

Wexiödisk^W

TRAY DISHWASHER WD-40BRE

(original documentation)



Read the manual before using the machine!

Installation and user manual



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1. General instructions

Read the instructions in this manual carefully as they contain important information regarding the correct, effective and safe installation, use and servicing of the machine. Service personnel should have access to all documentation for the machine.

Keep this manual in a safe place so that it can and should be used by other operators of the machine.



- The machine is intended to be used for washing dishware that is found in the general catering and restaurant trade. Other uses are NOT recommended!
- The machine can be equipped with a number of different options. Certain options may be standard in a number of countries. Check what your machine is equipped with.
- The machine's display indicates what the machine is doing. The machine's various temperatures and any alarms are also shown.
- The capacity requirements of the machine can be found in the TECHNICAL DATA chapter.
- The electronics in the machine are RoHS compatible.

Before the machine is started up and used, the following points should be observed:



- The SAFETY INSTRUCTIONS chapter must be studied carefully before commissioning the machine.
- Installation of the machine must be performed in accordance with the requirements and instructions indicated in the INSTALLATION INSTRUCTIONS and TECHNICAL SPECIFICATIONS chapters.
- Any personnel who may at some point use the machine must be trained in its operation, use and care.
- The machine should not be used by anyone suffering from a physical or mental illness.
- A close eye should be kept on any children in the vicinity of the machine to ensure they do not tamper with it.
- All cover plates must be fitted during use.



The machine and equipment requires an annual service. Contact one of our authorised and trained service companies for such a service.

General instructions

1.1 Symbols used



This symbol warns of situations where a safety risk may arise. The instructions given should be followed in order to prevent injury and dangerous situations.



This symbol on a machine part warns of electrical equipment. The machine must be entirely non-live during servicing, turn off the power at the power switch or the main switch and if required, the switch should be locked to prevent unintentional operation. The component may only be removed by a qualified electrician.



This symbol warns that the machine's electronics are sensitive to electrostatic discharge (ESD), which is why a static electricity wristband must be used when handling the electronics at all times.



This symbol explains the right way to perform a task in order to prevent poor results and/or damage to the machine.



This symbol identifies recommendations and hints to help you get the best results when washing, to increase the machine's lifespan and reduce the risk of emergency shutdown.



This symbol explains the importance of careful and regular cleaning of the machine to meet hygiene requirements.



This symbol warns of the importance to read the manual before using the machine.



This symbol warns that local regulations must be followed for recycling of packaging etc. as well as the destruction of the machine.



This symbol shows where any earth cable for potential equalisation can be connected. The earth bolt is placed on the machine's stand.

General instructions

1.2 Machine rating

The machine has two rating plates, one of which is placed at the bottom of one side of the machine and the other in the electrical cabinet. The technical information on the plates is also included on the machine's wiring diagram. The various rating fields show:



1. Machine type
2. Machine serial number
3. Year of manufacture
4. Enclosure protection class
5. Voltage
6. Number of phases with or without neutral
7. Frequency
8. Main fuse
9. Motor output
10. Electrical heating output
11. Max. output

1.3 Checking that the machine and manual correspond

Check that the type description on the rating plate corresponds with the type description on manual cover page. If manuals are missing, it is possible to order new ones from the manufacturer or the local distributor. When ordering new manuals, it is important to quote the machine number found on the rating plate.

General instructions

1.4 EU Declaration of Conformity

A so-called EU Declaration of Conformity is provided on delivery of the machine.

Wexiödisk^W

CE DECLARATION OF CONFORMITY

This declaration of conformity only refers to the machine/product in the condition in which it is supplied, not any additions or modifications made by the customer/user.

1 Manufacturer: Wexiödisk AB Mårdvägen 4 S-352 45 Växjö, Sweden
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2 Representatives: BBR&S General Trading Ltd Ryūji Group Ltd, DSP Ltd, Elektroniks Service OOD,
Fasus ehf #2B, Marlin Food Equipment Ltd, Moffitt Pty Ltd,
M/S Alsiwa's Conco,icates Pvt Ltd, Nakantshi M&C Co Ltd, QMB col/PKration, Retail doc,
SHS Hygiene i Sundtlan, TPN Group, Westödisk AB, Wexiödisk UK
3 CONFORM to Harmonised documents: MAGNUS PERCATION

4 Our machines are manufactured **2016** in accordance with applicable EU directives and we declare under sole responsibility that the following products:

5 CE Declaration of Conformity,
EU's Machinery Directive 2006/42/EG, annex IA,
EU's Low voltage directive 2006/95/EC
EU's EMC-directive 2014/53/EU
EU's WEEE-directive 2002/96/CE
EU's RoHS-directive 2011/65/EU

6 Harmonised standards:
EN 12100 Machine safety: General principles for design - Risk assessment and risk reduction
EN 50105 Safety - Particular rules for a code book
EN 60529 Specification for degrees of protection provided by enclosures (IP code)
EN 62233 Measurement methods for electromagnetic fields of household appliances and similar apparatus with regard to human exposure
EN 61020 Safety of electromagnetic compatibility (EMC) - General standard for industrial environments
EN 55014-1 EMC compatibility - Requirements for household appliances, electric tools and similar apparatus - (EMC) - Part 1: Emission
EN 50581 Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances

7 The above directives and standards are common to the different machine groups.
Standards in the tables below are specific to the different machine groups.

Wooden work, Part of the system: Universal with accessories: WD-300 (1110001-5) WD-3000 (1110001-5) WD-3000 (1110001-5) WD-3000 (1110001-5) WD-3000 (1110001-5) WD-3000 (1110001-5) WD-3000 (1110001-5)	Harmonised standards to: EU's Machinery Directive 2006/42/EG, annex IA EN 00015-2-20
General use, Special machines: WD-3000 & WD-3000 & WD-3000 & ACS-3007 & WD-2500 & WD-3500 & WD-3000 & WD-3000 & WD-3000 WD-3000 (1110001-5)	Harmonised standards to: EU's Machinery Directive 2006/42/EG, annex IA EN 0002-1
Special machines: ACS 3000 (1110001-5)	Harmonised standards to: EU's Machinery Directive 2006/42/EG, annex IA EN 0002-1

8 Växjö 2016-04-20
Magnus Tjusson
Managing Director

CE_16_2

- Contact details of the manufacturer (Wexiödisk AB, Mårdvägen 4, SE-35245 Växjö, SWEDEN, Tel.: +46 470 771200, Fax: +46 470 23752, E-mail: wexiodisk@wexiodisk.com).
- Representatives of Wexiödisk AB.
- Person responsible for the product's documentation.
- Year of manufacture of the product.
- The EU Directives with applicable provisions to which all the machines, special machines and accessories comply.
- Harmonised standards for the Directives specified, and which the machines, special machines and accessories meet, wherever relevant.
- Model designation and serial number of the machines, special machines and accessories the document applies to.
- Place and date with signature and name (in block letters) of the person responsible for ensuring compliance with legislation and regulations.

2. Safety instructions



Read the chapter GENERAL INSTRUCTIONS carefully before starting work.

2.1 General information



The machine is CE marked, which means that it complies with the requirements of the EU Machinery Directive with regard to product safety. Product safety means that the design of the machine will prevent personal injury or damage to property. The CE mark is only valid for an unmodified machine. Any damage to the machine arising from failure to follow the instructions will invalidate the supplier's warranty and product liability.



Installation, repairs and servicing must be performed by an authorised engineer in accordance with local and national rules in effect for such work with water and drainage systems, electricity, ventilation and steam. To ensure electrical safety, components must only be tested when fitted in their normal place in the machine. We recommend that the work is performed by the manufacturer or one of the manufacturer's authorised service companies.

To further improve safety during installation, operation and servicing, the operator and the personnel responsible for installing and servicing the machine should read the safety instructions carefully.



The machine's electronics are sensitive to electrostatic discharge (ESD), which is why a static electricity wristband must be used when handling the electronics at all times.

Before the machine enters service, ensure that the personnel are given the necessary training in handling and looking after the machine.

Safety instructions

In order to avoid dangerous situations, the following must be followed:



- Switch off the machine immediately in the event of failure or malfunction.
- Make sure the machine is non-live before removing the cover plate. Turn off the power using the power switch or the main switch. If required, the switch must be locked to prevent unintentional operation.
- Shut off the tap for incoming water and drain the machine's tank(s) before starting work. Let the machine cool down as pipes for water, washing pumps, booster heaters and valves become very hot when the machine is in operation.
- The machine and equipment requires an annual service. The machine should be serviced by a person authorised or trained to do so by us. Use original spare parts.
- Warranty repairs must be performed by an authorised company. Contact an authorised service company to draw up a programme of preventive care and maintenance. For authorised service companies, please see www.wexiodisk.com or contact Wexiödisk AB.
- The regular checks described in the manual must be carried out in accordance with the instructions.

