

Wexiödisk^W

CUTLERY DISHWASHER WD-ACS 47D

(Original documentation)



Read the manual before using the machine!

Installation and user manual



cover_47D

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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 installed 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.



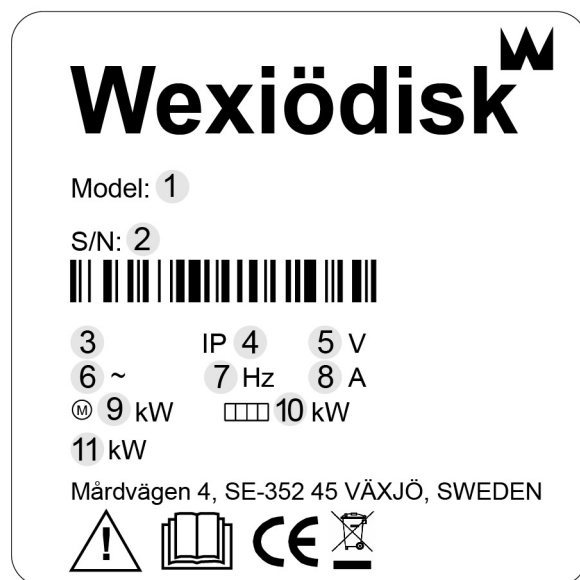
This symbol warns that local regulations must be followed for recycling of packaging etc. as well as the destruction of the machine.



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

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.

Wexiödisk

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.

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Fasus srl #ZB, Martin Food Equipment Ltd, Moffitt Pty Ltd,

M's Alshweis Cosmetics Pvt Ltd, Nakatshi Mfg Co Ltd, QMB corporation, Retail dos,

S&S Hygienic Handling, TFM Group, Wexiödisk AG, Wexiödisk UK,

Company of International Manufacturers Magnus ET GmbH

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

CE Declaration of Conformity.

EU's Machinery Directive 2006/42/EC, annex II A

EU's Low-voltage directive 2006/95/EC

EU's EMC-directive 2014/53/EU

EU's WEEE directive 2002/96/EC

EU's RoHS-directive 2011/65/EU

Harmonised standards:

EN 12100 Machine safety: General principles for design - Risk assessment and risk reduction

EN 50100 Safety - Particular rules for online tests

EN 60205 Specification for degrees of protection providing enclosure (IP code)

EN 61010-2-2 Measurement methods for electromagnetic risks of household appliances and similar apparatus with regard to human exposure

EN 61010-2-1 Electromagnetic compatibility (EMC) - Intentionally standard for industrial environments

EN 55014-1 Electromagnetic compatibility: Requirements for household appliances, electric tools and similar apparatus.

(EMC) - Part 1: Guidance

EN 50181 Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances

The above directives and standards are common to the different machine groups.

Standards in the tables below are specific to the different machine groups.

Single tools, grinders, hand-

saws etc with accessories:

WD-PH001A

WD-PH001A & WD-PH001A (2000°)

