardness	1°e=	0.798	1.0	1.43	0.142
French hardness	1°TH=	0.560	0.702	1.0	0.1
mmol/l	1 mmol/l=	5.6	7.02	10.0	1.0

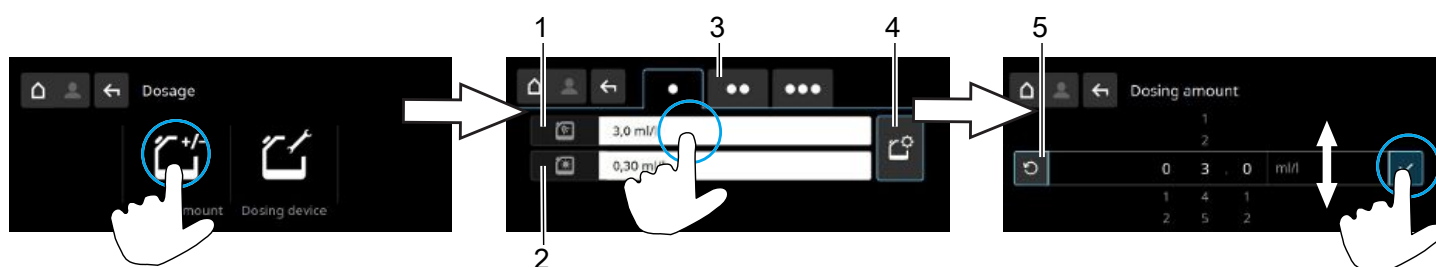
#### 4.1.4 Dosage

In this menu you set the dosing amounts and configure the transfer strip for the dosing devices.



Item	Description
1	Setting the dosing amount
2	Configuring the transfer strip ▶ 35

#### Setting the dosing amount



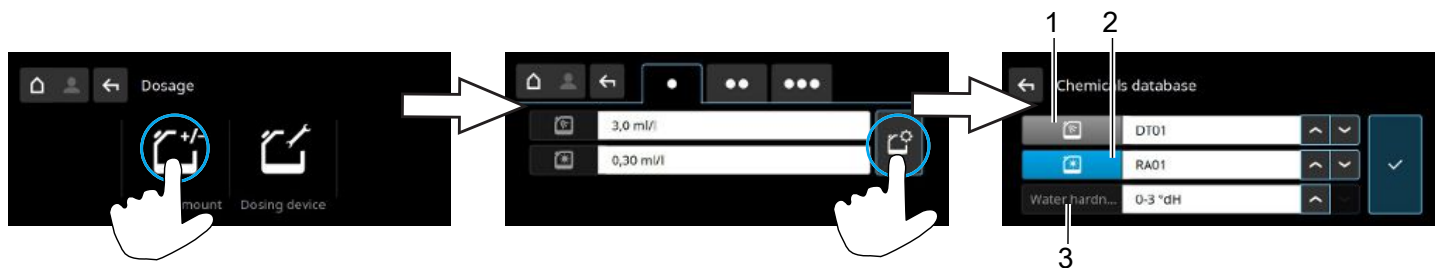
Item	Description
1	Detergent dosing
2	Rinse aid dosing
3	Washing programmes
4	Chemicals database
5	Reset to default setting

**Note:** The defoamer dosing must be set by an authorised service technician.

### Accessing the chemicals database

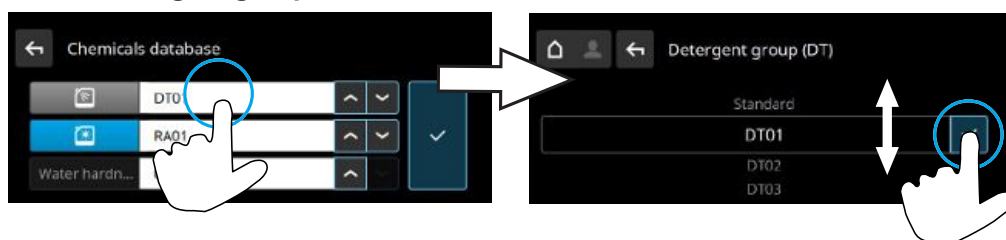
When using Winterhalter rinse aid and detergent, the canisters incorporate the information for a detergent group (e.g. DT05) or rinse aid group (e.g. RA01). This information is used as an aid for dosing. However, we recommend that the dosing setting be set precisely by an authorised service technician.

**Note: Canisters with 'DT' or 'RA' information are not available in all countries.**

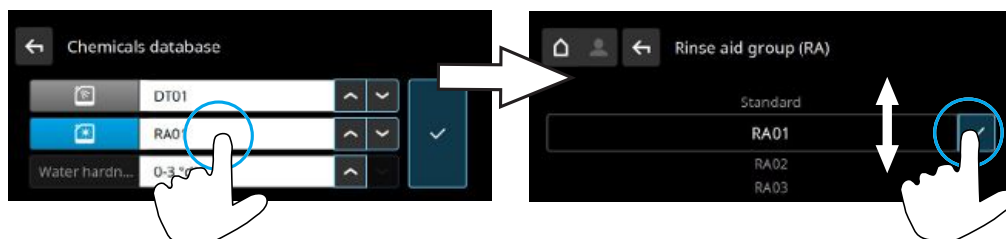


Item	Description
1	Detergent group (DT)
2	Rinse aid group (RA)
3	Water hardness

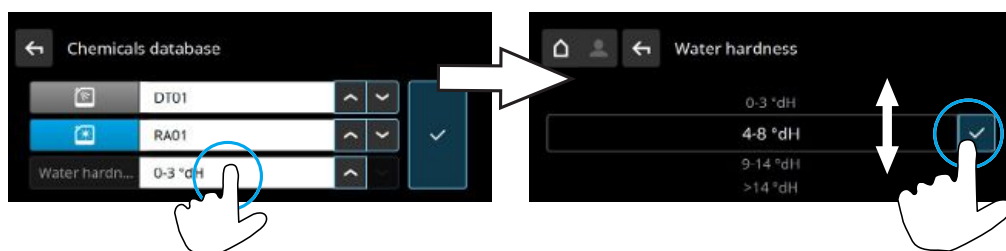
### Set the detergent group



### Set the rinse aid group



### Set the water hardness

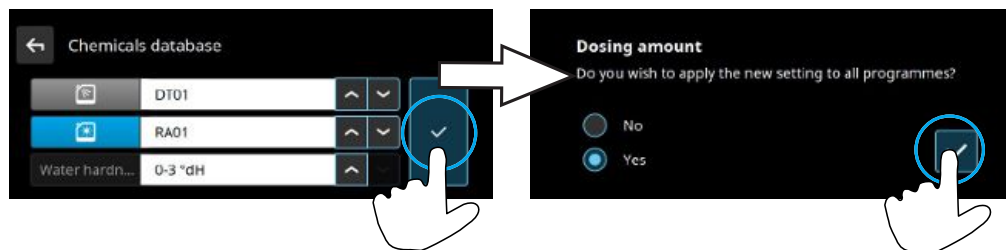


### Calculation table

**Note: Enter water hardness in °dH. Set "0-3 °dH" for machines with a built-in water softener.**

		°dH	°e	°TH	mmol/l
German hardness	1°dH=	1.0	1.253	1.78	0.179
English hardness	1°e=	0.798	1.0	1.43	0.142
French hardness	1°TH=	0.560	0.702	1.0	0.1
mmol/l	1 mmol/l=	5.6	7.02	10.0	1.0

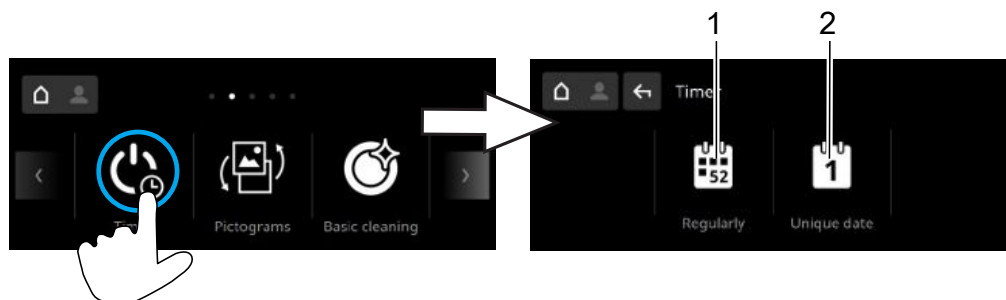
## Exit the menu



### 4.1.5 Timer

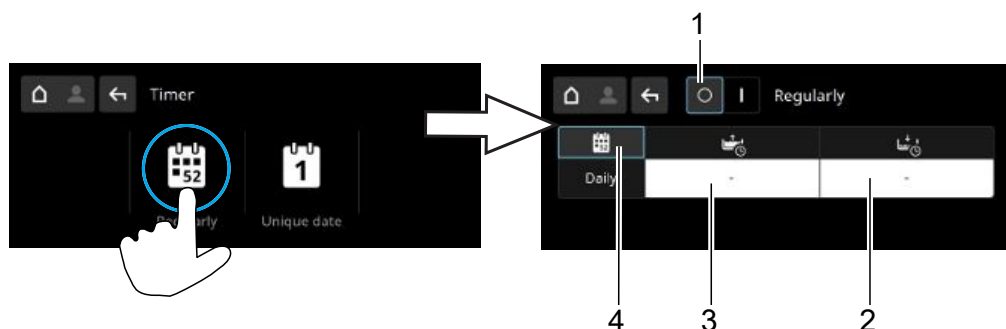
The timer can be used to programme the warewasher to switch on or off automatically at a specific time. At the time of automatic start-up the following requirements must be met:

- The hood is closed.
- The on-site water supply is open.



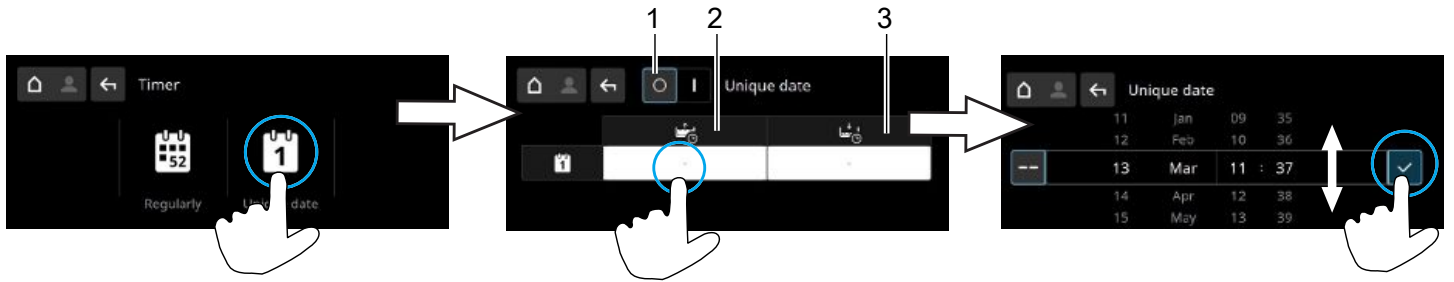
Item	Description
1	Set a regular time
2	Set a non-recurring date

### Set a regular time



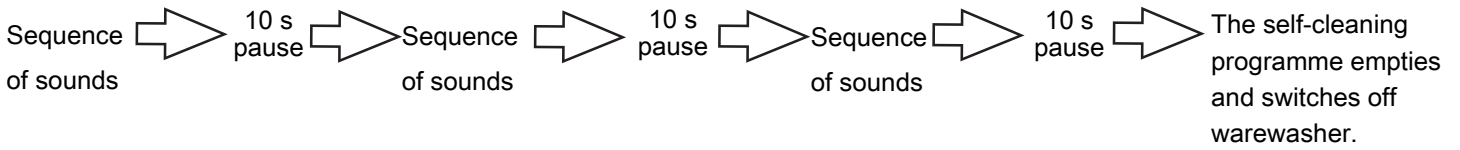
Item	Description
1	Switch the timer off / on
2	Time for automatic switch-off
3	Time for automatic start-up
4	Select timer schedule <ul style="list-style-type: none"> <li>– Daily</li> <li>– Mon–Fri, Sat–Sun</li> <li>– Individual (a different time on every weekday)</li> </ul>

**Set a non-recurring date**



Item	Description
1	Switch the timer off / on
2	Date and time for automatic start-up
3	Date and time for automatic switch-off

**Automatic switch-off sequence**



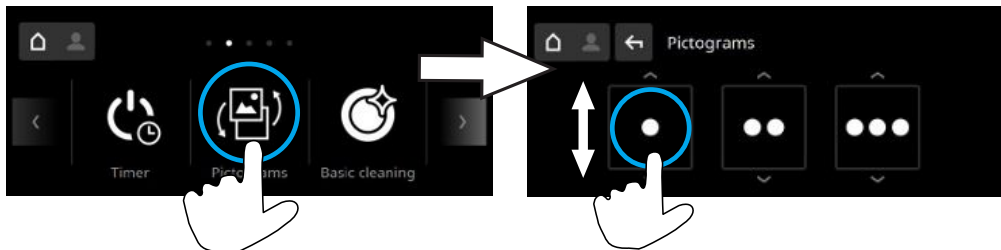
If the hood is open during the automatic switch-off, the warewasher is pumped empty and switched off.

