

# Wexiödisk<sup>W</sup>

## TRAY DISHWASHER WD-40BRE

(translation of the original documentation)



Read the manual before using the machine!

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## 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.

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.
- 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 alerts are also shown.
- The capacity requirements of the machine can be found in the TECHNICAL SPECIFICATIONS chapter.
- The electronics in the machine are RoHS compatible.

Before the dishwasher 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 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 installed during use.



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

## General instructions

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### 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.



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 and if required, the switch should be locked to prevent unintentional operation. The component may only be removed by a qualified electrician.



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 correct way to perform a task in order to prevent poor results, damage to the dishwasher or hazardous situations.



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 of reading 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.

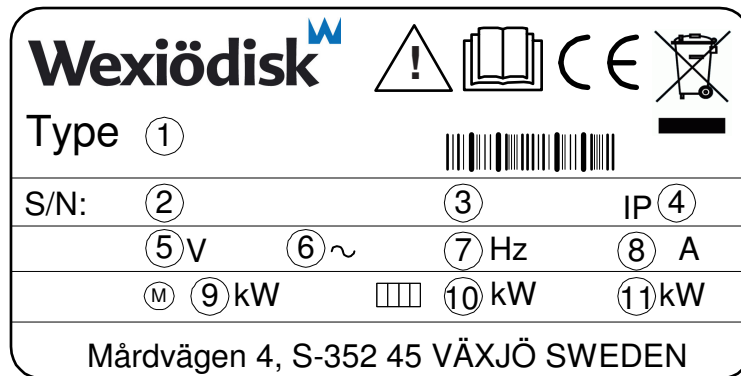


This symbol shows where any earth cable for potential equalisation can be connected. The earth bolt is placed on the machine's stand.

## 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 the manual correspond

Check that the type description on the rating plate corresponds with the type description on the front of the manual. 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 serial number found on the rating plates.

## 1.4 EU Declaration of Conformity

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



### 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 SE-352 45 Växjö, Sweden  
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 2. Representatives: Behra's General Trading, Ube Kyung Group Ltd, DSP doo, Elektronas Servis OOD, Fasus ehf, IZB, Marlin Food Equipment LLC, Moffitt Pty Ltd, M/s Alshwaja Consolidates Pvt Ltd, Nakasishi Mfg Co Ltd, QMB corporation, Retail doo, S&S Hvaleri Kordilar, TPN Group, Wexiödisk AB, Wexiödisk UK  
 3. Compiler or technical documentation: Magnus Ericsson

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 IIIA  
 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 corded tools  
 EN 60229 Specification for degrees of protection provided by enclosures (IP code)  
 EN 62233 Measurement methods for electromagnetic interference of household appliances and similar apparatus with regard to human exposure  
 EN 61010-2-2 Electromagnetic compatibility (EMC) - Immunity standard for industrial environments  
 EN 55014-1 Electromagnetic 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.

<p>Single table, 3rd wash, 3rd wash-dishwashers with accessories:                  WB-01 (11100000)                  WB-P18000 &amp; WB-F &amp; WB-F &amp; WB-F (11100000)                  WB-02 (11100000)                  WB-P18000 (11100000)                  WB-1 &amp; WB-15000 (11100000) &amp;                  WB-15000 (11100000) &amp; WB-15000 (11100000) &amp;                  WB-15000 (11100000) &amp; WB-15000 (11100000)                  WB-03 (11100000)                  WB-04 (11100000)                  WB-05 (11100000)</p>	<p>Harmonised standards to: EU's Machinery Directive 2006/42/EC, annex IIIA                  EN 12100 Safety of household and similar electrical appliances - General requirements                  EN 60229-2-2007 Part 2: Safety of household and similar electrical appliances - Particular rules for corded tools - Corded electrical drilling machines</p>
<p>Special machines:                  ACB 40000000 (131400)</p>	<p>Harmonised standards to: EU's Machinery Directive 2006/42/EC, annex IIIA                  EN 60229-2-2007 Part 2: Safety of household and similar electrical appliances - Particular rules for corded tools - Corded electrical drilling machines</p>

8. Växjö 2016-04-20

Magnus Ericsson  
Managing Director

CE\_16\_2

1. 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).
2. Representatives of Wexiödisk AB.
3. Person responsible for the product's documentation.
4. Year of manufacture of the product.
5. The EU Directives with applicable provisions to which all the dishwashers, special machines and accessories comply.
6. Harmonised standards for the Directives specified, and which the dishwashers, special machines and accessories meet, wherever relevant.
7. Model designation and serial number of the dishwashers, special machines and accessories the document applies to.
8. 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. 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.