2.2 Transport



Handle the machine with care during unloading and transport; there is a risk of it tipping over. Never lift or move the machine without using the wooden packaging to support the stand.

2.3 Installation



- The machine is designed for quick electrical installation.
- The machine must be connected to a lockable power switch, if it does not have an internal main switch.
- Make sure that the mains voltage is the same as that indicated on the machine's rating plate.



For increased safety, it is recommended to equip the installation with a ground fault circuit breaker.

2.4 Detergent and drying agent



Be aware of the risks involved in handling detergents and drying agents. Protective gloves and safety glasses should be used when handling, and an eyebath should be within easy access. Read the warning text on the detergent and drying agent containers as well as the detergent supplier's instructions.

Safety instructions

2.5 Operation



Be very careful around the machine when it is in operation.

2.5.1 High temperatures



- The temperature of the washing and rinsing water is 60°C and 85°C. Do not open the machine until the washing and rinsing phases have finished. The steam that comes out of the machine after the wash has been completed is hot.
- Avoid touching hot pipes and booster heaters. The machine's outer jacket can also become hot during operation.

2.5.2 Risk of crushing



The machine, and any equipment, has moving parts before, during and after washing. Be careful therefore to avoid crush injuries. In connection with service or repairs that require the hood to be open, it must be secured by means of a prop for example.

2.5.3 Risk of slipping



The floor should be kept dry to eliminate any risk of slipping. Mop up any water and leftover food that has been spilt.

2.5.4 Sounds



The machine is not silent during operation, see TECHNICAL SPECIFICATIONS. Hearing protection may therefore need to be used.

2.6 Cleaning the machine



The water in the tank has a temperature of approximately 60°C and contains detergent. Be careful when draining and cleaning the wash tank. Wear protective gloves and safety glasses and have an eyebath within easy access.

3. Installation instructions



Read the chapters GENERAL INSTRUCTIONS and SAFETY INSTRUCTIONS carefully before starting work.

3.1 General information



Read these instructions carefully, as they contain important information regarding the correct installation method.

- The instructions should be used together with the machine's wiring diagram and flow diagram for water and any steam. These can be found in the machine's electrical cabinet.
- The machine can be equipped with a number of different options. Certain options may be standard in a number of countries. Check what your machine is equipped with.
- If holes need to be drilled in the machine, the holes must be fitted with an edge strip or similar protection.

Installation instructions

3.1.1 Rust on industrial dishwashers



- Large-scale industrial dishwashers in general as well as our dishwashers are made of stainless materials, but despite this, there are still situations where rust can occur on “stainless” materials.
- We are going to describe a few reasons for this here, so that you, as a user, service engineer or other type of personnel, can avoid this.
- Rust usually occurs due to the fact that something that is not stainless finds its way onto the stainless surface. The non-stainless particles will soon start to rust, and then contaminate the stainless material, which also starts to rust. If no action is taken at this point, serious damage such as a hole in the material can occur.

RISK SITUATION	CAUSE	DECLARATION / ACTION
Drilling holes when installing a detergent device.	Using a drill or hole saw that has previously been used for ordinary non-stainless materials.	“Contaminated” hole-drilling tools can cause enormous damage in the form of pores in stainless plates. Never use a cutting tool that has previously been used on other materials or blackplate.
	Using blunt tools when drilling holes.	Stainless plate, which has overheated during hole drilling, may lose its “stainless” properties. This can show up as rust around the hole for the detergent cell.
	Shavings from hole drilling.	The shavings from drilling or hole sawing are usually heated so much that they lose their stainless properties. They must always be removed by hand! Washing after hole drilling is not enough!
Rust spots that occur during normal operation and use.	Minerals, e.g. ferrous gravel or earth, from dishware or food (vegetables and root vegetables) that has been lying in crates, find their way onto the stainless surface. Minerals (gravel) can also be found on the wheels of catering trolleys.	Daily cleaning is always important. Use a suitable brush for “mechanical” cleaning, e.g. in the wash tanks, on the wash trays and filters.
	Steel wool. Ordinary steel wool is not stainless, and can cause serious damage to stainless surfaces and plates.	Use stainless cleaning pads Remove all ordinary steel wool from the catering facility / restaurant.

N.B.! If rust spots have developed, they must be dealt with immediately by a person authorised to do so!

3.2 Requirements for the installation site

3.2.1 Lighting

In order to ensure the best possible working conditions during installation, operation, servicing and maintenance, make sure that the machine is installed in a well-lit room.

3.2.2 Ventilation and ambient temperature

The machine is intended to be used in an indoor environment at normal room temperature. The machine produces heat and steam when in operation. In order to ensure the best possible working conditions, a certain air renewal rate is required in the dishwashing room. The ventilation requirements for the dishwashing room are to be dimensioned on the basis of the applicable standards.

3.2.3 Power supply

Electrical connections are made by qualified personnel in a way that complies with local and national regulations. The machine's capacity requirements are stipulated in TECHNICAL SPECIFICATIONS.

3.2.4 Water

Water connections are made by qualified personnel in a way that complies with local and national regulations. The machine's capacity requirements are stipulated in TECHNICAL SPECIFICATIONS.

3.2.5 Steam (optional)

Steam connections are made by qualified personnel in a way that complies with local and national regulations. The machine's capacity requirements are stipulated in TECHNICAL SPECIFICATIONS.

3.2.6 Drain/waste pipe

There must be a waste pipe with an effective trap for the machine's waste water and for water used for rinse cleaning. The machine's capacity requirements for drainage are stipulated in TECHNICAL SPECIFICATIONS.

Installation instructions

3.2.7 Space for servicing

A 1-metre area should be left clear in front of the machine for servicing purposes. Depending on if the machine has different accessories, there may also be such a requirement at the infeed and outfeed ends as well as above the machine.

3.3 Transport and storage

Always transport the machine in an upright position.



- Take care during transport, as there is a risk of tipping. N.B.! The machine must not be transported without a pallet or other support. Some form of support beam must always be used along the sides of the machine during transport. Otherwise the machine may become damaged. When transporting the machine without a normal wooden pallet, always check that none of the components underneath the machine can be damaged.
- The machine is supplied in sections with a pallet under each section. Transport each section to the installation site using a handtruck.
- The sections are transported transversely with the forks of the truck inserted from the long side (the side marked "FRONT"). If the space available does not permit transverse transport, each section should be transported using two handtrucks, one at each short end. Do not lift the machine by its legs. These are indicated by labels on the outside of the packaging.



Label on the packaging marking the position of the legs



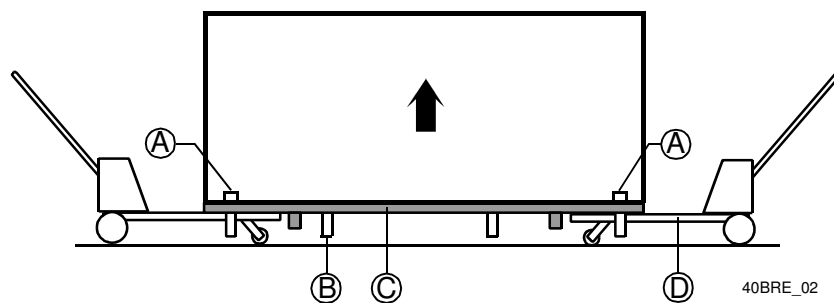
If the machine is not being installed immediately, it must be stored in a frost-free area where the air is dry.

Installation instructions

3.4 Unpacking



- Check against the delivery note that all the units have been delivered.
- Remove the packaging, but leave the pallet and any transport supports in place.
- Packaging must be sent for destruction or recycling in accordance with local regulations.
- Inspect the machine for any transport damage.
- Lift the section at both ends using a handtruck. Screw down the legs (B) so that they extend below the bottom of the pallet (C). Lower the section. Split the pallet and remove it.
- If the section should need to be lifted again from the short sides, a wooden runner should be placed under the cross-bar (A) on the section stand.



40BRE_02

A = Stand cross-bar

B = Leg

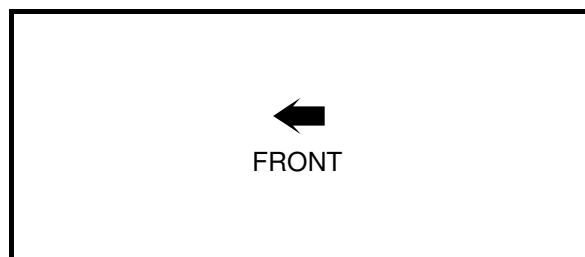
C = Pallet

D = Handtruck

3.4.1 Marking of the machine

The machine is marked on the outside of the packaging with the following information:

- Arrows which indicate the feed direction of the machine
- Marking of the front with the text FRONT



40BRE_01

Marking of the packaging

3.5 Installation

3.5.1 Preparing for the installation

Check that there is sufficient room for the machine at the installation location.



