



PT-XL

PT-L

PT-M

Operating Instructions

For Winterhalter PT Series rack pass-through dishwasher
(translation of the original German operating instructions)

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1 About this manual

This manual contains information and instructions for the safe operation and maintenance of your ware-washer.



Please note carefully the safety instructions listed here.

The following symbols are used in these instructions:

Symbol	Meaning
 Danger	Warning against potential serious or fatal injuries to persons if the described precautionary measures are not taken.
 Warning	Warning against potential minor injuries to persons or potential material damage if the described precautionary measures are not taken.
 Caution	Warning against defects in or destruction of the product if the described precautionary measures are not taken.
IMPORTANT	Important information is given here.
INFO	Useful information is given here.
➤	This symbol indicates instructions.
⇒	This symbol indicates results of your actions.
–	This symbol indicates itemizations.
▶	This symbol refers to a chapter with more detailed information.

2 Safety notes

2.1 Proper use

- The PT Series warewasher is a technical device for commercial use and is not intended for private use.
- Use the warewasher only for the washing of dishes such as plates, cups, cutlery and trays or for washing glasses of a gastronomic and related type.

2.2 Improper use

- This device is not intended for use by persons (including children) with limited physical, sensory or mental capabilities or who do not have the required experience with and knowledge of this device. Such persons must either be instructed by a supervisor who is responsible for their safety or must be supervised during the operation of the device.
- Do not use the warewasher to wash electrically heated devices or parts made of wood.
- Do not wash without a wash rack.
- Do not wash parts made of plastic if they are not heat and lye-resistant.
- Use a suitable detergent to wash parts made of aluminium such as jars, containers or plates in order to prevent black stains.
- Winterhalter Gastronom GmbH does not assume liability for any damage caused due to improper use of the device.

2.3 Electrical Safety

- The electrical safety of this machine is guaranteed only if it is connected to a correctly installed protective circuit and a residual current circuit breaker. It is very important that this basic safety requirement is tested and in case of doubt the house installation is checked by a qualified electrician. Winterhalter cannot be held responsible for damage caused by a missing or broken earthing system (e.g. electrical shock).

2.4 Safety Instructions for Maintenance and Repairs

- Maintenance work and repairs may only be performed service technicians authorized by Winterhalter. Improper maintenance or repairs may cause significant danger for the user, for which Winterhalter is not liable.
- When performing maintenance and repair work, unplug the powder dosing device from the power network. Electricity consumers (heating element, frequency inverter, ...) are under voltage until the on-site mains disconnect switch has been operated.
- Only original Winterhalter replacement parts may be used for maintenance and repairs. If original replacement parts are not used, the warranty is invalidated.
- A damaged or leaking machine can endanger your safety. In case of defects, switch off the machine immediately. Switch off the on-site mains disconnect (main switch). Only then is the machine without power.
- Do not operate a damaged machine. In case of defects resulting from an unknown cause, switch off the machine, and switch it on again only when the defect has been rectified.
- Contact your installer or electrician if the on-site water or electricity supply is the cause of the malfunction.
- Notify an authorized service technician or your retailer if another fault has occurred.
- If the mains connecting line of this device is damaged, it must be replaced by the Winterhalter or its Customer Service or another qualified person in order to prevent hazards. The power cable must be H07 RN-F type or equivalent.

2.5 General safety notes

- Read through the safety notes and operating instructions in this manual carefully. Retain the operating instructions for future reference. Winterhalter Gastronom GmbH does not assume liability or warranty in case of non-adherence to these safety and operating instructions.
- Do not make changes, additions or reconstructions in the dishwasher without the approval of the manufacturer.
- Use the dishwasher only after you have read and understood the operating manual. Allow the Winterhalter Customer Service Department to provide information about the operation and functioning of the dish washer. Always operate the machine as described in this operating manual.
- Train the operating personnel as regards handling the machine and inform them about the safety notes. Repeat the training sessions at regular intervals to prevent accidents.
- For your safety, test the local fault current circuit breaker (FI) regularly by pressing the test button.
- Close the local water shut-off valve after the work is complete.
- Switch off the local mains disconnect after the work is complete.

3 Before working with the machine

- Have the machine set up by an authorized service technician or your dealer (► 15).
- Get the machine connected as per the locally applicable standards and the regulations of the authorised mechanics (water, waste water, electrical system) (► 16 and 17).
- After connecting the water and the power properly, contact the relevant Winterhalter dealer or your dealer for the commissioning of the machine and for providing training in its operation. Get yourself and your operating personnel trained in the operation of the machine.

4 Product description

4.1 Mode of operation

The boiler and the tank fill and are warmed up to the operating temperature after the machine is switched on. During the heating phase, the lighting of the start button (3) changes gradually from red to green. When the target temperatures are reached, the machine is ready for use. The start button lights up green.

The machine is fully automatic with programmes consisting of three steps: Wash, Drain and Rinse. Whilst a washing programme is running, the start button gradually moves from blue to green.

4.2 Special equipment

The following special equipment is available:

– **Cool (only for glass washers)**

The rinsing power of the constant hot tank water guarantees hygienically clean results. At the end of the wash cycle the rinse with cold fresh water ensures the cooling of the glasses.

A special plus: the rinse temperature can be increased at any time. So, you can decide at any time whether you need cold glasses or to optimise the drying with a hot rinse cycle.

IMPORTANT The first rinses after activating this function will still be with hot or warm rinse water.

Requirement: Connect the machine to the cold water.

– **effect**

In this process, you rinse with reduced tank and boiler temperatures. Appropriate Winterhalter detergents and rinse aids are required for rinsing at these temperatures with this process.

Due to the reduced tank and boiler temperatures you save energy and thus operating costs. At the same time the kitchen climate sustainably improves because when you open the hood there are less vapours from the machine. This function can be deactivated at any time.

Requirement: Connection of the machine to water at a maximum 50 °C when the glasswasher is operated.

– **EnergyPlus**

In the construction above the machine there is a fan motor and a heat exchanger. After rinsing, the fan motor draws the humid vapours (= exhaust air) out of the washing tank through the heat exchanger. The cold fresh water flowing through the heat exchanger condenses the vapours and is preheated for the rinsing of the next washing programme. Less energy is therefore required to heat the fresh water to the recommended rinse temperature. A waste water heat exchanger provides an additional energy gain. This system also sustainably improves the kitchen climate because when you open the hood there are less vapours from the machine.

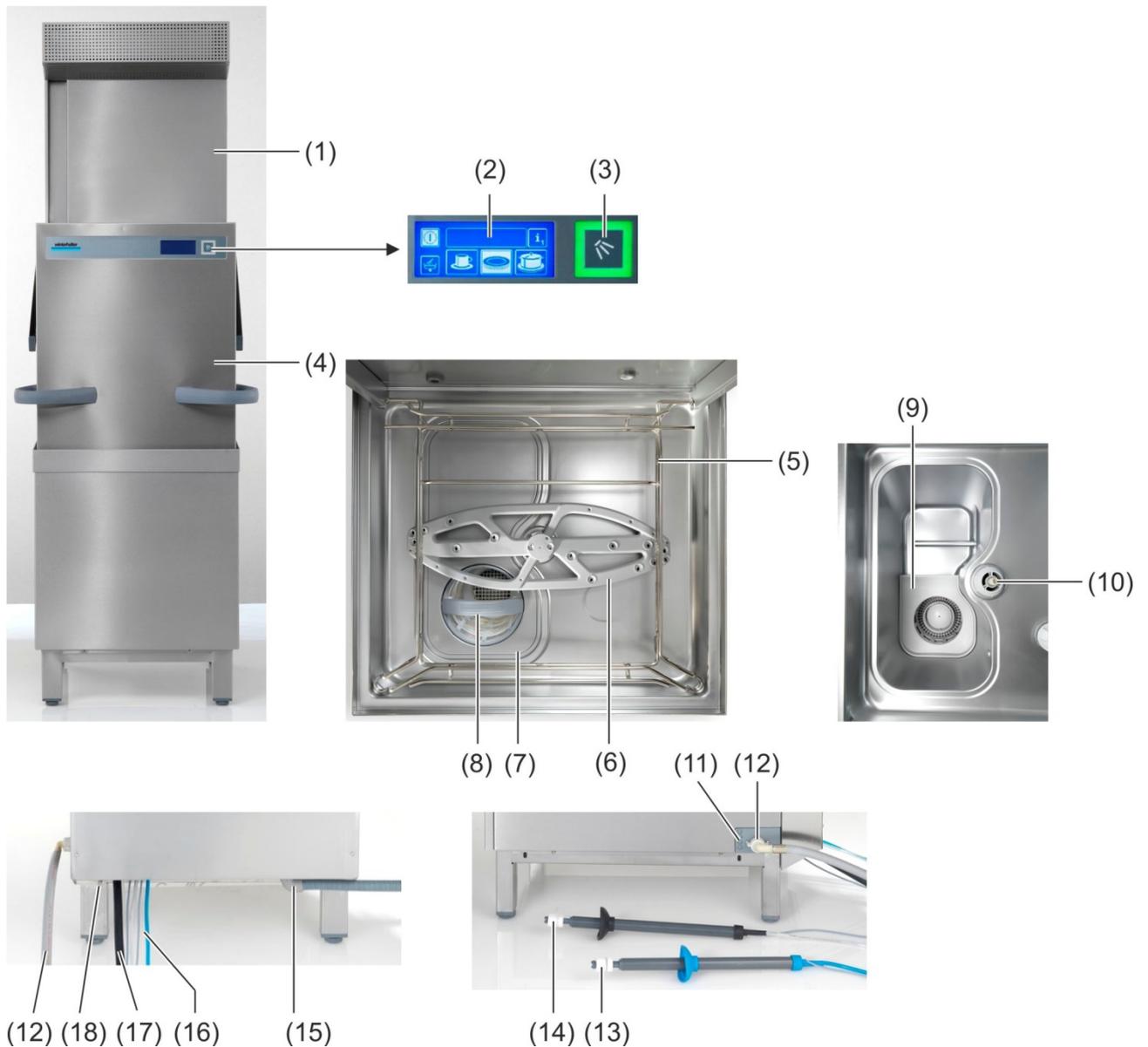
Requirement: Connect the machine to the cold water.