**Show time programme**



**4.1.6 Pictograms**

The pictograms for the 3 washing programmes can be changed in this menu.



Changing the pictograms has no effect on parameters such as programme length or temperatures.

### 4.1.7 Basic cleaning

We recommend running the basic cleaning programme at the end of every working day, as the machine's tank is emptied when the programme ends. For this programme you need a washing power booster suitable for commercial warewashers. Winterhalter recommends washing power booster A 20 ST.



#### Danger

##### Risk of chemical burns due to chemicals

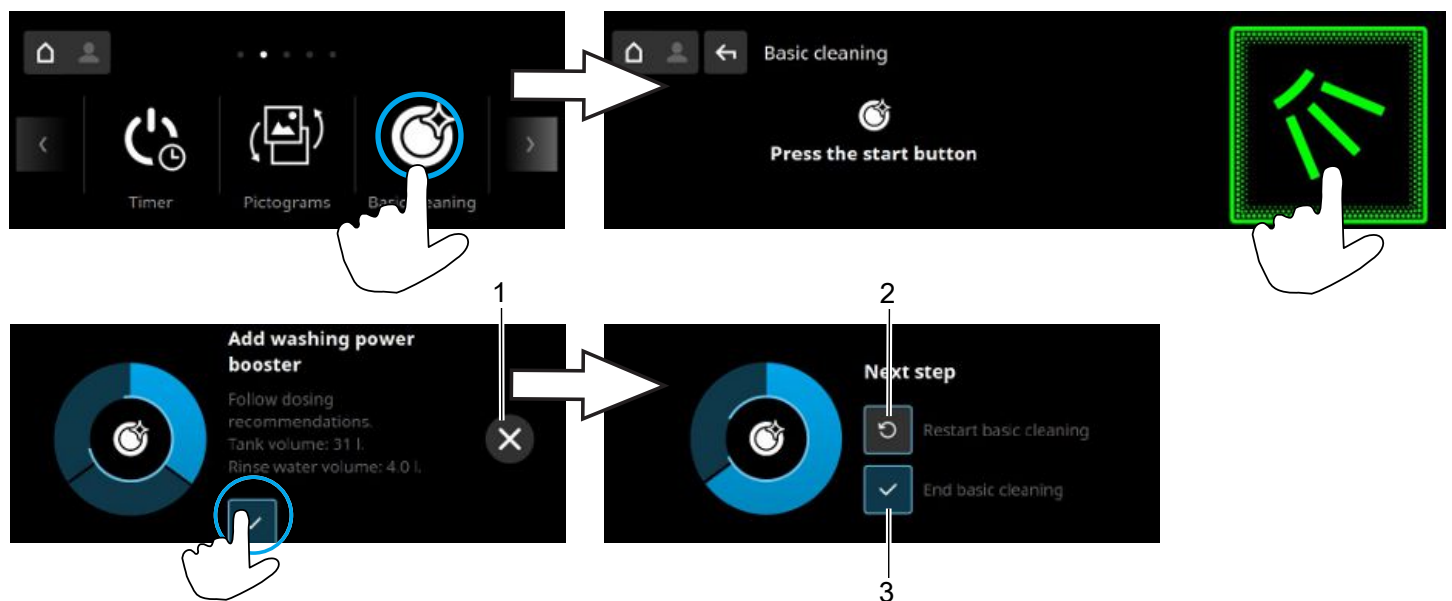
Contact between chemicals with the skin or eyes can lead to severe burns or serious eye damage.

- In the event of contact with the eyes or skin, rinse thoroughly with tap water. Seek medical attention as required.
- Wear protective clothing, protective gloves and protective goggles.
- Observe the danger and safety notes on the canister and safety data sheet.

#### Start the basic cleaning programme

Follow dosing recommendations when adding the washing power booster. The initial dose for the first use of the programme depends on the machine's tank volume.

The additional dosage for each additional programme depends on the rinse water volume.



Item	Description
1	Terminate the basic cleaning programme
2	Restart the basic cleaning programme
3	End the basic cleaning programme

### 4.1.8 Descale

If the warewasher is operated with hard water and without water treatment, then the boiler, the interior of the machine, all the water lines and other components may develop scale. Grease residues and dirt that remain in the machine can contribute towards hygiene risks, while scaling can lead to failure of heating elements. Regular removal of these coatings is recommended.

The interior of the warewasher can be descaled using the descaling programme. We recommend running the descaling programme at the end of every working day, as the machine's tank is emptied when the programme starts and ends. For descaling, you need an acid-based descaler suitable for commercial warewashers. Winterhalter recommends descaler A 70 LS.

The water lines and the boiler can be descaled only by an authorised service technician.



#### Warning

##### Risk of chemical burn due to contact with descaler

Contact between descaler and the skin or eyes can lead to severe burns or serious eye damage.

- Wear protective clothing, protective gloves and protective goggles.
- Observe the danger and safety notes on the canister and safety data sheet.



#### Warning

##### Danger of chlorine gas developing

Mixing active chlorine cleaner and acid-based descaler produces chlorine gas. Contact with chlorine gas leads to eye, nose and throat irritations.

- Do not mix active chlorine cleaner and acid-based descaler.
- Ensure good ventilation when you descale the warewasher.



#### Note

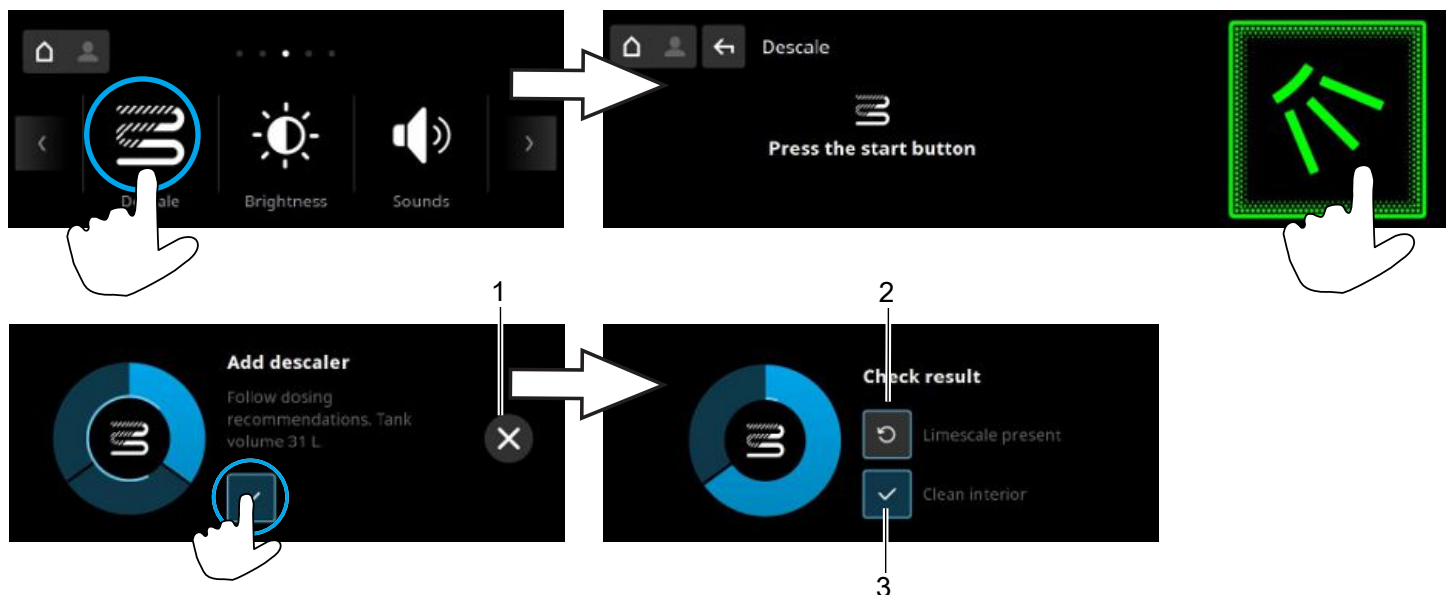
##### Danger of corrosion due to descaler solution

Descaler solution has a corrosive effect when in contact with metals and plastics for a long time and therefore must not remain in the interior of the machine (e.g. overnight).

- Do not terminate the descaling programme and follow the instructions on the display.

### Start the descaling programme

When adding the descaler, observe the tank volume and dosing recommendation.

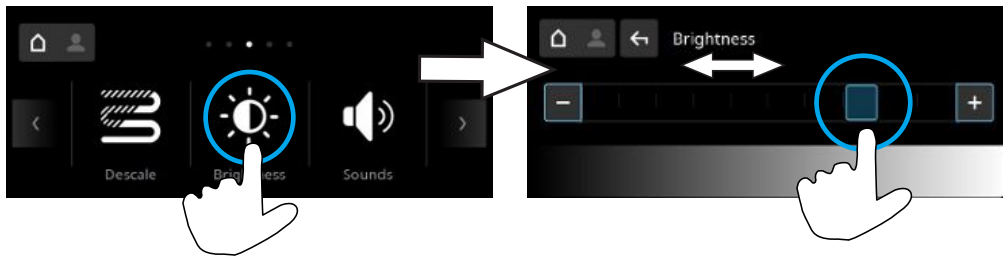


Item	Description
1	Terminate descaling programme (possible as long as no descaler has been added)
2	Repeat descaling programme
3	End descaling programme



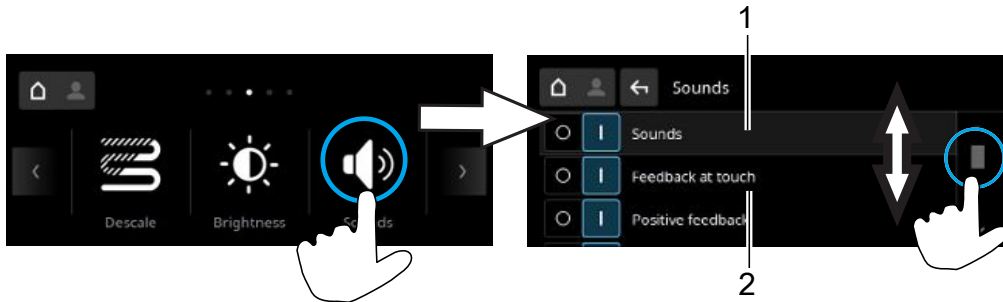
### 4.1.9 Brightness

In this menu the brightness of the display is set.



### 4.1.10 Sounds

In this menu sounds are turned on or off.



Item	Description
1	Turn all sounds on or off
2	Turn individual sounds on or off

### 4.1.11 Date / time

In this menu the date and time are entered.

