

Wexiödisk^W

HOOD TYPE DISHWASHER WD-7 DUPLUS

(translation of the original documentation)

Installation and user manual



1. General instructions	1
1.1 Symbols used in this manual	1
1.2 Symbols on the dishwasher	2
1.2.1 Machine marking	2
1.3 Checking that the machine and the manual correspond	2
2. Safety instructions	3
2.1 General information	3
2.2 Transport	3
2.3 Installation	3
2.4 Detergent and drying agent	4
2.5 Operation	4
2.5.1 Hot water	4
2.5.2 Crushing risk	4
2.6 Cleaning the dishwasher	4
2.6.1 Pressure washing	4
2.6.2 The outside of the machine	4
2.7 Washing the floor	5
2.8 Repairing and servicing the dishwasher	5
2.9 Recycling the machine	5
3. Installation	6
3.1 General information	6
3.2 Requirements for the installation site	6
3.2.1 Lighting	6
3.2.2 Ventilation	6
3.2.3 Drain	6
3.2.4 Space for servicing	7
3.3 Transport and storage	7
3.3.1 Unpacking	7
3.3.2 Recycling the packaging	7
3.4 Installation	8
3.4.1 Positioning the machine	8
3.4.2 Installing auxiliary equipment	9

3.5 Connections	12
3.5.1 Electrical connection	13
3.5.2 Water connection, regardless of any options	13
3.5.3 Drain connection, machines without a drain pump	14
3.5.4 Drain connection, machines with a drain pump	14
3.5.5 Detergent and drying agent connection	15
3.5.6 Bleeding the hood lifting cylinder (option)	16
3.5.7 Steam hood with extractor (option)	17
3.5.8 Condensation unit with heat recovery through the condensing battery (option)	18
3.6 Settings options for detergent and drying agent equipment (option)	20
3.6.1 24V AC or 230V AC power supply for detergent and drying agent dosing via relay 9/J71 and relay 11/J73	20
3.6.2 Settings options for relay 9/J71	23
3.6.3 Settings options for relay 11/J73	24
3.7 Trial operation	25
3.7.1 Start-up schedule	25
3.8 Technical documentation	27
4. Instructions for use	28
4.1 Preparations	28
4.1.1 The machine's design	28
4.1.2 Preparations before filling	30
4.1.3 Filling the machine	31
4.2 Using the machine	32
4.2.1 Selecting a programme	32
4.2.2 Changing the washing temperature and washing time	32
4.2.3 Washing	35
4.3 After use – cleaning	38
4.3.1 Draining and internal cleaning (machine without a drain pump)	39
4.3.2 Draining and internal cleaning (machine with a drain pump)	41
4.3.3 Emptying the tank for the recirculating rinse	43
4.3.4 Cleaning each week	44
4.3.5 Cleaning once a year	45
4.3.6 Cleaning the exterior	46
4.3.7 Incorrect cleaning methods	46
4.3.8 Operating problems	47
5. Technical information	51

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 dishwasher.

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

1.1 Symbols used in this manual



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 component is a warning of electrical equipment. The machine is sensitive to electrostatic discharge (ESD), which is why a static electricity wristband must be used when handling the electronics.



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 to get the best performance from the machine.



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

General instructions

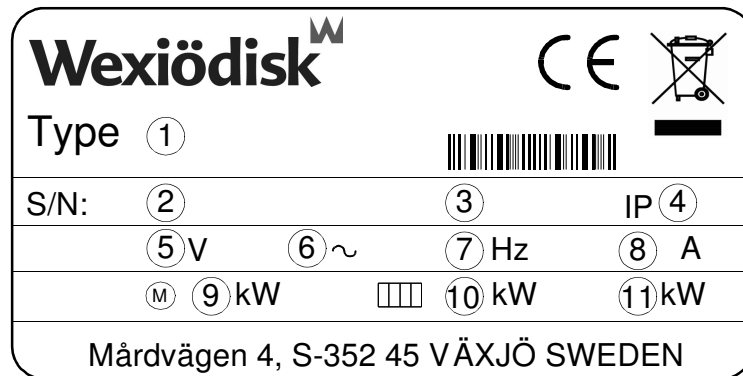
1.2 Symbols on the dishwasher



This symbol on a component is a warning of electrical equipment. The component may only be removed by a qualified electrician. The machine is sensitive to electrostatic discharge (ESD), which is why a static electricity wristband must be used when handling the electronics.

1.2.1 Machine marking

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 zero
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 number found on the rating plates.

2. Safety instructions

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.



Modifying the equipment without the approval of the manufacturer invalidates the manufacturer's product liability.

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.



Switch off the machine immediately in the event of a fault or malfunction. The machine must only be serviced by trained engineers. The regular checks described in the manual must be carried out in accordance with the instructions. The machine must be serviced by a person authorised to do so by the manufacturer. Use original spare parts. Contact an authorised service company to draw up a programme of preventative maintenance. Dangerous situations may arise if the instructions above are not followed.

Before using the machine, ensure that personnel are given the necessary training in operating and maintaining the machine.

2.2 Transport



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

2.3 Installation



The electrical cabinet must only be opened by an authorised electrician. The machine is sensitive to electrostatic discharge (ESD), which is why a static electricity wristband must be used when handling the electronics.



The water connections must only be put in place by qualified technicians.

Water pipes must be connected in a way that complies with the current regulations of the local water supply authority. Check that the water connections do not leak before starting the machine.

Make sure that the mains voltage is the same as that indicated on the machine's rating plate. The machine should be connected to a lockable mains switch.

Safety instructions

2.4 Detergent and drying agent



Only detergent and drying agent intended for industrial dishwashing machines must be used. Washing-up liquid must not be used in the machine or for pre-treating items (soaking, pre-washing, etc.). Contact your detergent supplier regarding the choice of a suitable detergent.



Be aware of the risk of handling washing and drying agents. Protective gloves and safety glasses should be used when handling dishwasher detergent. Read the warning text on the detergent and drying agent containers as well as the detergent supplier's regulations.

2.5 Operation

2.5.1 Hot water



The temperature of the washing and rinsing water is 60 °C and 85 °C. If the machine has a manual hood lift, do not open the hood until the washing and rinsing phase is finished.

2.5.2 Crushing risk



If the machine has an automatic hood lift, take care when the lid is closing that your fingers or arms do not become trapped.

2.6 Cleaning the dishwasher



The water in the tank has a temperature of approximately 60 °C and contains detergent. Take care when draining and cleaning the dishwasher. Use protective gloves.

2.6.1 Pressure washing



The machine must not be cleaned with a pressure washer, either inside or out.



In order to satisfy current requirements, electrical components of approved IP classes are used. No enclosure classes are designed to withstand pressurised water.

2.6.2 The outside of the machine



Pressure washers and hoses must not be used to wash the outside of the machine. Water can penetrate into the electrical cabinet and the control panel and damage the equipment, which may affect the safety of the machine.

Safety instructions

2.7 Washing the floor



When the floor is washed, water can splash up under the machine and damage the components. These have not been designed to withstand being washed with water. Do not wash the floor within a distance of 1 metre from the dishwasher. Problems with splashing can also occur when using ordinary hoses.

2.8 Repairing and servicing the dishwasher



Disconnect the power supply before removing the front panel. Avoid touching hot pipes and the booster heater.

Check the following points:

- Are there any error messages on the display?
- Has the machine been used according to the instructions?
- Are all the removable parts in the correct place?
- Is the mains switch in the "ON" position?
- Are the fuses in the electrical cabinet undamaged? Ask the service personnel to check the fuses.

If this does not solve the problem, ask authorised service personnel to check the machine.

2.9 Recycling the machine



When the dishwasher has reached the end of its service life, it must be recycled in accordance with current regulations. Contact professionals who specialise in recycling.

3. Installation

3.1 General information



The machine must be installed by authorised personnel only.

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



Software version 2.3 or later should be used to connect a WD-PRM 7 to a WD-7 DUPLUS. If you are using an earlier software version this should be updated. The level pipe in the dishwasher has been replaced with a bottom filter.

The instructions should be used together with the machine's wiring diagram and flow diagram.



The machine is CE marked. The CE mark is only valid for machines that have not been modified. If the machine is damaged as a result of the instructions not being followed, this invalidates the supplier's guarantee and the product liability.

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 change rate is required in the dish-washing room. The ventilation requirements for the room are dimensioned as per applicable standards.

3.2.3 Drain

There must be a floor drain 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.

Installation

3.2.4 Space for servicing

A 1-metre area should be left clear in front of the machine for servicing purposes.

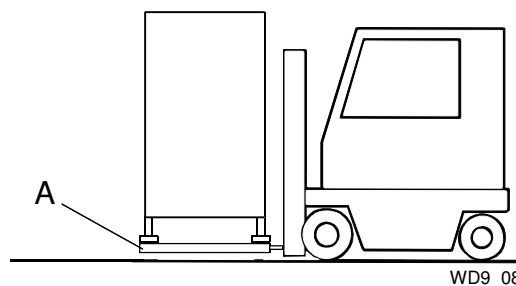
3.3 Transport and storage

Always transport the machine in an upright position.

Take care during transport, as there is a risk of the equipment tipping over.



NOTE: The machine must not be transported without a pallet or other support, 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=Wooden pallet

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

3.3.1 Unpacking

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

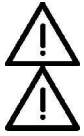
Check that all parts have been delivered by comparing them with the delivery note.

3.3.2 Recycling the packaging



Packaging must be disposed of or recycled in accordance with local regulations.

3.4 Installation



Check that the overheating protection on the booster heater is set to zero.

If holes need to be made in the machine, each hole must be fitted with an edge strip or similar protection.