– **Automatic hood opening**

The hood opens automatically after each wash cycle.

– **Integral softener (► 6)**

4.3 Overview



Pos.	Description
(1)	Energy module (special equipment)
(2)	Display (Touchscreen)
(3)	Start button
(4)	Machine hood (= hood)
(5)	Rack guide
(6)	Lower rinse area
(7)	Tank cover
(8)	Filter cylinder
(9)	Pump inlet filter
(10)	Rinse area bearing
(11)	Bushings for cables and hoses

Pos.	Description
(12)	Water supply hose
(13)	Suction tube for rinse aid (blue cap and blue suction hose)
(14)	Suction tube for detergent (black cap and transparent suction hose)
(15)	Water supply hose
(16)	Hoses and cable for the suction tubes
(17)	Mains connection cable
(18)	Connection for local equipotential bonding system

4.4 Display (Touchscreen) and start button



Activating the display

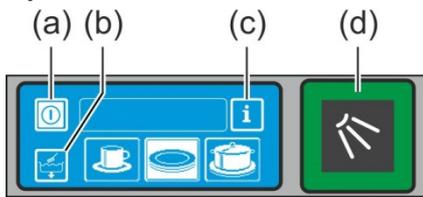
- Touch the display with your finger.
 - ⇒ The display turns on and then off again after a short time. This saves energy and prevents accidental switching on of the machine.

INFO Switching on the machine, see Section ► 7.2.

On the screen touch-sensitive buttons (keys) are displayed. Operate the screen with your fingers only, not with sharp objects. Each touch of a button is confirmed by a beep. Events such as the end of the programme or malfunctions are indicated by a sequence of tones.

INFO An authorised service technician can deactivate the beep and the sequence of tones.

Operational state



- (a) On/Off key
- (b) Self-cleaning programme
- (c) Change to Info Level 1 → Info Level 2 → PIN Menu
- (d) Start button

Start button

The coloured lighting of the start button (d) has the following meanings:

Colour	Meaning
not lit	Machine is switched off
red	Machine is not yet ready for use
green	Machine is ready for use
blue	Machine is rinsing
red and green	Machine is filling and heating up
green and blue	Washing programme is running
blue and not lit	Self-cleaning programme is running
flashing green	Wash programme ended; hood will not be opened yet
flashing green-blue	Only with EnergyPlus model: Vapours being extracted. The wash programme has not completely finished.

Menu levels

The machine electronic control unit is split into 3 levels:

- Level for the dishwashing staff (► 4.5)
- Info level 1 with additional washing programmes and information (► 10)
- Info level 2 with access to the PIN Menu (► 11)

4.5 Standard washing programme

The washing program display depends on which application the machine has been programmed for. If necessary, the machine can also be reprogrammed later.

Program 2 is already selected when the machine is ready. Another washing programme is selected by tapping. The selected programme is represented by a button with a white background.

Application of the machine	  	Programme 1 for	Programme 2 for	Programme 3 for
Dishwasher	  	slightly dirty dishes	medium dirty dishes	heavily dirty dishes
Glasswasher	  	delicate glasses	less delicate glasses	robust glasses
Bistro dishwasher	  	glass	glasses and cups	plates
Bistro and cutlery washer	  	glass	cutlery	plates
Cutlery washer			cutlery	

INFO The indicator on your dishwasher may vary since the authorized service technician can display appropriate images for your machine from a collection of images. At your request, the service technician can also hide programmes.

5 Rinse aid and detergent



Danger

- Observe the safety precautions when handling chemicals and the dosage recommendations on the packaging.
- Wear protective clothing, protective gloves and protective goggles when handling chemicals.



Caution

- Use only products that are suitable for commercial dishwashers. Such products are appropriately marked. We recommend Winterhalter products. These are especially adapted to Winterhalter dishwashers.
- Do not put rinse aids in the storage container for detergents and vice versa.

5.1 Rinse aid

A rinse aid is necessary to ensure that water on the dishes drains off after washing and dries off after a short while. Rinse aid is automatically metered from an external container.

The dosing level is set by the service engineer when commissioning the machine (► 12.6).

5.2 Detergent



Caution

- Do not use acidic cleaners.
- Do not mix different detergent products in order to prevent crystallisation that could destroy the detergent dosing device (► 5.4)
- Do not use products that can create foam, e.g. hand soap, soft soap, hand wash liquid. Ensure that these do not enter the machine even during the pre-treatment of the utensils.

A detergent is necessary to ensure that the leftovers and dirt on the dishes is cleaned. Detergents can be supplied as follows:

- Manually as detergent powder.
- Automatically from an external container using a detergent dosing device.

INFO The detergent dosing device is not included in the scope of delivery of all machines. When using an external metering device, a transfer strip is available for connecting the dosing device (► 18).

5.2.1 Manual dosing of detergent powder

Pre-dosing

- Switch on the machine and wait until the start button is lit green.
- Adhere to the dosing instructions on the packaging of the detergent. The machine's tank capacity is approx. 35 litres.
- Place approx. 100 g of detergent powder in the machine. This corresponds to a dosing of approx. 3 g/l.
- Then start the wash cycle immediately to mix the detergent powder with the water.

Post-dosing

At each wash cycle approx. 2.0-2.5 litres of fresh water enter the warewasher, which must be mixed with detergent powder.

- Fill approx. 30 - 40 g detergent of powder into the machine after 5 wash cycles.

5.2.2 Automatic dosing of liquid detergent

The dosing amount is set by the service engineer when commissioning the machine (► 12.6).

5.3 Suction tube with level control



Caution

- Only use the suction tube with sufficiently stable containers. Narrow and tall containers can tip can tip if the suction tube is pulled.
- Do not place the suction tube for the rinse aid in the detergent container or vice versa.
- Do not pull unnecessarily on the suction hose or main power cable, as this may lead to a defect.

As an option, with your machine you may have one or more suction tubes. The suction tube is already connected to the machine.



Figure 1

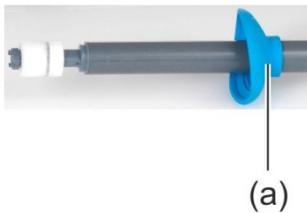


Figure 2

Figure 1:
Suction tube for detergent
Transparent suction hose
Black cap

Figure 2:
Suction tube for rinse aid
Blue suction hose
Blue cap

Servicing and maintenance



- Rinse the suction tube at every container change under running water. Remove crystallised detergent residue.
- Ensure that both vent holes (a) in the caps are open.
- Replace the suction tube in the container. Slide the cap downwards until the container opening is closed.

5.4 Changing the detergent product



Caution

- Mixing different detergents can lead to efflorescence that can lead to a failure of the detergent dosing device. This is applicable even if the new detergent is from the same manufacturer.
- The dosing pipe and the detergent dosing device must be thoroughly rinsed with water before the new detergent is used.

- A new detergent product usually requires a new setting of the detergent dosing device. Assign the required work to a service engineer authorised by Winterhalter to attain good results.

If this is not done, the warranty and product liability of Winterhalter Gastronom GmbH expires.

Integral water softener (special equipment)

Procedure:



- Observe the safety precautions when handling chemicals and the dosage recommendations on the packaging.
- Wear protective clothing, protective gloves and protective goggles when handling chemicals.
- Do not mix different detergents.

- Remove the suction tube from the container and place it in a water-filled container.
- Rinse the dosing tube and the detergent dosing device with water. To do this, use the "prime dosing device" function several times (▶ 10). The frequency depends on the length of the dosing tubes.
- Place the suction tube in the new detergent container.
- Use the "prime dosing device" function several times (▶ 10), to replace the water in the dosing tubes with detergent.

5.5 Priming the dosing devices

Dosing devices must be primed when air is reached in the dosing device because the containers were not exchanged or refilled (▶ 10).

6 Integral water softener (special equipment)

By softening the inlet water, limescale build-up in the machine and on the dishes is avoided. For the integral water softener to work correctly, the salt container must be filled with regeneration salt.

INFO At the commissioning of the machine the authorized service technician measures the water hardness and saves it in the machine's electronic control unit.

6.1 Lack of salt display



A pictogram appears on the screen when an empty salt container requires refilling. The display disappears after filling the salt container, as soon as approx. 3 wash cycles have been completed and part of the salt has been dissolved.

6.2 Filling regeneration salt



Possible risk of damage to the water softener

Chemicals such as detergent and rinse aid inevitably lead to damage to the water softener. Fill only with regeneration salt or pure evaporated salt.

Possible malfunction of the water softener

Do not fill with other salts (e.g table salt cleaning or de-icing salt). These can contain water-insoluble components. Fill only with fine-grained salt (max. 0.4 - 7 mm grain size).

INFO Because of their size, salt tablets are not suitable.

- Proceed in accordance with Figures A1 to A5.

IMPORTANT Figure A2 is only relevant for the first filling.



Risk of rust formation in the filling area

Immediately after filling, start a wash cycle to rinse off any salt residue.