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. 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. Reduce the pressure at all valves before servicing the machine. 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

## Safety instructions

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and maintenance. For authorised service companies, please see [www.wexiodisk.com](http://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 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 interrupter.

## 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

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### 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 rinsing phase has 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 crushing injuries.

#### 2.5.3 Risk of slipping



The floor should be kept clean and 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 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.

### 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

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. In addition to the machine's ventilation requirements, the ventilation requirement for the room must be calculated on the basis of current standards.

## Installation instructions

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### 3.2.3 Power supply

Power supply 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 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.

### 3.2.6 Space for servicing

The area above the machine must not contain any equipment that may prevent the fitting, servicing and replacement of parts. A free height of at least 3 metres is required in order to remove the inspection doors.

A 1-metre free space should be allowed in front of the machine and around the infeed and outfeed ends for service purposes.

## Installation instructions

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### 3.3 Transport and storage

#### 3.3.1 General



Always transport the machine in an upright position. Take care during transport, as there is a risk of tipping.

The machine is supplied with a pallet. Transport the machine to the installation site using two handtrucks, one at each short end.

If the machine needs to be transported transversely with the forks of the truck inserted from the long side, do not lift where the machine's legs are positioned. These positions are indicated by labels on the outside of the packaging.



*Label marking the position of the legs*



NB! 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 an ordinary pallet, always check that none of the components underneath the machine can be damaged.



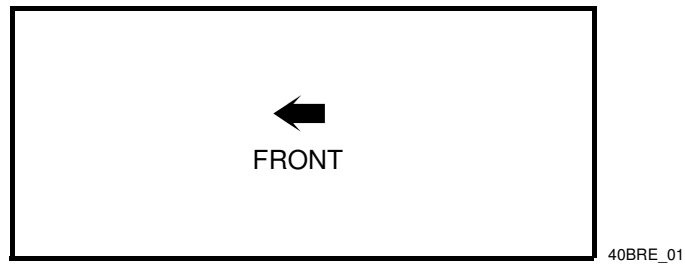
If the machine is not being installed immediately, it must be stored in a frost-free area where the air is dry.

#### 3.3.2 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. FRONT = Front.

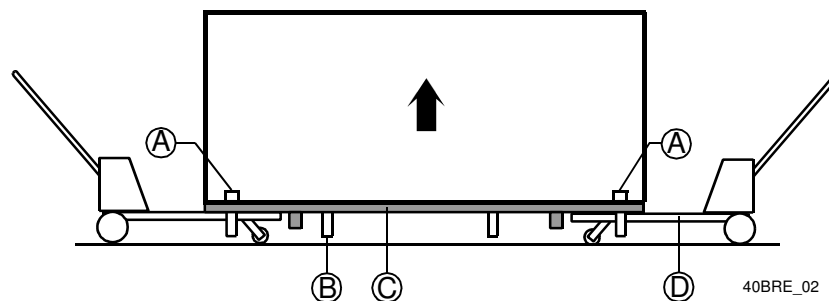
## Installation instructions



*Marking on the packaging indicating front and feed direction*

### 3.3.3 Unpacking

- Check that all parts have been delivered by comparing them with the delivery note.
- Remove the packaging but leave the pallet in place.
- Inspect the machine for any transport damage.
- Lift the machine using a handtruck from the short end and assemble the legs (B) so that they extend below the bottom of the pallet (C). If possible, lift the machine simultaneously at both ends. Adjust the legs to the correct height shown in the machine drawing. Remember the risk of the machine tipping over. Lower the machine. Split the pallet and remove it.
- If the machine should need to be lifted again from the short sides, a wooden runner should be placed under the cross-bars (A) on the machine stand.



*A = Stand cross-bar*

*B = Leg*

*C = Pallet*

*D = Handtruck*

## Installation instructions

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### 3.3.4 Recycling

Packaging must be sent for destruction or recycling in accordance with local regulations.



The machine is manufactured from stainless steel plate, among other things, and also contains electronic components. Recycling of the appliance when its economic lifetime has been reached must be carried out in accordance with current rules and regulations.

## 3.4 Installation

### 3.4.1 Preparing for the installation

Check that there is adequate space for the machine and that the correct connections for water, electricity, drains and where applicable steam are available at the installation site (see TECHNICAL SPECIFICATIONS)

### 3.4.2 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.
- Check that the overheating protection device is reset.
- 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 20 mm.