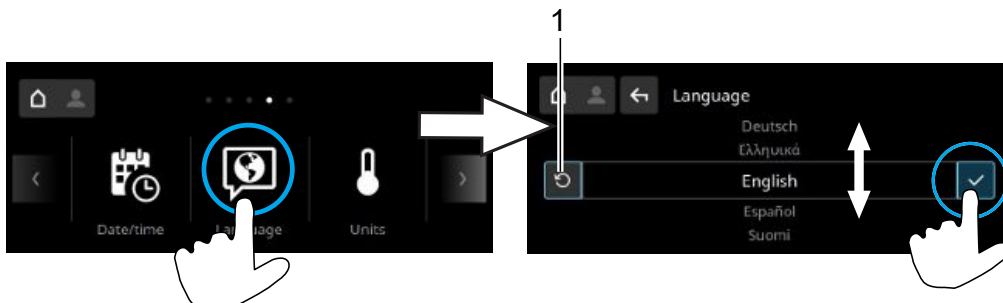
**Note: Time must be changed for the summer/ winter time changeover.**



Item	Description
1	Set date
2	Set time

### 4.1.12 Language

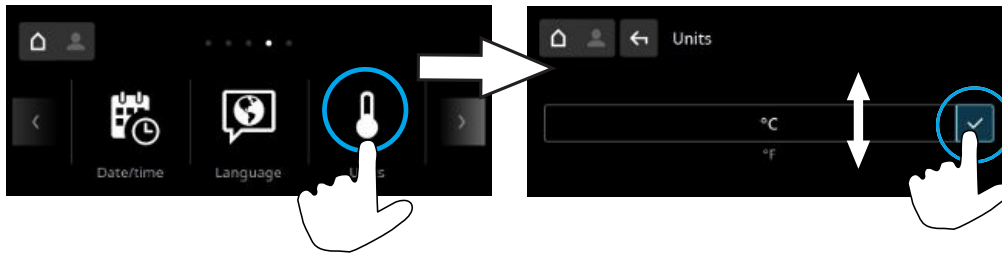
In this menu the language of the display texts is set.



Item	Description
1	Reset to last language set

### 4.1.13 Units

In this menu the unit and temperature indicator are changed.

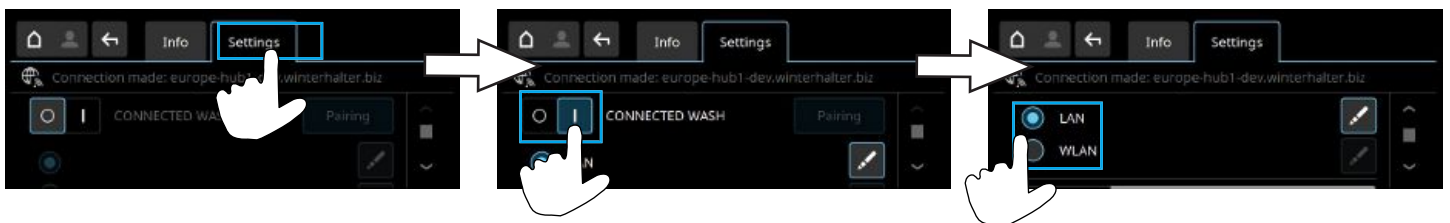


### 4.1.14 CONNECTED WASH

In this menu the link with CONNECTED WASH is configured.



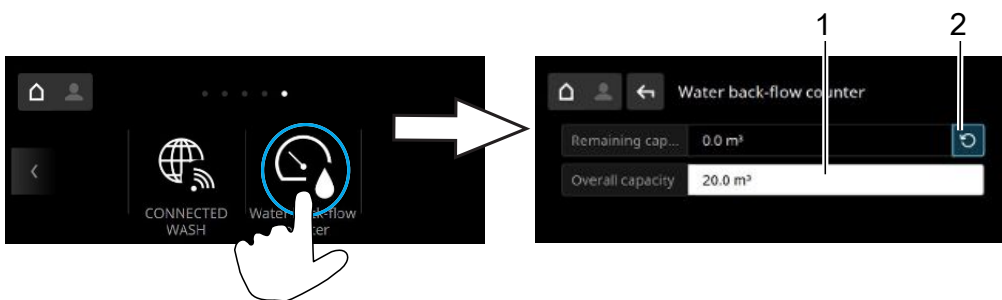
### Activating CONNECTED WASH



You will find detailed information and instructions on the website: ▶ 11

### 4.1.15 Water back-flow counter

The water back-flow counter must be reset if the set total capacity of an external water treatment device has reached the value "0".



Item	Name
1	Set the total capacity
2	Reset the water back-flow counter

## 5 Commissioning

### 5.1 Installing the warewasher

The installation site must be frost-resistant to prevent the water supply systems from freezing.

- Install the warewasher horizontally using a spirit level.
- Adjust any unevenness of the base using the height-adjustable machine feet.

### 5.2 Connecting the warewasher

The warewasher and any other relevant additional devices must be connected in adherence to local standards and regulations by an electrical company authorised by the relevant electricity supplier.

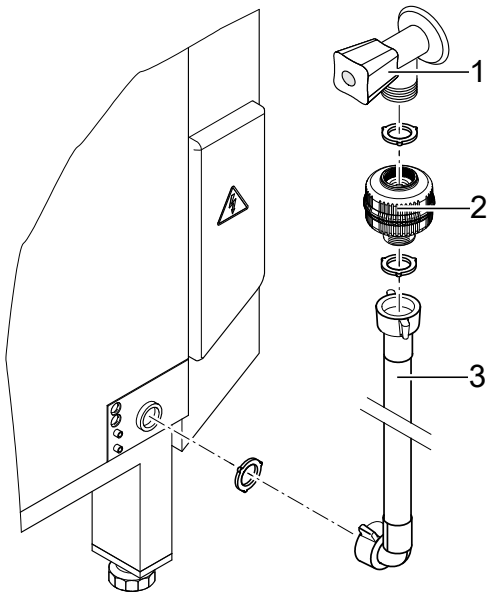
#### 5.2.1 Water connection

The water-related safety should be as per DIN EN 61770. The warewasher can be connected to a fresh water pipe without an intermediate connection to other safety equipment.

#### Connecting the inlet water hose

Important notes:

- Do not shorten, alter or damage the inlet water hose.
- Use only the inlet water hose supplied. Old existing inlet water hoses may not be re-used.
- Do not kink the inlet water hose when connecting it.



- Connect the inlet water hose (3) to the warewasher.
- Connect the dirt trap (2) to the on-site water supply (1).
- Connect the inlet water hose (3) to the dirt trap (2).
- Open the water supply (1) and check that the connections are sealed.

The dirt trap prevents particles from the inlet water from entering the warewasher, thus preventing extraneous rust on the cutlery and in the warewasher.

#### Connecting the warewasher to the waste water system



- Connect the waste water hose (1) to the warewasher.
- Guide and connect the waste water hose to the on-site waste water connection.

**Requirements for on-site installation****Inlet water connection**

Location	approx. 500 mm above finished floor; to the right of the machine			
Construction	Isolation valve with G 3/4" external thread			
Inlet water temperature	PT Standard, PT Utensil	max. 60 °C		
	PT EnergyPlus, PT ClimatePlus, PT Cool	max. 20 °C		
Water quality	Microbiologically, fresh water must be of drinking water quality			
Water hardness		Machines without integrated softener	Machines with integrated softener	Note
	PT Standard, PT Cool, PT Utensil	≤ 3 °dH (3.8 °e / 5.34 °TH / 0.54 mmol/l)  Recommended, to prevent ware-washer from scaling up.	≤ 31 °dH (37.6 °e / 53.4 °TH / 5.35 mmol/l)	-
	PT EnergyPlus, PT Utensil EnergyPlus	≤ 3 °dH (3.8 °e / 5.34 °TH / 0.54 mmol/l)	≤ 20 °dH (25.1 °e / 35.6 °TH / 3.58 mmol/l)	-
	PT ClimatePlus	≤ 3 °dH (3.8 °e / 5.34 °TH / 0.54 mmol/l)	-	The conductivity must be ≥ 200 µS/cm (128 ppm TDS).
Water flow pressure	PT Standard, PT Cool, PT Utensil	100 kPa (1.0 bar)		
	PT EnergyPlus, PT ClimatePlus	150 kPa (1.5 bar)		
Max. inlet pressure (Back pressure)	1000 kPa (10.0 bar)			
Flow rate	min. 4 l/min			

**Waste water connection**

Location	approx. 650 mm above finished floor; left or right of the machine
Dimensions	Ø 40 mm or 50 mm with trap

## 5.2.2 Electrical connection



### Danger

#### Electric shock from live components

A fatal electric shock can occur when the warewasher and its additional devices are connected to the electrical mains supply.

- The warewasher and its additional devices may be connected to the electrical mains supply only by a specialist company registered within the electrical trade and approved by the energy supplier.
- All locally applicable standards and regulations must be observed during the connection to the electrical mains supply.
- The electrical safety of this warewasher is guaranteed only if it is connected to a correctly installed protective circuit and a residual current circuit breaker. It is crucial that this basic safety requirement is tested and, in case of doubt, that the on-site installation is checked by a qualified electrician.
- The circuit diagram must be observed.
- The warewasher may be operated only at the voltages and frequencies specified on the rating plate.
- For machines delivered without a plug, a fixed connection must be installed as an overriding priority.
- The electrical connection must be secured as a separately fused circuit with slow fuses or circuit breakers. The fuse protection depends on the total connected load of the warewasher. The total connected load is specified on the rating plate of the warewasher.
- PT ClimatePlus: Local fuse protection via circuit breaker with a C or K rating is necessary.
- If a residual current circuit breaker is provided on-site, we recommend installing a Class B all-current sensitive residual current circuit breaker.
- Determine the cable cross-section of the mains cable using the following table:

Voltage	Frequency [Hz]	On-site fuse protection [A]	Cable cross-section [mm <sup>2</sup> ]
380V, 3N~	50	16	2.5
	60		
400 V / 3N~	50	16	2.5
	60	25	4
		32	6
415 V / 3N~	50	15 / 16 / 20	2.5
	60	25	4
		32	6
200 V / 3~	50	25	4
	60	32	6
230 V / 3~ <sup>1</sup>	50	25	4
	60	32	6
230 V / 1N~ <sup>1</sup>	50	32	6
	60		
240 V / 1N~ <sup>1</sup>	50	25	4
	60	32	6
		40	10
		50	10

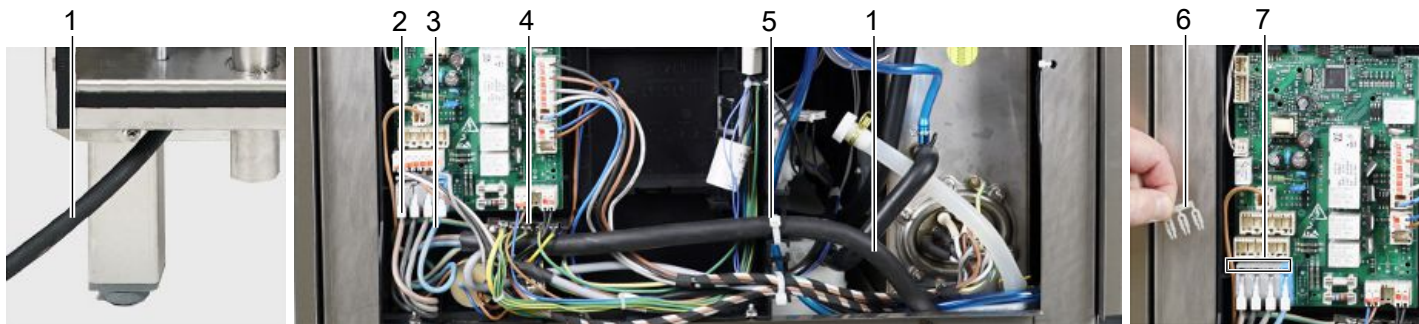
<sup>1</sup> Not for PT Cool and PT Utensil

The mains cable must be a H07RN-F type or equivalent.

## Connecting the mains cable

**Note:** Select the correct cross section and number of wires in the mains cable to suit the on-site voltage and fuse protection.

- Remove the front cover.
- Insert the mains cable (1) at the rear of the machine.
- Pull the mains cable (1) out at the front and guide it to the left.
- Strip the wire end of the mains cable and attach ferrules (2).
- Connect the mains cable wires (3) according to the connection diagram ▶ 31 and close the quick release connectors (4).
- If necessary, connect the bridges (6) according to the connection diagram ▶ 31 (7) and press in firmly using a screwdriver.
- Connect the green-yellow wire on the distributor to the earth wires (4).
- Fasten the mains cable to the strain relief on the mounting plate using a cable tie (5).



## Establishing equipotential bonding



- Connect the warewasher to the on-site equipotential bonding system.
- Position of the connecting screw (1) see drawing.