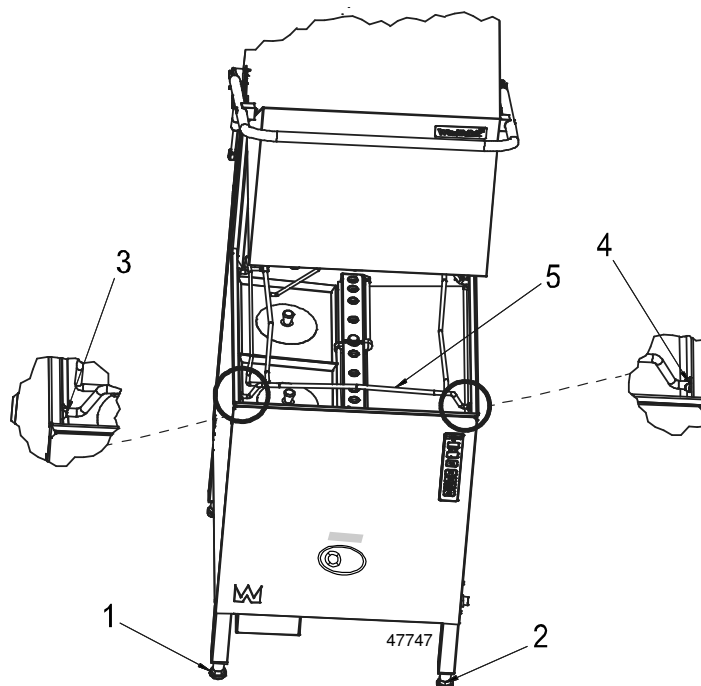
3.4.1 Positioning the machine

Put the machine in position and check that it is horizontal using a spirit level. Place the spirit level on the join between the machine tank and the hood. Once the machine has been filled with water, check that it is level.

If the machine is to be corner-loaded, it must be positioned with the control panel furthest away from the wall.

Adjust the height using the machine's legs. The machine can also be fitted with extension legs (35 mm).

Adjusting the folding basket path



Place the machine in level by adjusting the four feet so they have full contact with the floor. Use spirit level.

Fill up your machine.

Lift basket guide (5) up and down and adjust foot 1 and 2 until the basket guide is in the middle of the two supports 3 and 4.

If further adjustment of the machine's leveling is required, the legs are adjusted in pairs (side, back or front).

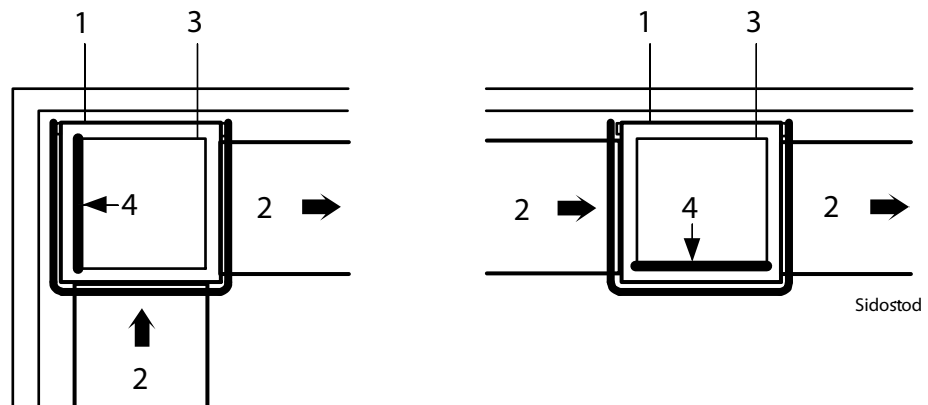
Installation

3.4.2 Installing auxiliary equipment

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

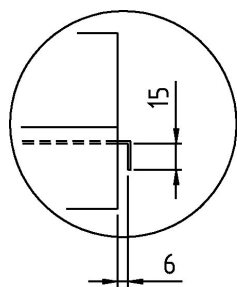
The machine can be positioned so that it can be straight-loaded or corner-loaded. Depending on the position chosen, the removable side support (4) on the basket conveyor must be positioned as shown in the figures below.

NOTE: When connecting sinks and conveyors, no holes must be drilled on the front of the machine. If holes need to be made in the machine, each hole must be fitted with an edge strip or similar protection.



Position of the side support

1. Dishwasher
2. Sink
3. Basket conveyor
4. Side support

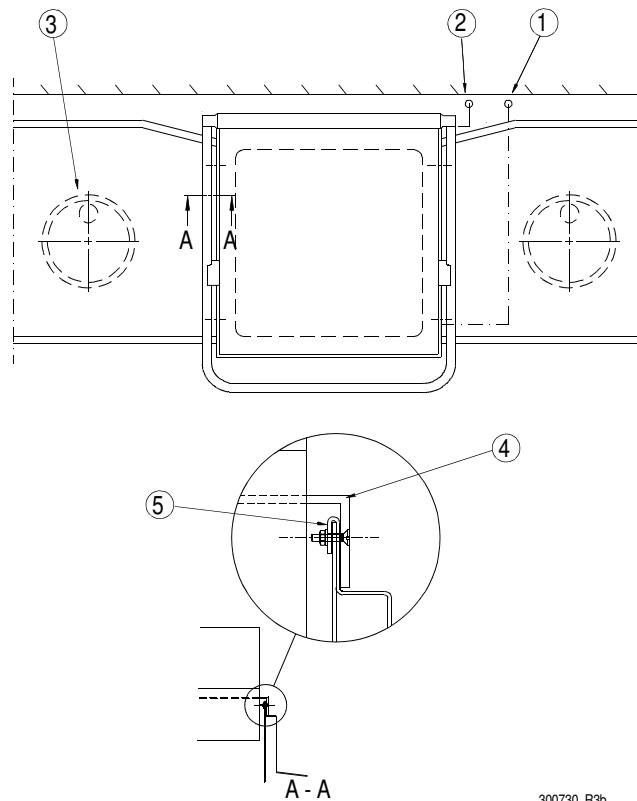


300730_R1a

Detail of sink cover

The connection profile must look like the one shown in the drawing. The distance of 6 mm may be reduced, but must not be less than 3 mm.

Connection to the left- or right-hand side of the machine



300730_R3b

1. Water connection
2. Electrical connection
3. Floor drain
4. Connection to sink
5. Upper edge of lower part of machine

- Attach the sink connection (4) to the machine and then adjust.
- Drill two \varnothing 4.5 mm holes through the sink connection and the machine, approx. 100 mm from each outer edge.
- Countersink the holes.
- Seal with silicone between the connection and the machine.
- Secure the sink with countersunk M4 screws, grommets on the outside surface and nuts. Alternatively, you can secure the sink to the wall with wall brackets.

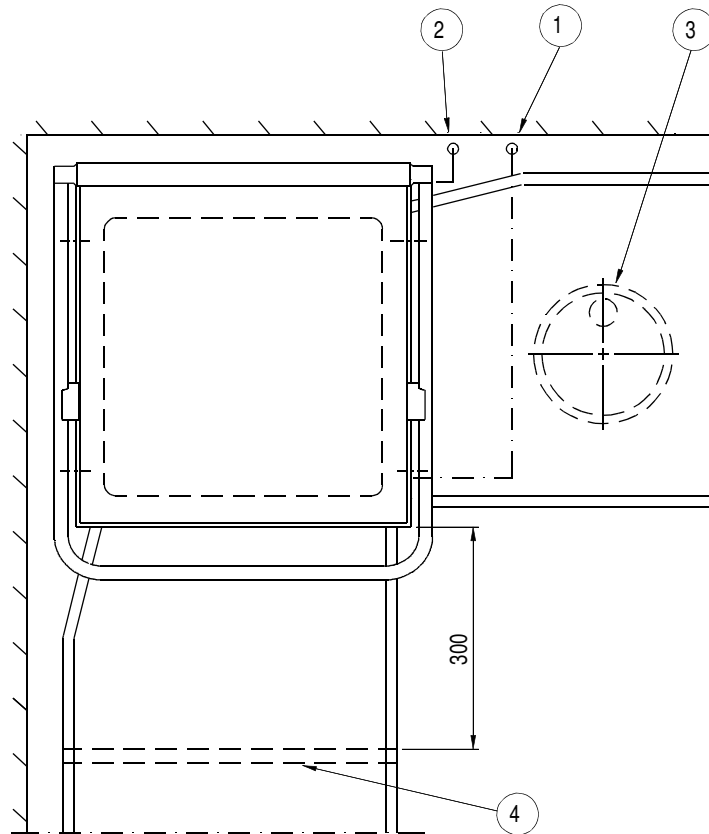
Use a spirit level to check that the sinks are horizontal and adjust the height, if necessary.

Connection to the front of the machine

NOTE: When connecting sinks and conveyors, no holes must be drilled on the front of the machine.

If the machine is to be corner-loaded, there must be at least 300 mm of free space in front of the machine to allow the electrical cabinet to be opened.

The legs on the sink connected to the front of the machine must be at least 300 mm away from the machine to allow the machine to be accessed for servicing.