See the "Transport and storage" chapter if the machine is to be moved.

Place the machine in position and check that it, and any accessories, are horizontally level. Place the spirit level on the join between the machine tank and the upper part. Adjust the height with the legs. Once the machine has been filled with water, do another check to make sure the machine is standing level.

#### **Assembling divided machines**

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

### 3.4.3 Installing auxiliary equipment

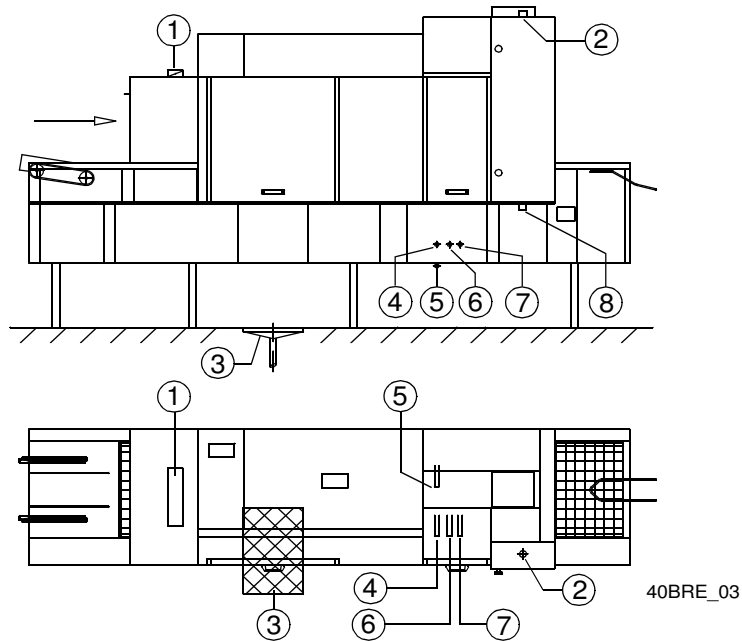
Once the machine is in place and has been adjusted horizontally and vertically, the auxiliary equipment can be fitted.



## Installation instructions

### 3.5 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 the image and list above.

## Installation instructions

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### 3.5.1 Electrical connection

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 safety system is not compromised.

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

### 3.5.2 Water connection

Cold water is connected at (6) and hot water is connected at (7).



- The machine is supplied as standard without stopcocks for the water supply. Stopcocks must be installed on incoming pipes.
- It is important that the water supply has sufficient flow and pressure to ensure the correct flow of water to the machine. The required water flow and pressure can be found in the TECHNICAL SPECIFICATIONS. If the water pressure is too low, a booster pump must be fitted.

The hot water connection is fitted with a filter. The cold water connection has a filter, non-return valve, safety valve and vacuum valve.

### 3.5.3 Ventilation

The machine has a ventilation connection on the top of the steam hood at the in-feed 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

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### 3.5.4 Steam (steam-heated machines)

A steam connection is only provided on steam-heated machines. The connection (4) is fitted with a filter. The machine is supplied as standard without a shut-off valve for steam. A shut-off valve must be installed on the incoming pipe. The required steam pressure can be found in the TECHNICAL SPECIFICATIONS

### 3.5.5 Condensation water connection (steam-heated machines)

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

### 3.5.6 Drain/waste pipe

There must be a waste pipe with an effective trap for the machine's waste water and for water used for 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 drain 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.

### 3.5.7 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 the 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.

## Installation instructions

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### 3.6 Trial operation

Prepare the machine for trial operation by following the INSTRUCTIONS FOR USE. The instructions describe the measures that must be taken to prepare the machine for operation.

If a start-up report has been supplied with the machine, this should be used for the trial run and testing. An extract of a start-up report is provided below.

#### 3.6.1 Start-up schedule

This should be completed and signed by the customer on start-up.

**Machine type:**

**Machine serial number:**

**Installation date:**

<b>Customer:</b>
Address for visitors
Postcode + Town/City:
Telephone:
Contact:

<b>Dealer:</b>
Telephone:
Contact:

<b>Installation company:</b>
Telephone:
Contact:

<b>Service company:</b>
Telephone:

<b>Detergent supplier:</b>
Telephone:

<b>End-user signature:</b>

<b>Name (in capitals):</b>

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

## Installation instructions

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### 1. Check the following before starting the dishwasher:

- Water and drain 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
- 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
- For electrically-heated dishwashers and dishwashers with low pressure steam (50-140 kPa):  
that the mini-switches for the tank heater (FU22-FU24), booster heater (FU41-FU43) and drying zone (FU31-FU32) are in AV mode (other mini-switches must be in the ON position)

### 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 mixingare correct (see Reference value settings)
- 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.