WD-PH001A

WD-PH001A

WD-PH001A

WD-PH001A

WD-PH001A

WD-PH001A

WD-PH001A

WD-PH001A

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WD-PH001A

WD-PH001A

WD-PH001A

Harmonised standards to EU's Machinery Directive 2006/42/EC, annex II A

EN 60034-1 Safety: Electrical equipment of machines - Design and construction

EN 60034-2 Safety: Electrical equipment of machines - Construction and testing

EN 60034-3 Safety: Electrical equipment of machines - Construction and testing

EN 60034-4 Safety: Electrical equipment of machines - Construction and testing

EN 60034-5 Safety: Electrical equipment of machines - Construction and testing

EN 60034-6 Safety: Electrical equipment of machines - Construction and testing

EN 60034-7 Safety: Electrical equipment of machines - Construction and testing

EN 60034-8 Safety: Electrical equipment of machines - Construction and testing

EN 60034-9 Safety: Electrical equipment of machines - Construction and testing

EN 60034-10 Safety: Electrical equipment of machines - Construction and testing

EN 60034-11 Safety: Electrical equipment of machines - Construction and testing

EN 60034-12 Safety: Electrical equipment of machines - Construction and testing

EN 60034-13 Safety: Electrical equipment of machines - Construction and testing

EN 60034-14 Safety: Electrical equipment of machines - Construction and testing

EN 60034-15 Safety: Electrical equipment of machines - Construction and testing

EN 60034-16 Safety: Electrical equipment of machines - Construction and testing

EN 60034-17 Safety: Electrical equipment of machines - Construction and testing

EN 60034-18 Safety: Electrical equipment of machines - Construction and testing

EN 60034-19 Safety: Electrical equipment of machines - Construction and testing

EN 60034-20 Safety: Electrical equipment of machines - Construction and testing

EN 60034-21 Safety: Electrical equipment of machines - Construction and testing

EN 60034-22 Safety: Electrical equipment of machines - Construction and testing

EN 60034-23 Safety: Electrical equipment of machines - Construction and testing

EN 60034-24 Safety: Electrical equipment of machines - Construction and testing

EN 60034-25 Safety: Electrical equipment of machines - Construction and testing

EN 60034-26 Safety: Electrical equipment of machines - Construction and testing

EN 60034-27 Safety: Electrical equipment of machines - Construction and testing

- 4

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.

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 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.

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. 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.

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. The ventilation requirements for the dishwashing room are to be dimensioned on the basis of the applicable standards.

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 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.

3.2.7 Space for servicing

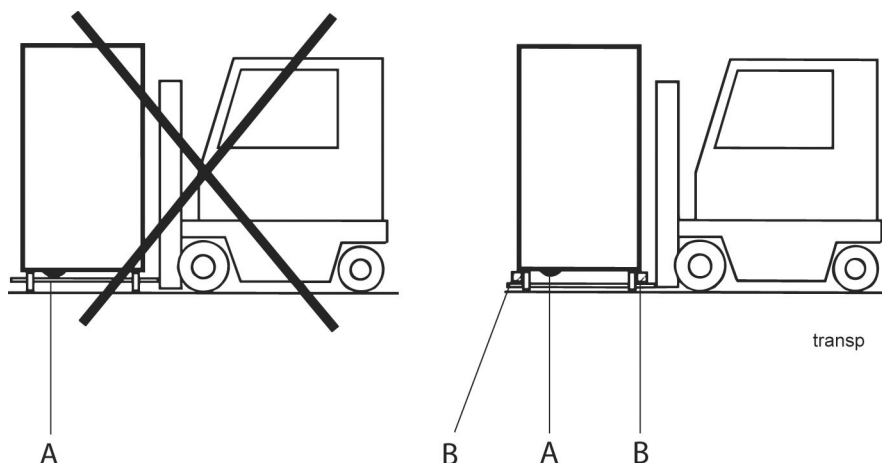
A 1-metre area should be left clear in front of the machine for servicing purposes. Depending on if the machine has different accessories, there may also be such a requirement at the infeed and outfeed ends as well as above the machine.

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.



A = Pumps
B = Spacers



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

3.4 Unpacking

Check that all parts have been delivered by comparing them with the delivery note.

Remove the packing material. Inspect the machine for any transport damage.



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

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

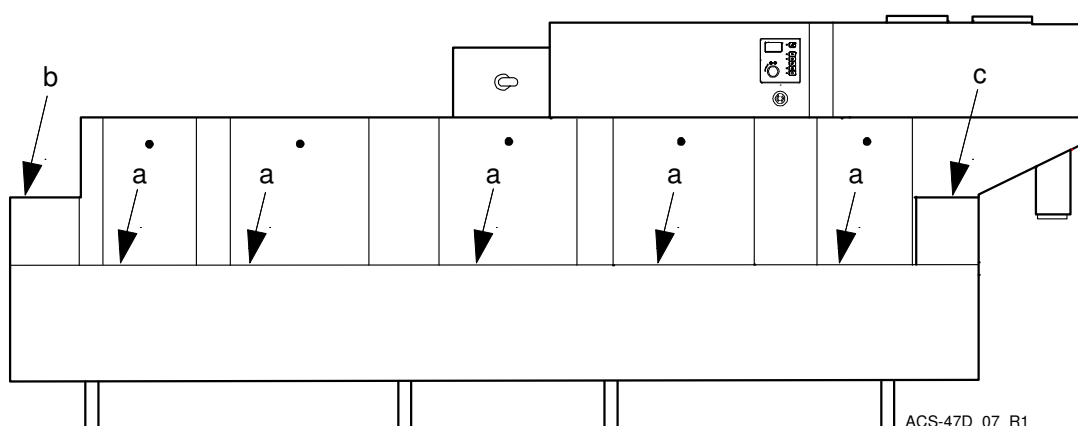
Check the following points before the machine is placed in position:



- 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 100 mm.

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

Check with a spirit level that is standing level. Place the spirit level on the join between the machine tank and the upper part. Once the machine has been filled with water, do another check to make sure the machine is standing level. Close the doors and check that the tops of the doors are in a straight line. Adjust the machine using the legs.