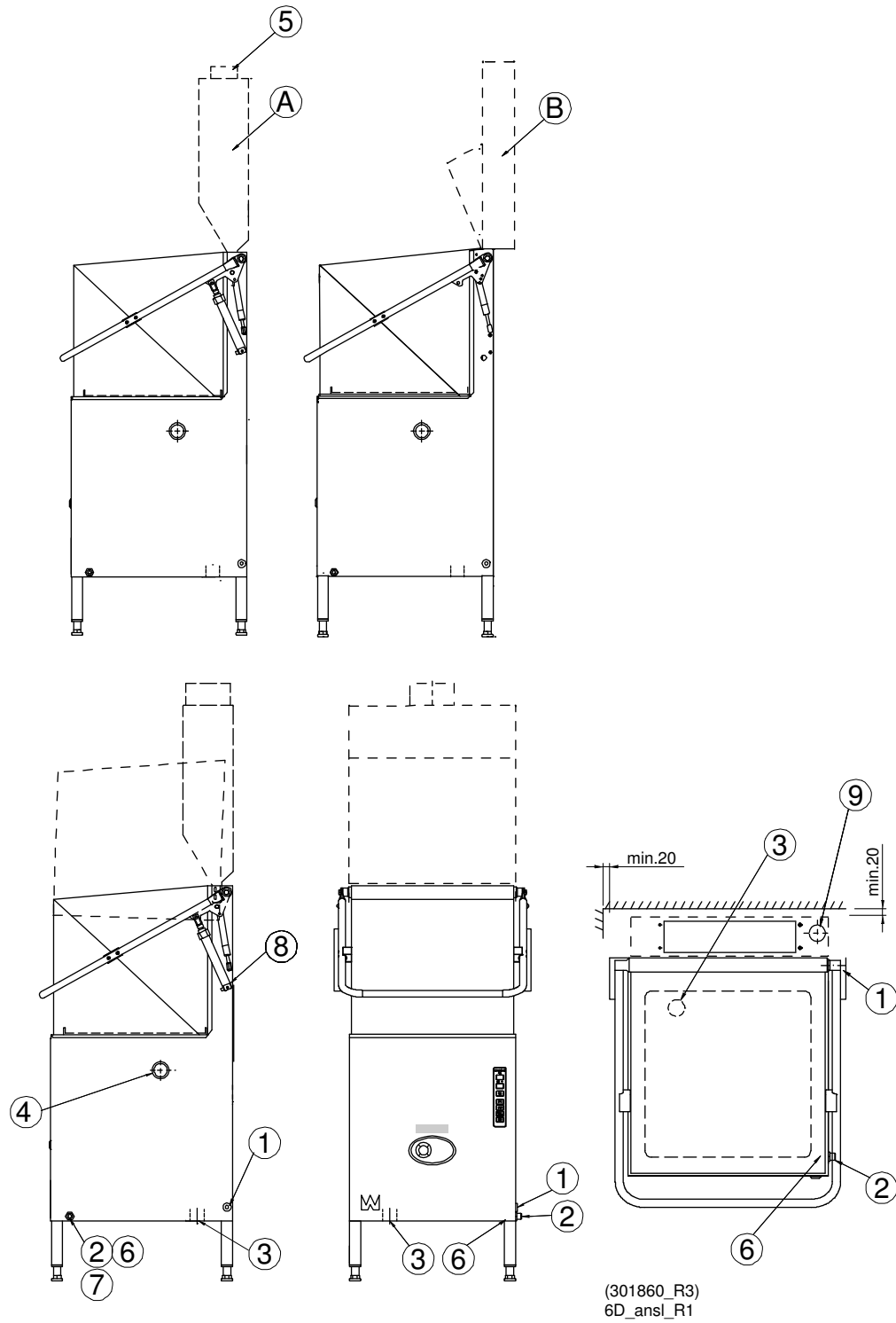
300730_R2c

1. Water connection
2. Electrical connection
3. Floor drain
4. Legs

- Attach the sink connection to the machine and then adjust.
- Seal with silicone between the connection and the machine.
- Secure the sink to the wall with wall brackets.

Use a spirit level to check that the sinks are horizontal and adjust the height, if necessary.

3.5 Connections



Installation

- A=Steam hood with extractor (option)
 - B=Condensation unit with heat recovery through the condensing battery (option)
1. Electrical connection
 2. Water connection
 3. Drain connection
 4. Plugged hole for detergent hose
 5. Ventilation connection (on machines with steam hood)
 6. Water outlet for detergent dosing
 7. Water connection from below (option)
 8. Air bleed for the lifting cylinder (on machines with an automatic hood)
 9. Drain connection (option)

3.5.1 Electrical connection



This symbol on a component is a warning of electrical equipment. The component may only be removed by a qualified electrician. The machine is sensitive to electrostatic discharge (ESD), which is why a static electricity wristband must be used when handling the electronics.



Information about electrical connections can be found on the machine's wiring diagrams. These are located on the inside of the front panel.



NB For future servicing of the machine, it is important to ensure that the correct wiring diagram is available. The wiring diagram supplied with the machine should always be kept on the inside of the front panel after installation.



The machine must be connected to a lockable mains switch. This should be placed on a wall, well-protected from water and from the steam which escapes when the hood is opened.



The machine is supplied with the electrical cable connected (1).

3.5.2 Water connection, regardless of any options

The water pipe is connected at (2) or from below at (7) (option). If the machine is connected to a hose, the internal diameter of the hose must be at least 12 mm.

The required water flow and pressure can be found in the TECHNICAL INFORMATION.



There must be stopcock on the incoming water pipe.

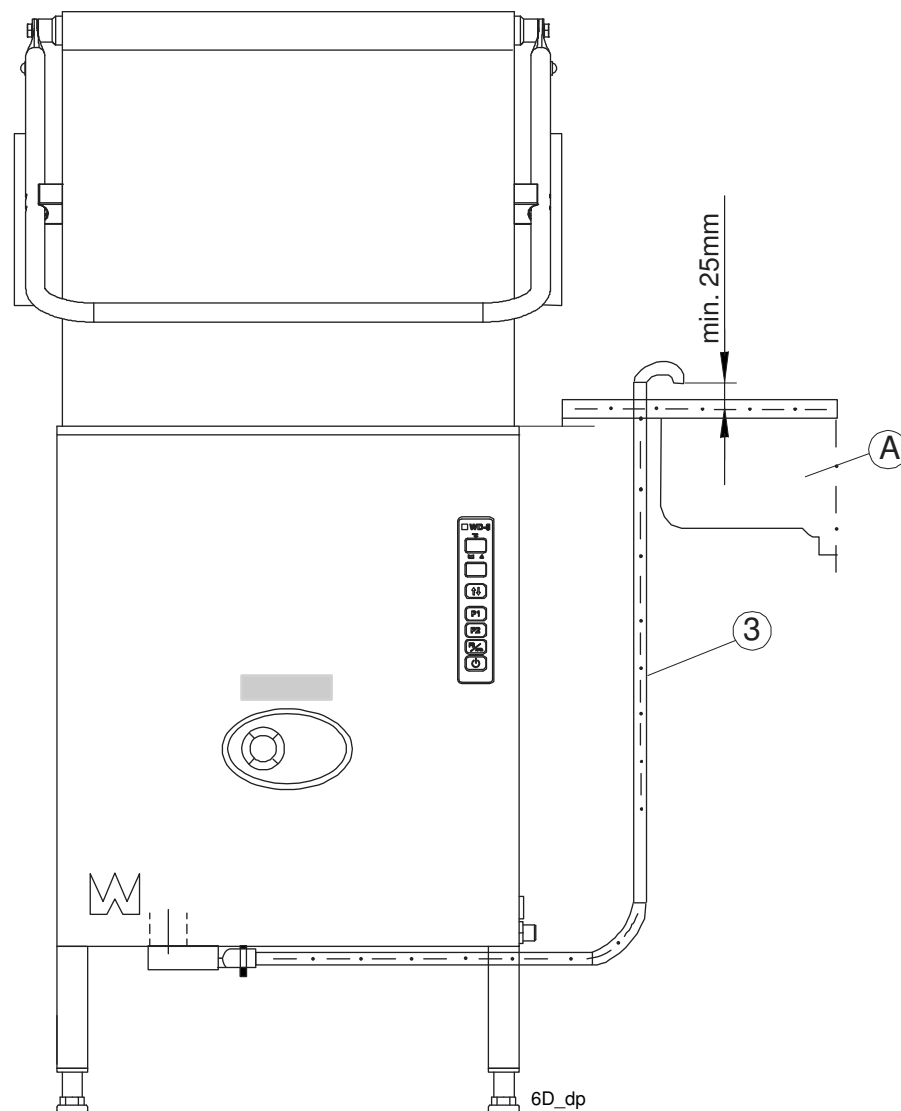
Installation

3.5.3 Drain connection, machines without a drain pump

The waste water system connected to (3) 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. The capacity of the floor drain must be 3 litres/second.

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

3.5.4 Drain connection, machines with a drain pump



The drain connection (3) consists of a spiral hose. The drain is run to a washing-up sink (A) where it must end at least 25 mm above the washing-up sink.

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

Installation

3.5.5 Detergent and drying agent connection

Drying agent equipment is included with the machine. Connect the suction hose on the drying agent injector to the drying agent container.

The equipment for liquid detergent is option. If the machine is supplied with detergent equipment, connect the suction hose on the detergent pump to the detergent container.

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.

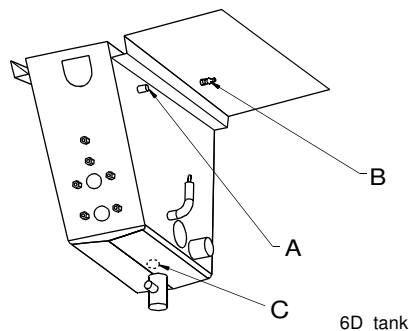
There is a plugged hole for a detergent hose on the end of the machine (4). The holes must be fitted with edge strips or similar protection.

The detergent hose is connected to the pipe (A) at the top of the chemical washing tank on the right-hand side (see the figure below). There is a connection nipple in the pipe (B).

If detergent paste is being used, the connection nipple must be removed and the hose connected directly to the pipe (A).

If liquid detergent is used, the nipple must be left in the pipe. Drill a hole through the nipple and connect the hose to the nipple.

The measuring cell for measuring the concentration of detergent in the washing water must be put in the bottom of the tank. On the inside bottom of the tank next to the heating element, the letter "C" is stamped into the metal to mark where the hole should be drilled. If holes need to be made in the machine, each hole must be fitted with an edge strip or similar protection.



Connecting the detergent hose

Marking for measuring cell

A=Connection in the tank

B=Connection nipple

C=Marking in bottom of tank for measuring cell

The water outlet for detergent (6) is on the incoming water pipe (2).

The process of setting the detergent and drying agent dosage is described in the ADJUSTMENT INSTRUCTIONS.

Electrical connections, see wiring diagram.

The machine can also be equipped with detergent and drying agent equipment via external connections. See the wiring diagram for the correct connection.