### 3. Check the setting of the reference values:

(at the time of delivery, all reference values are set in accordance with the testing report supplied. These settings should be used as a guide when adjusting and setting the dishwasher)

- Check that all reference values are correctly adjusted.
- Check that the water temperature (in the wash tank and booster heater) has been attained in accordance with the reference values set

## Installation instructions

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### 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 and turn off the power using the main switch before performing the final check.)

- 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 dishwashing staff concerning:

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

## 3.7 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.



This chapter describes what must be done with the machine:

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

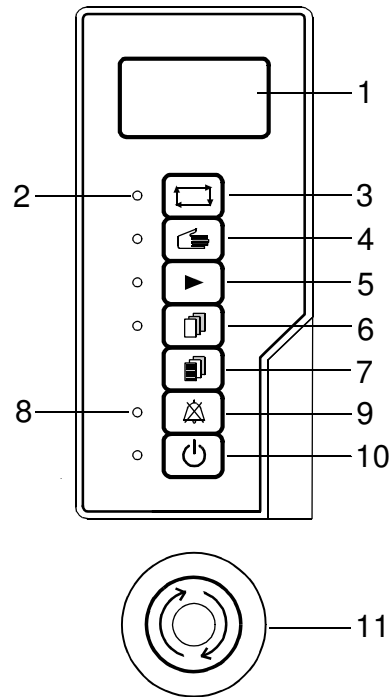
The use of the machine is dependent on how the machine is equipped.



If the machine will not be used for a longer period, the power to the machine should be turned off using the power switch, the water supply turned off and machine should be left open.

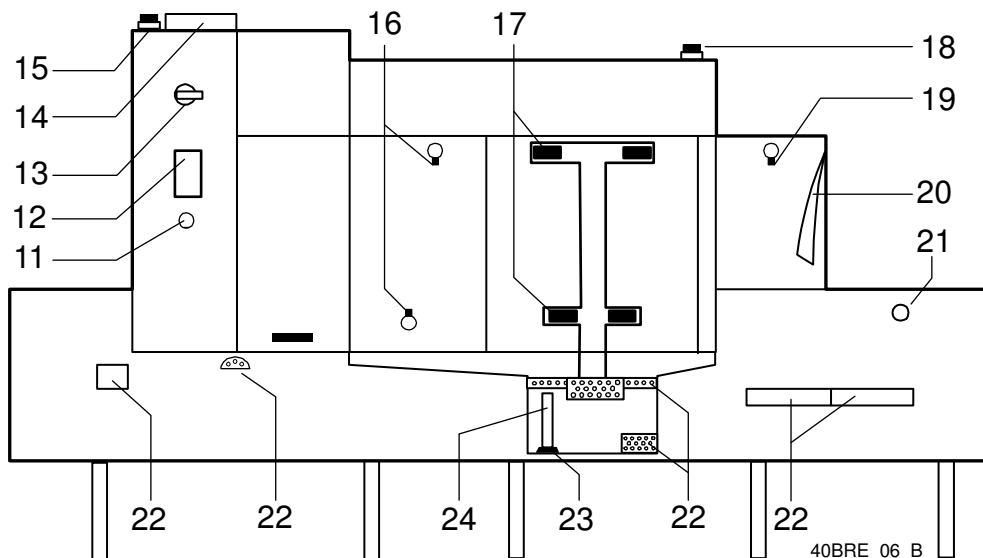
## 4.1 Before washing

### 4.1.1 Machine design



40BRE\_05

*Control panel*



40BRE\_06\_B

*Machine overview*



## Operating instructions

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1. Display
2. LEDs (x 5) indicating that a function is activated
3. Button for automatic operation
4. Button for manual operation
5. Button for feed
6. Button for diagnostics function (only for service engineers)
7. Button for diagnostic messages (only for service engineers)
8. LED for indication of alerts. If the LED flashes, the alert can be reset by pressing button (9).
9. Button for resetting alert
10. On/Off
11. Emergency stop
12. Control panel
13. Main switch
14. Grille for drying zone fan
15. Alert lamp for indication of alerts (extra equipment)
16. 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).
17. Washer arm (removable)
18. Alert lamp to indicate filters are full in the chemical wash tank (extra equipment)
19. Rinse nozzle pre-rinse
20. Curtain
21. Photocell
22. Filters
23. Rubber sleeve
24. Level pipe

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

## Operating instructions

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### 4.1.2 Preparations before filling

Check:



- that the machine and removable parts have been cleaned. If not – clean them!
- that no dirt is in the washer arms' (16) or in the rinse pipes' (15,18) nozzles
- that removable parts are correctly in place
- that the machine hood is closed
- the amount of detergent and drying agent (option)
- that the stopcock for the water to the machine is open
- that the power 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).