Connection diagram

<p>3N~ Power Unit Star 30013253</p>	<p>1N~ Power Unit Star 30013253</p>	<p>1N~ I = 40/50 A Power Unit Star 30013253</p>	<p>Power Unit Star 30013253</p>
<p>3N~ Power Unit Universal 30013252</p>	<p>1N~ Power Unit Universal 30013252</p>	<p>230 V, 3~ Power Unit Universal 30013252</p>	<p>200 V, 3~ Power Unit Universal 30013252</p>

### 5.3 Multifunction interface overview

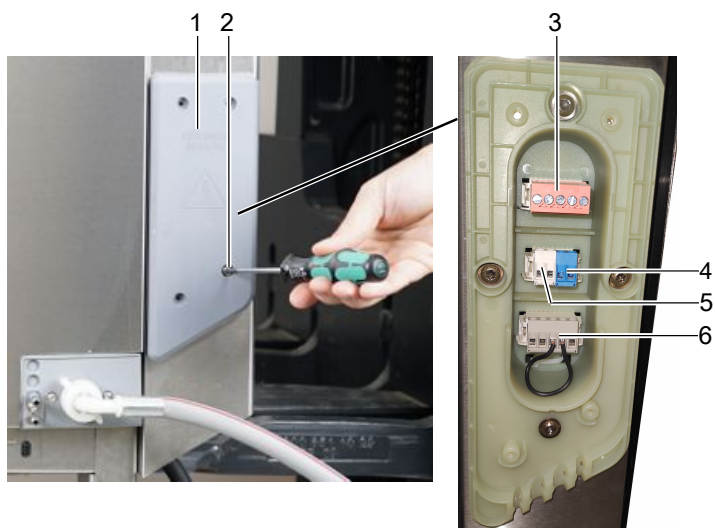


#### Danger

#### Electric shock from live components

A fatal electric shock can occur when the warewasher and its additional devices are connected to the electrical mains supply.

- The warewasher and its additional devices may be connected to the electrical mains supply only by a specialist company registered within the electrical trade and approved by the energy supplier.
- All locally applicable standards and regulations must be observed during the connection to the electrical mains supply.



- Loosen screws (2) and remove the cover (1).

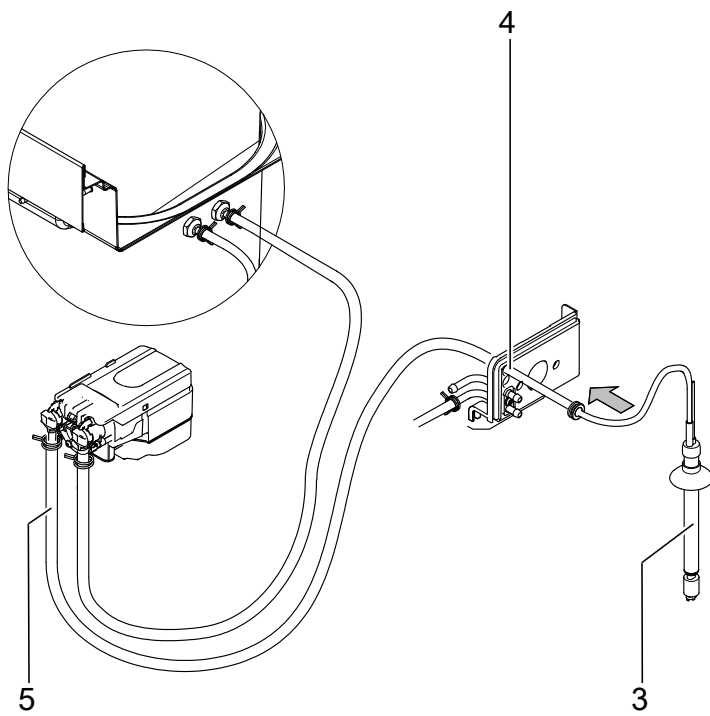
Item	Description
3	Transfer strip for external dosing devices
4	Terminals for suction tube rinse aid
5	Terminals for suction tube detergent and defoamer
6	Terminals for external energy management system in accordance with DIN 18875 (optional)

### 5.4 Mechanically connecting suction tubes



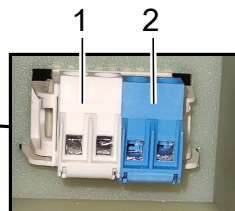
- Fasten the hose of the rinse aid suction tube to the connection (1) using a wire hose clip.
- Fasten the hose of the detergent suction tube to the connection (2) using a wire hose clip.





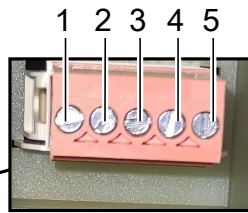
- Guide the hose of the suction tube defoamer (3) through the hose guide (4) and attach it to the dosing device (5) with a wire hose clip.

### 5.5 Establish the electrical connection of the suction tubes



- Connect the suction tube for the detergent and the suction tube for the defoamer to the terminal (1).
- Connect the suction tube for the rinse aid to the terminal (2).

## 5.6 Establish the electrical connection of the external dosing devices



**Note: Maximum current drain at the transfer strip: 0.5 A. Connect only external dosing devices with their own fuse protection.**

- Connecting an external detergent or rinse aid dosing device. Terminals (1) to (5) are available.
- Configuring the transfer strip. ▶ 35
  - ⇒ Depending on the settings selected, voltage is supplied to terminals (1) and (3).

Item	Description	Item	Description
1	DETERGENT terminal	4	Terminal N (Neutral / Phase 2)
2	WASH terminal	5	Terminal L (Continuous voltage / Phase 1)
3	RINSE terminal		

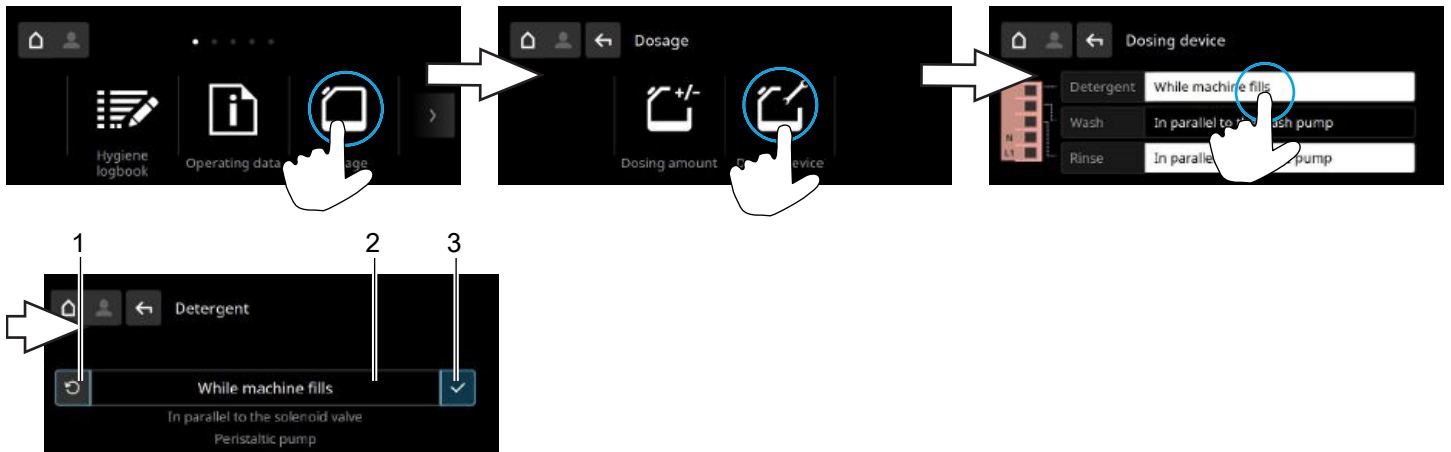
Terminal	Voltage present	Condition	Restriction
DETERGENT	While machine fills	a), b)	
	Parallel to the solenoid valve (O7) <ul style="list-style-type: none"> <li>– While machine fills</li> <li>– During the rinse</li> </ul>	a)	c)
WASH	Parallel to the wash pump	a)	c), d), e)
RINSE	Parallel to the rinse pump (O12)	a)	c), d), e)
	Parallel to the solenoid valve (O7) <ul style="list-style-type: none"> <li>– While machine fills</li> <li>– During the rinse</li> </ul>	a)	c)

- a) hood closed
- b) minimum water level in the tank
- c) not during the self-cleaning programme
- d) not while the machine is being filled
- e) not during the descaling and basic cleaning programme

### 5.7 Configuring the transfer strip

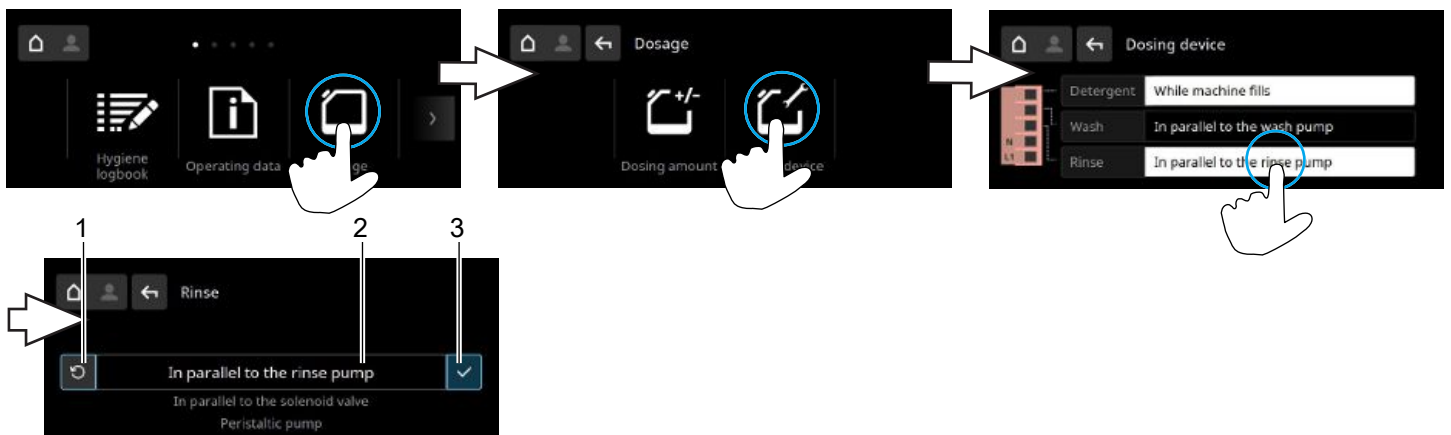
A service technician will configure the transfer strip in the Dosing menu, specifying the type of dosing device.

#### Detergent dosing device



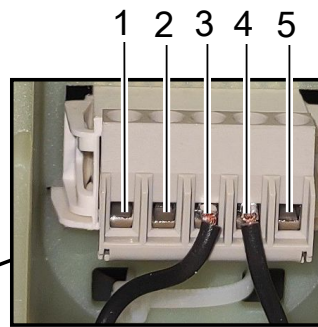
Item	Description	Note
1	Reset to default setting	
2	For dosing devices not from Winterhalter: <ul style="list-style-type: none"> <li>– While machine fills</li> <li>– Parallel to the solenoid valve</li> <li>– Peristaltic pump</li> </ul> For Winterhalter dosing device: <ul style="list-style-type: none"> <li>– Fluidos</li> <li>– MPI/PPX</li> </ul>	With the “peristaltic pump” setting, set the output in ml/min. Set the dosing amount in the dosing menu.
3	Save settings	

#### Rinse aid dosing device



Item	Description	Note
1	Reset to default setting	
2	For dosing devices not from Winterhalter: <ul style="list-style-type: none"> <li>– Parallel to the rinse pump</li> <li>– Parallel to the solenoid valve</li> <li>– Peristaltic pump</li> </ul> For Winterhalter dosing device: <ul style="list-style-type: none"> <li>– Fluidos</li> <li>– MPI/PPX</li> </ul>	With the “peristaltic pump” setting, set the output in ml/min. Set the dosing amount in the dosing menu.
3	Save settings	

## 5.8 Connecting the external energy management system



- Connecting the external energy management system. Terminals (1) to (5) are available.