7 Operation

7.1 Before switching on the machine



Caution

Possible risk of damage due to suction of items from within the machine e.g. pieces of cutlery

The pump inlet filter protects the circulating pump and the drain pump. Operate the machine only with the pump inlet filter fitted.



- Open the water shut-off valve.
- Switch on the local mains disconnecter.
- For your own safety, test the on-site residual-current circuit breaker (F1).
- Open the hood.
- Remove the filter cylinder (1).
- Check whether the pump inlet filter (2) is fitted. If it is not fitted there will be an error message when the machine is switched on.
- Replace the filter cylinder (1).
- Check whether the rotary wash arms (top and bottom) are fitted and properly engaged.
- Close the hood.
- Check whether sufficient detergent and rinse aid are present in the storage containers. Replace the storage containers in time so that the wash results are not affected.

7.2 Switching on the machine and prepare it for operation



7.3 Washing



Caution

Possible risk of scalding from hot wash water

- Keep children away from the dishwasher. The wash water is at a temperature of approx. 62 °C.
- Do not open the hood while the machine is in operation. There is a risk of the hot wash water spilling out. Stop the washing programme before doing so (► 7.3.7).

Possible risk of injury

- Do not place any objects on the hood.
- Arrange sharp, pointed utensils so that they do not cause injury.

Possible failure of the washing programme due to heavy dirt ingress

- Pre-rinse all dishes and pans with **cold** water. Remove food residues.

7.3.1 Arranging the dishes in the washing rack

Dishes and cutlery

- Place plates with their front side facing forwards.
- Place cups, bowls and pots rim down.
- Cutlery should be washed either standing in the cutlery holder or lying in a shallow basket. Make sure that they are not too close together. Soak cutlery, before you wash it.
- Position knives and other sharp objects in the cutlery holder with the handle up in order to prevent injuries.

Glasses

- Pour out drink residue (not in the machine).
- Remove scraps of paper.
- Rinse off ash with water.
- Place glasses rim down.
- Space the glasses, so they do not rub against each other. This will avoid scratches.
- For tall glasses choose a basket with appropriate divisions so that the glasses are held in a stable position.

7.3.2 Using automatic hood start

- Choose a washing programme (► 4.5).
INFO The washing programme remains selected until a different washing programme is chosen.
- Slide the washing rack into the machine.
- Check that the top and bottom rotary wash arms are free to turn.
- Close the hood.
 - ⇒ The washing programme is started.

7.3.3 Interrupting automatic hood start

- Do not close the hood completely, but only as far as the lower detent position.

INFO The automatic hood start can be deactivated by an authorised service technician (P516). Every washing programme must then be started by pressing the start button.

7.3.4 Changing washing programme

- Choose a different washing programme by tapping the button (► 4.5).
 - ⇒ The background of the button (4) becomes white.
- Close the hood.
 - ⇒ The washing programme is started.

7.3.5 Intensive programme

If the stains are particularly dried in, the washing programme can be intensified

- Close the hood and press the start button twice in short succession ("double click").



⇒ In the info field, the "Brush" icon flashes.

INFO The intensive program only affects the current washing programme and is then automatically deactivated again.

7.3.6 End of the programme

The start button **flashes green**, as soon as the washing programme has ended and the hood remains unopened.

Only with EnergyPlus model

The start button then **flashes blue-green**. At the same time, the warm-humid vapour is extracted from the washing compartment, and the heat energy stored in it is recovered for the next wash cycle. If possible, do not open the hood yet at this time.

The Start key **flashes green** as soon as the warm air is extracted.

7.3.7 Prematurely ending the washing programme

A washing programme can be interrupted in the following ways:

- Press the start button
- Tap on the button of the selected washing programme

7.3.8 Periods of disuse

Do not switch the machine off during periods of disuse.

- Close the hood as far as the detent position to prevent it cooling down.

7.4 Switching off

Switch the machine off at the end of the working day using the self-cleaning programme (► 8.1.2), so that it is cleaned and emptied every day.

INFO If you use the On/Off switch, the tank stays filled but will no longer be kept at temperature. If the tank temperature has dropped too much before the next washing cycle, the tank will be emptied automatically and filled again.

8 Servicing and maintenance



Warning

- Do not spray the machine and the surrounding area (panels, base) using a water hose, steam-jet air ejector or high-pressure cleaner.
- Ensure that the base of the machine is not flooded when washing it in order to prevent an uncontrolled inflow of water.



Warning

Wear protective clothing and protective gloves before touching parts in contact with detergent solution (filters, wash arms, ...)

8.1 Daily Cleaning

8.1.1 During operation

Remove the filter cylinder, clean if necessary and re-insert it.

8.1.2 Self-cleaning programme at the end of the working day

The machine is equipped with a self-cleaning programme that assists you when you are cleaning the inside of the machine. After the first programme step, the self-cleaning programme is interrupted so that you can remove the filter cylinder and the tank cover and clean them. If you do not follow this step, the self-cleaning programme will continue automatically after 30 seconds.

➤ Proceed in accordance with Figures B1 to B27.



Terminating the self-cleaning programme:

- Press this button.
 - ⇒ The background of the button becomes blue.
 - ⇒ The machine is filled again.



8.1.3 Cleaning the interior



Caution

Ensure that there are no rusty foreign objects in the machine which can also cause the "stainless steel rust-free" material to start rusting. Rust particles can come from non-rust-free cleaners, damaged wire racks or non-rust-protected water lines.

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

- High-pressure cleaner
- Detergents containing chlorine or acid
- Sponges and wire brushes containing metal
- Abrasives or abrasive cleaners

- Remove dirt with a brush or a cloth.

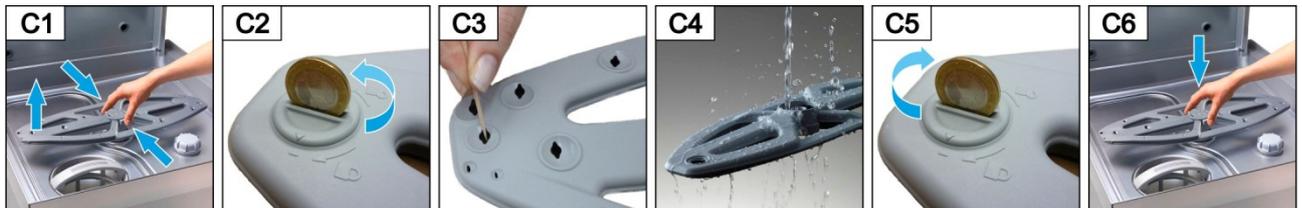
8.1.4 Cleaning the exterior of the machine

- Clean the display with a damp cloth.
- Clean the external surfaces using a stainless steel cleaner and stainless steel support.

8.2 Weekly Cleaning

Cleaning the rotary wash arms (top and bottom)

- Proceed in accordance with Figures C1 to C6.

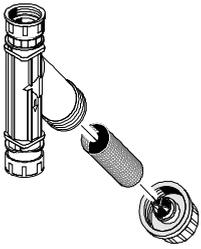


Cleaning the wash arms (top and bottom)

- Proceed in accordance with Figures D1 to D9.



8.3 Monthly cleaning



Cleaning the dirt trap

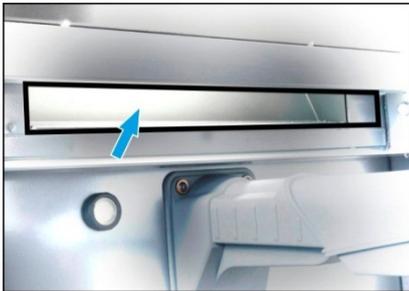
- Close the shut-off valve for the water supply.
- Clean the dirt trap.

Only with EnergyPlus model



Cleaning the Energy Module

- Slide the ventilation grill upwards and remove it.
- Clean the space behind the ventilation grill with a cleaning cloth.
- Wash the ventilation grill in the machine and then refit.



- Open the hood.
- Spray the suction channel with warm water. Use a water hose, not a high-pressure cleaner.
- Clean the suction channel with a cleaning cloth.

8.4 Descaler

If the machine is operated with water of high hardness without water treatment, descaling is necessary at regular intervals (► 12).

8.5 Maintenance by the Customer Service

We recommend that you have an authorised Winterhalter service engineer carry out the maintenance of the machine at least twice a year so that vulnerable parts can be checked and replaced accordingly. Original spare parts must be used for repairs and the replacement of worn parts.

Worn parts are, for example:

- Dosing pipes
- Shafts of the rotary wash arms
- Hood seal
- Water supply hose

Winterhalter has a maintenance contract that includes these services.



In the electronic control unit, the number of hours of operation or washing programmes before servicing should be performed can be programmed and at what number of hours of operation remaining the symbol for maintenance/service can be displayed. If necessary, have this function activated by a service technician authorised by Winterhalter.

9 Malfunctions

This chapter explains the remedies for malfunctions. The causes and remedies are specified in the tables. Contact a Winterhalter service engineer if you cannot rectify the error yourself.



Danger

Danger to life. Live components.

- Do not open any machine covers or machine parts if it requires tools. There is danger of shock.
- Only a Winterhalter service engineer should carry out work on the electrical system. The machine must first be disconnected from the mains.



Faults are displayed in the information box in the form of pictograms. In addition, every malfunction will be recorded in the hygiene journal (► 12) and can be retrieved in Info Level 2 (► 11). Information is recorded in both menus when the malfunction is remedied.