Before trays are fed into the machine, they must be soaked to remove dried-on pieces of food.



NB! Ordinary washing-up liquid must not be used in the machine or for soaking. Ordinary washing-up liquid causes foam to form and produces poor wash results.



If using liquid detergent and drying agent, the same make and type should be used. When switching between different detergents, it must be ascertained whether or not there is a risk of blockages in hoses and pumps. When switching between different detergents and drying agents, the dosing system (including pumps) must be rinsed thoroughly by flushing with ordinary water.

Fit:

- the level pipe (24). The rubber seal of the level pipe (23) must be sealed against the bottom plate.
- filters (22)
- curtains (20)

### 4.1.3 Filling and heating the machine

You can see what the machine is doing on the machine's panel.

- The doors must be closed.
- Press button (10) to switch on the power supply.
- Press button (3). The filling and heating process will begin.
- When the machine is filled and heated, it starts and runs for a while to mix the detergent.
- When the detergent is mixed, the message on the display indicates that the feed should start. Start the conveyor belt by pressing button (5).
- The machine is now ready to wash.

## 4.2 Using the machine

### 4.2.1 Washing

#### Washing with automatic operation

For automatic operation, press button (3). The corresponding LED lights up.

- 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.

#### Unloading trays manually

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

Press button (4) for manual operation. The corresponding LED lights up.

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

#### Storage in the dispenser

If washed trays are being stored in the tray dispenser connected to the machine's outfeed, a text message appears on the control panel display when the dispenser is full. The machine stops. A full dispenser can also be indicated with an alert lamp (15) (option).

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

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

#### Cleaning the filters

The machine can also be fitted with an alert lamp (18) 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 alert is activated, remove and clean the filters.

## Operating instructions

### Checking the wash result



The dishware should be checked after each wash for:

PROBLEMS	CAUSES & MEASURES
Starch spots	<ul style="list-style-type: none"> <li>• <b>Scraping:</b> It is important to remove as many 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.</li> <li>• <b>Detergent and drying agent dosage:</b> If using liquid detergent and drying agent, the same make and type should be used. The dosing affects both detergent and drying results of the dishware. The hardness level of the water affects the consumption of detergent. Contact your detergent supplier.</li> <li>• <b>Temperatures:</b> At incorrect temperatures the dishes will not be clean. Contact a service technician if you need to change the set values.</li> <li>• <b>Programme selection:</b> Programme with too short a washing time selected. Choose a programme with a longer washing time.</li> <li>• <b>Cleaning the machine:</b> Insufficient cleaning of the machine affects the results of the washing. Ensure better cleaning of the machine.</li> <li>• <b>Placing dishes in baskets:</b> Incorrectly placed items can mean that the washing water does not reach the items during washing and rinsing.</li> <li>• <b>Soaking:</b> Items with hard dried on food. Soak the dishes in water. Do NOT use washing-up liquid.</li> </ul>
Misting	
Protein residues	
Detergent residues	

#### 4.2.2 Emergency stop

The machine may have one or more emergency stops. One of the emergency stop buttons (11) is located beneath the control panel. Emergency stops may also be located by the machine's infeed. If the machine has been stopped during operation using the emergency stop button, the button must be reset by turning it in the direction of the arrows. Then press the button (5) to restart the feed.

#### 4.2.3 Changing the water



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

- Switch the machine off by pressing button (10).
- Remove the filter from the tank and empty the machine by turning the level pipe (24) a quarter of a turn.
- Clean the tank, level pipe and filters. Refit the components.
- Refill the machine. See "Filling and heating the machine".

## Operating instructions

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### 4.3 After use



For longer periods between washes, the machine should be in the “normal” mode and closed. This ensures the temperature in the machine is maintained.



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. Cleaning the machine carefully helps to ensure good washing results and reduces the risk of dirt accumulating inside the machine.