Item	Name	Item	Name
1	Terminal PE	4	Terminal B power request
2	Terminal D neutral	5	Terminal A machine ON
3	Terminal C power release		

## 5.9 Before working with the warewasher for the first time

- Have the warewasher set up by an authorised service technician or your dealer.
- Have the warewasher connected according to the locally applicable standards and the regulations by authorised mechanics (water, waste water, electrical system).
- After connecting the water and the power properly, contact the relevant Winterhalter dealership or your dealer to arrange for the commissioning of the warewasher. Have yourself and your operating personnel trained in operating the warewasher.

## 5.10 Check for completeness

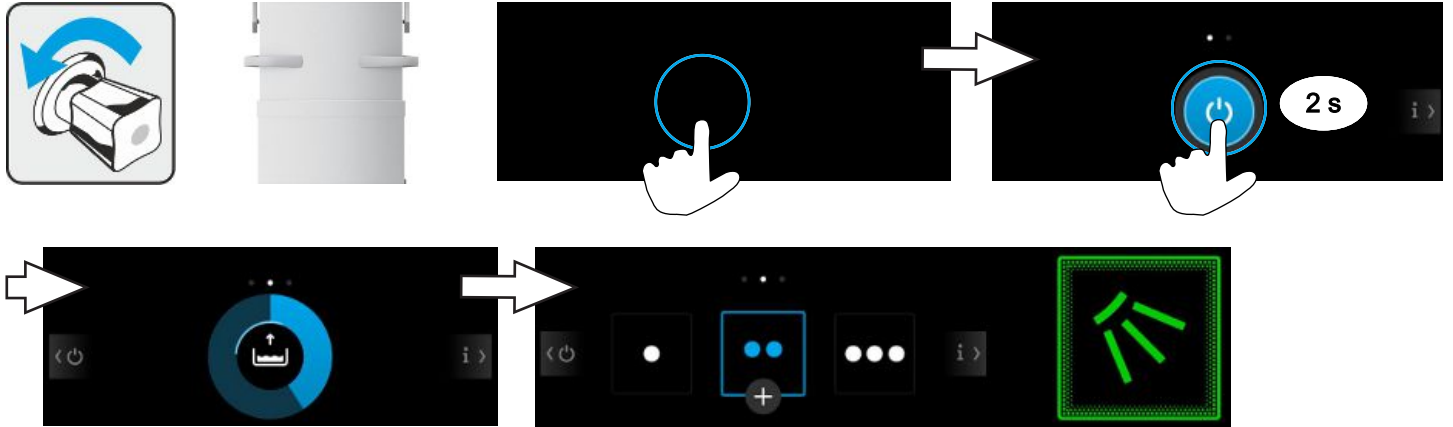


**Note:** Ensure that there is always enough detergent and rinse aid available to achieve an optimum wash result.

## 6 Operation

### 6.1 Switch on the warewasher

The warewasher is ready for operation as soon as the start button lights up green.



### 6.2 Washing



#### Caution

##### Risk of scalding from hot wash water

There is hot wash water in the interior of the warewasher after it is switched on.

- Do not open the hood during washing.
- Before opening the hood, terminate the washing programme by pressing the start button and waiting a few seconds.



#### Warning

##### Possible risk of injury when loading the wash racks

Be aware of sharp and pointed utensils when loading the wash racks.

- Wash cutlery upright in the cutlery holder or laid in the flat basket.

- Do not wash electrical cooking appliances.
- Do not wash parts made of wood.
- Do not wash ashtrays and objects covered with wax.
- Only wash heat- and caustic-resistant plastic parts.
- Wash parts made of aluminium, e.g., pots, GN containers or trays, only with a specially suitable detergent to avoid black discolourations.

#### Arranging the wash items in the wash rack

- Remove large leftovers.
- Pour out beverage residues (outside the warewasher).
- Place plates with their upper surface facing forwards.
- Place glasses, cups, bowls and pots rim down.
- Wash cutlery preferably standing in the cutlery holder or lying in a shallow wash rack. Always arrange the end of handles downwards. Make sure that the cutlery is well-spaced.
- Do not overload racks, to allow the wash water to reach all dirty surfaces.
- Space the glasses to prevent them from rubbing against each other. This will avoid scratches.
- For tall glasses, choose a wash rack with appropriate divisions so that the glasses are held in a stable position.

**Start washing programme**

- Sort wash rack correctly.
- Open the hood.
- Slide the wash rack into the warewasher.

Warewasher without an automatic hood mechanism:

- Close the hood.
  - ⇒ Washing programme starts automatically.
  - ⇒ Start button lights up blue.

Warewashers with an automatic hood mechanism:

- Press the start button on the front cover or hood.
  - ⇒ Start button flashes blue.
  - ⇒ The hood closes and the washing programme starts automatically.
  - ⇒ Start button lights up blue.

**End of the programme**

Warewasher without Energy module, heat pump module or automatic hood:

- Washing programme ends automatically.
  - ⇒ As soon as the washing programme ends, the start button flashes green.

Warewashers with an automatic hood mechanism:

- Washing programme ends automatically.
  - ⇒ The hood opens.
  - ⇒ The start button lights up green.

Warewasher with Energy module, heat pump module without automatic hood:

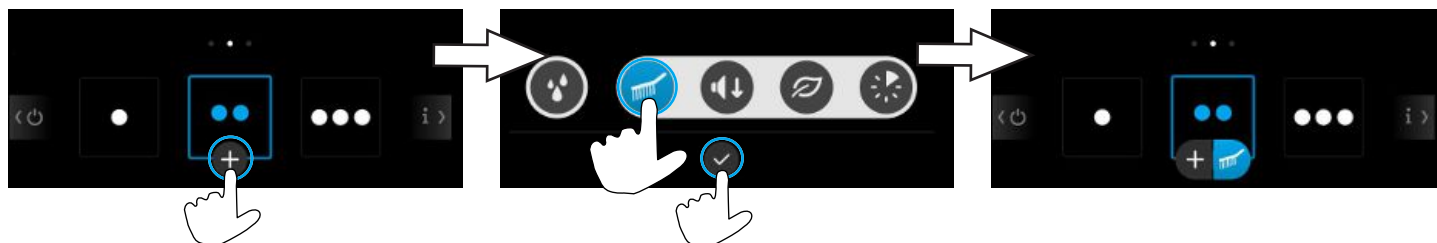
- Washing programme ends automatically.
  - ⇒ The start button will begin to flash blue-green before the end of the programme. At the same time, the warm and humid vapour is extracted from the interior, and the heat energy stored in it is recovered for the next washing programme.
  - ⇒ The hood only opens after the start button begins to flash green and the warm and humid air has been extracted.

Warewasher with Energy module, heat pump module and automatic hood:

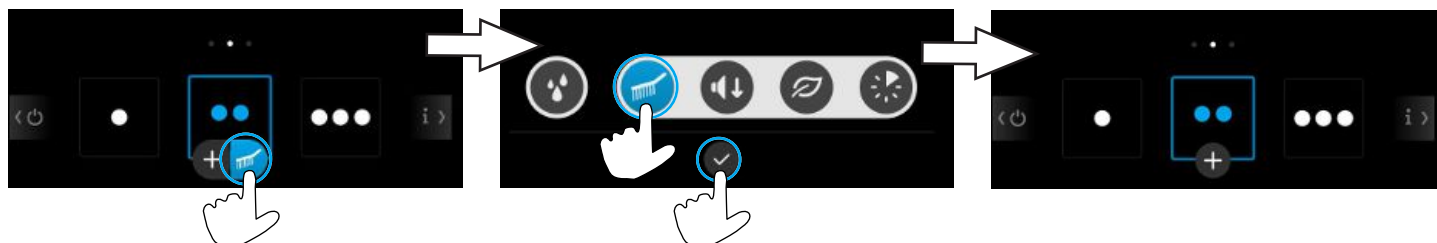
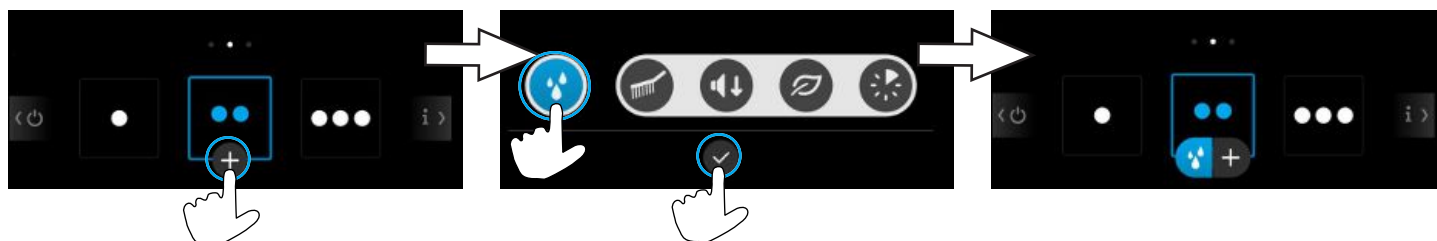
- Washing programme ends automatically.
  - ⇒ The start button will begin to flash blue-green before the end of the programme. At the same time, the warm and humid vapour is extracted from the interior, and the heat energy stored in it is recovered for the next washing programme.
  - ⇒ The hood opens automatically, the start button lights up green.

**Terminate washing programme**

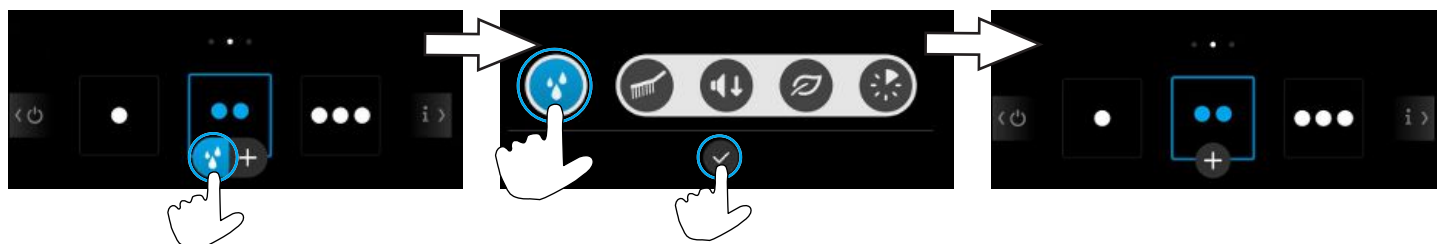
- Press button (1) or (2).
  - ⇒ The start button lights up green.

**Selecting an additional programme**

The additional programme remains activated until it is deactivated or another additional or washing programme is selected.

**Deactivate additional programme****Select soaking programme**

The soaking programme remains activated until it is deactivated.

**Deactivate soaking programme**

### Wash breaks

Do not switch the warewasher off during wash breaks.

Warewasher without an automatic hood mechanism:

- Close the hood to the bottom detent position to prevent the machine from cooling down.

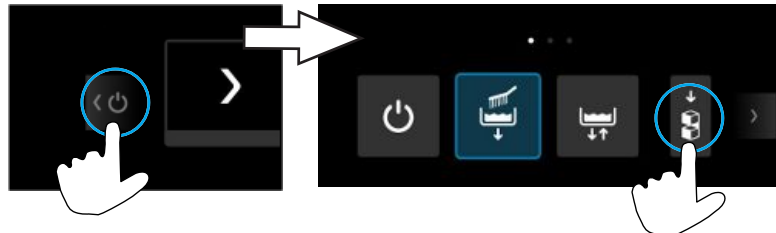
Warewashers with an automatic hood mechanism:

There are two options for closing the hood without having to start a programme:

- Press the start button (1) on the front cover for 2 seconds.



- Press the "Close the hood" button.



### Instructions for a good wash result

- Rinse the cutlery until it is washed. Do not use any foaming pre-cleaners.
- Do not polish glasses, cutlery and dishes. Germs and bacteria exist even in fresh multi-purpose cloths.