Pictogram	Meaning	Possible Cause	Remedy
	Hood is open	Programme start with open hood	Close the hood
	Detergent is empty ¹		Change the detergent storage container
	Rinse aid is empty ¹		Change the rinse aid storage container
	Lack of water	Water shut-off valve closed	Open the water stop valve
		Dirt filter in the dirt trap is blocked	Remove and clean the dirt filter (► 8.3)
		Solenoid valve defective or blocked	contact an authorised service technician for the repair
	Integral water treatment is exhausted	Low salt	Fill the salt reservoir with regenerating salt (► 6.2)
	External partial or full demineralisation unit blocked		Exchange the partial demineralisation unit; exchange the core of the full demineralisation unit.
	Service interval is running out	The number of operating hours / cleaning programmes set in the controls has been reached. INFO: This function is not activated in factory.	contact an authorised service technician for the repair
	Check the calcification	The number of operating hours set in the control system has been reached.	Start the descaling programme (► 12.5)

¹ is now displayed, when a suction tube with level control is used and connected to the machine.

Malfunctions

Pictogram	Meaning	Possible Cause	Remedy
	Lower rotating wash arm is blocked.	Rotary wash arm is not correctly engaged	Correctly engage the rotary wash arm
		Rotary wash arm obstructed by, e.g. a piece of cutlery	Remove the obstruction
		Rotary wash arm blocked by pollution	Clean the wash arm bearing (► 8.2)
		Defective drive ²	Contact an authorised service technician for the repair
	Upper rotating wash arm is blocked.	Rotary wash arm obstructed by, e.g. high dishes	Remove the obstruction
		Rotary wash arm blocked by pollution	Clean the wash arm bearing (► 8.2)
		Defective drive ²	Contact an authorised service technician for the repair
	Filter cylinder blocked	Heavily contaminated filter cylinder	Remove, clean and replace the filter cylinder
	Energy optimization ³	On-site energy optimisation equipment switches individual electrical consumers (heating elements).	Wait until the on-site energy optimisation equipment switches off
	Pump inlet filter not fitted	Missing pump inlet filter ⇒ The machine switches off after 30 seconds and will not be filled.	Fit the pump inlet filter and, if necessary, switch the machine on again. INFO: When the prompt is downgraded three times, the machine can be switched on
	Pump inlet filter not fitted despite three prompts	missing pump inlet filter IMPORTANT: The circulating pump and drain pump can be damaged by drawing in, for example, pieces of cutlery	Fit pump inlet filter
	Automatic hood opening ² defective	Motor defective	Contact an authorised service technician for the repair
	Tank will be filled	Start a washing programme during which the machine refills the water	Wait till the machine has been filled
	Malfunction with error code	Various	Display the error code (► 9.1) and assign the repair to an authorised service technician

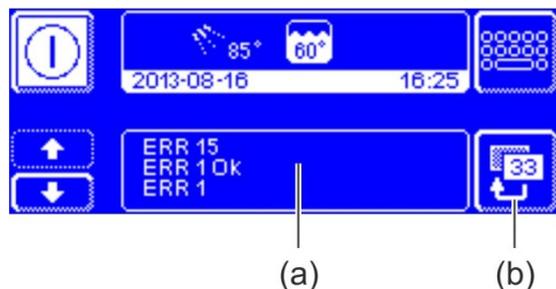
² Special equipment

³ is displayed only when the machine is connected to an equipment with energy optimisation

9.1 Error code call

In the display, the following symbol flashes

- Tap the row next to the following buttons



⇒ The error codes are displayed in area (a).

INFO Malffunctions already resolved are also displayed here (e.g. ERR 1 OK).

- Contact an authorised service technician for the repair.
- Press the button (b) twice to leave the Menu.

9.2 Poor cleaning result

	Possible Cause	Remedy
The dishes do not get clean	No or excessively low detergent dosing	Set the dosing amount as per the manufacturer's specifications (▶ 12.6) Check the dosing lines (for kinks, breakage, ...) Exchange the storage container, if empty
	Dishes incorrectly sorted	Do not stack dishes one over the other
	Nozzles of the wash arms blocked	Remove the wash arms and clean the nozzles (▶ 8.2)
	Excessively low temperatures	Test the temperatures (▶ 10)
There is formation of layers on the dishes	In case of grease residues: The water is too hard	Check the water preparation Clean thoroughly
	In case of starch residues: Temperature of the manual pre-cleaning (brush) is higher than 30 °C	Lower the temperature of the manual pre-cleaning Carry out the basic cleaning program (▶ 12.5.2)
The dishes do not dry on their own	No or excessively low rinse aid dosing	Set the dosing amount as per the manufacturer's specifications (▶ 12.6) Check the dosing lines (for kinks, breakage, ...) Exchange the storage container, if empty
	Water intake pressure too low	Contact an authorised service technician for the repair

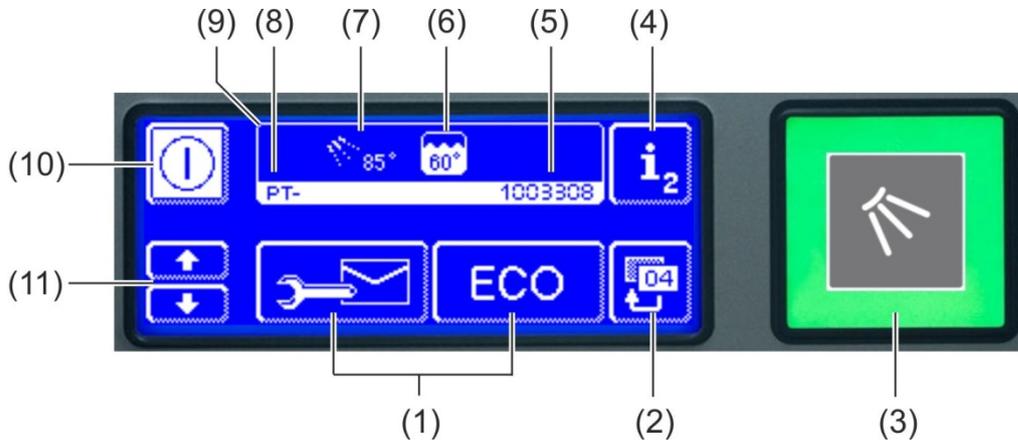
For machines without integral softener:

INFO The water quality affects the washing and drying performance. We therefore recommend from a total hardness of more than 3° dH (0.53 mmol/l) that the machine is supplied with softened water.

10 Info Level 1

Calling Info Level 1

➤ Press the following button:



(1)	Buttons for retrieving information the priming of the dosing device and the selection of additional programmes
(2)	Back button
(3)	Start button
(4)	Switch to Info Level 2 (▶ 11)
(5)	Serial number
(6)	Current tank temperature
(7)	Current rinse temperature
(8)	Machine type (PT-M, PT-L or PT-XL)
(9)	Info field
(10)	On/Off switch (tank will then not be emptied)
(11)	Scroll buttons for areas (1)

Buttons for the areas (1)



Addresses

➤ Press the button.

⇒ The following 2 addresses appear:

- SERVICE: Address of the service technician
- CHEMICALS: Address of the chemicals supplier (rinse aid, detergent, ...)

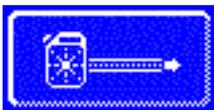
INFO If no addresses appear, the authorised service technician can enter the matching addresses.



Prime the detergent dosing device and dosing tube

➤ Keep the button pressed.

⇒ The background of the button becomes white. The dosing device is activated (max. 30 seconds)



Prime the detergent dosing device and dosing tube

➤ Keep the button pressed.

⇒ The background of the button becomes white. The dosing device is activated (max. 30 seconds)



Integrated operating instructions (▶ 13)

- Press the button.
 - ⇒ The integrated operating instructions appear.



Tips

- Press the button.
 - ⇒ Tips appear concerning themes such as hygiene, cleaning of dishes and economy.

INFO Accessing the integrated operating instructions and tips is possible at any time, even while a washing programme is running.

Additional programmes

INFO The number of special programmes depends on the programming of the machine.



Energy saving programme



Whisper programme
for especially quiet washing



Short programme



Special programme
The special programme can be freely programmed by the service technician to your wishes (time, temperature, mechanics, chemistry).

Using the additional programmes

- Tap on the button of the selected washing programme
 - ⇒ The background of the button becomes white.
 - ⇒ In the info field the display of the temperature is replaced by the display of the additional programmes.
- Press button (3) to start the additional program.
 - ⇒ The start button (3) lights up in blue.
 - ⇒ The start button (3) flashes green when the additional programme has ended.
 - ⇒ The additional programme remains stored until it is disabled or another additional programme is selected.

Additional programs with the "Cool" and "effect" special equipment



INFO Button appears only on "Cool" type machines.
As long as the button is enabled (white background) rinsing will be with cold water. To disable the function, the button must be touched.

- ⇒ The background becomes dark and in the Info field (9)  flashes.



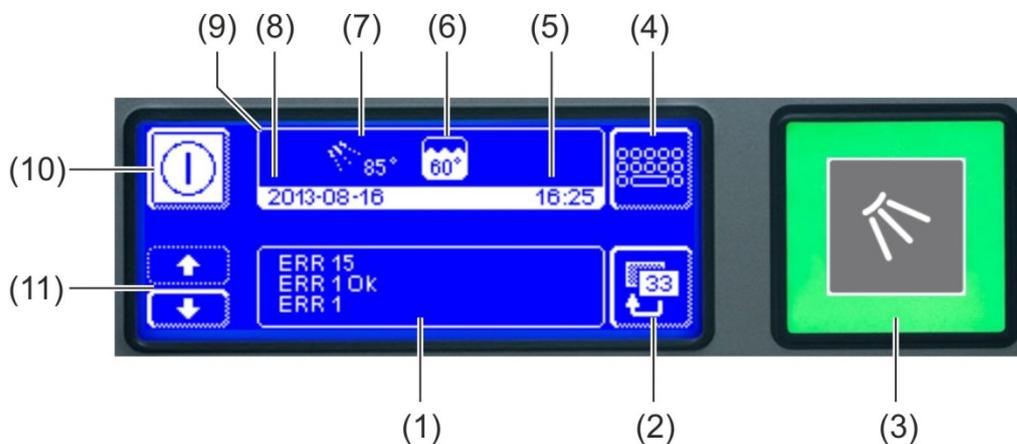
INFO Button appears only on "effect" type machines.
As long as the button is enabled (white background) rinsing will be at a lower temperature. To disable the function, the button must be touched.