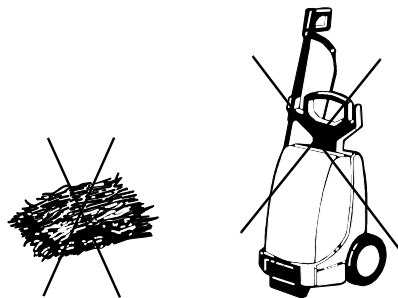
See the WEB Tool manual for the HACCP alert options.

#### 4.3.1 Incorrect cleaning methods



NB! 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 control 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*

## Operating instructions

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### 4.3.2 Daily cleaning

#### Cleaning the inside

- Switch the machine off by pressing button (10).
- Empty the tank by turning the level pipe (24) a quarter of a turn.
- Clean the filters (22), all curtains (20), the level pipe (24) and the rinse nozzles (16, 19). Never leave the level pipe so that the rubber sleeve rests on a surface. The sleeve can become deformed leading to the risk of water leakage in the tank.
- Clean the washer arm nozzles (17).
- Clean the back of the doors.
- Rinse out all of the machine's inside surfaces and clean the tank.
- Refit all removable parts and leave the doors open.

#### Cleaning the exterior

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

- 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 control panel and electrical equipment.

### 4.3.3 Weekly cleaning or cleaning as required

Weekly cleaning should be more thorough than daily cleaning. In addition to the daily cleaning measures, clean the machine as per these instructions:

- Clean the washer arms (17). Remove the lower washer arms by pushing the lock on the front of the washer arm down and then pull the washer arm out. Remove the upper washer arms by turning the knob beneath the front of the washer arms a half turn. Pull the washer arm down slightly and out. Brush and rinse the inside of the washer arms and clean the nozzles.
- Clean the grille for the drying zone fan (14).
- Check and clean the rinse nozzles (16.19).
- Certain machines may be fitted with removable rinse pipes (16) in the final rinse. Remove the rinse pipes and rinse them out.
- Check that the overload switch for the feed is working by attempting to hold the belt still for a few seconds during operation. If the switch does not activate (the belt should stop), it must be adjusted immediately.
- Refit all cleaned components.



If the machine will not be used for longer periods, the power to the machine should be turned off using the power switch and the water supply should be turned off and the door left ajar.

## Operating instructions

### 4.3.4 Annual cleaning or cleaning in the case of an alert

The machine's condensing battery should be cleaned at least once a year.

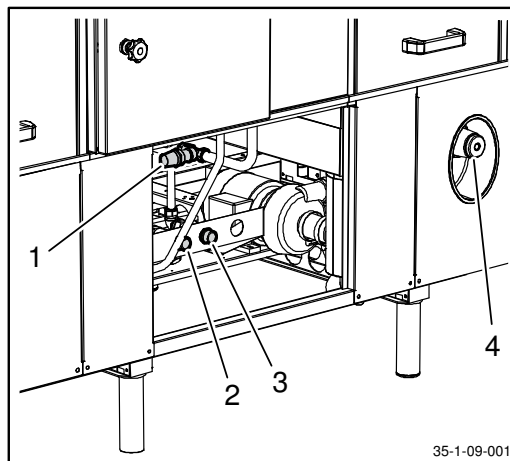
Remove the panel and rinse clean the condensing battery.



NB! When rinse cleaning the condensing battery 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.

### 4.3.5 Annual checks

#### Safety valve for condensing battery

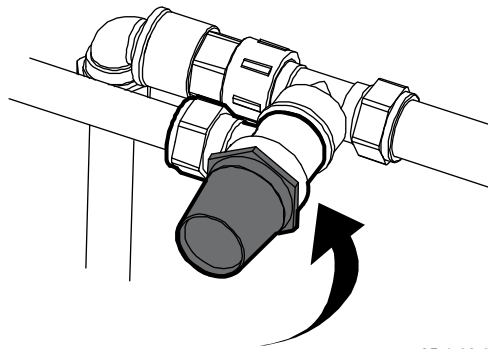


*Safety valve for condensing battery (the figure shows a dishwasher with the feed direction right to left)*

1. Safety valve
2. Connection for hot water
3. Connection for cold water
4. Filter for re-circulating final rinse

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:

- Loosen the screws that hold the cover plate over the water connections to the dishwasher (to the left of the filter for recirculating final rinse in dishwashers with a feed direction right to left)
- Remove the cover plate
- Turn the plastic dial on the valve anti-clockwise for approximately a quarter turn until a faint click is heard



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- 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.

### 4.3.6 Operating problems

#### Error messages

Machine faults and user faults are indicated with messages on the display (1). If an alert occurs, an LED (8) will light up or flash. If the LED flashes, the alert can be reset by pressing button (9).