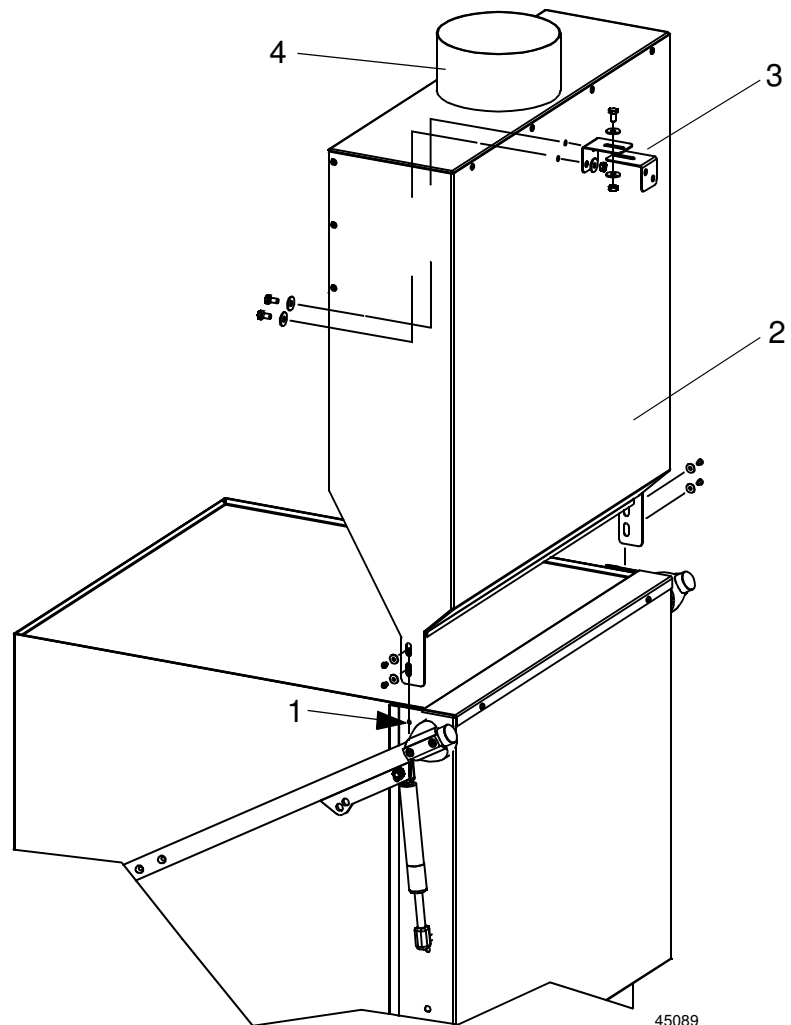
Installation

3.5.6 Bleeding the hood lifting cylinder (option)

1. Close the hood.
2. Loosen the hose connection of the first air cylinder approx. 2-3 turns using a 13 mm box wrench.
3. Keep the hood in the closed position. Press the up button. Check that only water and no air comes out of the hose connection. Otherwise repeat the procedure.
4. Tighten the hose connection with the hose still in the lower position.
5. Repeat the same procedure with the second cylinder.

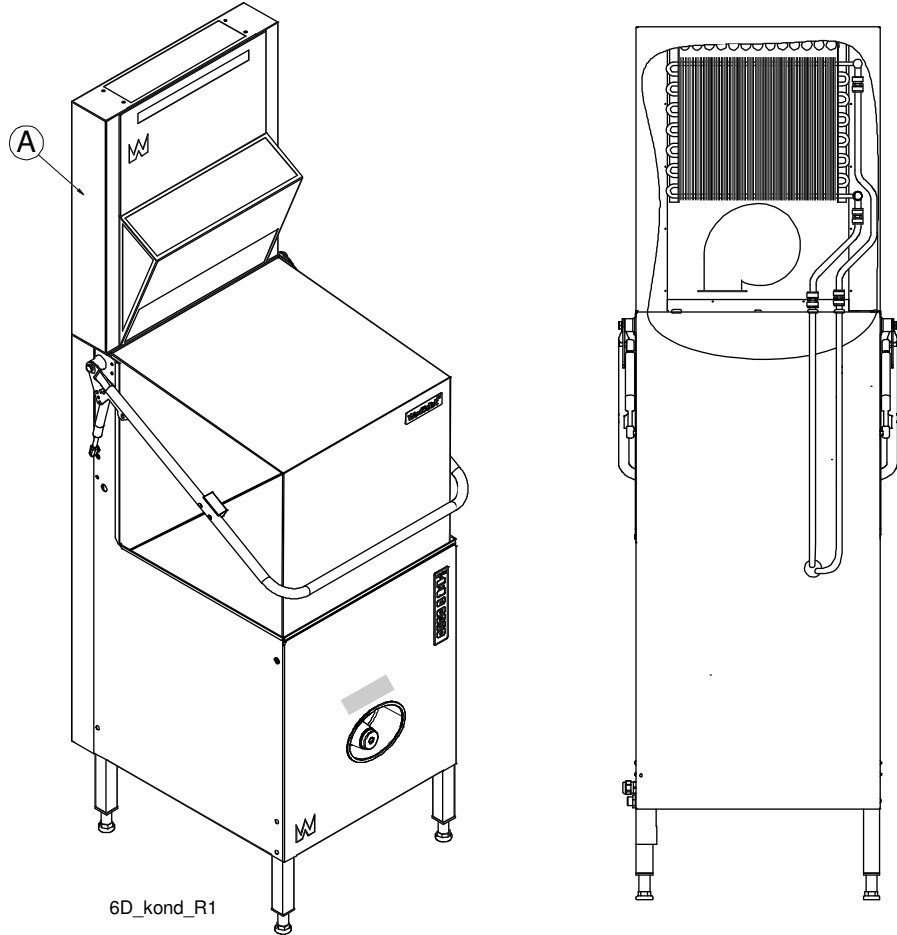
Installation

3.5.7 Steam hood with extractor (option)



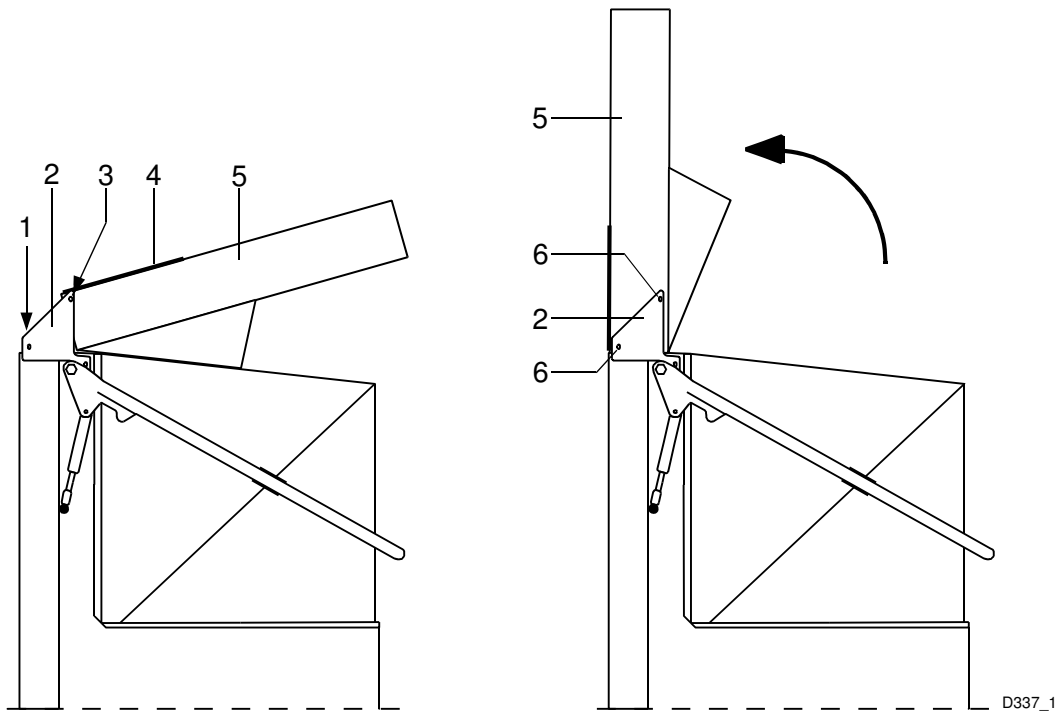
Steam hood with extractor

1. Existing screws
 2. Steam hood
 3. Attachment
 4. Connection for ventilation \varnothing 160 mm
- Undo the existing M4 screws at (1).
 - Replace the existing screws and washers with the longer M4 screws and the larger washers provided. The steam hood (2) is fastened to (1) using these screws.
 - Screw one bracket (3) firmly to the wall behind the machine. The other bracket must be put in the corresponding position on the back of the steam hood. Two holes \varnothing 7 mm must be drilled through the plate.
 - Screw both the brackets (3) together with the screws, washers and nuts provided.
 - The ventilation duct is connected to (4).

Installation**3.5.8 Condensation unit with heat recovery through the condensing battery (option)**

A=Condensing battery

Fitting the condensation unit



1. Position of the mounting points for the condensation unit
2. Attachment
3. Screw
4. Cover plate
5. Condensation unit
6. Screw and washer

- When the machine is delivered, the condensation unit (5) is folded down on top of the machine. It is fastened to the bracket (2) with screws (3) during transport. Remove the screws.
- The screws used to fit the condensation unit on the machine are screwed into the mounting points on top of the machine (1). Remove the 5 screws.
- Remove the cover plate (4).
- Lift up the condensation unit (5) and fasten it to the machine at (1) using the five screws and the flange provided.
- Fasten the condensation unit to both brackets (2) with the screws and washers at (6).
- Fit the cover plate (4). The screws for the cover plate are supplied in a plastic bag.

3.6 Settings options for detergent and drying agent equipment (option)

Check which equipment is fitted to the machine before starting work.