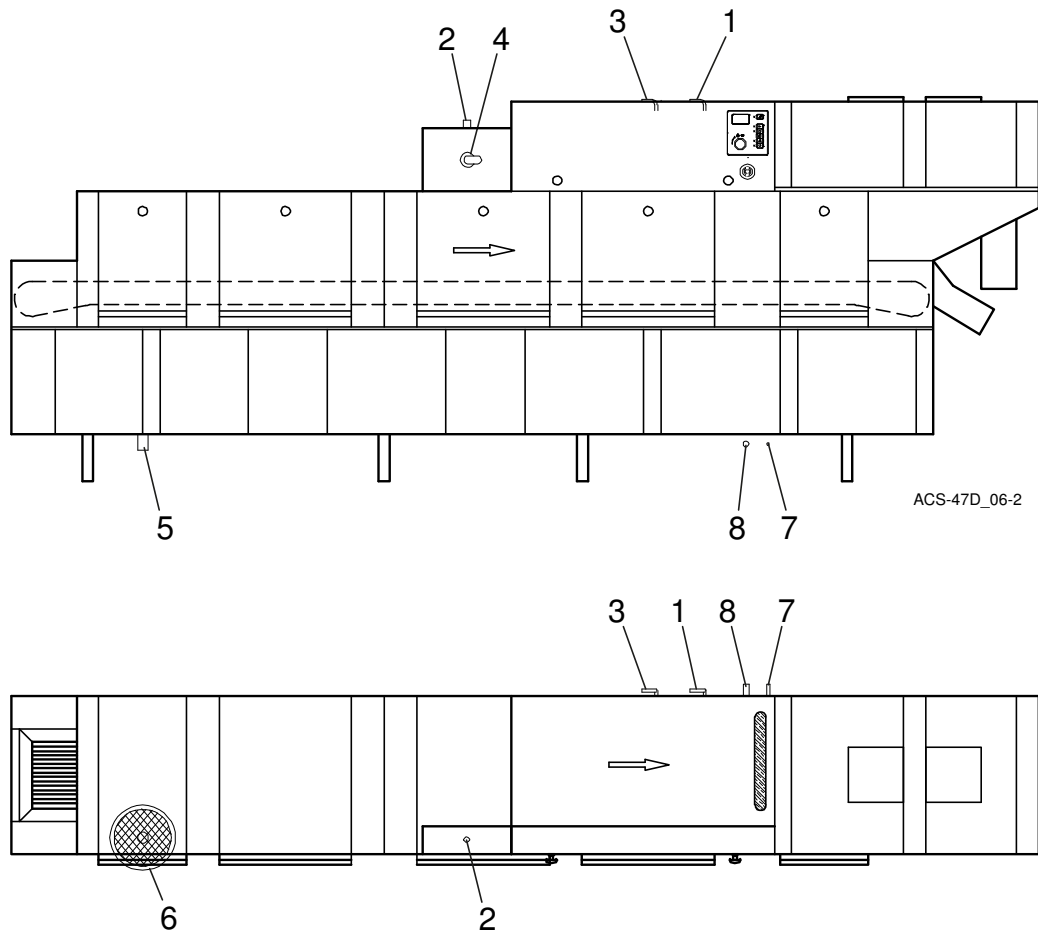


The machine must be evenly balanced on three sides:

- On the cover edge of the front side (a) (tank body).
- On the cover of the infeed (b).
- On the cover of the outfeed (c).

Installation instructions

3.6 Connections



1. Hot water connection
2. Electrical connection
3. Cold water connection
4. Main switch
5. Drain/waste pipe connection
6. Floor drain
7. Condensing water connection (option)
8. Steam connection (option)

Installation instructions

3.6.1 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 installation.
- The machine has a built-in main switch (4). Connect the electric cable at (2).
- The machine is equipped with a phase sequence detector. The machine will not start if the phase sequence is incorrect. If the phase sequence is incorrect, the display will show POWER SUPPLY FAILURE CHECK EMERGENCY STOP

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 pipe.
- It is important that the water supply has sufficient 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 water pipe is connected at (1, 3). If the machine is connected with a hose, this should be steel braided and have an internal diameter of at least 12mm.

The hot water connection (1) on the machine is fitted with a filter.

The cold water connection (3) on the machine is fitted with a filter, non-return valve and vacuum valve.

Installation instructions

3.6.3 Ventilation

The machine's heat load for the room is stipulated in TECHNICAL SPECIFICATIONS.