The following alerts can be addressed by the operator. For other alerts, or if an alert reset with button (9) recurs, authorised service personnel must be contacted.

Alert texts		
Alert text	Cause	Action
(63) POWER SUPPLY FAILURE - CHECK THE EMERGENCY SWITCH	Emergency stop depressed.	Reset the emergency stop by turning it in the direction of the arrows. Start the feed by pressing button (5).
(1) EMERGENCY STOP ACTIVATED	Emergency stop depressed.	Reset the emergency stop by turning it in the direction of the arrows. Start the feed by pressing button (5).
(9) COMMUNICATION ERROR FREQUENCY CONVERTER - CALL SERVICE	---	Reset the alert by pressing button (9). Contact service personnel.
(10) FREQ. CONVERTER ERROR - CHECK POWER SUPPLY - CALL SERVICE	---	Reset the alert by pressing button (9). Contact service personnel.
(11) OVERTEMPERATURE FREQUENCY CONVERTER - CALL SERVICE	---	Reset the alert by pressing button (9). Contact service personnel.
(12) DC BUS OVERVOLTAGE FREQUENCY CONVERTER - CALL SERVICE	---	Reset the alert by pressing button (9). Contact service personnel.



## Operating instructions

Alert texts		
Alert text	Cause	Action
(14) WEAK SIGNAL FROM PHOTOCELL START WASH - CLEAN PHOTOCELL	There is dirt on one of the photocells (20) at the in-feed.	Clean the photocells. The alert in the display will disappear after cleaning.
(47) HACCP ALERT PUMP FUNCTIONALITY DEFECT - PRESS RESET	The pump is not functioning.	Reset the alert by pressing button (9). Contact service personnel.
	Low water level in the tank. The level pipe (23) is not closed. The rubber sleeve does not seal against the bottom plate.	Close the level pipe. Check the rubber sleeve. Reset the alert by pressing button (9).
(64) HACCP ALERT WRONG TEMPERATURE IN TANK - PRESS RESET	The washing temperature in the tank is too low.	Reset the alert by pressing button (9). Contact service personnel.
(67) HACCP ALERT WRONG TEMPERATURE IN BOILER - PRESS RESET	The temperature in the booster heater is too low.	Reset the alert by pressing button (9). Contact service personnel.
(72) HACCP ALERT WASHING DETERGENT FUNCTIONALITY DEFECT - PRESS RESET	The detergent has run out.	Check and fill with new detergent. Reset the alert by pressing button (9).
(78) HACCP ALERT FINAL RINSE DEFECT - PRESS RESET	The water stopcock is closed. The rinse nozzles (15) for the final rinse are blocked.	Open the tap. Clean the nozzles. Reset the alert by pressing button (9).
(26) SENSOR ERROR PULSE SENSOR B18 - RESTART FEEDING	No pulses registered from B18.	Reset the alert by pressing button (9). Start the feed by pressing button (5).
(27) SENSOR ERROR PULSE SENSOR B17 - MAN MODE - CALL SERVICE	No pulses registered from B17.	The machine can be run in manual mode. Reset the alert by pressing button (9). Contact service personnel.
(30) TIMEOUT FILLING OF TANKS - PRESS RESET	The water stopcock is closed. The level pipe (23) is not closed. The rubber sleeve does not seal against the bottom plate.	Open the tap. Close the level pipe. Check the rubber sleeve. Reset the alert by pressing button (9).
(31) TIMEOUT HEATING TANKS AND BOILERS - PRESS RESET	---	Reset the alert by pressing button (9). Contact service personnel.
(33) DOOR IS OPEN - CLOSE DOOR	---	Close the door and start the feed by pressing button (5).
(39) OVER FLOW PIPE NOT IN POSITION - CONTROL THE OVER FLOW PIPE	The level pipe (23) is not fitted or closed.	Check that the level pipe is in place. Turn the level pipe to the closed position.