### 6.3 Opening/closing the hood (automatic hood optional)

For opening / closing the hood without a subsequent programme start (e.g. during idle periods) there are two options:

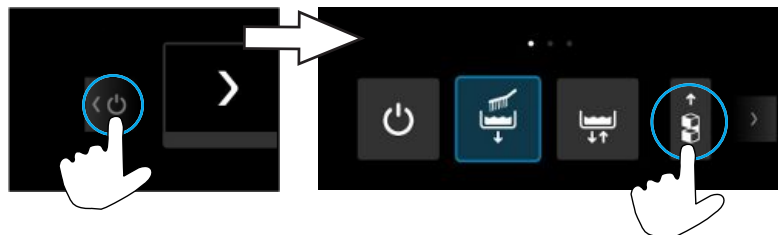
#### Open / close the hood using the start button

- Press the start button (1) on the front cover for 2 seconds.

#### Open the hood via the display

The position of the hood is indicated by the arrows on the pictogram.

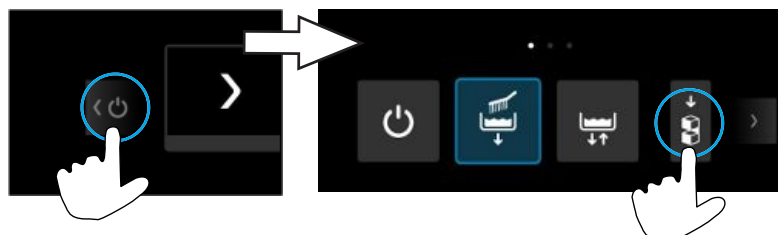
- Press the "Open the hood" button.



#### Close the hood via the display

The position of the hood is indicated by the arrows on the pictogram.

- Press the "Close the hood" button.



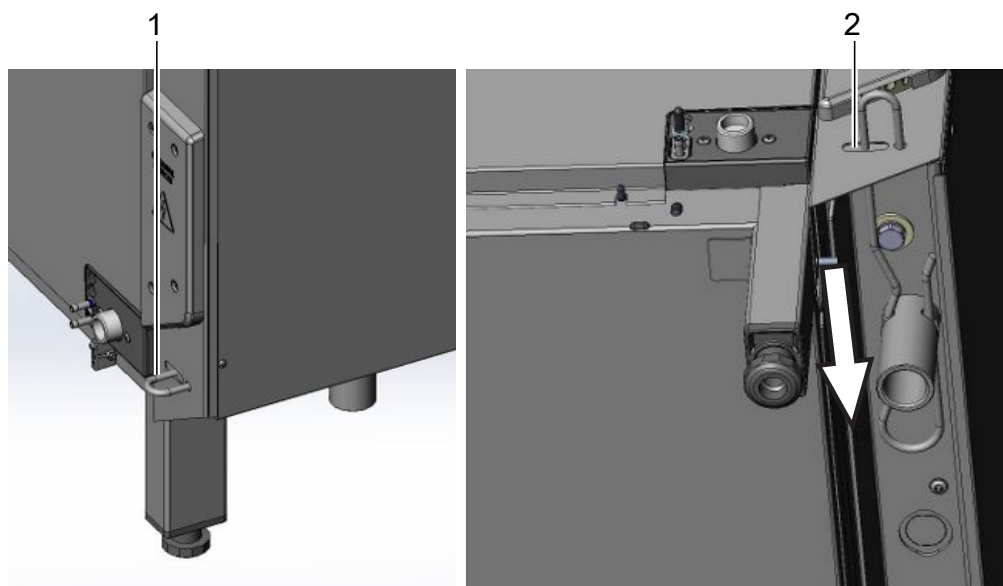
### 6.4 Unlock the hood (automatic hood optional)

If the hood can no longer be moved, the hood can be unlocked manually.

- Pull the retaining clip (1) forwards out of the safety mechanism and guide it into the slotted hole (2).
  - Press the retaining clip (1) through the slotted hole (2) in the direction of the arrow.
  - Remove the retaining clip (1).
- ⇒ The automatic hood is unlocked.

It is still possible to wash when manually opening and closing the hood. A fault message will appear on the display at the end of each programme.

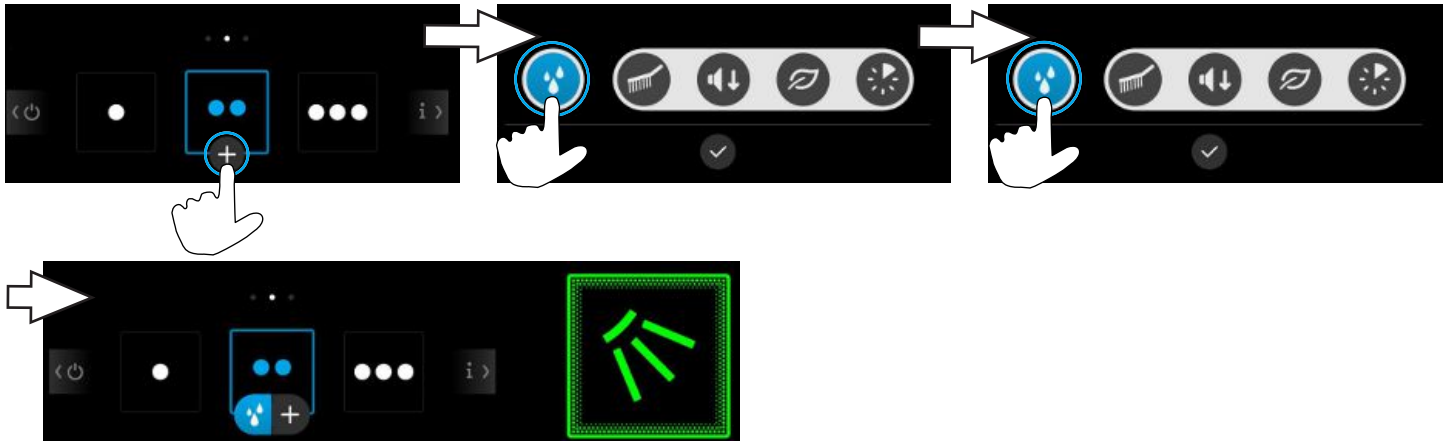
- Acknowledge the fault message.
- Contact an authorised service technician for the repair.



## 6.5 Soaking programme

We recommend the soaking programme for soaking and dissolving dried-on residues.

### Activate soaking programme



### Start soaking programme

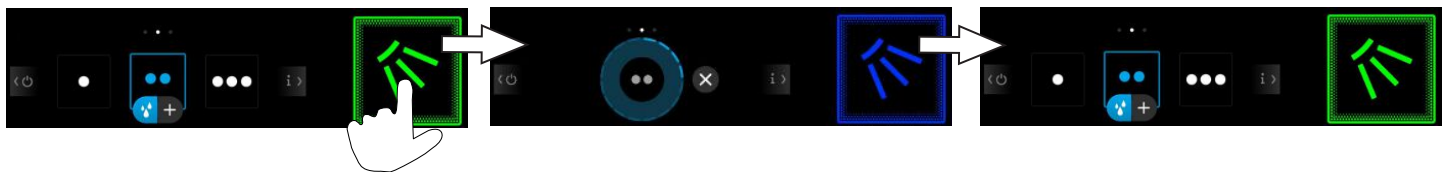


#### Danger

#### Risk of chemical burns due to chemicals

Contact between chemicals with the skin or eyes can lead to severe burns or serious eye damage.

- In the event of contact with the eyes or skin, rinse thoroughly with tap water. Seek medical attention as required.
- Wear protective clothing, protective gloves and protective goggles.
- Observe the danger and safety notes on the canister and safety data sheet.
- Remove the wash items only once the washing programme has finished and the start button flashes green.



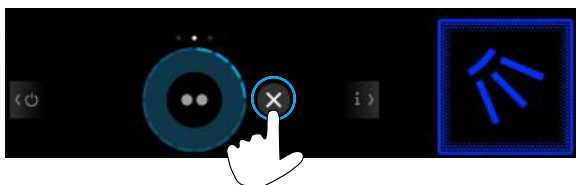
Five seconds after the soaking programme has started, the wash pump circulates the tank water for seven seconds. The soaking time of five minutes begins after this circulation. The tank water moistens the wash items and soaks the contaminants.

- If you open the hood during this time and close it again within 10 seconds, the wash pump circulates the tank water again for five seconds. The soaking time is not extended.
- If you open the hood for longer than 10 seconds to put more wash items into the washing basket, the soaking programme will start from the beginning once the hood has been closed. A washing programme starts automatically after the end of the soaking period. The soaking period can also be shortened by pressing the start button.

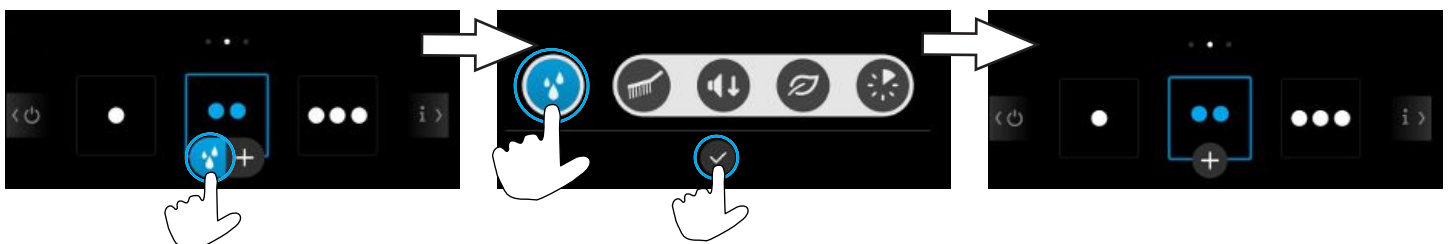
A service technician can adjust the times mentioned above.

### Terminate soaking programme

After terminating the soaking programme, always start a washing programme to rinse the tank water off the wash items.



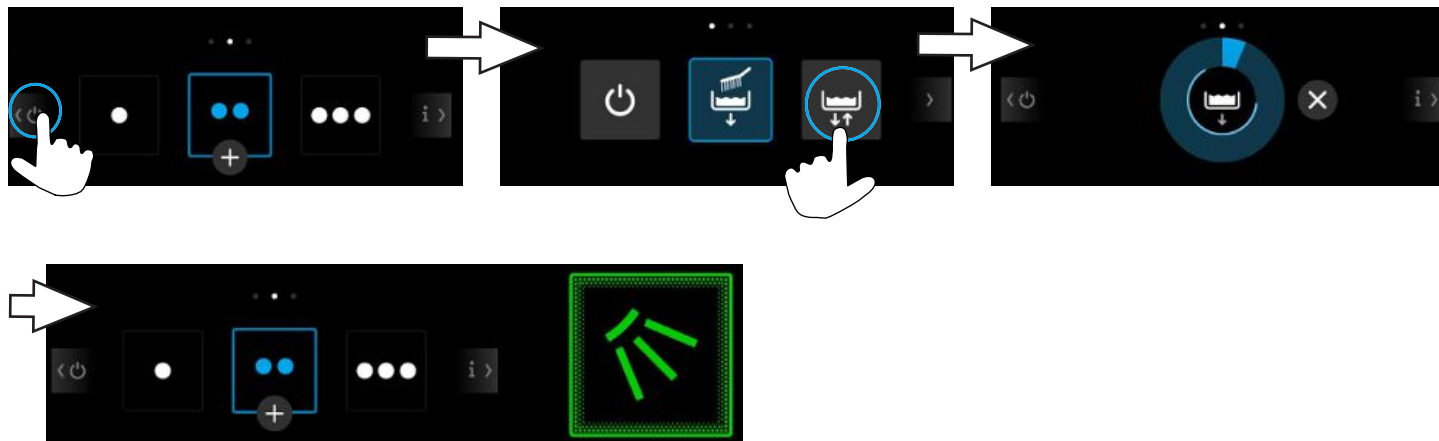
### Deactivate soaking programme



## 6.6 Changing the tank water

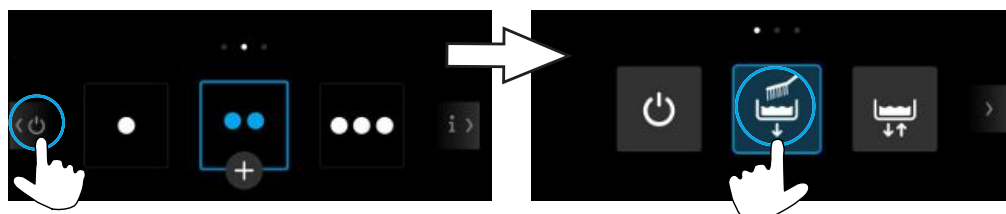
Change the tank water if it is very dirty and if the end wash result worsens.