The machine has a condensing battery connected to an exhaust fan to reduce the amount of steam released. Extractor fans for extracting steam can be installed above the infeed and outfeed openings, as well as above the area of the machine where steam is emitted from the condensing fan.

If a hood is fitted over the machine, it must cover both the infeed and the outfeed. The front of the hood must be positioned at least 500 mm in front of the machine to allow access for service and repairs.

3.6.4 Steam connection (option)

The connection for steam (8) is fitted with a filter. The machines are supplied as standard without a shut-off valve for steam. A shut-off valve must be installed on the incoming pipe.

3.6.5 Condensing water connection (option)

A connection for condensation (7) is only provided on steam-heated machines. The pipe is connected to the system's steam boiler.

3.6.6 Drain/waste pipe

The waste water system connected to (5) should consist of a 50 mm metal pipe that will withstand mechanical impacts. The drain must run to a floor drain (6), 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.

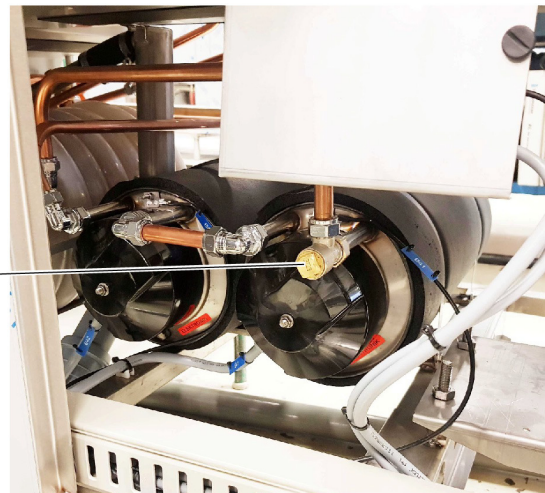
3.6.7 Detergent and drying agent

The machine has a drying agent connection and a water outlet for a detergent device. The water outlet for detergent is located on the incoming hot water pipe (1). The drying agent connection (2) is on the pipe leading to the booster heater for the final rinse water.



Disk_o_torkmedel_1

1



2

1. water outlet for detergent
2. drying agent connection

Use the same make and type of detergent and drying agent.

Avoid making unnecessary holes in the machine. If possible, the equipment should be placed on a wall next to the machine.

For information about electrical connections, see the electrical diagram.

3.7 Setting / adjustment of flows

This is described in the chapter ADJUSTMENT INSTRUCTIONS.

3.8 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.

3.8.1 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:

- Water, steam and drain connections
- That the machine is evenly balanced
- That closed doors are in line
- Detergent and drying agent
- That filters, level pipe, filter tray and partitions are in position
- That mini-switches for all heating elements are in the OFF position
- That the overheating protection on the booster heater and the tank element is reset.

2. Filling the machine:

- Close the doors
- Switch on the main switch and turn the knob to 1
- Fill the machine with water in accordance with the OPERATING INSTRUCTIONS

Note: It takes approximately 10 minutes to fill the system. The booster heaters fill automatically when the doors are closed. The machine has a filling check function for the booster heaters. When the function is activated, a check is carried out to ensure that the booster heaters are full of water, before the element is switched on.

N.B.: If the filling process is interrupted using the control button, the check starts again from the beginning.

- When the filling check has been completed and all the tanks are full, the mini-switches for the booster heaters switch on.

3. Start the machine: (see the OPERATING INSTRUCTIONS)

- Check the overload switch
 - Check the direction of rotation of the pumps
- NB! If the direction of rotation is wrong, the phase must be inverted on the incoming feed.

Installation instructions

4. Run the machine in manual mode:

- Set all circuit breakers to the ON position.
- Run the machine continuously for 10 minutes. Check and adjust the temperature and water flow.
- Final rinse approx. 5.5 l/min.
- Total flow approx. 9.5 l/min.

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

- There are no water leaks
- The door breaker works
- The limit switch is working
- Steam discharge from the machine
- The water temperatures are maintained
- The washed items are clean
- The washed items are dried
- The chemical wash pump will not stop until the washed items have been removed from the machine.

6. Final check: Empty the machine and turn off the power using the main switch.

- Re-tighten all the connections on the circuit breakers and contactors.