- Check that correct connections are available for water, electricity, drainage and possibly steam at the installation location. See TECHNICAL SPECIFICATIONS.
- Check that the overheating protection device is reset.

3.5.2 Positioning the machine

Check the following points before the machine is placed in position:



- Check that the fuse for the machine at the site is off, blocked and that outgoing electrical circuits from the machine are non-live.
- Remove the protective plastic on the sides which are to be stood against a wall.
- The distance between the wall and machine should be at least 50 mm.

Place the machine in position and check that it, and any accessories, are horizontally level. Adjust the height with the legs.

- Lateral tilt: Place a spirit level on the body of the machine at the infeed and outfeed.
- The machine's longitudinal direction: Place the spirit level across the body of the machine.

Once the machine has been filled with water, do another check to make sure the machine is horizontal.

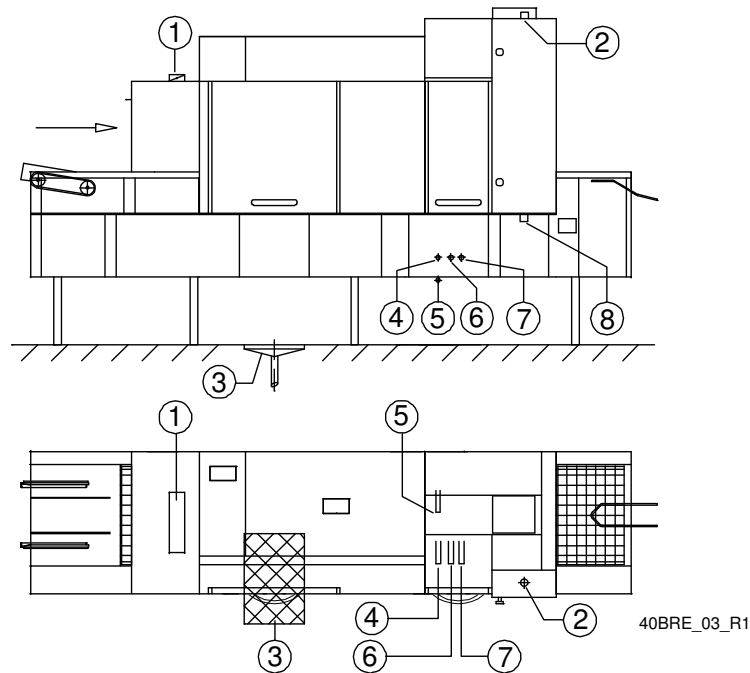
Assembling the divided machine (optional)

Parts which must be assembled are prepacked inside each section together with the necessary bolts, nuts, etc.

Installation instructions

3.6 Connections

The picture shows a machine with the feed direction from left to right. The machine can also operate in the opposite feed direction. For the exact location of the various connection points, see the machine drawing located in the electrical cabinet. The drawing can also be obtained from the manufacturer.



1. Extraction with damper.
2. Electrical connection from ceiling.
3. Floor drain
4. Steam connection (steam-heated machines)
5. Condensation water connection (steam-heated machines)
6. Cold water connection.
7. Hot water connection.
8. Alternative electrical connection from floor.

In the following chapter, figures are given in brackets to clarify what needs to be done. These numbers refer to image and list above.

Installation instructions

3.6.1 Power supply

Information about electrical connections is available on the machine's wiring diagram which is provided on delivery. Store the diagrams in the plastic pocket, located in the electrical cabinet, even after installation.



- The machine is designed for quick electrical connection and is connected to (2) or (8).
- The machine must be connected to a lockable main switch. This should be placed on a wall, well-protected from water and from the steam which escapes when the machine is opened.
- The machine has a built-in main switch. Rating data is given on the rating plates, which are located on the end of the outfeed and in the electrical cabinet. Electrical data is also shown on the machine's wiring diagram. The installation diagram shows the location of the electrical connection
- It is important that the electrical connection is checked so that it is certain that the live and neutral wires are correctly connected and not swapped over. It is also important to check at the same time that the earthing system connection is correct and sufficient so that the machine's electrical and personal security system is not compromised.

After completing the installation, switch on the main switch and all circuit breakers.

3.6.2 Water connection, regardless of any options



- A shut-off cock must be installed on the incoming lines.
- The machine is equipped with a break-tank including booster pump as standard to obtain the correct flow of water to the machine. The required water flow and pressure can be found in the TECHNICAL SPECIFICATIONS.

Connect the cold and hot water pipes according to the labels by the connection points (6, 7). If the machine is connected with a hose, this should be steel braided and have an internal diameter of at least 12 mm.

The hot water connection on the machine is fitted with a filter.

The cold water connection on the machine is fitted with a filter, non-return valve and Break tank.

3.6.3 Ventilation

The machine has a ventilation connection (1) on the top of the steam hood at the infeed opening. This is where the connection is made with the ventilation duct. The location and size of the connection are shown on the installation diagram. The machine's heat load for the room is stipulated in TECHNICAL SPECIFICATIONS.

Installation instructions

3.6.4 Steam (optional)



A shut-off cock must be installed on the incoming pipe (4). The required steam pressure can be found in the TECHNICAL SPECIFICATIONS.

The connection is fitted with a filter. When connecting a pipe from the ceiling, it is taken into the same area as the water pipes behind the cover plate next to the electrical cabinet.

Condensing water

A condensation connection (5) is only provided on steam-heated machines. The pipe is connected to the system's steam boiler.

3.6.5 Drain/waste pipe

There must be a waste pipe with an effective trap for the machine's waste water and for water used for cleaning. The floor drain capacity can be found in the TECHNICAL SPECIFICATIONS.

The waste water system connected should consist of a 50 mm metal pipe that will withstand mechanical impacts. The waste pipe must run to a floor drain, where its opening must be above the water level.

Ensure that the drain connection is kept in place by using e.g. cable ties in the designated areas.

3.6.6 Detergent and drying agent

The machine comes ready for the connection of a detergent and drying agent system. Note the following:

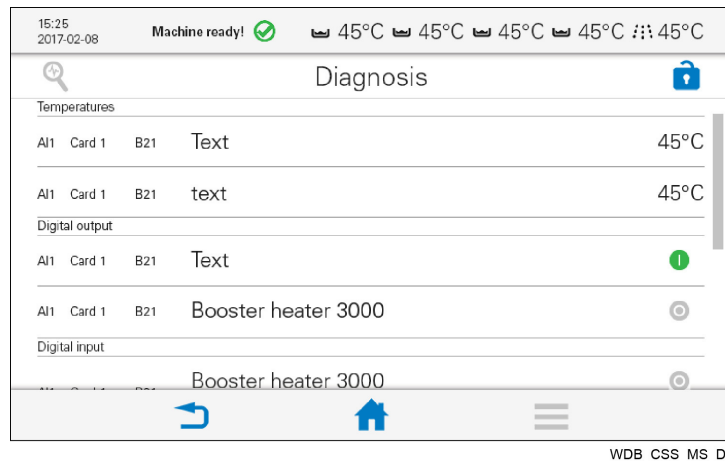
- Use the same make and type of detergent and drying agent.
- If liquid detergent is used together with Wexiödisk's detergent pump, the detergent must be placed under the machine's tank level. If equipment for a different type of detergent is used, it should preferably be put on the wall behind the machine to avoid holes being drilled unnecessarily in the machine.
- With machines connected to cold water, the water pipe temperature may be too low for use of powder or paste type detergents.
- The water outlet for the detergent is located on the incoming hot water pipe. The drying agent connection is located on the pipe leading to the booster heater.

Avoid making unnecessary holes in the machine. If possible, the equipment should be placed on a wall next to the machine. Contact a suitable supplier to arrange for the equipment to be installed.

3.7 Checking and setting the flow

The water flow is set in the factory but should be checked after the machine has been installed.