**Note:** It takes a few minutes until the warewasher is ready for operation again, as the tank is first emptied and then refilled and reheated.

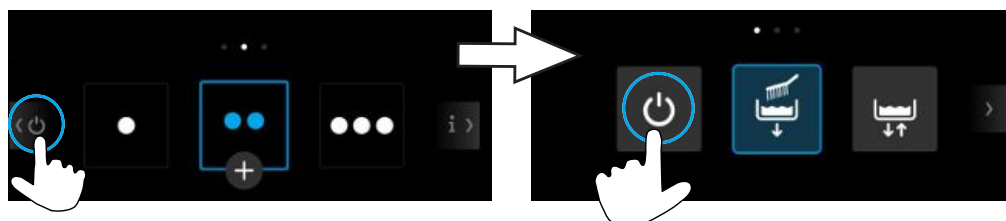


## 6.7 Switch off the warewasher

We recommend switching off the warewasher at the end of the working day using the self-cleaning programme so that it is cleaned and emptied every day.





















Pressing the On/Off button switches the warewasher off. The tank stays filled but will no longer be kept at temperature. If the tank temperature has dropped too much before the machine is switched on again, the machine will be emptied and refilled automatically.






## 7 Notifications

### 7.1 Pictograms

Notifications are displayed as pictograms. If there are many notifications, washing will still be possible but the end wash result will be impaired. Please therefore rectify any notification as soon as possible. If you cannot rectify the notification, contact an authorised service technician.

Cause / meaning	Remedy
 Lack of rinse aid	Replace the canister. Venting the dosing device. (▶ 51)
 Lack of detergent	
 Detergent dosing failed	Replace the detergent container. Venting the dosing device. (▶ 51) If the error is not cleared: Contact an authorised service technician.
 Upper wash field does not rotate	Remove the obstruction or clean the jet or descale. (▶ 49) Wash field drive defective. Contact an authorised service technician.
 Lower wash field does not rotate	Ensure the wash field is engaged correctly. Remove the obstruction or clean the jet or descale. (▶ 49) Wash field drive defective. Contact an authorised service technician.
 For warewashers with an integrated softener: Lack of salt	Fill the salt container with regeneration salt.
 Warewasher with external partial demineralisation cartridge: Partial demineralisation cartridge used up	Replace the partial demineralisation cartridge. Reset the water countdown meter.
 Warewasher with external full demineralisation cartridge: Full demineralisation cartridges used up	Have the resin of the full demineralisation cartridge replaced by an authorised service technician. Reset the water countdown meter.
 Hood is open	Close the hood.
 Lack of water	Open the water supply. Have the dirt trap cleaned by a service technician or have a new dirt trap installed. Have the solenoid valve repaired by an authorised service technician.
 Energy optimisation active	Wait until the on-site energy optimisation activates the warewasher.
 Service interval expired	Contact an authorised service technician.
 Strainer clogged	Clean the strainer and restart the programme.
 Descaling required	Start the descaling programme. (▶ 24)
 Tank water exchange recommended Tank water has not been changed for at least 24 h.	Changing the tank water. (▶ 43)
 Error on external water treatment device	Check the water treatment device.
 Tank heating encrusted	Clean the tank heating.
 Filter bottom not installed	Insert filter bottom.

Cause / meaning	Remedy
 Note on saving energy	Close the hood.
 Error on automatic hood	Follow the instructions on the display.
 Various	Tap the pictogram and note the error code. Contact an authorised service technician.

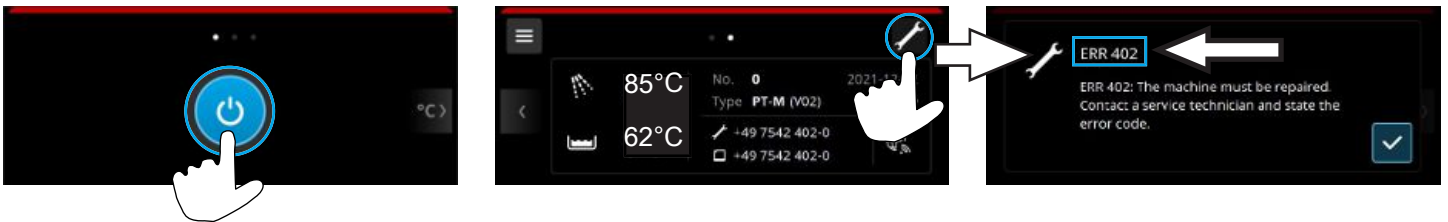
By tapping the pictogram, additional information will appear on the display.

## 7.2 Display the error code of a serious error

If a serious error is present, washing is no longer possible and a red bar appears at the top of the display:



### Accessing the error code



## 7.3 Poor wash result

	Possible cause	Remedy
Wash items not clean	No or low detergent dosing	Set the dosing amount as per the manufacturer's specifications. (▶ 19) Check the dosing hose (for kinks, breakage, etc.). Venting the dosing device. ( ) Replace the canister, if empty.
	Wash items incorrectly sorted	Sort wash items correctly. (▶ 37)
	Wash field jets clogged	Dismantle wash field and clean the jets. (▶ 49)
	Temperatures too low	Contact an authorised service technician.
	Tank water too heavily soiled	Start tank water exchange programme. (▶ 43)
Coatings visible on the wash items	If scaling is present: The water is too hard	Check the external water treatment. Connect water treatment.
	For starch residues: Temperature of manual pre-cleaning exceeds 40 °C	Carry out basic cleaning. Lower the temperature of manual pre-cleaning.
The wash items do not dry on their own	No or low rinse aid dosing	Set the dosing amount as per the manufacturer's specifications. (▶ 19) Check the dosing hose (for kinks, breakage, etc.). Vent the dosing device. Replace the canister, if empty.
	Rinse water temperature too low	Contact an authorised service technician.

**Note: Water quality affects the washing and drying result. We therefore recommend that upwards of a total hardness of more than 3 °dH (0.53 mmol/l) the warewasher be supplied with softened water.**

## 8 Cleaning and maintenance

### 8.1 Cleaning the warewasher during operation



#### Caution

##### Risk of chemical burns due to chemicals

After the wash, wash water with chemicals continues to adhere to the filters and wash fields.

- Wear protective clothing, protective gloves and protective goggles.

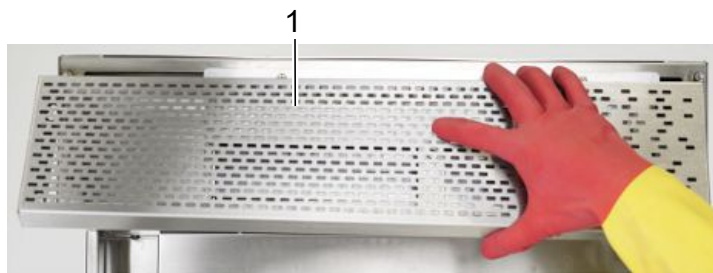
During the work day:



Daily before draining the warewasher:

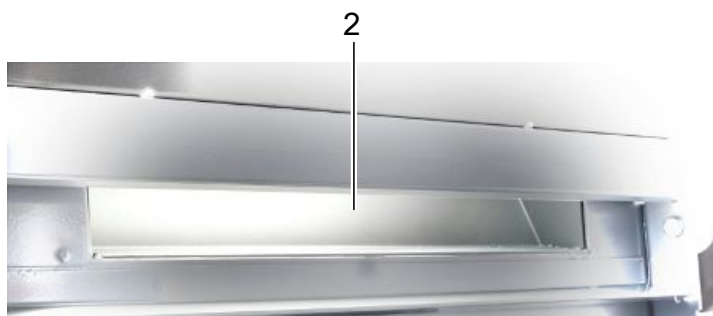
#### Additionally for warewashers with Energy module or heat pump module

##### Cleaning the ventilation grill



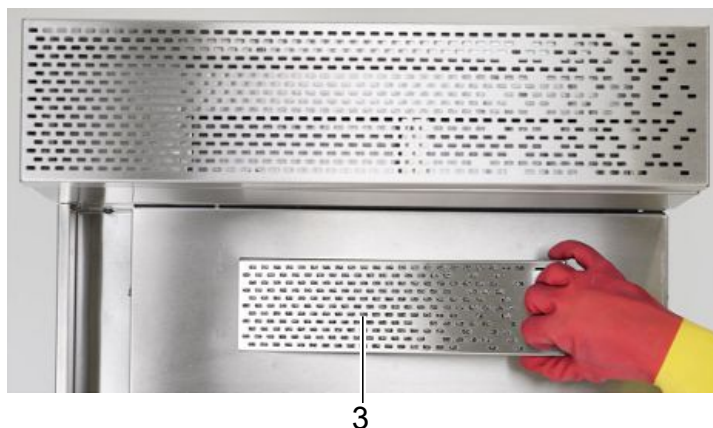
- Remove the ventilation grill (1) from the top and wash in the warewasher.
- Fit the ventilation grill (1).

##### Cleaning the suction channel



- Open the hood.
- Spray the suction channel (2) with warm water. Use a water hose, not a high-pressure cleaner.

##### Cleaning the grease filter

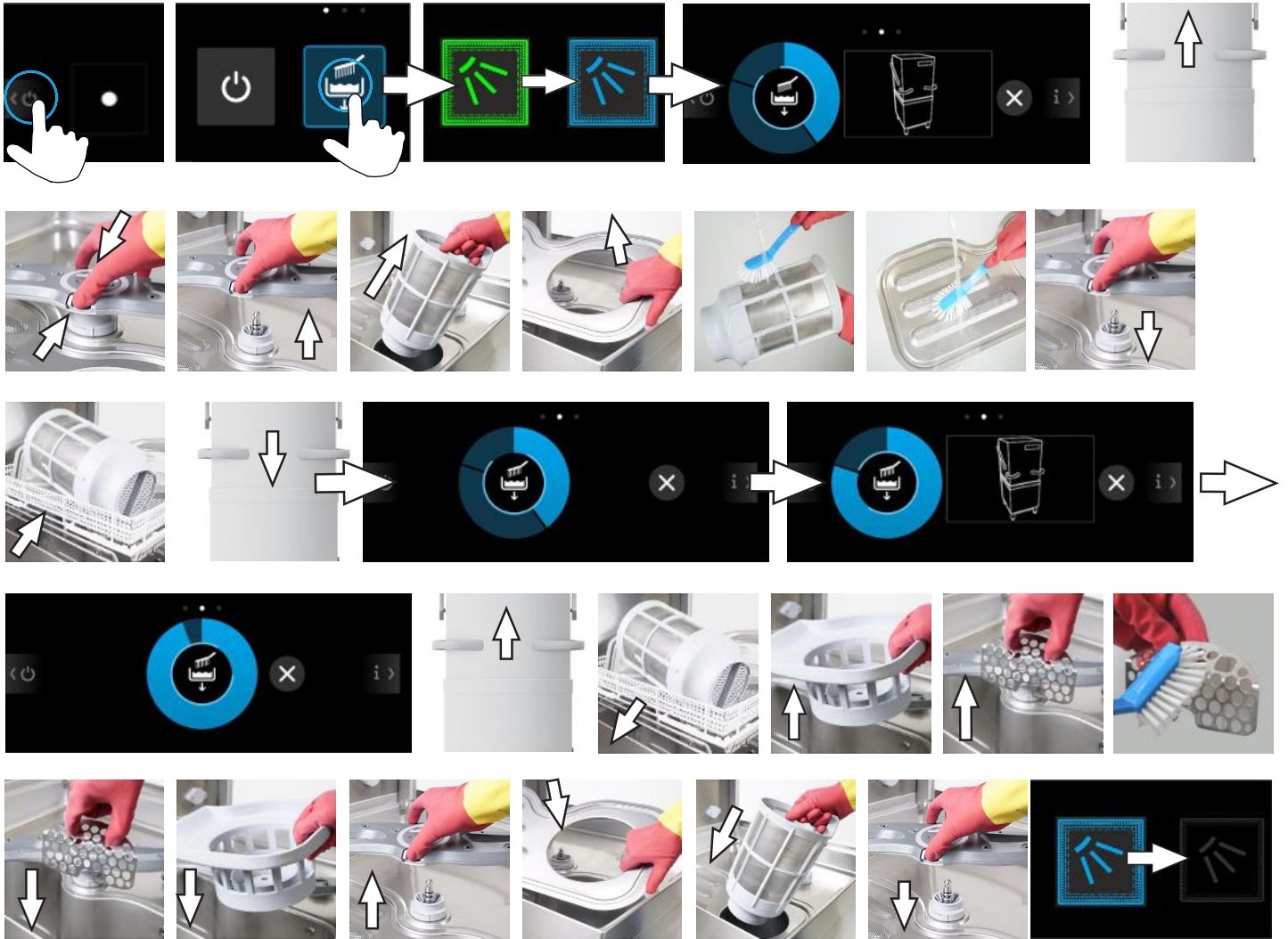


- Remove the grease filter (3) from the front and wash in the warewasher.
- Fit the grease filter (3).