7. Final check: Empty the machine and turn off the power using the main switch.

- Washing
- Care (daily, weekly and other frequencies)
- Recommendation for annual service

3.9 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:

- Prior to use
- Regarding the way in which the machine should be used
- Following use
- In the event of error messages and troubleshooting

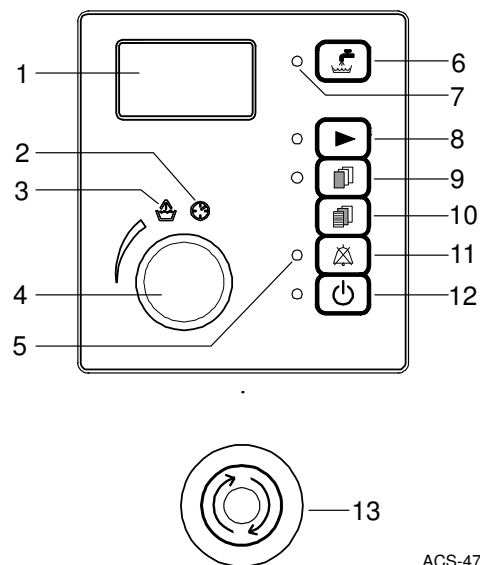
The use of the machine is dependent on how the machine is equipped.



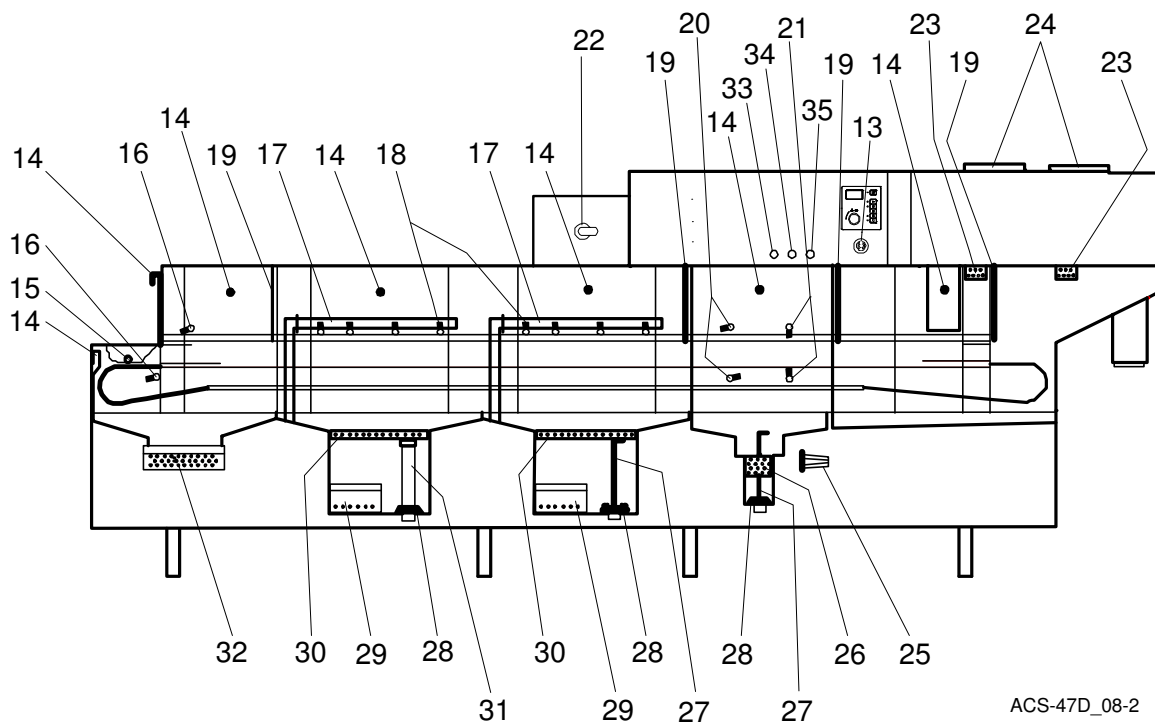
If the machine will not be used for a longer period, the power to the machine should be turned off using the main switch, the water supply turned off and machine should be left open.

4.1 Before washing

4.1.1 Machine design



ACS-47D_08_R



ACS-47D_08-2

Machine design

Operating instructions

1. Display
2. Symbol for contact time (washing time)
3. Symbol for washing
4. Knob for selecting contact time (washing time)
5. LED for indication of alarms. If the LED flashes, the alarm can be reset by pressing button (11).
6. Button for filling the machine
7. LEDs (x 4) indicating that a function is activated
8. Button to start the feed
9. Button for diagnostics function (for service engineers only)
10. Button for diagnostic messages (for service engineers only)
11. Button for resetting alarm
12. On/Off
13. Emergency stop
14. Door
15. Photocell
16. Pre-rinse nozzle
17. Washer arm, removable
18. Chemical wash nozzle
19. Partition, removable
20. Recirculating final rinse nozzle
21. Final rinse nozzle
22. Main switch
23. Intake guard
24. Grill
25. Filter
26. Final rinse strainer
27. Outlet seal
28. Rubber sleeve
29. Pump filter
30. Tank filter
31. Level pipe
32. Pre-rinse strainer
33. Pushbutton for Automatic emptying of wash tank 1 (option)
34. Pushbutton for Automatic emptying of wash tank 2 and final rinse tank (option)
35. Pushbutton for Cancel automatic emptying of wash tanks (option)