- ⇒ The background becomes dark and in the Info field (9)  flashes.

11 Info Level 2

Calling Info Level 2

➤ Tap the row next to the following buttons:



(1)	Area for displaying events and malfunctions
(2)	Back button
(3)	Start button
(4)	Switch to the PIN Menu (► 12)
(5)	Current time
(6)	Current tank temperature
(7)	Current rinse temperature
(8)	Current date
(9)	Info field
(10)	On/Off switch (tank will then not be emptied)
(11)	Scroll buttons for areas (1)

Events and malfunctions

In this field all events and malfunctions are displayed. Already resolved malfunctions appear here as well.

Example



last entry
↓
older entry

Display	Explanation
Evt xx	Event (e.g. end of a washing programme)
ERR xx	Malfunction
ERR xx OK	Malfunction resolved

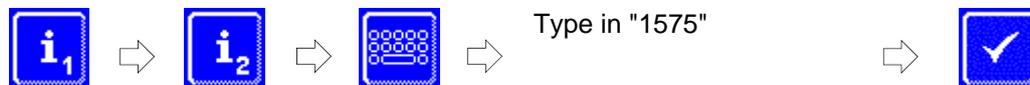
INFO Information with a date can be found in the Hygiene logbook (► 12.4).

12 PIN Menu

INFO If you switch to the PIN Menu, the machine switches off.

Accessing the PIN Menu

➤ Tap the row next to the following buttons



Type in "1575"

INFO

Incorrectly entered digits can be corrected with the ← button.

INFO An incorrectly entered PIN is displayed on the screen as the  symbol. If you have entered your PIN incorrectly five times, the input is locked for 2 minutes.

Overview

	General settings (time, date, language, contrast) (▶ 12.1)
	Automatic programming On/Off switching (▶ 12.2)
	Display the operating data (▶ 12.3)
	Access the hygiene journal (▶ 12.4)
	Start descaling or cleaning programme (▶ 12.5)
	Changing the amount of detergent/rinse aid (▶ 12.6)
	Set parameters for external dosing devices (▶ 18.3)
	Reset water back-flow counter (▶ 12.7)

Leaving the PIN Menu

➤ Press the button.



12.1 General Settings

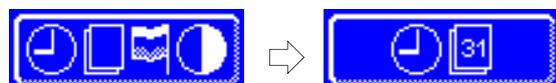
12.1.1 Date, Time, Temperature units

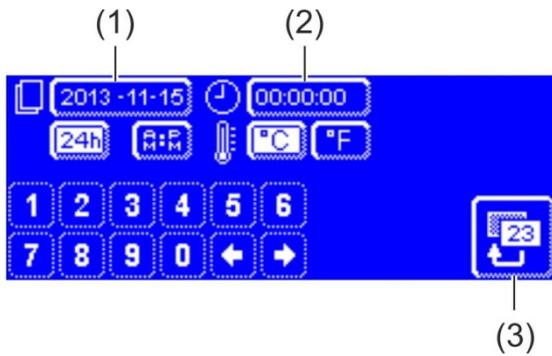
Here you can enter the current date and the current time, change the format of the time, and change the temperature units.

INFO The time must be changed for the summer/ winter time changeover.

Retrieving the settings

➤ Tap the row next to the following buttons





Setting the date

- Press the button (1).
 - Use the numeric keypad to enter the current date. Format: YYYY-MM-DD (Year-Month-Day)
- INFO** During entry, the date is checked for whether it exists. Only plausible dates can be entered.

Setting the time

- Press the button (2).
- Use the numeric keypad to enter the current time.

Setting the time format

- Switch between 24-Hour-Mode ("24h") or 12-Hours-Mode ("AM/PM") by pressing the appropriate button.

Setting the temperature units

- Switch between Degrees Celsius ("°C") and Degrees Fahrenheit ("°F") by pressing the appropriate button.

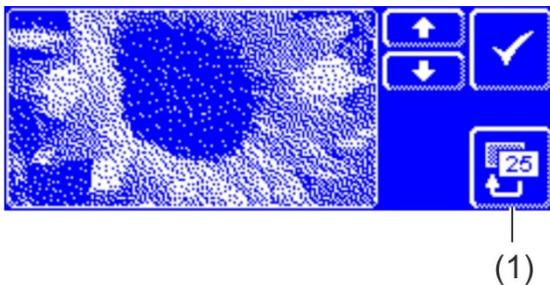
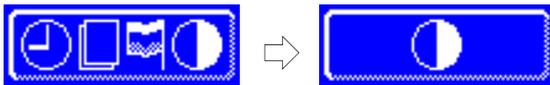
- Press the back button (3) to exit from the menu.

12.1.2 Setting the contrast

Here you can change the contrast to match the display of the screen to the lighting conditions in your kitchen.

Retrieving the settings

- Tap the row next to the following buttons



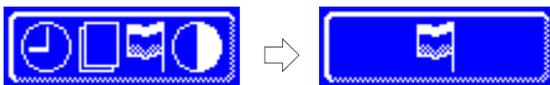
- Change the setting with the ↑ and ↓ buttons until all of the data on the display is readable.
- Confirm with the ✓ button.
- Press the back button (1) to exit from the menu.

12.1.3 Setting the language

Here you can set the language in which to display texts on the screen.

Retrieving the settings

- Tap the row next to the following buttons



- Select the required language.
- Press the back button (1) to exit from the menu.

12.2 Automatic Switch On / Switch Off

Here you can:

- programme , when the machine should automatically fill and heat up.
- programme, when the machine should automatically switch off.

The automatic switching on/off can be set either per day or for a special date. If the inputs overlap, a specific date always takes precedence over the weekly program

IMPORTANT The following requirements must be met at the time of the automatic power-on:

- The hood is closed.
- The on-site mains disconnecter is switched on.
- The water stop cock is open.

Automatic Switch On programming

➤ Tap the row next to the following buttons

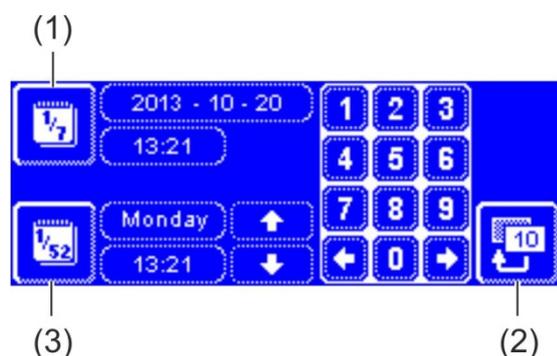


Setting the weekday



- Press the button (3).
- Use the scroll buttons to select the required weekday.
- Tap on the button of the selected weekday.
⇒ The background of the button becomes white.
- Enter the time for the start of automatic activation at the numeric keypad.
- Repeat the above step as necessary for the other days of the week.
- Check whether the button (3) is activated (white background). Only then is automatic switch-on active.
- Press the back button (2) to save your input.

Setting a special date



- Press the button (1).
- Enter the time and the date for the start of automatic activation at the numeric keypad.
- Check whether the button (1) is activated (white background). Only then is automatic switch-on active.
- Press the back button (2) to save your input.



INFO

The date and time of the next automatic activation are displayed when the machine is switched on. Of course the machine can be used before this point of time.

Automatic Switch Off programming

➤ Tap the row next to the following buttons



The setting of days of the week or special dates is much the same as for automatic switch on. Proceed as described in this section.

Expiration of the automatic power-off:

- ⇒ Sound 3 short beeps
- ⇒ 10 second pause
- ⇒ Sound 3 short beeps
- ⇒ 10 second pause
- ⇒ Sound 3 short beeps
- ⇒ The machine is emptied and switched off using the self-cleaning programme.

INFO If the hood is open at the time of the automatic turn-off, the machine is pumped empty and switched off, but **not** cleaned internally.

12.3 Operating data

Here you can read out all operating data.

Retrieving the operating data

➤ Press the button.



The following operating data is shown on the display.

Commissioning	Date
Next service in ⁴	x hours or washing cycles
Total operation hours	x hours
Total washing cycles	x
Total water consumption	x Litres
Fill. Washing cycle EnergyPlus ⁵	x
Total energy savings ⁵	x kWh
Days-Operating hours	x hours
Days-Washing cycles	x
Days-Water consumption	x Litres
Remaining capacity water collection	x Litres
Operating hours Master old ⁶	x hours

INFO The display depends on the facilities of the machine.

➤ Press the back button (3) to exit from the menu.

⁴ An authorised service technician can activate this function.

⁵ only for EnergyPlus

⁶ when a new display is installed

12.4 Hygiene logbook

In the hygiene logbook you can:

- retrieve all operating conditions, actions, and failures for one day in chronological order .
- retrieve all HACCP and hygiene relevant data.

The list starts with the current date and the first event on this day. Then the following events on that day, and then the events of days before. The most important operating data are summarized at the end of each day.

INFO When the memory capacity is reached, the oldest data is deleted as soon as new data is added.

Access the hygiene logbook

- Press the button.