Switch off the power supply to the machine at the mains switch before starting work in the electrical cabinet.

The first section "24V AC or 230V AC power supply for detergent and drying agent dosing via relay 9/J71 and relay 11/J73" explains how the contacts are supplied with the relevant voltage.

The second section "Settings options for relay 9/J71 and relay 11/J73" describes the different settings available and how they can be changed.

3.6.1 24V AC or 230V AC power supply for detergent and drying agent dosing via relay 9/J71 and relay 11/J73



Upon delivery, the machine 230V closing function between J71-101 and J71-102.

The detergent and drying agent dosage system can take its power from two relays on the data card. The relays can be dead, with no power supply, or they can be connected to a 24V AC or 230V AC supply to power the dosage system. Each relay has a contact for connecting the equipment. Relay 9 for detergent is connected via a 3-pin J71 contact. Relay 11 for drying agent is connected via a 2-pin J73 contact.



For right connection at X10 see the machines wiring diagram.

230V AC equipment should not draw more than 1.5A.

24V AC equipment should not draw more than 1.5A.

The time and method for switching on the relays is determined by the settings in the table of reference values. See the section "Settings options for relay 9/J71 and relay 11/J73".

Relay 9/J71. Dead closing function (230V/400V machine)

To use the closing function without a power supply, follow these instructions:

- Disconnect a blue 0,75mm² wire from connector N1 or N2 in the electrical cabinet to contact J71-102.
- Disconnect a black 0,75mm² wire from connector X10 to contact J71-105.
- Contact the equipment to be controlled to contacts J71-101 and J71-105.

**Relay 9/J71. Relay 9. 24V AC version
(230V/400V 3-phase machine)**

To connect a 24V AC power supply to the contact, follow these instructions:

- Disconnect a blue 0,75mm² wire from connector N1 or N2 in the electrical cabinet to contact J71-102.
- Disconnect a black 0,75mm² wire from connector X10 to contact J71-105.
- Connect the equipment to be controlled to contacts J71-101 and J71-102. There will be two wires connected to contact J71-102.

**Relay 11/J73. Dead closing function
(230V/400V 3-phase machine)**

To use the closing function without a power supply, follow these instructions:

- Contact the equipment to be controlled to contacts J73-103 and J73-104.

Relay 11/J73. 230V AC version (400V 3-phase machine)

To connect a 230V AC power supply to the contact, follow these instructions:

- If a 230V AC version of J71 is fitted:
Connect J71-105 to J73-104 using a black 0.75mm² wire.
- If J71 is not fitted or is not a 230V AC version:
Connect a black 0.75mm² wire from connector X10 to contact J73-104.
- Connect the equipment to be controlled between contact J73-103 and connector N1, N2 or N3 in the electrical cabinet.

Relay 11/J73. 230V AC version (230V 3-phase machine)

To connect a 230V AC power supply to the contact, follow these instructions:

- If a 230V AC version of J71 is fitted:
Connect J71-105 to J73-104 using a black 0.75mm² wire.
- If J71 is not fitted or is not a 230V AC version:
Connect a black 0.75mm² wire from connector X10 to contact J73-104.
- Connect the equipment to be controlled between contact J73-103 and connector X10 in the electrical cabinet.

**Relay 11/J73. Relay 11. 24V AC version
(230V/400V 3-phase machine)**

To connect a 24V AC power supply to the contact, follow these instructions:

- If a 24V AC version of J71 is fitted:
Connect J71-105 to J73-104 using a red 0.75mm² wire.
- If J71 is not fitted or is not a 24V AC version:
Connect a red 0.75mm² wire from the 8-pin contact on the data card labelled J69-8 (24V) to contact J73-104.
- Connect the equipment to be controlled between contact J73-103 and connector X10 in the electrical cabinet.

3.6.2 Settings options for relay 9/J71

The function of relay 9/J71 can only be influenced by the reference value on row 22.

Relay 9/J71. Set/change the dosage interval during filling and final rinse

1. Switch on the power to the machine.
2. Go into S1 mode, by pressing the service button on the data card.
3. Go to row 22.
4. Increase the setting by pressing "P2".
5. Reduce the setting by pressing "P3".
6. Leave S1 mode by pressing the 0/1 button.
7. The setting is saved when you leave S1 mode.
8. The new value will be used next time the machine is filled or after the next final rinse, when the chemical wash start.

Relay 9/J71. Constant connection when the machine is started

1. Switch on the power to the machine.
2. Go into S1 mode, by pressing the service button on the data card.
3. Go to row 22.
4. Change the setting to "00".
5. Leave S1 mode by pressing the 0/1 button.
6. The setting is saved when you leave S1 mode.
7. The new value will be used as soon as it is applicable.

Relay 9/J71. Parallel operation with the chemical pump

1. Switch on the power to the machine.
2. Go into S1 mode, by pressing the service button on the data card.
3. Go to row 22.
4. Change the setting to "99".
5. Leave S1 mode by pressing the 0/1 button.
6. The setting is saved when you leave S1 mode.
7. The new value will be used as soon as it is applicable.

3.6.3 Settings options for relay 11/J73

Set the correct function for relay 11/J73 by ensuring that the reference value on row 105 is set to "0", which corresponds to "external dosing of drying agent", before starting on the settings on row 23.

Relay 11/J73. Set/change the dosage interval during filling and final rinse

1. Switch on the power to the machine.
2. Go into S1 mode, by pressing the service button on the data card.
3. Go to row 23.
4. Increase the setting by pressing "P2".
5. Reduce the setting by pressing "P3".
6. Leave S1 mode by pressing the 0/1 button.
7. The setting is saved when you leave S1 mode.
8. The new value will be used during the next final rinse.

Relay 11/J73. Parallel operation with the final rinse valve (hose pump)

1. Switch on the power to the machine.
2. Go into S1 mode, by pressing the service button on the data card.
3. Go to row 23.
4. Change the setting to "00".
5. Leave S1 mode by pressing the 0/1 button.
6. The setting is saved when you leave S1 mode.
7. The new value will be used as soon as it is applicable.

Relay 11/J73. Parallel operation with the chemical pump

1. Switch on the power to the machine.
2. Go into S1 mode, by pressing the service button on the data card.
3. Go to row 23.
4. Change the setting to "99".
5. Leave S1 mode by pressing the 0/1 button.
6. The setting is saved when you leave S1 mode.
7. The new value will be used as soon as it is applicable.

3.7 Trial operation

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

3.7.1 Start-up schedule

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

Machine type:

Machine serial number:

Installation date:

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

Dealer:
Telephone:
Contact:

Installation company:
Telephone:
Contact:

Service company:
Telephone:

Detergent supplier:
Telephone:

End-user signature:

Name (in capitals):

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

1. Check:

- Water and drain connections
- That the machine is evenly balanced
- Detergent and drying agent
- Filters and level pipe are in place
- The overheating protection on the booster heater is set to zero.

2. Filling the machine:

- Turn on the mains switch and any circuit breakers
- Close the hood
- Fill the machine with water in accordance with the INSTRUCTIONS FOR USE. (If the machine is not filled, check return valve that is located after the booster heater.)
- Bleed the hood lifting cylinder (option) in accordance with the manual

3. Start the machine:

- Check all pumps for direction of rotation
NOTE: If the direction of rotation is wrong, two phases should be switched in the main contactor.

4. Check the setting of the reference values:

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

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

- There are no water leaks
- The hood switch functions
- The automatic hood lift functions (option)
- The automatic hood closure functions (option)
- The water temperatures are maintained
- The washed items are clean
- The washed items are dried
Note: The equipment for detergent and drying agent is roughly set at the factory; contact your detergent supplier for a more precise setting.

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

- Re-tighten all the connections on the relays and any circuit breakers
- Set all the circuit breakers to the ON position
- Display the maintenance instructions supplied with the machine.

7. Train the dishwashing staff

3.8 Technical documentation



To ensure that the machine is operated and serviced correctly, it is important that the documentation supplied with the machine is made available to the personnel using it. The installation and user manual, which describes, amongst other things, how to operate and maintain the machine, should be stored near the machine.

If the service manual is supplied with the machine, it should be given to the service engineer who is responsible for the machine.

If the spare parts manual is supplied with the machine, it should be given to the service engineer who is responsible for the machine.

If the WEB Tool manual is supplied with the machine, it must be kept near the machine.

4. Instructions for use



All personnel using the machine must be given training in how the machine works by the person responsible for staff safety.



The dishwasher should not be used by anyone suffering from a physical or mental illness.



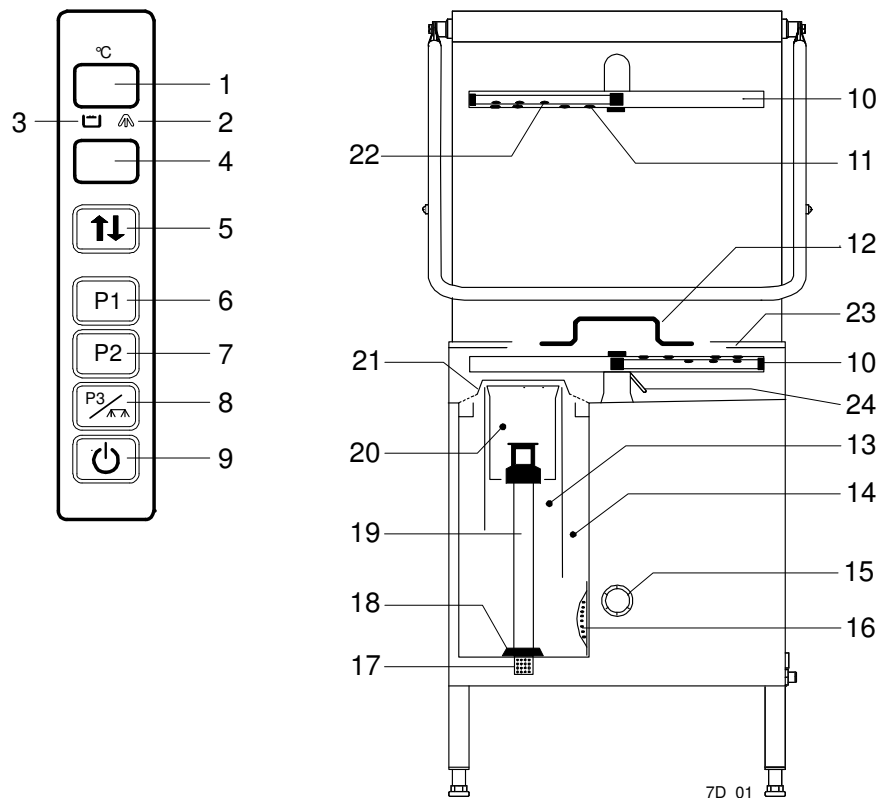
Children should be watched closely to ensure that they do not play with the machine.