4.1.2 Preparations before filling

Check:



- That the machine and removable parts have been cleaned. If not – clean them!
- That there is no dirt in the wash arm (17, 18) or rinse pipe nozzles (20, 21)
- That removable parts are correctly in place
- Amount of detergent and drying agent (option)
- That the stopcock for the water to the machine is open
- That the main switch is in the ON position

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.
- Steel wool must not be used for pre-treating the dishware.
- Only detergent and drying agent intended for industrial machines may be used.
- If using liquid detergent and drying agent, the same make and type of detergent and drying agent should be used.

4.1.3 Filling and heating the machine

- The doors (14) must be closed.
- Press button (12) to switch on the power supply.
- Press button (6). The filling and heating process will begin.
- Press button (8) to activate the washing conveyor feed when the following text is shown in the display:

THE MACHINE IS READY
TO WASH
START THE FEED
USING THE FEED BUTTON



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.

4.2 Washing

4.2.1 Selecting the contact time/wash time

When the machine's feed has started, a text message appears on the display indicating that the machine is ready to wash and specifying a contact time in seconds.

READY TO WASH
CONTACT TIME 110 S

The contact time is the total period during which the load is washed while being transported through the various washing zones. There are six different times that can be selected.

- Select the contact time using knob (4) on the panel.
- You should select a contact time on the basis of how heavily soiled the load is:
 - in the case of heavily soiled items, select the longest contact time
 - in the case of lightly and normally soiled items, select a shorter contact time.

4.2.2 Feeding loads into the machine

Before feeding in the items, remove coarse food residues and soak dried food residues. Note: Ordinary washing-up liquid must not be used for soaking.

The washing stage will start when cutlery drops onto the belt and activates the photocell (15).

4.2.3 Emergency stop

The machine has an emergency stop (13), which is located under the control panel.

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. Reset the alarm using the reset button (11) and then press the button (8) to restart the feed.

4.2.4 Checking the wash result



The dishware should be checked after each wash for:

PROBLEMS	CAUSES & MEASURES
Starch spots	• 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. • Washing time/contact time: If cleaning is inadequate, the contact time can be increased. • Time/water volume: If starch spots or misting can be seen, or if there is still detergent residue on the item, this may mean that the flow through the wash arms during the final rinse is too low. The final rinse flow can be checked and adjusted by a service technician. The duration of the final rinse may also play a part. Increase the contact time if necessary. • 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 dishes 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 circulation: If water circulation in the machine is not good enough, this can lead to problems such as starch spots. Contact the service company for help in dealing with the problem. • 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	

4.2.5 Changing the water



N.B.: The water in the wash tank must be changed regularly, otherwise foam will start to form and the washing results will deteriorate. If the filters are clogged with foam or if foam comes out of the waste pipe, the water must be changed immediately.

For best wash results, it is important that the water in the tanks is changed when it becomes too dirty. The water should always be changed if foam begins to form in the washing tanks.

- Switch off the machine using button (12).
- Remove the filters (30, 32) and empty the tanks by turning the level pipe (31) and drain seal (27) a quarter of a turn.
- When the tanks are empty, refit the level pipe (31) and outlet seal (27).
- Refit the strainers (30, 32).
- Refill the machine. See "Filling and heating the machine".

Automatic emptying of wash tanks (option)

- Automatic emptying of wash tank 1 will start when the pushbutton (33) next to the control panel is pressed. Wash tank 02 and the final rinse tank will be emptied when pushbutton (34) is pressed.
- Refill the machine. See "Filling and heating the machine".

4.3 After use – Cleaning



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 shut-down.



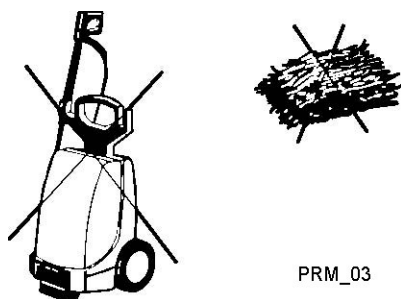
The machine is easiest to clean while it is still warm.