- ⇒ The hygiene logbook display then appears:
 - The list starts with the current date and the first event on this day.
 - This is followed by the events from the days before.
- Press the back button (3) to exit from the menu.

12.4.1 Data transfer to PC (option)

Because the hygiene logbook stores only a limited number of entries, there is also the possibility to transfer the records to a PC and archive them there.

For more information, see the related documents. .

12.5 Descaling / cleaning

12.5.1 Descaling programme

If the machine is operated with hard water without the relevant water preparation, the boiler, the machine interior, all water lines and other components can scale.

Grease residues and dirt that remain in the machine can contribute towards an unhygienic interior and can lead to failure of heating elements. Regular removal of these layers is absolutely essential.

Using the descaling programme you can descale the inside of the warewasher. The water carrying lines and the boiler can only be descaled by an authorised service technician.

For descaling, you need an acid-based descaler suitable for commercial warewashers. We recommend the Winterhalter Descaler A 70 LS.



Danger

- Observe the safety precautions when handling chemicals and the dosage recommendations on the packaging.
- Wear protective clothing, protective gloves and protective goggles when handling chemicals.

Ideally, start the descaling programme when the machine is empty and switched off. If the machine is already prepared for use, it will automatically empty first.

Only with external detergent dosing devices:



Warning

Development of chlorine gas

If you mix active chlorinated detergent and descaler, chlorine gas is produced. Stop the detergent dosing (e.g. remove the suction tube or switch off the dosing device).

INFO A detergent dosing device built into the machine will be disabled automatically in the descaling programme.

Start the descaling programme

➤ Tap the row next to the following buttons



⇒ The button flashes while the programme is running.



Warning

Descaler produces chemical burns

The descaling solution must not remain in the machine. If you switch off the machine when the descaling programme is in progress or if you interrupt the programme, the machine must be emptied, refilled and again emptied. Use the self-cleaning programme for this.

End of the descaling programme:

- ⇒ With a machine ready for use: The tank is emptied and re-filled **without** detergent.
- ⇒ With an empty, switched off machine: The tank is filled **without** detergent.
- ⇒ Once the machine is ready for operation, the text "Add descaler. Press start button." appears on the display.
- Open the hood and place descaler inside the machine. Follow the recommended dosage.
 - INFO** The machine's tank capacity is approx. 35 litres.
- Close the hood and press the start button.
 - ⇒ The start button lights up in blue. The start button continues to flash.
 - ⇒ The descaling solution is circulated in the interior.
 - ⇒ On the display, the time counts down from 600 seconds.
 - ⇒ Once the time has expired, the start button should stop flashing.
- Open the hood and check whether the inside has been sufficiently descaled.
 - INFO** If the hood is not opened within the next 600 seconds, the descaling programme continues automatically and the machine will be emptied.
- Place more descaler in the machine if there are still white coatings. Close the hood and press the start button.
- Press the back button if there are no more white deposits inside the machine.
 - ⇒ The machine empties and is then refilled with cold water. Once the desired level is reached, the cold water is circulated for 60 seconds and then drained.
 - ⇒ The machine switches off automatically.
- Open the hood and check that the machine has been completely emptied.

12.5.2 Basic cleaning programme

New dishes and new glasses generally have a protective coating, which can be removed by using the basic cleaning program. The program can also be used if deposits such as starch have built up on the dishes.

Starting the basic cleaning programme

- Tap the row next to the following buttons



- ⇒ The button flashes while the programme is running.

End of the descaling programme:

- ⇒ With an empty, switched off machine: The machine is filled and heated up.
- ⇒ With a machine ready for use: A little water still flows into the boiler.
- ⇒ Once the machine is ready for operation, the text "Add descaler. Press start button." appears on the display.
- Open the hood and place descaler inside the machine. Follow the recommended dosage.
 - INFO** The machine's tank capacity is approx. 35 litres.
- Slide the basket with the dishes to be cleaned into the machine.
- Close the hood and press the start button.
 - ⇒ The start button lights up in blue. The start button continues to flash.
 - ⇒ The detergent solution is circulated in the interior.
 - ⇒ On the display, the time counts down from 300 seconds.
 - ⇒ This is followed by a drying pause and the rinse.
 - ⇒ Once the time has expired, the start button should stop flashing and it should flash green.
- Open the hood and remove the basket from the machine.
- As necessary, wash more racks or press the back button to exit from the menu.

12.6 Changing the amount of detergent / rinse aid

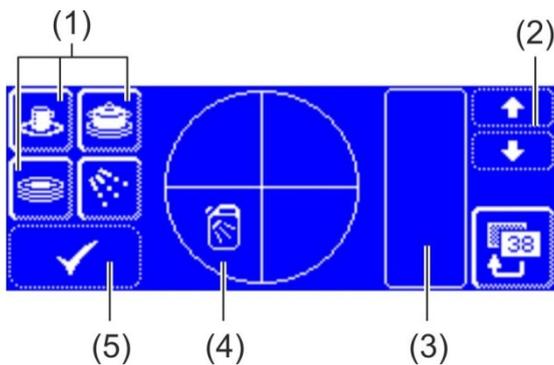
When a new detergent or a new rinse aid is used, it may be necessary to change the dosing amount. Please observe the dosing recommendations on the packing.

The dosing amount can be adjusted separately for every standard programme.

IMPORTANT In the next menu, only the dosing amount of the installed dosing devices is changed. Please consult the corresponding device documents for external dosing devices

Opening the menu

- Press the button.



Changing the detergent dosing mixture

- Select a washing programme: press one of the three buttons (1).
 - INFO** - The display of the three pictograms depends on the type of warewasher.
 - The dosing quantities for each washing programme can be set separately.
 - ⇒ The background of the selected button (1) and the button (4) changes to white.
 - ⇒ The current detergent dosing amount and the internal name (P003) is displayed in field (3).
- Change the dosing amount with the scroll buttons (2).
- Press the button (5) in order to save the entry.
 - ⇒ The button (5) flashes briefly in white.

Changing the rinse aid dosing

- Press the button.
 - ⇒ The background of the button becomes white.
- The remaining steps are much the same as the steps for changing the detergent dosing mixture. Therefore, proceed as in the "Change detergent dosing mixture" section.
- Press the back button (3) to exit from the menu.



12.7 Resetting the water back-flow counter



The water back-flow counter must be reset if on machines with an external partial- or full desalination unit this symbol flashes on the screen.

- Contact an authorised service technician to exchange the external partial or full demineralisation unit.

Resetting the water back-flow counter

- Tap the row next to the following buttons



- Press the back button (3) to exit from the menu.

13 Integrated operating instructions

The integrated operating instructions has a short description of the operation of the machine

Retrieving the integrated operating instructions

- Tap the row next to the following buttons



14 Customer-specific modifications

The machine can be adapted to individual needs within certain limits.

Examples

- The pressure can be reduced if mainly light dishes parts are washed.
 - The sound signal at the touch of a button can be disabled.
- Contact an authorised service technician for the changes.

15 Adjusting the machine and table

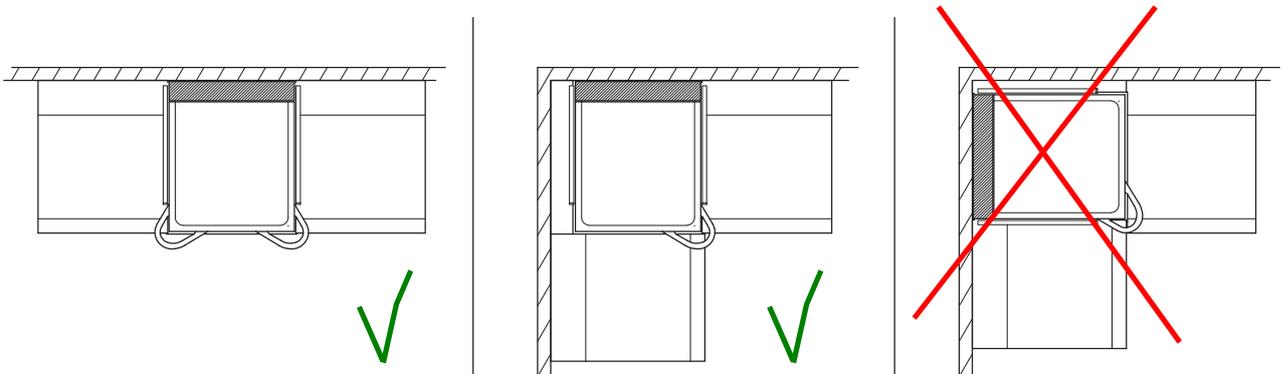
The installation site must be frost-resistant so that the water supply systems do not freeze. If the installation site is not frost-free: ► 19.

15.1 Installing the machine

INFO No gap is required between the wall and rear of machine.

- Install the machine horizontally with the help of spirit level.
- Adjust the base unevenness with the help of the height-adjustable machine feet.

Installation variants



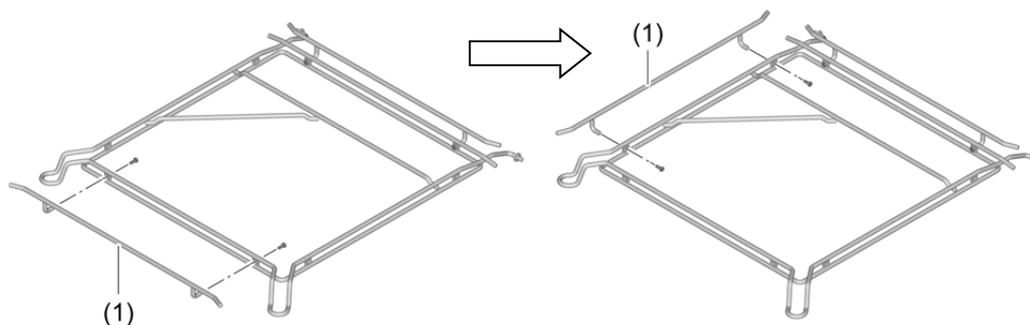
INFO If the machine is installed in a corner, the left hood handle must be removed. For plugging holes a kit with part no. 30002147 is available.