4.1 Preparations



To facilitate installation and removal of the removable parts the basket conveyor can be folded.

4.1.1 The machine's design



Instructions for use

1. Display for temperature during operation. Together with display (4), it shows error messages.
2. Final rinse indicator. The symbol is lit while the machine is filling up, during the final rinse phase and when the cleaning programme is run after a completed washing cycle. The symbol flashes if the hood is opened during the washing cycle or if the final rinse water has not reached the correct rinse temperature when the rinsing phase is due to start. The machine continues washing until the correct rinse temperature has been reached.
3. Symbol for washing function. After the machine is started, the symbol lights up when the tank is full. The symbol flashes if the water level in the tank is too low.
4. Display for programme. The remaining washing time is shown while the programme is running.
5. Button for closing or opening the hood. (On machines with an automatic hood.)
6. Button for washing programme 1. If the machine has a drain pump, P1 is used to start the drain pump and empty the tank after washing.
7. Button for washing programme 2.
8. Button for washing programme 3. When the machine is in shut-off mode, P3 is used to start internal rinsing when the cleaning programme is used to clean the machine.
9. Button to switch the power on or off. This button is also used to reset alarms, and to move to service mode. In service mode, the operator can change the washing temperature and time for the different programmes.
10. Washing and rinsing arm
11. Wash nozzle
12. Autostart switch (option: if the machine has this option, the hood is closed automatically when a basket is loaded into the machine.)
13. Tank for recirculating rinse water
14. Wash tank
15. Filter for recirculating rinse
16. Pump filter
17. Drain filter (on machines with a drain pump).
18. Rubber sleeve
19. Level pipe (if the machine is connected to a WD-PRM6 pre-rinse machine, there will be no level pipe. this will then be replaced with a bottom filter).
20. Filter for recirculating rinse
21. Tank filter and cover plates
22. Rinse nozzle
23. Folding basket conveyor
24. Lever for normal / heavily soiled wash

Instructions for use

4.1.2 Preparations before filling

Numbers in brackets refer to the diagram in the chapter "The machine's design".

Check:

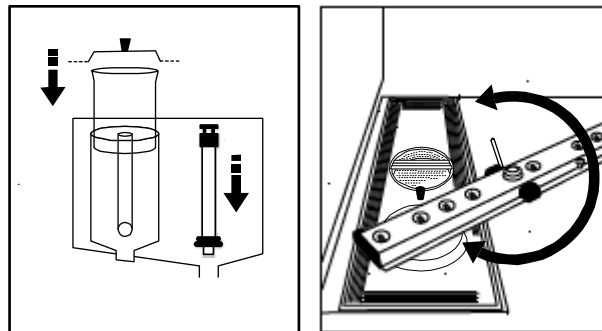
- that the dishwasher and all the removable components are clean and that there is no dirt in the nozzles in the washing and rinsing arms (11, 22)
- that the rubber sleeve (18) is undamaged.
- that the stopcock is open
- the amount of detergent and drying agent.



Washing-up liquid must not be used in the machine or for pre-treating items (soaking, pre-washing, etc.). It causes foam to form and produces poor washing results.

Fit:

Drain filter (17) (on machines with drain pump only), level pipe (19), filter for recirculating rinse (20), tank filter and cover plates (21). The rubber sleeve (18) must seal against the base plate. Check that the lower washing arm can rotate freely.



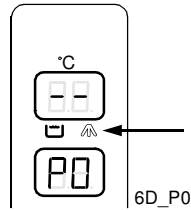
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Instructions for use

4.1.3 Filling the machine

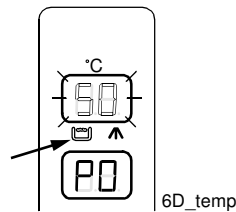
Switch on the power using the “0/1” button (9) on the panel. Close the hood. On machines with automatic hood lift, the hood is closed with the button (5). The machine will start to fill.

The display (1) shows two dashes “--” until the machine is full. The other display (4) shows “P0”. P0 is a pause mode which indicates that no washing programme has been selected. The symbol (2) is lit.



The final rinse symbol lights up when the heater is started

Once the dishwasher is full, the symbol (3) lights up and the display (1) shows the temperature of the washing water. If the washing temperature falls below the set value by more than 5°C, the temperature display flashes.



The symbol for the washing function lights up when when the machine is full and the temperature display flashes when the washing temperature is too low

The water in the washing tank will continue to be heated until the correct washing temperature has been reached. Heating time depends on the incoming water temperature, the power of the booster heater and any options. The normal operating temperature for the washing phase is 60°C. The machine can be set up so washing cannot start until the correct washing temperature has been reached.

Once the correct temperature has been reached, the washing pump will start and run for a short period to mix the detergent.

4.2 Using the machine

4.2.1 Selecting a programme

The machine can be set to two wash modes. - = normal wash or + = heavily soiled wash. A lever (24) inside the machine is used to adjust the setting.

When washing pans and very deep items, the heavily soiled programme should be selected.

When the heavily soiled programme is selected, there is increased washing pressure from the lower washing arm.

The control panel has three programme buttons: P1, P2 and P3.

- P1=Lightly soiled items (e.g. trays and glassware)
- P2=Normal load
- P3=Heavily soiled items

The washing temperature and chemical washing time for each programme is set on delivery. The operator can change these values if required.

4.2.2 Changing the washing temperature and washing time

The factory setting for the washing temperature is 60°C. The operator can adjust the temperature to between 55 and 70°C.

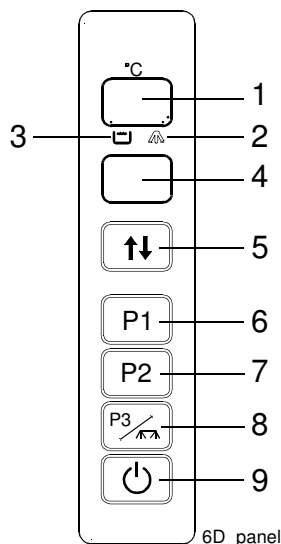
The chemical washing times for each programme are set on delivery to:

- 0.9 min. (programme P1)
- 1.5 minutes (programme P2)
- 3.0 min. (programme P3)

The washing times can be adjusted between 0.4 and 4.0 minutes.

Changing the values – Selecting service mode

The machine must be set to service mode when the operator needs to change a value. This is done using the control panel. The values that can be changed flash. The displays and buttons have different functions than when the machine is in normal operating mode.



The panel's functions in service mode.

1. Display for the table numbers and the row numbers of each table.
2. Symbol for final rinse.
3. Symbol for washing function.
4. Display of values and other information for all the row numbers in the tables.
5. Button for opening/closing the hood. (On machines with an automatic hood.)
6. Use the P1 button to move between the table rows or to reset the values to those last saved.
7. Use the P2 button to increase a value or move forwards between the tables.
8. Use the P3 button to reduce a value or move backwards between the tables.
9. Use the 0/1 button to enter or exit service mode.

All the values are laid out in tables, with each table containing a certain number of rows, one for each value. The table containing the values for the washing temperature and washing times for the different programmes is "0.0".

The values for washing temperature and washing times are on rows 01 to 04 (inclusive) of table "0.0".

Instructions for use

Row number	Relates to	Range of settings
01	Washing temperature	55-70 °C
02	Washing time programme P1	0.4-4.0 min
03	Washing time programme P2	0.4-4.0 min
04	Washing time programme P3	0.4-4.0 min

To select service mode and change the washing temperature and washing time, follow these instructions:

- When moving to service mode, the washing programme must be finished.
- Press the 0/1 button (9). Both the displays will now show two horizontal dashes "--" and the machine will be in shut-off mode.
- Hold the 0/1 button (9) down for approx. 3 seconds until the top display (1) shows "0.0". When "0.0" appears on the display (1), the machine is in service mode.
- Press P1 (6). The top display (1) will now show 01, the first row number in the table. The lower display (4) shows the set washing temperature, flashing. Only values that flash when displayed can be changed. If the temperature is to be changed, press P2 (7) to increase the value or P3 (8) to reduce the value.
- If the washing time for a programme is to be changed, use P1 (6) to move to the next row number in the table. For explanations of row numbers 01, 02, 03 and 04, see table "0.0" above.
- When the settings are complete, exit service mode by holding down the 0/1 button (9) for approx. 3 seconds until both displays show two horizontal dashes "--". The changed values are now saved.
- Return to normal operating mode by then quickly pressing the 0/1 button (9).

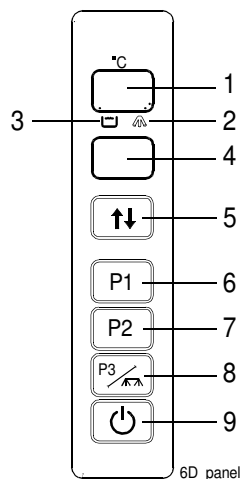
Instructions for use

4.2.3 Washing



The dishware must not be soaked or pre-washed in washing up liquid.

Make sure that the dishes are in a position where they cannot move out of the washing basket during the washing and rinsing phases.