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 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.



PRM_03

Steel wool and pressure washers must not be used for cleaning

4.3.2 Emptying

Remove the filters (30, 32) and empty the tanks by turning the level pipe (31) and drain seal (27) a quarter of a turn.

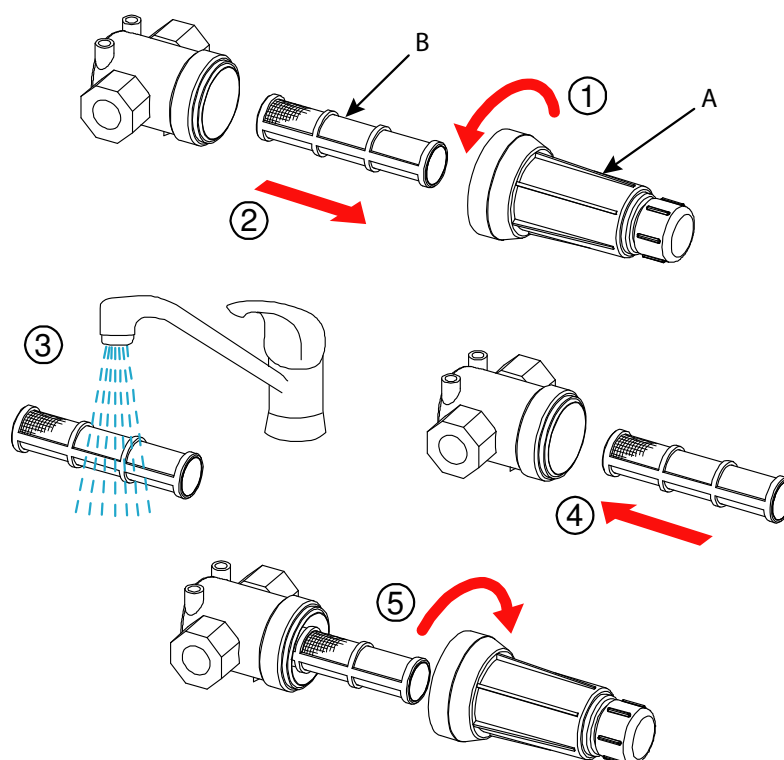
Automatic emptying of wash tanks (option)

Automatic emptying of wash tank 1 will start when the pushbutton (33) next to the control panel is pressed. Wash tank 2 and the final rinse tank will be emptied when pushbutton (34) is pressed. Emptying will be interrupted when pushbutton (35) is pressed.

4.3.3 Daily cleaning

Internally

- Switch off the machine using button (12).
- Empty the tanks by turning the level pipe (31) and the drain seal (27) a quarter of a turn.
- Clean the filters (29, 30, 32), all partitions (19), level pipe (31), outlet seal (24) and the nozzles for pre-rinse (16) and final rinse (20, 21).
- Never leave the level pipes (31) and outlet seal (27) so that the rubber sleeves (28) rest on a surface. The sleeves can become deformed leading to the risk of water leakage in the tanks.
- Clean the washer arms (17).
- Clean the doors (14). Wipe the rubber strips on the doors which are fitted at the top of the back of the doors.
- Rinse all the inside surfaces of the machine and clean the tanks.
- Clean the final rinse filter (26).
- Empty the final rinse tank and clean the filter (25). The filter is placed behind the lower door at the outfeed end. Unscrew the cover (A) and remove the filter (B). Clean the filter. Make sure that the cover seal provides a good seal when refitting.
- Refit the components.
- Leave the doors open.



Rec_filter_R1

Filter for final rinse

Externally

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

4.3.4 Cleaning each week or 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:

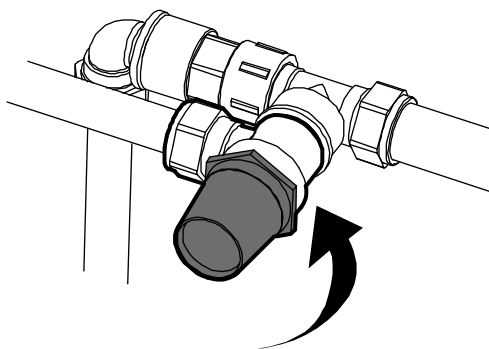
- Clean the washer arms (17). Brush and rinse the inside of the washer arms and clean the nozzles (18).
- Check and clean the rinse nozzles (16, 20, 21).
- Remove and clean the doors (14).
- Clean the mesh (24) for the drying zone fans.
- Check and clean the curtains.
- Refit all cleaned components.
- Decalcify the machine when necessary.