3.7.1 Checking and setting the final rinse flow



“Diagnosis” tab

In order to access “Diagnosis”, the user must log in with access level S1. The password for S1 is “wd”

- Prepare the machine for use in accordance with THE USER INSTRUCTIONS.
- Start feed.
- Tape over the photocell on the infeed and wait until the final rinse starts.
- Go to Menu - Change service settings - a login page will be displayed where you log in.
- Select the “Machine status” tab, and under this select the “Diagnosis” tab.
- Scroll down to the text “DI16 Card 1 BV02 Water meter”. The final rinse flow is displayed in litres/min.
- Adjust the flow using the needle valve located next to the water meter. The flow, which depends on the size of the machine, should be approximately 2.8-4 litres/min. The exact flow can be found on the machine's flow diagram which is in the electrical cabinet.
- Exit the “Diagnosis” tab using the home key. Remove the tape from the photocell.

Installation instructions

3.7.2 Checking and setting the pre-rinse flow

- Connect hoses to the nozzles in the pre-rinse. Allow the hoses to run into a vessel that holds 6-7 litres.
- Start the machine in accordance with THE USER INSTRUCTIONS and let it run for 1 minute. Then stop the machine.
- Measure the volume of water in the vessel. The flow should normally be 2 litres per minute. Always check the flow diagram supplied to see which flow applies for the machine. Where necessary, adjust the flow using the ball valve which is located next to the solenoid valve Y01.
- Repeat the procedure until the correct flow has been achieved.
- Remove the hoses.

3.8 Installation and connection of auxiliary equipment and options



- Once the machine is in place and has been adjusted horizontally and vertically, the auxiliary equipment can be fitted.
- The machine can be equipped with a number of options. Check what your machine is equipped with, which depends on the model, machine type and country.

The various options normally place no specific requirement on the installation.

3.9 Trial operation

Prepare the machine for trial operation with the help of OPERATING INSTRUCTIONS. The instructions describe the measures that must be taken to prepare the machine for operation.

3.9.1 Commissioning protocol

This should be completed when the machine is started up and used.

Machine type:
Machine serial number:
Installation date:

Read the installation and user manuals carefully. Then check the following points:

1. Check the following before starting the dishwasher:

- Water and waste pipe connections
- That the overheating protection device is reset
- The dishwasher is connected with the correct phase sequence.
- That the machine is evenly balanced
- That the closed doors are in line
- that the mini switches for tank heaters (FU22 - FU24), booster heaters (FU41 - FU43) and drying zone (FU31 - FU33) are in the OFF position (other mini switches must be turned on).
- The equipment for detergent and drying agent are correctly connected
- The adaptation of any tray dispensers
- That the filters, outlet seals, level pipes, curtains and filter tray are in place in the dishwasher

2. Filling the dishwasher:

- Start the dishwasher
- Check the pump's direction of rotation
- Close the doors
- Fill the dishwasher with water
- Check the temperature of the incoming hot and cold water during filling (see the Technical Specifications in the Installation and User Manual).
- Check the water flow and water pressure for the incoming hot water. Inform the customer if the water flow and the water pressure are too low!
- Check that the times for
 - filling of tanks
 - heating of tanks
 - detergent mixing
 are correct (see Adjustment instructions)
- Turn on the mini switches for the tank heater, booster heater and drying zone heater once the fill check for the booster heater is complete and the dishwasher starts.

Installation instructions

3. Check the setting of the reference values:



All the reference values have been set to the recommended values on delivery.

- Check that all reference values are correctly adjusted.
- Check that the water temperatures (in the wash tanks and booster heater, etc.) are reached as per the reference values.

4. Run a number of washes complete with loads and check:

- There are no water leaks
- For steam-heated dishwashers:
 - that the steam valves open and close
 - that the condenser conductors open and close
 - that there is no steam leakage
- The hood switch works
- That the temperature in the
 - washing and rinsing tanks
 - booster heaters and
 - condensing batteryis maintained.
- That the water level in the washing and rinsing tanks is maintained
- Check the water flow and water pressure for the incoming hot water. Inform the customer if the water flow and the water pressure are too low!
- That the setting for the airflow through the machine is adjusted optimally.
- The timer delay for the drying zone
- The washed items are clean
- The washed items are dried
- The overload switch for the washing conveyor works
- The coordination between the infeed and outfeed automatic function works

5. Final check: Empty the machine, turn the machine off using the ON/OFF button and then turn off the power at the main switch.

- Re-tighten all the connections on the relays and circuit breakers
- Set all the circuit breakers and motor safety cut-out to the ON position.
- Display the quick guide(s) supplied with the machine.

6. Train and inform personnel concerning:

- Washing
- Care (daily, weekly and other frequencies)
- The recommendations made concerning the annual service

3.10 Documentation



For correct use and servicing, it is essential that the documentation accompanying the machine is made available to personnel who will be using the machine. The installation and user manual, which describes handling and care among other things, should be stored near the machine.

4. Operating instructions



Read the chapters GENERAL INSTRUCTIONS and SAFETY INSTRUCTIONS carefully before starting work.



The machine's touch panel contains built-in guides on what and how things must be done.

The use of the machine is dependent on how the machine is equipped.



This chapter describes what must be done with the machine:

- Before washing
- How washing should be performed
- After completed washing
- In the event of error messages and troubleshooting

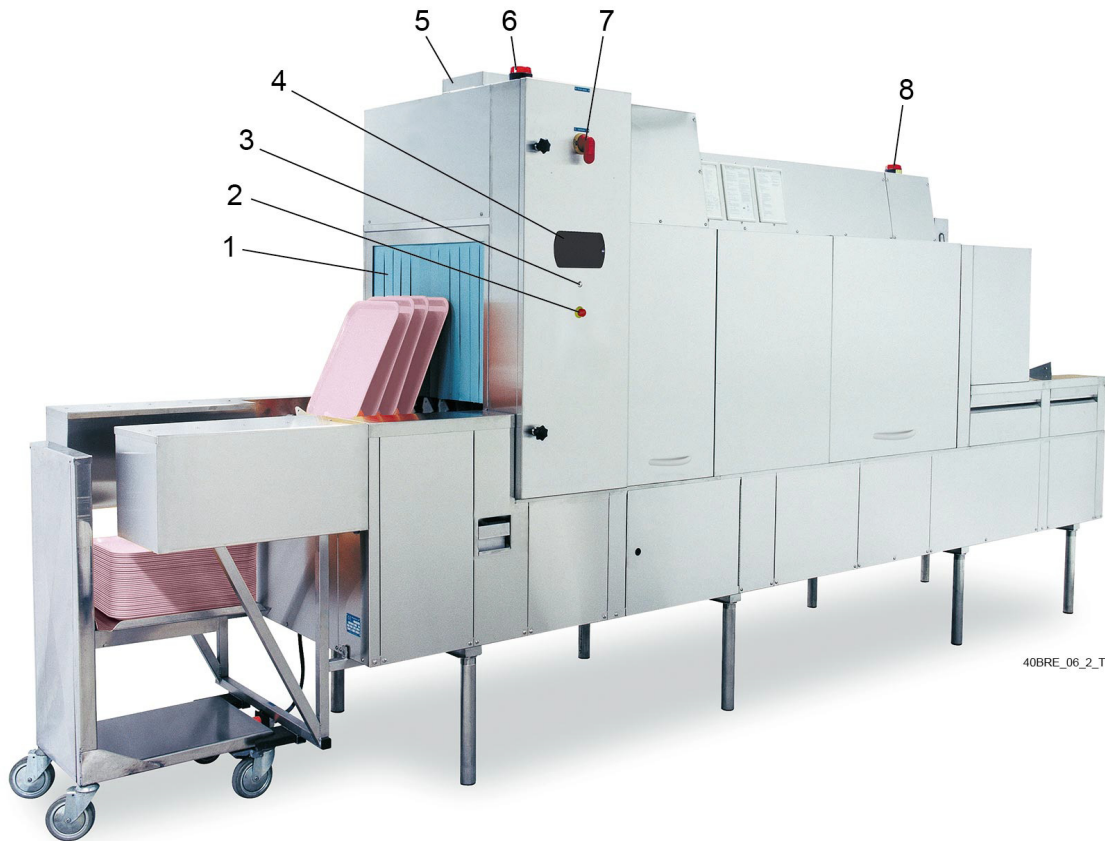


When the machine is not in use for an extended period of time, e.g. overnight, over a weekend or similar, the machine's power supply must be isolated, the water supply shut off and the machine left open.