15.2 Building tables

- Table dismantling.
- When Winterhalter tables are used, attach aluminium strut supports to the machine
The aluminium strut supports are in the machine.
- Secure the table to the machine.
- Connect the earthing cable from the table to the machine.

15.3 Rack guide conversion

INFO If the machine is installed in a corner, the left hood handle must be removed.



- Unscrew the front guide bar (1) and attach to the left side of the rack guide. With separately available guide bars, the rack guide can be converted to the following rack sizes and wall distances:

Rack size	Distance between the wall and rear of the rack guide
500 x 500 mm	170 mm
530 x 530 mm	155 mm
500 x 500 mm	140 – 150 mm
600 x 400 mm	170 mm
600 x 400 mm	235 mm

16 Water connection

The water-related safety should be as per DIN EN 61770. The machine can be connected to an inlet water supply without an intermediate connection to other safety equipment.



Warning

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

16.1 Requirements for the on-site inlet water connection

Water quality	The inlet water must in microbiological aspects have the quality of drinking water
Water inlet temperature:	max. 60 °C max. 20 °C for "Cool" and "EnergyPlus" version machines. max. 50 °C for "effect" version glass washers
Water hardness:	≤ 3 °dH (3.8 °e / 5.34 °TH / 0.54 mmol/l) (recommendation, to prevent scaling of the machine) ≤ 30 °dH (37.6 °e / 53.4 °TH / 5.35 mmol/l) with machines with an integral softener. In "EnergyPlus" machine models: Connection to osmosis water only with a stainless steel exhaust heat exchanger
Minimum flow pressure:	100 kPa (1.0 bar) 150 kPa (1.5 bar) for the "EnergyPlus" machine model
Maximum inlet pressure:	600 kPa (6.0 bar)
Rate of Flow	at least 4 l/min

16.2 Requirements for the local water shut-off valve.

- easily accessible
- not behind the machine
- 3/4" connector

16.3 Connecting the supply hose



Caution

The supply hose may not be shortened or damaged.
Old existing hoses may not be re-used.
Do not bend the supply hose while routing it.

The supply hose and dirt trap are located in the machine.
INFO The dirt catcher prevents particles from the water supply line entering the machine thus preventing extraneous rust on the cutlery and in the machine.



Left view

- Connect the supply hose (TWw) to the machine.
- Connect the dirt trap to the on-site water stop cock.
- Connect the supply hose to the dirt trap.
- Open the water stop cock and test whether the connections are sealed.

16.4 Connecting the drain pipe



Caution

The drain pipe may not be shortened or damaged.
Do not bend the drain pipe when laying it.

The drain pipe is located in the machine.
INFO The machine is equipped with a drain pump. The on-site water drain must have a trap. The maximum height of the on-site water drain is 650 mm.



Back view

- Connect the drain pipe (A) to the machine.
- Connect the dirt trap to the on-site water drain pipe.

17 Electrical connection



Danger

Danger to life. Live components.

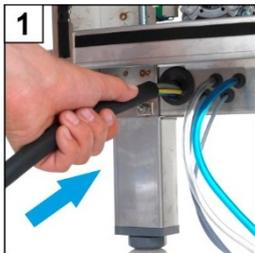
- The machine and the relevant additional devices must be connected by an electrical company authorised by the relevant electricity supplier as per the locally applicable standards and regulations.
- When performing installation and maintenance work, unplug the powder dosing device from the power network. Check that there is no voltage.

- The electrical safety of this machine is guaranteed only if it is connected to a correctly installed protective circuit and a residual current circuit breaker. It is very important that this basic safety requirement is tested and in case of doubt the house installation is checked by a qualified electrician.
- The circuit diagram must be observed.
- The equipment may only be operated at the voltages and frequencies specified on the rating plate.
- A fixed connection must as a priority be installed for machines that are delivered without a power cord.
- When the machine must be permanently connected (without a plug), a mains disconnecter with all-pole separation from the network must be installed. The mains disconnecter switch must have a contact opening width of at least 3 mm, and must also be lockable in the neutral position.
- The electrical connection must be secured as a separately fused circuit with slow fuses or circuit breakers. The protection depends on the total power consumption of the machine. The total connected load is specified on the rating plate of the machine
- In the electric supply line, install a universal current sensitive residual current circuit breaker class B with a tripping current of 30 mA (DIN VDE 0664) as a frequency inverter is located in the machine.
- Machines delivered from the factory equipped with mains connection cable and safety plug (single phase), or CEE plug are (triple phase), may only be connected to the mains network indicated on the nameplate.

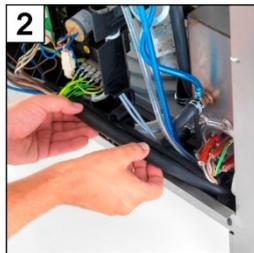
17.1 Mains cable connection

Requirements for the mains connection cable

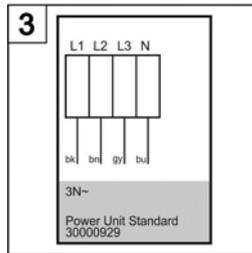
- Cable type: Type H07 RN-F or equivalent
- The wires must be fitted with wire end ferrules.
- Cross section and number of cores: suitable for on-site power and protection for more information see the sticker in the front panel



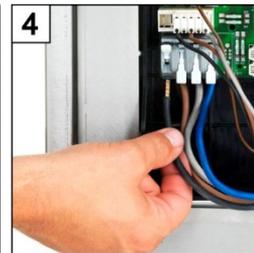
1 Connect the mains cable to the rear of the machine.



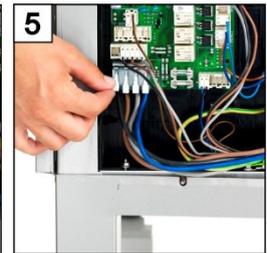
2 Withdraw the mains cable at the front and route it to the left.



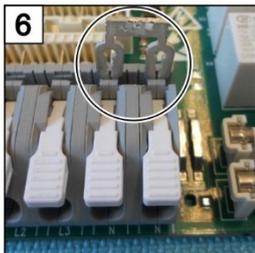
3 Follow the wiring diagram (► 17.3).



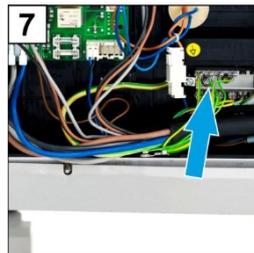
4 Connect the wires of the mains connection cable according to the wiring diagram.



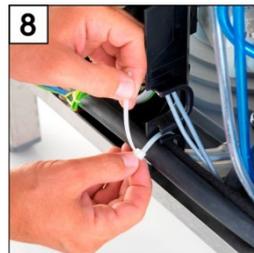
5 Close the quick release connectors.



6 If necessary plug bridges. Firmly press the bridges with a screwdriver.



7 Connect the green-yellow wire to the distributor of the earth wires



8 Attach the mains supply cable to the mounting plate with a cable tie for strain relief.

17.2 Establishing an earth connection

- Connect the machine into the equipotential bonding system.

INFO The terminal screw is located behind the right rear leg of the machine. It is identified with the  symbol.

17.3 Wiring diagram

<p>3N~ Power Unit Standard 30000929</p>	<p>1N~ I < 40 A Power Unit Standard 30000929</p>	<p>3~ Boiler 6,4 kW Power Unit Universal 30000933</p>	<p>3~ Trafo Power Unit Standard 30000929</p>

<p>3N~ Power Unit Universal 30000933</p>	<p>1N~ Power Unit Universal 30000933</p>

<p>1N~ I = 40/50 A Power Unit Universal 30000933</p>	<p>Power Unit Universal 30000933</p>	<p>230/3/~ Boiler 10,8 kW Power Unit Universal 30000933</p>	<p>Power Unit Universal 30000933</p>