- Remove large pieces of food by rinsing the dishes with a hand shower. The water in the hand shower must not exceed 40°C. Place the items to be washed in the basket.
- Open the hood. On machines with automatic hood lift, the hood is closed with the button (5).
- Put the lever (24) in the correct position for the items currently in the basket: - is for normally soiled and + for heavily soiled dishware.
- Select the programme. Slide the basket into the machine. If the machine is fitted with "autostart", the hood closes automatically and washing starts after 5 seconds.
- Close the hood. The machine starts washing using the selected programme. The lower display (4) now shows the remaining washing time for the programme.
- The symbol (3) is lit during the washing phase. When the washing cycle finishes, the recirculating rinse starts and both symbols (2, 3) light up.
- Once the rinsing phase starts, the symbol (2) lights up. If the final rinse water has not reached the correct rinse temperature once rinsing starts, the symbol (2) flashes and the machine continues washing until the rinsing water has reached the correct temperature.
- Do not open the hood until the programme has finished.
- If the hood is opened during the washing cycle, the machine will stop. If the hood is closed again, the programme will start from the beginning.
- When the machine has stopped, the selected programme appears on the display (4) and the hood opens automatically if the machine has an automatic hood. Remove the washed items and allow them to dry.

"P0" is a pause mode and is used for prolonged intervals between washes to maintain the tank temperature. The hood must be closed. The machine does not start in "P0" mode.

- Press the programme button for the current programme once. "P0" appears on the lower display (4).
- Press the button again to return to the current programme.
- The hood must be opened and closed between each washing cycle.

Changing the water



For the best washing results, it is important to change the water in the washing tank often. For normally soiled loads, the washing water should be changed after around 30 washes. Always change the water in the event of foam problems in the tank.

If IF09 appears on the display, this indicates that the water should be changed.

When the machine is in P0 mode with the hood open and the symbol (2) is lit, change the water as follows:

Machines without a drain pump

- Check that the machine is in P0 mode.
- Open the hood. On machines with automatic hood lift, the hood is opened/closed with the button (5).
- Remove the tank filter and cover plates (21).
- Empty the machine by turning the level pipe (19) clockwise.
- When the tank is empty, the level pipe (19) is turned clockwise. The tank filter and cover plates (21) are refitted.
- Check that the final rinse symbol (2) is lit.
- Close the hood and the machine will refill.

Machines with a drain pump

- Check that the machine is in P0 mode.
- Open the hood. On machines with automatic hood lift, the hood is opened/closed with the button (5).
- Remove the tank filter and cover plates (21) and the level pipe (19).
- Press the 0/1 button (9), emptying starts automatically.
- When the tanks are empty, refit the level pipe (19), tank filters and cover plates (21).
- Press the 0/1 button (9).
- Check that the final rinse symbol (2) is lit.
- Close the hood and the machine will refill.

Washing with pre-wash machine WD-PRM 7 (option)



The start-up and washing procedures etc. are the same as for standard washing. Both dishwashers are emptied by turning the lever (A) on the WD-PRM 7 to the left.

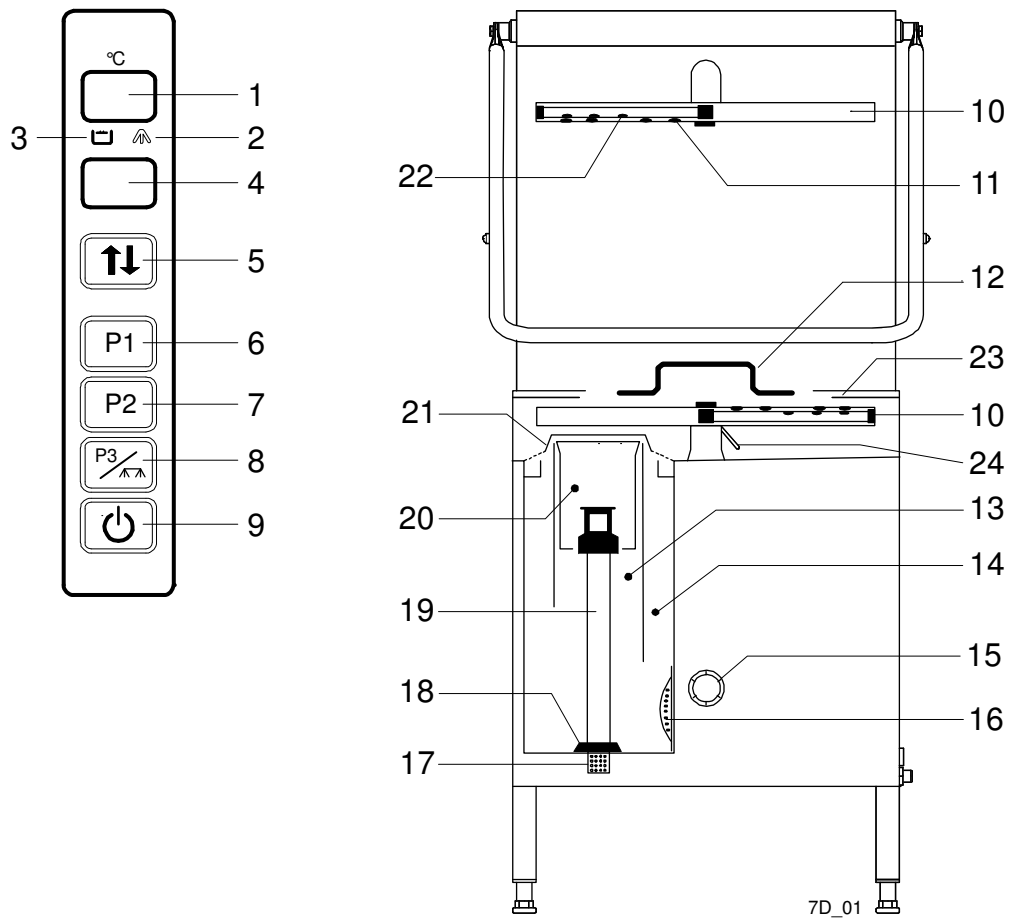
See also installation and user manual for the WD-PRM 7.

4.3 After use – cleaning

HACCP

HACCP is a preventive inspection system which ensures that hygiene requirements are met during the washing process and the 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.

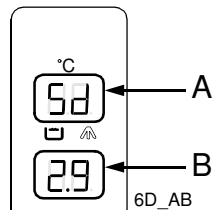


Instructions for use

4.3.1 Draining and internal cleaning (machine without a drain pump)

When the machine is switched off, the number of baskets washed appears on the display for approximately 5 seconds.

The upper display then shows "Sd", which indicates that the machine is in shut-down mode. For 5 minutes, the machine will still be powered on. Emptying and internal cleaning must be done within this time. The time until the machine is powered off is counted down with a flashing bar on the lower display. The machine then switches off automatically.

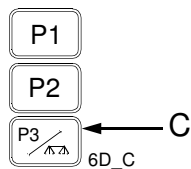


A=Indication of shut-down mode

B=Countdown of time

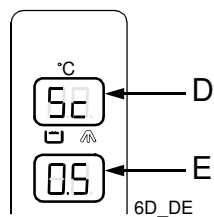
Open the hood. Press the "0/1" button. Remove the tank filter and cover plates (21) and the filter (20). Empty the washing tank by turning the level pipe (19) a quarter of a turn.

Close the hood. Press "P3" (8).



The programme button "P3" (C) is used to start the cleaning programme and empty the tank for the recirculating rinse.

The upper display shows "Sc" and internal rinsing starts. The lower display shows the remaining rinsing time. When rinsing has finished, the hood opens automatically if the machine has an automatic hood lift, the panel goes out and the machine is powered off.



D=Indication of cleaning programme

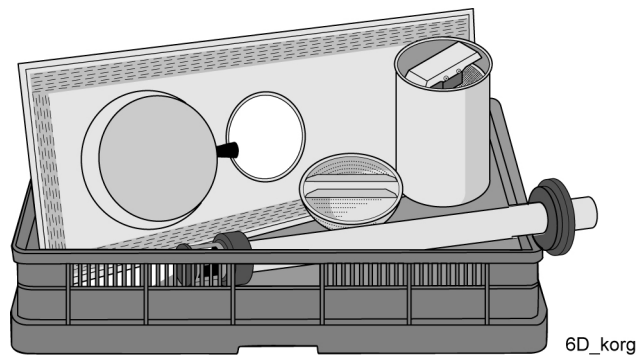
E=Countdown of time

Instructions for use



Note: It is important to run the cleaning programme with button “P3” to drain the tank (13) of water. If this is not done, the water will spill out onto the floor when the filter (15) is to be cleaned.

- Open the hood. Check that the washing and rinsing nozzles (11, 22) are clean and that no objects have fallen and lodged in the machine. Check also that the collection channel for water around the top edge of the dishwasher is clean.
- Clean the level pipe (19), cover plates and filters (20, 21). Store the cleaned parts in a washing basket. Ensure that the level pipe's rubber seal (18) does not become deformed, by allowing it to hang free. Leave the hood open.



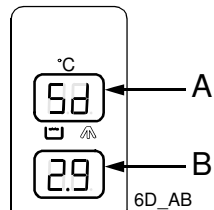
Position of clean components after washing

Instructions for use

4.3.2 Draining and internal cleaning (machine with a drain pump)

When the machine is switched off, the number of baskets washed appears on the display for approximately 5 seconds.

The upper display then shows “Sd”, which indicates that the machine is in shut-down mode. For 5 minutes, the machine will still be powered on. Emptying and internal cleaning must be done within this time. Emptying starts automatically! The time until the machine is powered off is counted down with a flashing bar on the lower display. The machine then switches off automatically.

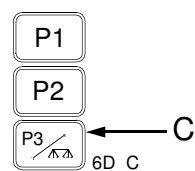


A=Indication of shut-down mode

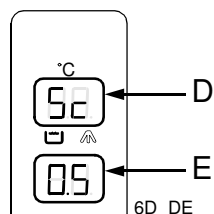
B=Countdown of time

Open the hood. Press the “0/1” button (9). Remove the tank filter and cover plates (21) and the filter (20). Remove the level pipe (19).