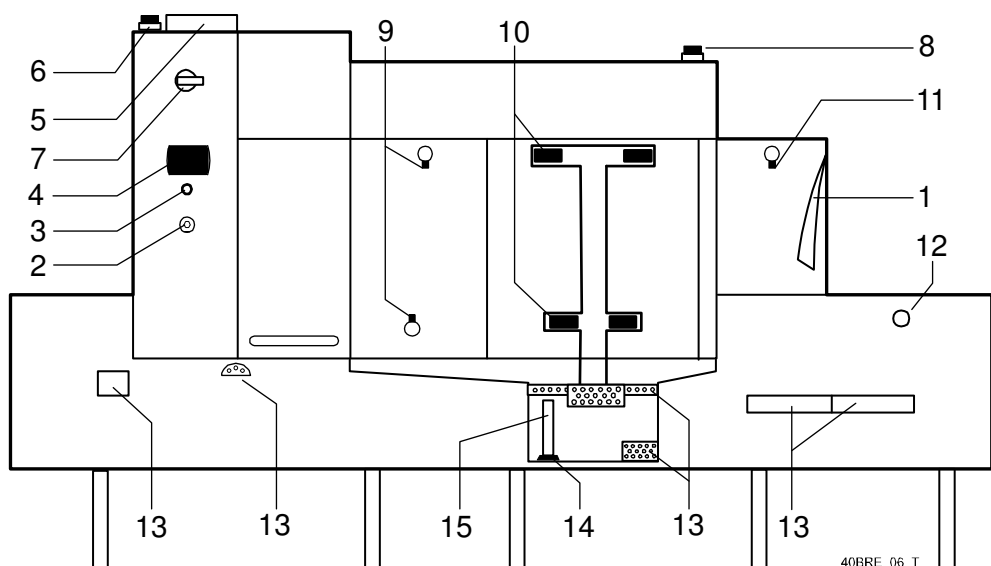
Operating instructions

4.1 Before washing

4.1.1 Machine design



40BRE_06_2_T



40BRE_06_T

Operating instructions

1. Curtain
2. Emergency stop
3. ON/OFF button
4. Touch panel
5. Grille for drying zone fan
6. Alarm lamp for indication of alarms (option)
7. Main switch
8. Alarm lamp to indicate filters in the chemical wash tank are full (option)
9. Rinse nozzle for final rinse (the rinse pipes in the final rinse can be supplied as extra equipment in a design that can be removed for cleaning).
10. Washer arm (removable)
11. Rinse nozzle pre-rinse
12. Photocell
13. Filters
14. Rubber sleeve
15. Level pipe

In the following chapter, figures are given in brackets to clarify what needs to be done. These numbers refer to image and list above.

4.1.2 ON/OFF button

The white light of the ON/OFF button will illuminate when the main switch is set in the ON position.



N.B.! When the isolating power switch is set in the ON position, you must wait 25 seconds before pressing the button to start the machine.



N.B.! When the ON/OFF button is pressed, it will take up to 10 seconds before the touch panel illuminates.

The button is off when the machine's isolating power switch is in the OFF position or there is no power supply to the machine. The button is also off if the emergency stop is activated or another error occurs, and in such cases you must follow the instructions on the touch panel display regarding actions.

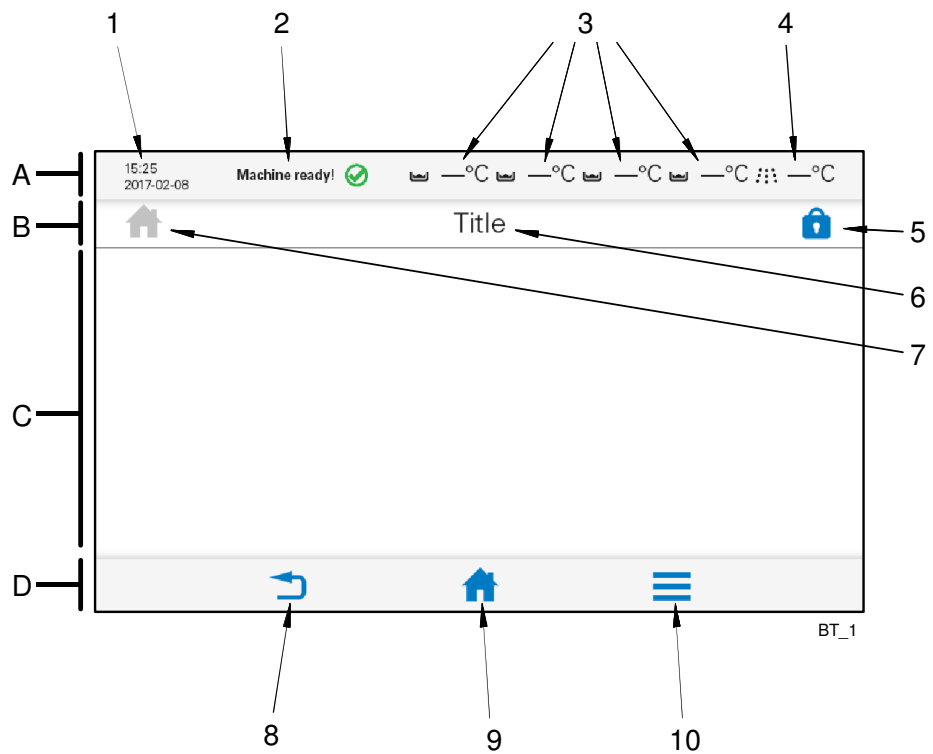
4.1.3 Touch panel

General

The panel comprises four fields:

- A = Top bar
- B = Process bar
- C = Activity field
- D = Bottom bar

Active (clickable) symbols are in blue. Inactive symbols are in grey. The activity field (C) contains both information text and selectable symbols which are used to continue to different entries:



The various fields are divided into the following parts:

1. Date and time
2. Machine status
3. Temperature of tanks
4. Temperature of final rinse
5. Login symbol
6. Text describing what happens in the activity field
7. Symbol for function displayed
8. Back button
9. Home button
10. Menu button

Top bar (A)

This indicates the machine status using text and symbols (2, 3, 4) and the date and time (1).

Alarm and information messages are displayed here. More information about these is shown in the activity field (C).

Process bar (B)

This indicates what the machine is doing using various symbols (7) and text (6). This is where authorised personnel log in (5).

Activity field (C)

This indicates what must be done or what is happening in the machine, and is shown using various figures and text.

Alarm and information messages are displayed in detail here. There are three different levels of these.



- BLUE: Information message with code number.
- YELLOW: Non-critical alarm message with code number. Yellow alarms may be reset by the user. A yellow alarm may change to a red alarm after being displayed a certain number of times.
- RED: Critical alarm message with code number. Service personnel must be contacted for these alarms.

Bottom bar (D)

This displays the machine's three main symbols (8, 9, 10).



Back button (8)



Home button (9)






Menu button (10)



























Operating instructions

Symbols

The following symbols and a brief description may be displayed in the various fields of the panel (some depending on machine type).

Symbol	Explanation	Symbol	Explanation
	Black: Information Blue: About the machine		Change the water
	Autostart of filling and washing		Consumption
	Back to previous figure / Reduce		Environmentally friendly/ Lowest consumption
	Cleaning the machine		Consumption costs
	Contact details		Warning
	Cost		Detergent
	Cancel / Reset		Down / Reduce
	Remove / Clear		Yes / Confirm / Ready
	Diagnosis		Fill tank
	Drying		Forward to next figure / Increase
	Edit		Strong/ Highest consumption
	Empty tank		HACCP
	Final rinse		Medium / Normal consumption
	Home		Journal
	Language		Log

Operating instructions

Symbol	Explanation	Symbol	Explanation
	Logged in		Logged out
	Low flow		Machine status
	No / Cancel		No flow
	Other		Alarm for operator
	START / ON		Protocol
	Glass		Plates
	Pots		Relay test
	Repeat / Machine is in operation		Reset
	Save to PC		Save to USB
	Service alarm		Service settings
	Machine configuration		Settings
	Updating software		Time and date
	Statistics		STOP / OFF
	Tank		Temperature / Heating
	User		Up / Increase
	Filling tank		See service settings
	Return / Back		Menu

Operating instructions

4.1.4 Preparations before filling

In this chapter, figures are given in brackets from the figure beneath chapter 4.1.1 Machine design.

Check:



- that the machine and removable parts have been cleaned. If not – clean them!
- that no dirt is in the wash arms' (10) or in the rinse pipes' (9, 11) nozzles.
- that removable parts are correctly in place.
- the amount of detergent and drying agent.
- that the stopcock for the water to the machine is open.
- that the main switch is in the ON position.
- that an empty tray dispenser is in place (two dispensers if the machine is fitted with a tray exchanger).