18 External dosing devices

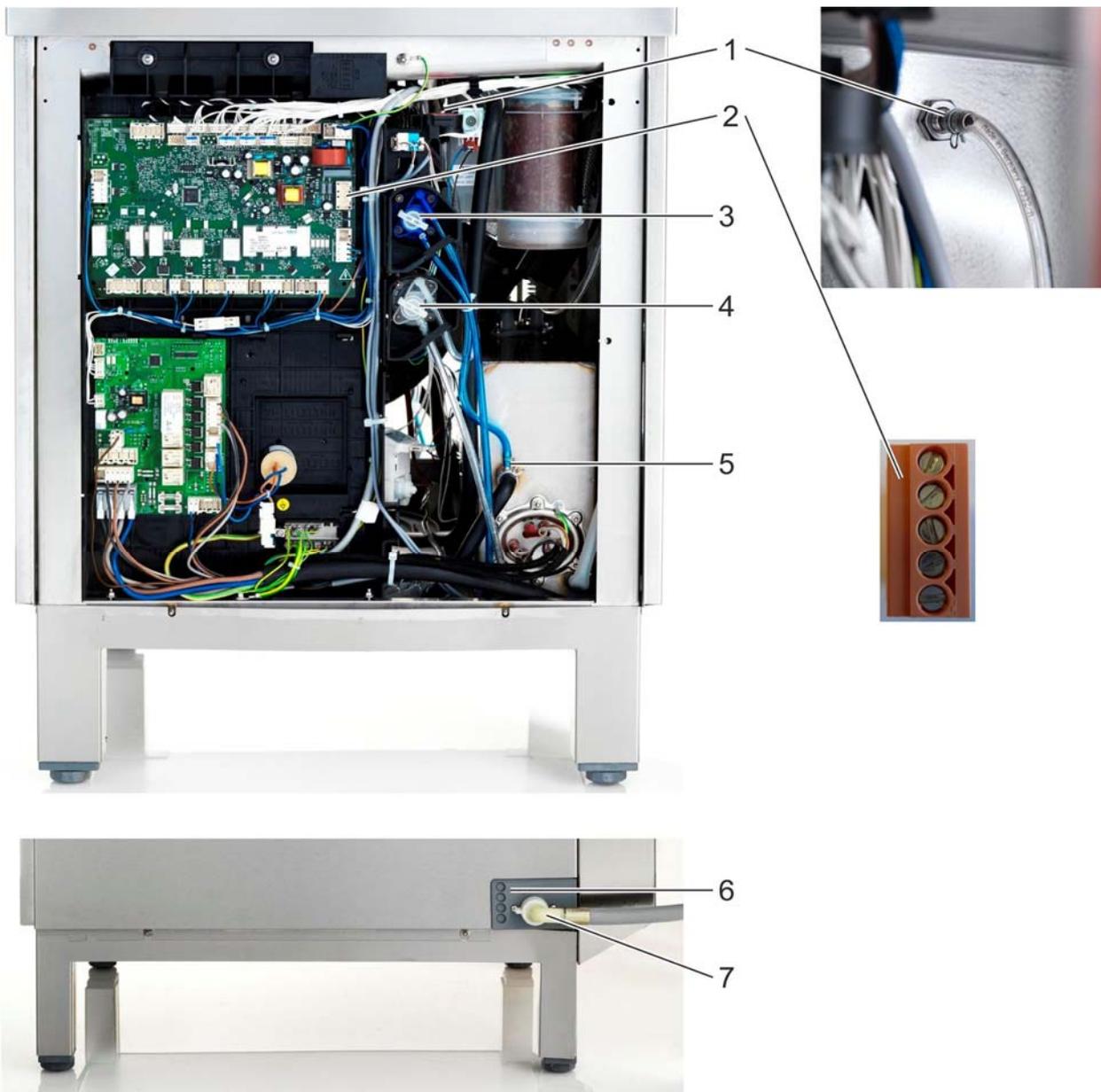
Instead of the integral dosing device, external dosing devices can also be used. Follow the instructions in this section. Additional information can be found in German and English on the Winterhalter web site (Dosiertechnik / Dosing systems).

18.1 Terminals



Danger to life. Live components.

Get the dosing device installed and commissioned by a service engineer authorised by Winterhalter.



1	Detergent dosing nipple
2	Take-over strip with red plug for the connection of an external dosing device
3	Rinse aid dosing device
4	Detergent dosing device (special equipment)
5	Rinse aid dosing nipple
6	Bushings for cables and hoses
7	Water supply hose

18.2 Electrical connection

IMPORTANT maximum current drain at the transfer strip: 0.5 A.

- Connect the external dosing device to the 5-pin plug.

Terminals (arranged from top to bottom)

	Terminal	Voltage is on	Condition	Restriction
	L1	continuous voltage		
	N			
	Rinse (O18)	parallel to solenoid valve (O7) – while the machine is filling – during rinsing	P709 = 0 a)	c)
	Wash (O20)	while the circulating pump is running	a)	c), d), e)
	Fill / Water (O17)	while the machine is filling	P704 = 0 a), b)	
parallel to solenoid valve (O7) – while the machine is filling – during rinsing		P704 = 1 a), b)		

- a) Hood / door closed
- b) minimum water level in the tank
- c) not in the self-cleaning programme
- d) not while the machine is filling
- e) not in descaling or basic cleaning programme

The parameters P704 and P709 control when a voltage present at the fill and rinse terminals.

Possible settings

P704	Use
0	for dosing devices not originating from Winterhalter
1	for dosing devices not originating from Winterhalter
2	for Winterhalter dosing device SP 166 Z
3	for pulse controlled dosing device (e.g. Winterhalter Fluidos DT)

P709	Use
0	for dosing devices not originating from Winterhalter
1	not used
2	for pulse controlled dosing device (e.g. Winterhalter Fluidos DB)

Recommendations

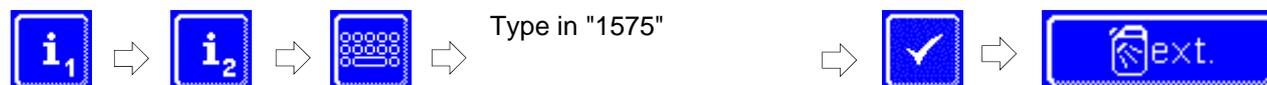
Winterhalter dosing device SP 166Z:

- P704 = 2
- Set both potentiometers to zero
- Connect the black wire to **Fill**
- Set the dosing on the display (touchscreen)

18.3 Setting parameters

Retrieving the settings

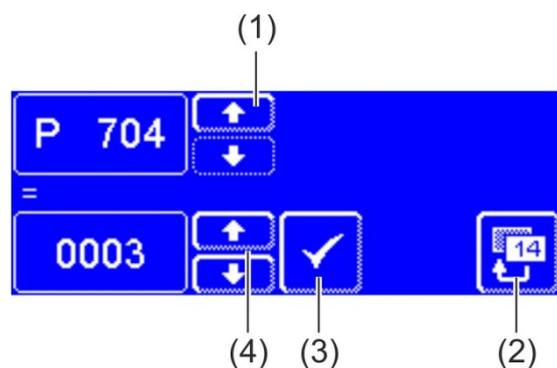
- Tap the row next to the following buttons:



Type in "1575"

INFO

Incorrectly entered digits can be corrected with the ← button.



- Using the scroll buttons (4), set the value of parameter P704.
- Press the button (3) to save your input.
- Press the scroll button (1) if parameter P709 must also be set.
 - ⇒ P709 is displayed.
- Using the scroll buttons (4), set the value of parameter P709.
- Press the button (3) to save your input.
- Press the back button (2) to exit from the menu.

19 Taking the machine out of service for a long period

Follow the notes if the machine needs to be out of operation for a long duration (holidays, seasonal business).

- Empty the machine using the self-cleaning programme (► 8.1.2).
- Clean the machine (► 8.1.3 and 8.1.4).
- Leave the hood open.
- Close the outer water shut off valve.
- Switch off the local mains disconnecter.

If the machine is in a place that is not frost-free:

- Instruct an authorised service technician to make the machine frost-free.

20 Putting the machine back into service after a long period of disuse

- Open the water shut-off valve
- Switch on the local mains disconnecter
- Switch on the machine

If the machine is in a place that is not frost-free:

After extended periods of disuse, the machine must be completely climatized (at least 24 hours at 25 °C). If this requirement is met:

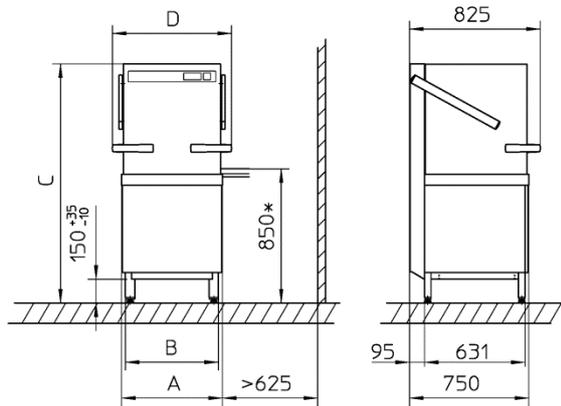
- Contact an authorised service technician to put the machine back into service.

21 Technical Information

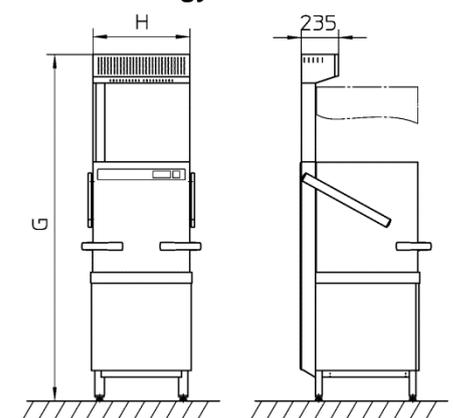
Voltage	see rating plate
Total connection value	
Fuse	
Minimum flow pressure:	▶ 16.1
Maximum inlet pressure:	
Water inlet temperature:	

Dimensions

Without EnergyPlus



With EnergyPlus



		PT-M	PT-L	PT-XL
A	[mm]	635	735	735
B	[mm]	585	685	685
C	[mm]	1515	1515	1635
D	[mm]	750	850	850
E	[mm]	1995	1995	2235
F	[mm]	440	440	560
G	[mm]	2195	2195	2435
H	[mm]	610	710	710

*) Standard working height is 850 mm which can be optionally increased to 900 mm. The vertical dimensions are increased by 50 mm by this.

22 Emissions

Noise

Workplace-related emission sound pressure level L (pA): max 66 dB (according to the selected program)
Measurement uncertainty: K(pA): 4 dB

Exhaust air

Adhere to the VDI Guideline 2052 when designing the ventilation system.

23 Disposal

Contact your dealer so that the materials in the machine can be reused or disposed in accordance with local legislation.



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