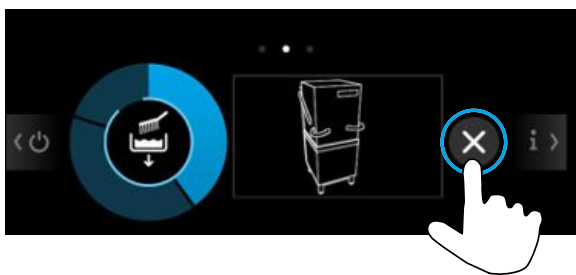
## 8.2 Self-cleaning programme

The self-cleaning programme is helpful in cleaning the interior of the warewasher at the end of the work day. We recommend also using A 15 MC cleaning tablets. The A 15 MC cleaning tablets help to remove unpleasant odours and light limescale deposits.

After the first programme step, the self-cleaning programme is interrupted and a video with further steps is shown in the display. If no notice is taken of the video, the self-cleaning programme will start automatically.



### Terminate the self-cleaning programme





### 8.3 Cleaning the warewasher at the end of the working day

#### Cleaning the warewasher interior

Ensure that there are no rusty foreign objects in the interior of the warewasher, which could cause even “stainless steel rust-free” material to start to rust. Rust particles can come from non-rust-free wash items, from cleaning aids, damaged wire grate racks or from water pipes that are not protected against rust.

The following materials must **not** be used for cleaning:

- Detergents containing chlorine or acid
- Cleaning sponge or wire brush containing metal
- Abrasives or abrasive cleaning agents
- Remove dirt with a brush or a cloth.

#### Cleaning the outside of the warewasher

- Do not spray the warewasher and the surrounding area (panels, floor) with a steam jet or high-pressure cleaner. Ensure when cleaning the floor that the plinth of the warewasher is not flooded, to prevent an uncontrolled inflow of water.
- Clean the display with a damp cloth.
- Clean the external surfaces using a stainless steel cleaner and stainless steel polish.

#### Clean the upper and lower wash field



### Clean the upper and lower wash field bearing



### After cleaning



## 8.4 Topping up the regeneration salt



### Note

Salt residues can have a negative effect on the wash result. It is best, therefore, to top up the regeneration salt before starting the self-cleaning programme.



### Caution

#### Damage to the water softener

Chemicals such as detergent or rinse aid or other salts such as table salt will inevitably damage the water softener.

- Fill only with regeneration salt or a pure evaporated salt with a maximum grain size of 0.4–7 mm.



### Caution

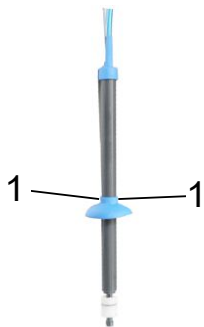
#### Danger of rust formation in the filling area as a result of salt residues

- After filling the regeneration salt, start a washing programme or the self-cleaning programme in order to wash away any salt residues that may be present.

- Only fill with water when commissioning the water softener for the first time.
- Top up the regeneration salt.

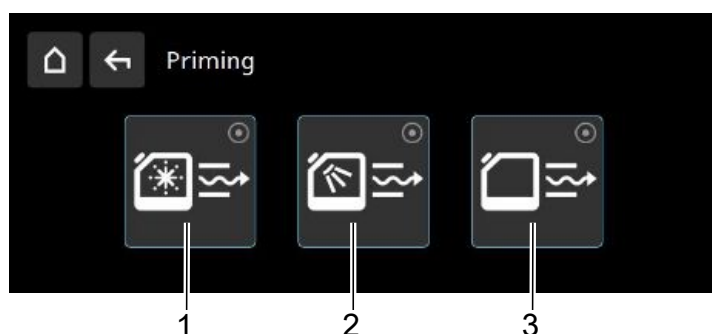


## 8.5 Replace canister



- Wear protective clothing, protective gloves and protective goggles.
- Pull the suction tube carefully out of the empty canister.
- Check whether both vent holes (1) in the caps are open. Clean if required.
- Place suction tube in the new canister.
- Slide the cap slowly downwards until the canister opening is closed.

The dosing device must be vented if air has entered the dosing hose. This occurs if the canister is not replaced in time.



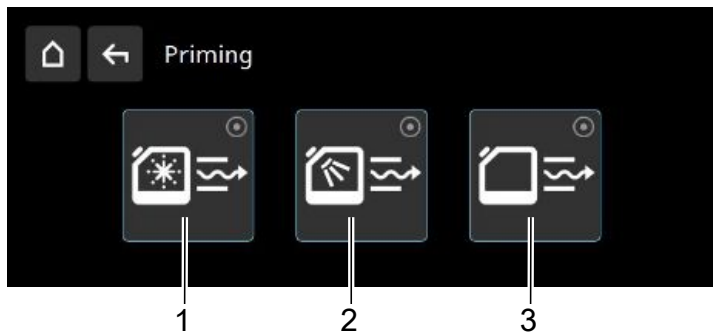
Item	Description
1	Rinse aid dosing device
2	Detergent dosing device (optional)
3	Defoamer dosing device (optional)

- Press button 1, 2 or 3.
  - ⇒ The button turns white.
  - ⇒ The dosing device is being vented.
- As soon as the button turns dark again, exit the menu.

## 8.6 Change the chemical product

Crystallisation can occur as a result of mixing different chemical products, which can damage the dosing device. Therefore, the dosing device and the dosing hoses must be flushed with water before a new chemical product is used. If this is not done, the Winterhalter Gastronom GmbH warranty and product liability will be void.

- Remove the suction tube from the canister and place it in a water-filled canister.



Item	Description
1	Rinse aid dosing device
2	Detergent dosing device (optional)
3	Defoamer dosing device (optional)

- Press button 1, 2 or 3.
  - ⇒ The button turns white, and the dosing device is activated.
  - ⇒ The dosing hoses and the dosing device are rinsed out with water.
- As soon as the button goes dark, insert the suction tube into the new canister.
- Press button 1, 2 or 3 again.
  - ⇒ The button turns white, and the dosing device is activated.
  - ⇒ The water in the dosing hoses and dosing device is replaced by the new chemical product.

In addition, the dosage must also be reset.

- To attain good wash results, commission an authorised service technician.

## 8.7 Cleaning the interior

To achieve an optimal wash result and to increase the service life of the warewasher, we recommend cleaning the interior daily.



### Note

#### Risk of rust due to foreign bodies

Damaged wire grate baskets, wash items that are not rust-free, incorrect cleaning utensils and water pipes not protected from rust can cause corroding foreign bodies to enter the interior of the warewasher. These foreign bodies can also cause the material “stainless steel” to corrode.

- Use only undamaged wire grate baskets, suitable wash items and suitable cleaning utensils.

The following materials must **not** be used for cleaning:

- High-pressure cleaner, steam jet
- Detergents containing chlorine or acid
- Cleaning sponges or wire brushes containing metal
- Abrasives or abrasive cleaning agents
- Hose down the interior with a water hose.
- Remove dirt with a brush or a cloth.

### 8.8 Descale the warewasher

If the warewasher is operated with hard water and without water treatment, then the boiler, the interior of the machine, all the water lines and components may develop scale. Grease residues and dirt that remain in the machine can contribute towards hygiene risks, while scaling can lead to failure of heating elements. Regular removal of this scaling is therefore necessary / essential.

The descaling programme can be used to descale the interior of the machine. (► 24)

The water lines and the boiler can be descaled only by an authorised service technician.

### 8.9 Maintenance by the customer service department

We recommend that you have an authorised service technician carry out maintenance of the warewasher at least once a year so that vulnerable components subject to ageing and wear can be checked and replaced accordingly. Original spare parts must be used for repairs or to replace consumable parts.

Consumable parts are, e.g.:

- Dosing tubes
- Inlet water hose



#### Service interval

The warewasher control unit specifies the number of operating hours or wash cycles at which the pictogram for service is shown.

**Note: This function is deactivated ex-factory. On request, the service technician can activate this function.**

## 9 Disassembly and disposal

### 9.1 Taking the warewasher out of operation for long production stops

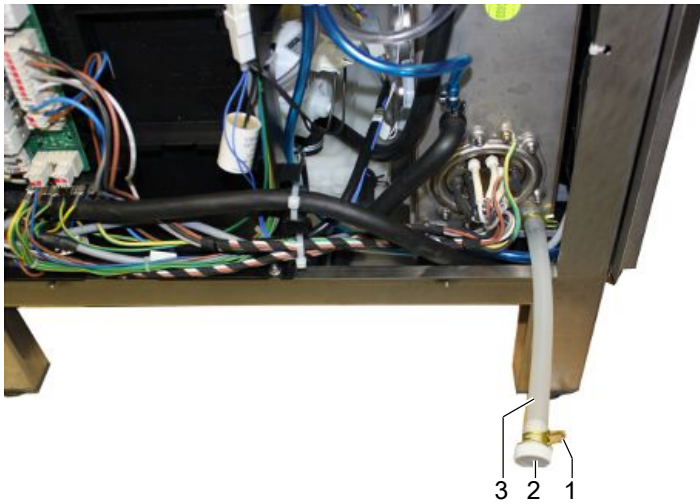
If the warewasher is taken out of operation for long periods (company holidays, seasonal operation), carry out the following steps:

- Rinse the dosing devices with water and allow them to dry. If necessary, observe the dosing device information provided by third-party manufacturers.
- Use the self-cleaning programme to empty the warewasher.
- Clean the warewasher.
- Open the hood.
- Switch off the on-site water supply.
- Disconnect the warewasher from the electrical mains supply.
- Empty the water treatment (e.g. partial demineralisation cartridges).

If the warewasher is in a place that is not frost-free, the boiler and, if necessary, the water circuits of the heat pump must also be emptied.

- Instruct an authorised service technician to secure the warewasher against frost.

#### Drain boiler



- Remove the front cover.
- Guide drain hose (3) out of the machine frame.
- Loosen hose clamp (1) on drain hose (3).
- Remove plug (2).
- Fully drain the water from the boiler.
- Replace plug (2) and secure with hose clamp (1).
- Guide drain hose (3) back into the machine frame.

### 9.2 Disassembly

- Remove any wash items and baskets from the warewasher.
- Empty the warewasher completely.
- Disconnect the warewasher from the on-site electrical connection.
- Disconnect the warewasher from the on-site water supply.
- Disconnect the warewasher from the on-site water disposal.
- Disassemble the table system.
- Disassemble the exhaust air system, if present.

### 9.3 Disposal

Incorrect or negligent disposal can cause considerable environmental pollution and/or damage.



- For hazardous substances, please observe the disposal regulations on the safety data sheets.
- Disposal according to national regulations.







**Winterhalter Gastronom GmbH**  
Gewerbliche Spülsysteme

Winterhalterstr. 2-12  
88074 Meckenbeuren  
Deutschland

Tel. + 49 7542 402-0

[www.winterhalter.de](http://www.winterhalter.de)  
[info@winterhalter.de](mailto:info@winterhalter.de)

**Winterhalter Gastronom GmbH**  
Commercial Dishwashing Systems

Winterhalterstr. 2-12  
88074 Meckenbeuren  
Germany

Telephone: +49 (0) 7542 4 02-0

[www.winterhalter.com](http://www.winterhalter.com)  
[info@winterhalter.com](mailto:info@winterhalter.com)