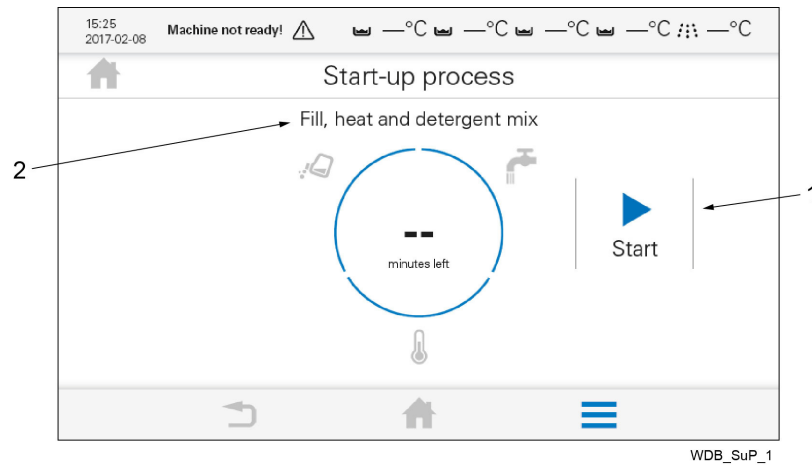
Remember:



- Ordinary washing-up liquid must not be used in the machine or for soaking. Contact your detergent supplier regarding the choice of a suitable detergent. Washing-up liquid causes a build-up of foam, produces poor wash results and can damage the machine.
- Only detergent and drying agent intended for industrial machines may be used.
- Use the same make and type of detergent and drying agent.

Operating instructions

4.1.5 Filling and heating the machine



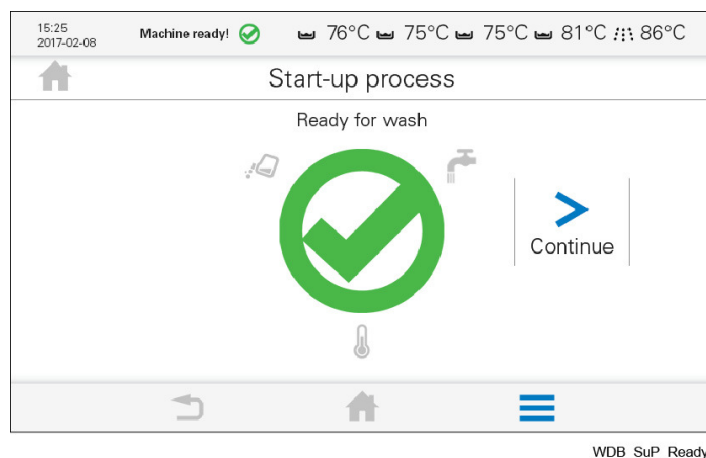
1. Start button
2. Activity text



- Check that at least 25 seconds have elapsed since the main switch was set in the ON position.
- Press the ON/OFF button beneath the touch panel to start the machine. It may take up to 10 seconds before the screen on the touch panel illuminates.
- Press the start button (1) in the activity field to start filling and heating.
- Then follow the instructions on the touch panel. The activity text (2) describes what is happening or what must be done.
- The machine has an Autostart function, where a date and time can be entered for the automatic filling and heating of the machine. The function is located under Autostart in the main menu and only works if level pipes have been set and all the doors are closed.



N.B.! The time it takes for the machine to fill and heat up to the right washing temperature varies between 5 and 30 minutes and depends on the temperature of the incoming water.



The figure above will be displayed when the machine is ready for washing.

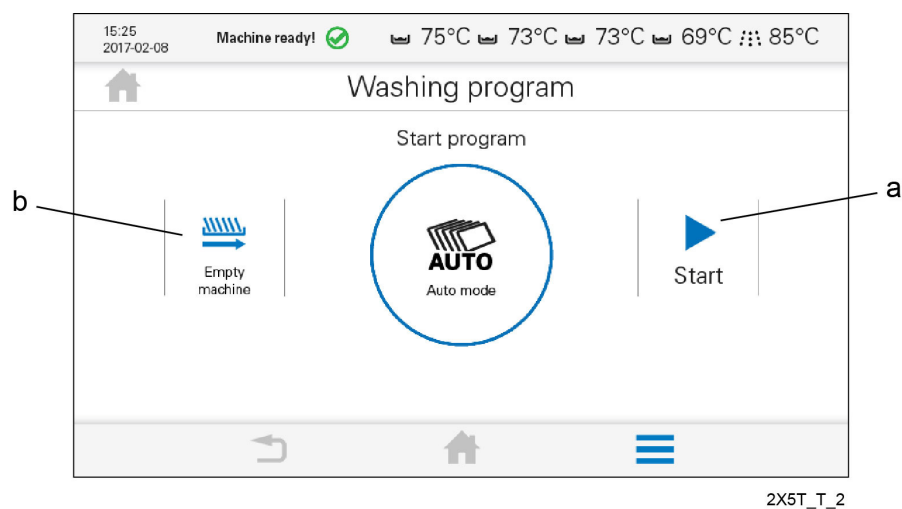
4.2 Washing

In this chapter, figures are given in brackets from the figure beneath chapter 4.1.1 Machine design.

4.2.1 Starting washing

When the machine's feed has started, it is indicated on the display that the machine is ready to wash and that automatic operation has been preselected.

Press the start button (a) in the activity field on the touch panel to start the conveyor and to start washing in automatic operation.



Button (b) must be pressed for manual operation. The start button (a) must also be pressed if the machine has stopped.

4.2.2 Washing with automatic operation

- Trays are transported on a tray conveyor. The trays are fed into the machine automatically.
- The wash and rinse process will start automatically when trays are fed into the machine.
- If no new trays are fed in, the machine will stop. After a while, the trays are automatically removed from the machine.

Operating instructions

4.2.3 Manual operation

When the machine has stopped and you do not wish to wait for automatic unloading, manual mode can be used to transport the items out of the machine.

Button (b) must be pressed for manual operation. The start button (a) must also be pressed if the machine has stopped.

If the machine is being operated in manual mode and new trays are fed in, the machine switches to automatic operation automatically.

4.2.4 Storage in the dispenser

If washed trays are being stored in the tray dispenser connected to the machine's outfeed, a yellow alarm is displayed on the touch panel when the dispenser is full. The machine stops. A full dispenser can also be indicated with an alarm lamp (6) (option).

If the machine is connected to a tray exchanger for two dispensers, a yellow alarm is displayed when both dispensers are full.

When empty dispensers are put in position, the machine starts automatically.

4.2.5 Cleaning the filters

The machine can also be fitted with an alarm lamp (8) as extra equipment which indicates that the filters in the chemical wash tank are clogged with dirt and need to be cleaned. Dirty filters can affect the washing results. If the alarm is activated, remove and clean the filters.

4.2.6 Emergency stop

The machine has an emergency stop (2), which is located under the touch panel and the ON/OFF button.

If an emergency stop button is pressed during operation, the reason for the emergency stop must be rectified. The emergency stop is then reset by turning the emergency stop button in the direction indicated by the arrows on the emergency stop button. You must reset the alarm on the touch panel before you can restart the machine.

4.2.7 Guaranteed final rinse

The temperature of the final rinse water is always correct and the right amount of rinse water is always used.



If there is an error during the final rinse, this is indicated by an alarm and information on what must be done.

Operating instructions

4.2.8 Changing the water

Use the menu button on the touch panel to access the menu. Select the program for changing the water and follow the instructions on the touch panel.



To achieve the best possible washing results, it is important that the water is changed frequently. However, always change the water in the event of foam problems in the tank.

Recommendations

- Change the water if a large amount of foam forms.
- If a large number of items need washing before lunch and relatively few during the afternoon, change the water directly after the lunchtime wash.
- If a large number of items need to be washed after breakfast and after lunch, change the water twice, both after breakfast and after lunch.

4.2.9 Checking the wash result



The dishware should be checked after each wash for:

PROBLEM	CAUSES & MEASURES
Starch spots	<ul style="list-style-type: none"> • Scraping: Important to remove as much food particles as possible before washing. This also means that the water in the machine does not need to be changed as often. Scrape better. • Detergent and drying agent dosage: If using liquid detergent and drying agent, the same make and type should be used. A service technician should be contacted to rinse the equipment with water when replacing the detergent and drying agent. The dosing affects both detergent and drying results of the dishware. The hardness level of the water affects the consumption of detergent. Contact the detergent supplier. • Temperatures: At incorrect temperatures the dishes will not be clean. Contact a service technician if you need to change the set values. • Cleaning the machine: Insufficient cleaning of the machine affects the results of the washing. Ensure better cleaning of the machine. • Soaking: Items with hard dried food. Soak the items in water. Do NOT use washing-up liquid. • Changing the water: How often the water needs to be changed depends on several factors, such as the number of items being washed, how well food residue is scraped off the item, how much detergent there is in the washing water etc. It is therefore important to continuously check the wash result, which may indicate when it is time to change the water. • Water hardness: If the water used for washing is hard (>10 °dH), a higher concentration of detergent may be needed to ensure the washed items emerge clean. Contact your detergent supplier!
Misting	
Protein residues	
Detergent residues	

4.3 After use – Cleaning

HACCP

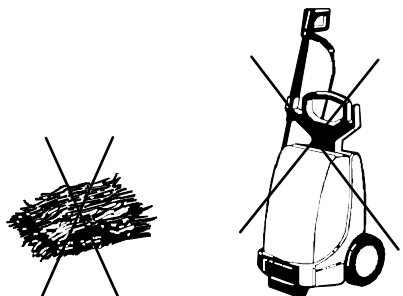
HACCP is a preventive inspection system to ensure hygiene requirements are met during the washing process and cleaning of the machine. As a result of its design, the machine meets strict hygiene requirements. Regular, thorough cleaning is also important from a hygiene perspective. A machine that is properly cleaned helps produce a good wash result, reduces the risk of dirt accumulating, increases the service life of the machine and reduces the risk of emergency shutdown.