4.3.5 Annual checks

Safety valve for condensing battery

There is a safety valve on the pipe upstream of the dishwasher's cold water connection. 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 anticlockwise by hand approximately one quarter turn until a quiet 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.

4.4 Operating problems

4.4.1 Error messages

The display (4) shows different error messages, at the same time as the LED (2) flashes.

ALARM	CAUSE	ACTION
DOOR OPEN	At least one door is open.	Close the door(s) and press button (8).
OVERLOAD FEEDING	Something has fallen into the mechanism and the feed has stopped.	Remove any items and press button (8).
EMERGENCY SWITCH	Someone has pressed the emergency stop button.	If the machine has been stopped using the emergency stop button, reset the button by turning it in the direction of the arrows. Then press button (8).
LOW TEMP. TANK	The washing temperature is too low.	Washing can still take place. Reset the alarm by pressing button (11). Contact service personnel.
LOW TEMP. FINAL RINSE	The rinsing temperature is too low.	Washing can still take place. Reset the alarm by pressing button (11). Contact service personnel.
WEAK SIGNAL	The photocell head has become dirty.	Clean the photocell (15). The alarm in the display will disappear after cleaning.

Operating instructions

4.4.2 Troubleshooting

PROBLEMS	CAUSE	ACTION
No indication on the control panel display when the On/Off button (12) is pressed.	The main switch 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 doors are open.	Close the doors.
The tanks overflow.	The 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.
The machine does not start washing.	The doors are not closed.	Close the doors.
	Outward feed conveyor limit switch has been activated.	Remove any cutlery from the limit switch.
Noise from the washing pump.	Low water level. Foam in the tank.	Check the level. 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 that there is sufficient detergent in the machine.
	The water in the tanks is too dirty.	Change the water.
	Dirt has dried on the dishware to be washed.	Soak the dishware before washing.
Dishware does not dry.	Rinse is defective.	Check rinse temperature and flow.
	The rinse nozzles are blocked.	Check and clean the nozzles.
	Too little drying agent.	Check that there is sufficient drying agent in the machine.

When you contact the service personnel, you will need to answer the following questions about the machine:

- Machine type and model
- Machine serial number and installation date
- Brief description of the fault/problem
- 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)	2x2,35
Pump motor, final rinse (kW)	0.11
Fan motor (kW)	2x0,75
Feed motor (kW)	0.11
Booster heater (kW)	18
Drying zone (kW)	9
Tank heater, chemical wash (kW)	24
Tank volume (l)	160
Enclosure protection class (IP)	55

CAPACITY AND OPERATING DATA	
Pump capacity (l/min)	2x500
Washing capacity (cutlery/h) (pcs.)	approx. 6000
Cold water consumption (litres/h)	570
Steam consumption (kg/h)*	72
Sound pressure level, LPA (dBA)**	71 **
Sound power level LWA (dBA)**	87 **

* 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.

CONNECTION, ELECTRICALLY HEATED MACHINE	
Total connected power (kW)	57.9
Main fuse 400 V 3N~(A) *	100
Max. connection area 400 V 3N~ (L1-L3, N, PE) Cu (mm²)	70

* Other voltages on request.

Technical specifications

CONNECTION, STEAM-HEATED MACHINE 50-250 kPa *	
Total connected power (kW)	15.9
Steam pressure (bar)	1.5-2.5
Main fuse 400 V 3N~(A) *	35
Max. connection area 400 V 3N~ (L1-L3, N, PE) Cu (mm ²)	50
Steam (internal thread)	R1"
Condensation connection (internal thread)	R½"

* Other voltages on request.

WATER, DRAIN AND VENTILATION CONNECTIONS	
Water quality, hardness (°dH)	2-7
Hot water connection 55-70 °C (internal thread)	R½"
Cold water connection 5-12 °C (internal thread)*	R½"
Water connection, PP pipe (ø mm)	50
Floor drain, capacity (litres/sec.)	3
Heat load room, latent / sensitive / total (kW)	4.5 / 6.5 / 11

* Required water pressure 3.5 kp/cm² with an output of 10 l/min.

SIZE AND WEIGHT FOR TRANSPORT, STANDARD MACHINE *	
Size (LxWxH) (m)*	4.8x0,78x1.8
Weight (kg) **	840

* Normal delivery fully assembled. If necessary, delivered in smaller components.

** Including packaging (65kg).