## Operating instructions

Alert texts		
Alert text	Cause	Action
(41) LOW LEVEL IN TANK 2 (CHEM WASH TANK 1)	The level pipe is not closed. The level pipe's rubber sleeve is not sealing against the bottom plate.	Close the level pipe. Check the rubber sleeve.
(49) MOTOR PROTECTION FEEDER ACTIVATED - CALL SERVICE - RESTART FEEDING	---	Contact service personnel. Start the feed by pressing button (5).
(51) OVERLOAD FEEDING ACTIVATED - REMOVE OBJECT - RESTART FEEDING	An object has stopped the belt.	Remove the item. Start the feed by pressing button (5).
(85) OVERLOAD FEEDING ACTIVATED - PRESS RESET	---	Reset the alert by pressing button (9). Start the feed by pressing button (5).
(53) ALARM TRAY EXCHANGER - CHECK TRAY EXCHANGER	The tray exchanger has stopped.	Start the tray exchanger.
(54) TRAY DISPENSER OUT OF POSITION - CHECK TRAY DISPENSER	The tray dispenser is in the wrong position or there is no tray dispenser in place.	Adjust the dispenser if it is in the wrong position or connect an empty dispenser to the machine or tray exchanger.
(55) TRAY DISPENSER FULL - CHECK TRAY DISPENSER	---	Change the dispenser.
(71) WASHING DETERGENT ALERT ACTIVE - CHECK DETERGENT DEVICE	The detergent has run out.	Check and fill with new detergent.
(77) FINAL RINSE ERROR - SENSOR ERROR FLOW METER BV02	---	Reset the alert by pressing button (9). Contact service personnel to check the flow meter.
(76) FINAL RINSE ERROR - NO FLOW IN THE MACHINE	The water supply is shut off.	Check that the stopcocks on the incoming water supply are open. Reset the alert by pressing button (9).
(75) FINAL RINSE ERROR - LOW FLOW IN THE MACHINE	The rinse nozzles (15) for the final rinse are blocked.	Clean the nozzles. Reset the alert by pressing button (9).
(83) TIME FOR MAINTENANCE - CONTACT:	The maintenance interval has been exceeded.	Contact service personnel. Reset the alert by pressing button (9).

## Operating instructions

### Troubleshooting

In addition to the faults shown on the control panel, other faults can occur. The table below shows some faults which can be rectified by the operator. If the problem persists, contact authorised service personnel.

Troubleshooting		
Problem	Cause	Action
No indication on the control panel display when the power is switched on by pressing button (10).	The main switch (12) is off.	Turn on the main switch.
The machine does not fill with water.	The shut-off cock on the incoming water supply is closed.	Open the tap.
The machine does not stop filling.	Level pipe is not in place.	Fit the level pipe.
	The level pipe's rubber sleeve is not sealing against the bottom plate.	Check that the level pipe is closed. Change the rubber sleeve if it is damaged.
Noise from the washing pump.	Low water level in the tank.	Check that the level pipe is closed. Change the rubber sleeve if it is damaged.
	Foam in the tank.	Change the water.
The machine is not cleaning properly.	The rinsing and washing nozzles are clogged with dirt.	Check and clean the nozzles.
	There is too little detergent.	Check the amount of detergent.
	Foam forming in the washing tank.	Check that the washing temperature is not too low and that the correct detergent is being used. Change the water if foam forms.
	Dirt has dried on the trays.	Soak the trays before washing.
	The water in the tank is too dirty.	Change the water.
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.

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

- Machine model
- Machine serial number and date when the machine was installed.
- A brief description of the problem.
- What happened immediately before the fault occurred

## 5. Technical specifications



The technical data, which is specific to each machine, can be found in the machine's flow, machine and wiring diagrams. These are supplied with each machine and are on the inside of the electrical cabinet door.

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)	9
Heat recovery, cooling surface (m <sup>2</sup> )	25
Heat recovery fan, flow (m <sup>3</sup> /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	
** Measured 1 metre from the side of the machine	

Connection, electrically-heated machines	
Total connected power (kW)	44
Main fuse 400V 3N~ (A)	80
Max. connection area 400V 3N~ (L1-L3, N, PE) Cu (mm <sup>2</sup> )	35

## Technical specifications

Connection, steam-heated machines 150-250kPa	
Total connected power (kW)	14
Main fuse 400V 3N~ (A)	25
Max. connection area 400V 3N~ (L1-L3, N, PE) Cu (mm <sup>2</sup> )	35
Steam connection (internal thread)	R 1"
Condensing water connection (internal thread)	R <sup>3</sup> / <sub>4</sub> "

Water, drain and ventilation connections	
Water quality, hardness (°dH)	2-7
Hot water connection 50-65 °C (internal thread)	R <sup>3</sup> / <sub>4</sub> "
Cold water connection 5-12 °C (internal thread)	R <sup>3</sup> / <sub>4</sub> "
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 <sup>3</sup> /hour)	300

Size and weight for transport	
Size (LxWxH) (mm) *	4200 x 1100 x 2100
Weight (kg) *	850
* Including packaging	

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