4.3.1 Incorrect cleaning methods



N.B.! An incorrect cleaning method may damage the machine. The following points must be observed:

- Do NOT use steel wool as it will cause corrosion to form on the machine.
- If detergent is used, it must not contain abrasives. Detergents containing abrasives will damage the stainless steel panels.
- The exterior of the machine must not be hosed. Water can enter the machine and damage the touch panel and electrical equipment.
- Pressure washers and steam can damage the machine and must NOT be used for cleaning purposes. Never use a pressure washer to clean the floor within 1 metre of the machine. The supplier cannot be held liable for any faults caused by the use of pressure washers on the machine and any such use may invalidate the warranty. There is a risk of splashing even if the floor is hosed down.



WD9_07

Steel wool and pressure washers must not be used for cleaning

4.3.2 Emptying

Go to the menu icon and select the program "Empty tank". Follow the instructions on the machine's touch panel.

Operating instructions

4.3.3 Daily cleaning

Internally

The machine should be cleaned at least once a day when in normal operation.

Go to the menu icon and select "Cleaning". Follow the instructions displayed on the machine's touch panel.



Once it has been cleaned, it is a good idea to leave the machine open if no washing is due for a while, e.g. overnight.

Externally

Wipe the outside of the machine with a soft, damp cloth.

4.3.4 Cleaning and checking each week or as required

When the daily cleaning has been performed via the machine's touch panel, there is an option to continue to the weekly cleaning by following the instructions on the touch panel.

Weekly cleaning should be more thorough than daily cleaning.

4.3.5 Annual cleaning or cleaning in the case of an alarm

The machine's heat recovery unit should be cleaned at least once a year.

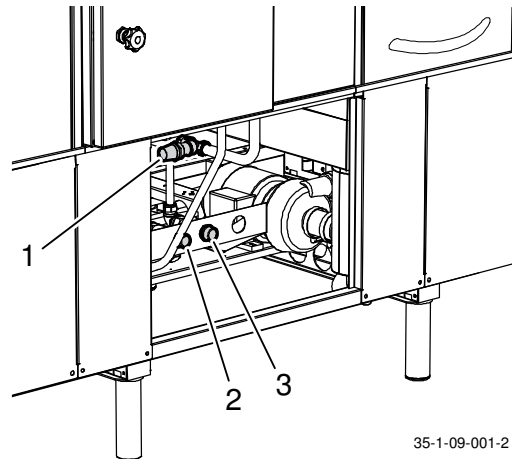
Remove the panel and rinse clean the heat recovery unit.



N.B.! When rinse cleaning the heat recovery unit and the base of the battery box, do not use more water than the drain under the battery can remove from the machine. The battery must be cleaned with hot water at normal pressure. Do not aim the water directly at the fan motor. The electric motor may be damaged if it is rinsed with high-pressure water.

4.3.6 Annual checks

Safety valve for condensing battery

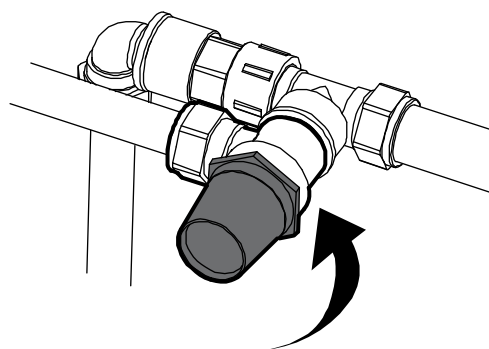


Safety valve for heat recovery unit (the figure shows a dishwasher with the feed direction right to left)

1. Safety valve
2. Connection for hot water
3. Connection for cold water

There is a safety valve on the pipe upstream of the dishwasher's cold water connection (see figure above). The opening function for this valve must be checked 2–3 times a year. Proceed as follows:

- Unscrew the screws holding the cover plate over the water connections to the dishwasher, which is under the electrical cabinet.
- Remove the cover plate
- Turn the plastic dial on the valve anti-clockwise for approximately a quarter turn until a faint click is heard



- Let the water flow through for a short period
- Turn the dial again for approximately a quarter turn until a louder click is heard and the valve closes.

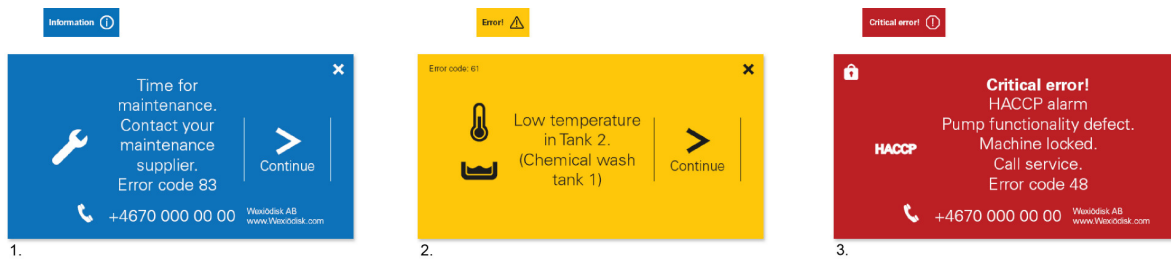
Operating instructions

4.3.7 Operating problems

Troubleshooting

If there is no indication on the touch panel screen 10 seconds after the ON/OFF button is pressed, check that at least 25 seconds have elapsed since the main switch was set in the ON position. If the problem persists, contact authorised service personnel.

The figure on the touch panel will change when an error or an alarm is presented. There are three different levels.



1. Information alarms (blue), which can be dealt with by the operator
2. Error alarms (yellow), which can often be dealt with by the operator
3. Critical error alarms (red), where service personnel must be contacted

The majority of these alarms can be remedied by the operator. Some blue alarms that have been dealt with by the operator a number of times will eventually change to yellow or red alarms, meaning that service personnel must be contacted.

Depending on previous settings, the machine may be stopped but not restarted until the cause of the alarm has been addressed. The operator is assisted by guides presented on the touch panel to perform measures or alternatively contact details for a service provider will be displayed.

Operating instructions

In addition to the faults shown on the touch panel, other faults can occur. The table below shows some faults which can be rectified by the operator.

Troubleshooting		
Problem	Cause	Action
Noise from the washing pump.	Foam in the tank.	Change the water.
The machine is not cleaning properly.	For causes and actions, see "4.2.9 Checking the wash result".	
The trays do not dry.	The rinse nozzles are blocked.	Check and clean the nozzles.
	Too little drying agent.	Check the quantity of drying agent.

All errors displayed on the touch panel have an error code, which is displayed in the alarm. This error code must be specified when contacting service personnel.

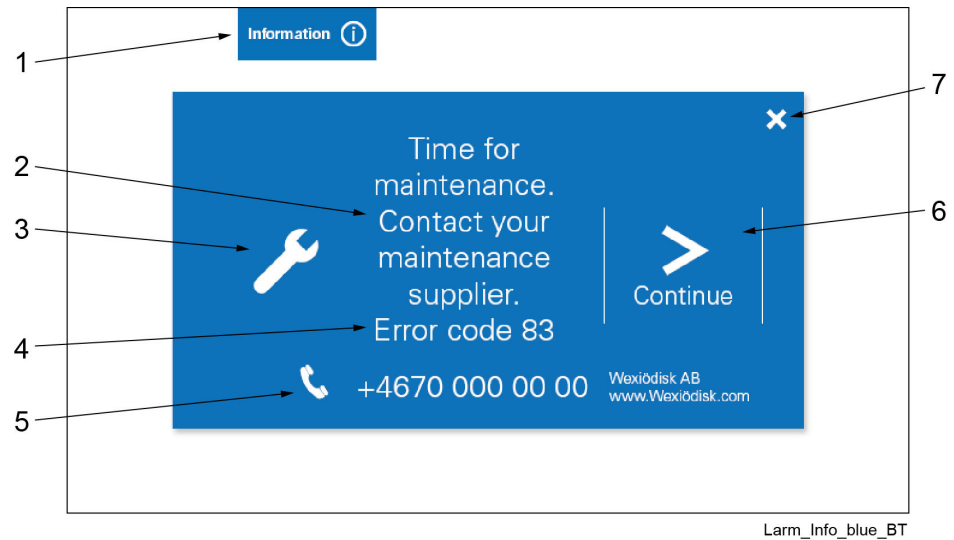


When you contact service personnel, you will need to provide the following information:

- Machine type and model.
- Machine serial number and date when the machine was installed.
- A brief description of the problem. Are any error codes shown on the touch panel?
- What happened/was being done immediately before the fault occurred?

Information alarms (blue)

An information alarm is generated, e.g. because a predetermined number of wash cycles has been reached.



1. Type of alarm and minimise / maximise
2. Descriptive text
3. Symbol for type of alarm (maintenance)
4. Error code
5. Name and contact details of service personnel
6. Continue to next screen
7. Reset alarm



The information alarm can be minimised and then maximised by clicking on the button (1).

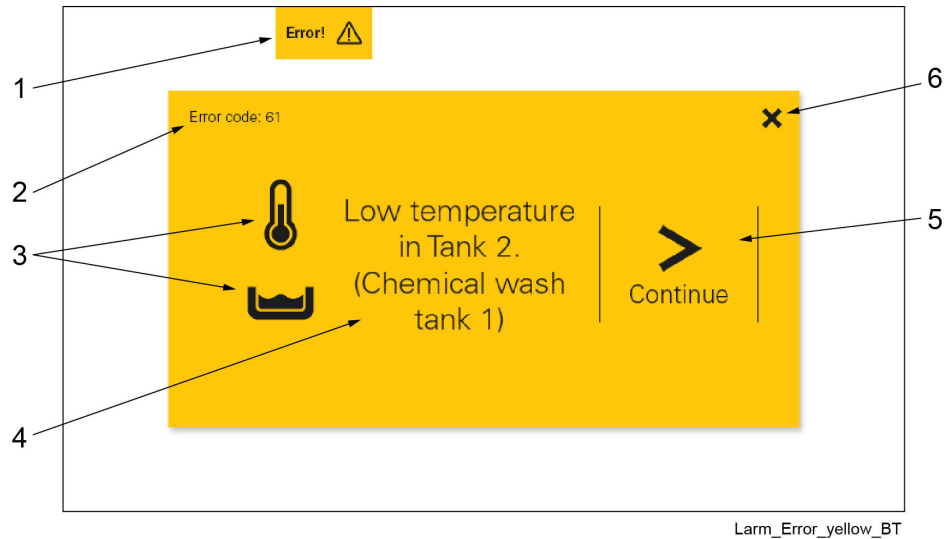
Follow the instructions on the touch panel, which are displayed by clicking on the symbol (6).

The information alarm can normally be reset using the X button (7), if you do not wish to click through the entire guide.

Operating instructions

Error alarms (yellow)

An error alarm is generated, e.g. because of a low temperature in one of the tanks.



1. Type of alarm and minimise / maximise
2. Error code
3. Symbol for type of alarm
4. Descriptive text
5. Continue to next screen
6. Reset alarm



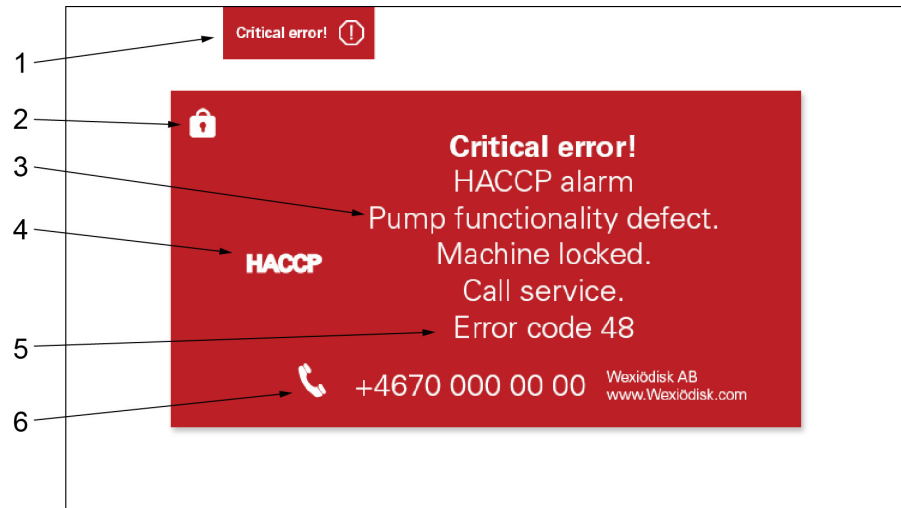
The alarm can be minimised and then maximised by clicking on the button (1)

Follow the instructions on the touch panel, which are displayed by clicking on the symbol (5).

The alarm can normally be reset using the X button (6) if you do not wish to click through the entire guide. Some alarms cannot be reset, and the alarm will then remain active until the reason for the alarm ceases to exist.

Critical error alarms (red)

A critical error alarm is generated because a serious error has occurred. The majority of these alarms cannot be reset by the operator, and service personnel must be contacted.



Larm_Critical error_red_BT

1. Type of alarm and minimise / maximise
2. Login symbol
3. Descriptive text
4. Symbol for type of alarm
5. Error code
6. Name and contact details of service personnel



Call the service company (6) and state the following:

- Machine type and model.
- Machine serial number and date when the machine was installed.
- The error code (5) displayed on the touch panel.
- What happened/was being done immediately before the fault occurred?

5. Technical specifications

The manufacturer reserves the right to make changes to the technical data.

TECHNICAL DATA	
Pump motor, chemical wash (kW)	2.35
Condensing fan (kW)	0.12
Drying zone fan (kW)	1.1
Drive motor, belt (kW)	0.15
Tray infeed motor (kW)	0.22
Booster heater (kW)	12
Tank heater, chemical wash (kW)	18
Heater, drying zone (kW)	6
Heat recovery, cooling surface (m ²)	25
Heat recovery fan, flow (m ³ /hour)	100
Tank volume, chemical wash tank (litres)	120
Weight, machine in operation (kg)	900
Enclosure protection class (IP)	55

CAPACITY AND OPERATING DATA	
Capacity (trays/min.)	20
Max. tray size (mm)	580 x 530
Cold water consumption, final rinse (litres/min.)	4
Cold water consumption, pre-rinse (litres/min.)	2
Steam consumption at 150-250 kPa (kg/hour) *	65
Surface temperature at a room temperature of 20°C (°C)	35
Noise level (dB(A)) **	70

* When the machine is steam-heated.

** in accordance with EN 60 335-2-58, §ZAA.2.8 with instruments that satisfy class 1.

Measurements of the sound pressure level on site are performed in three places 20 cm from the edges of the front at a height of 1.55 m using a microphone.

When measuring sound power level, create an imaginary measurement area consisting of five sides at a distance of 1 m from all edges of the machine.

Technical specifications

CONNECTION, ELECTRICALLY HEATED MACHINE	
Total connected load (kW)	39.3
Main fuse 400V 3N~ (A)	80
Max. connection area 400V 3N~ (L1-L3, N, PE) Cu (mm ²)	35

CONNECTION, STEAM-HEATED MACHINE 150–250 KPA	
Total connected load (kW)	14
Main fuse 400V 3N~ (A)	25
Max. connection area 400V 3N~ (L1-L3, N, PE) Cu (mm ²)	35
Steam connection (internal thread)	R 1"
Condensing water connection (internal thread)	R ³ / ₄ "

WATER, DRAIN AND VENTILATION CONNECTIONS	
Water quality, hardness (°dH)	2-7
Hot water connection 50-70 °C (internal thread)	R ³ / ₄ "
Cold water connection 5-12 °C (internal thread)	R ³ / ₄ "
Drain connection, PP pipe (mm)	ø 50
Water capacity, cold water, pressure (kPa)	300-600
Water capacity, cold water, flow (litres/minute)	18
Water capacity, hot water, min./max. pressure (kPa)	300/600
Floor drain, capacity (litres/sec.)	3
Ventilation of machine (m ³ /hour)	300

SIZE AND WEIGHT FOR TRANSPORT *	
Size (LxWxH) (mm)	4200 x 1100 x 2100
Weight (kg)	850

* Including packaging.