Close the hood. Press “P3” (8). The upper display shows “Sc” and internal rinsing starts. The lower display shows the remaining rinsing time. When rinsing has finished and the rinsing water has been drained, the hood opens automatically if the machine has an automatic hood lift, the panel goes out and the machine is powered off.



The programme button “P3” (C) is used to start the cleaning programme and empty the tank for the recirculating rinse.



D=Indication of cleaning programme

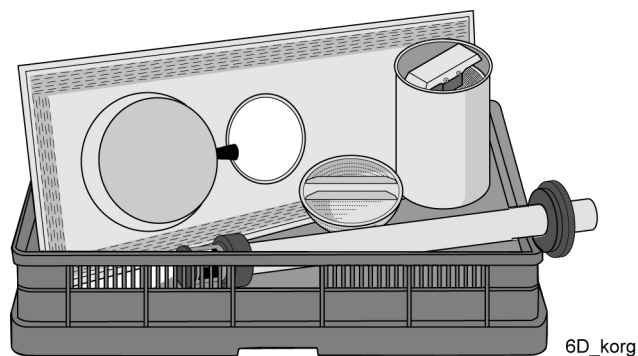
E=Countdown of time

Instructions for use



Note: It is important to run the cleaning programme with button “P3” to drain the tank (13) of water. If this is not done, the water will spill out onto the floor when the filter (15) is to be cleaned.

- Open the hood. Check that the washing and rinsing nozzles (11, 22) are clean and that no objects have fallen and lodged in the machine. Check also that the collection channel for water around the top edge of the dishwasher is clean.
- Remove and clean the drain filter (17). Clean the level pipe (19), cover plates and filters (20, 21).
- Store the cleaned parts in a washing basket. Ensure that the level pipe's rubber seal (18) does not become deformed, by allowing it to hang free. Leave the hood open.

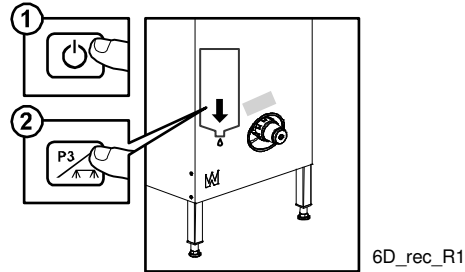


Position of clean components after washing

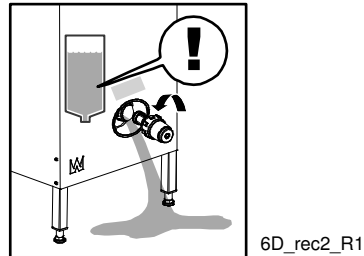
Instructions for use

4.3.3 Emptying the tank for the recirculating rinse

The tank for the recirculating rinse is emptied during the cleaning programme, which is started with button "P3".



Note that emptying is necessary when you want to unscrew and clean the filter, because otherwise the water from the tank will spill out onto the floor.



Instructions for use

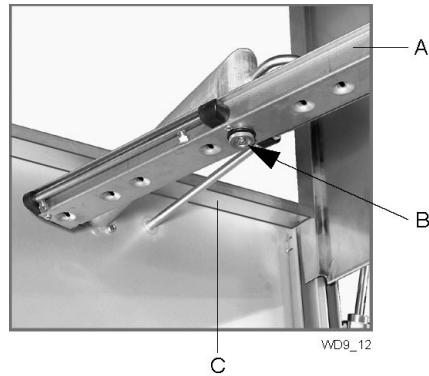
4.3.4 Cleaning each week

Weekly cleaning should be more thorough than daily cleaning. If the information message "IF10" is shown on the display, this indicates that weekly cleaning needs to be done.

In addition to the daily cleaning measures, follow these instructions:

Cleaning the washing arms and splash strip

- Remove the washing arms. Loosen the lock nut (B) in the centre of the washing arm and remove the washing arm. Check and clean the nozzles if necessary. Rinse the washing arms and refit them.
- Clean the top of the splash strip (C). The strip is inside the top of the machine at the back.



A=Upper washing arm

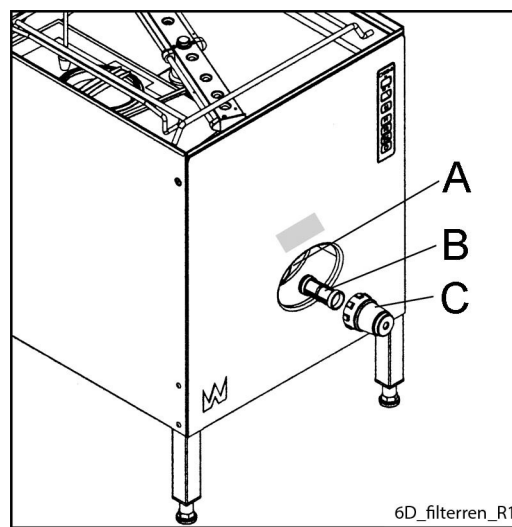
B=Lock nut

C=Splash strip

Cleaning the filter

When cleaning the filter (15), the tank (13) for the recirculating rinse water must be empty. The tank is emptied during the cleaning programme and when internal rinsing is started with button "P3". (See "Draining and internal cleaning – machine with/without a drain pump").

- Unscrew the cover (C) and remove the filter (B). Rinse the filter and cover.
- When refitting, it is important to fit the filter correctly to ensure that it is not damaged and that no leakage occurs.
- First fit the filter (B) in the filter housing (A) then ensure that it is sitting straight.
- Fit the cover (C), (does not need to be screwed tight).



Removing/fitting the filter.

A=Filter housing

B=Filter

C=Cover



Note that the tank for recirculating rinse water should not be full when the filter is unscrewed, or water will spill out into the dishwashing room.

4.3.5 Cleaning once a year

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

The safety valve (located on the incoming water connection) for condensing the battery should be vented / exercised at least 1 time / year.



NOTE: When cleaning the 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.

Instructions for use

4.3.6 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.



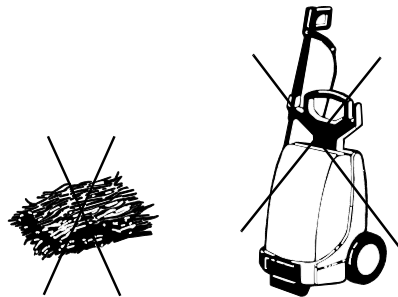
The outside of the machine must not be hosed down. Water can enter the machine and damage the control panel and electrical equipment.

4.3.7 Incorrect cleaning methods



NOTE: 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.
- Pressure washers can damage the machine and must NOT be used for cleaning purposes. Never use a pressure washer on the floor less than 1 metre from the dishwasher. The supplier cannot be held liable for any faults caused by the use of pressure washers on the machine and any such use will invalidate the guarantee.



WD9_07



There is a risk of splashing even if the floor is only hosed down with a normal hose.

Instructions for use

4.3.8 Operating problems

Error messages

When the machine is operating, various alarms or information messages can appear on both the control panel displays. There is a distinction between IF and Er alarms. IF alarms can normally be dealt with by the operator. If there is an Er alarm, the service personnel must be called. Some IF alarms that have been dealt with by the operator a few times will eventually change to Er alarms, meaning that the service personnel must be contacted.

Each alarm has a number: 01, 02, 03 etc. The top display shows either IF or Er. The bottom display shows the alarm number.

CODE	CAUSE	ACTION
IF01/ Er01	The time needed to fill the tank has been exceeded.	The alarm can be reset by pressing 0/1 on the panel.
	The level pipe is not in place.	Fit the level pipe.
	The level pipe's rubber sleeve is not sealing against the bottom plate.	Adjust the level pipe. Check that the rubber sleeve has not been damaged. Replace the sleeve, if it is damaged.
	The water stopcock is closed.	Open the stopcock.
Er02	It has taken too long for the machine to heat up, compared with the previous time.	The alarm can be reset by pressing 0/1 on the panel. Contact service personnel if the alarm recurs.
Er04	Faulty temperature sensor.	Contact service personnel.
Er05	Faulty temperature sensor.	Contact service personnel.
IF06/ Er06	The booster heater is not cooled during the final rinsing phase.	The alarm can be reset by pressing 0/1 on the panel.
	The water stopcock is closed.	Open the stopcock. Close the hood
IF09	Alarm for changing the water.	Change the water. The alarm can be reset by pressing 0/1 on the panel. If the alarm is not set to stop the machine, the washing programme can continue.
IF10	Alarm for weekly cleaning.	The machine must be cleaned more thoroughly than during daily cleaning. The alarm can be reset by pressing 0/1 on the panel.
Er12	The break tank has not filled with water.	The alarm is reset automatically when the tank is full.
Er16	The temperature in the booster heater is too low.	The alarm can be reset by pressing 0/1 on the panel. Contact service personnel.
Er23	The hood does not open when the automatic hood opener is used.	The alarm can be reset by pressing 0/1 on the panel. Contact service personnel if the alarm recurs.
Er27	The machine has lost all its set values.	Contact service personnel.
IF29	Low water level in the tank for recirculating rinse.	The alarm can be reset by pressing 0/1 on the panel.
IF30	Low water level in the washing tank.	Check that the level pipe is closed. The alarm can be reset by pressing 0/1 on the panel.
	The level pipe's rubber sleeve is leaking.	Check that the level pipe's rubber sleeve has not been damaged.
IF31	The tank for recirculating rinse water is not emptied when rinsing finishes. The filter in the tank is clogged.	Clean the filter. The alarm can be reset by pressing 0/1 on the panel. Contact service personnel if the alarm recurs.

Instructions for use

CODE	CAUSE	ACTION
Er32	Non-return valve for final rinse is faulty.	The alarm can be reset by pressing 0/1 on the panel. Contact service personnel if the alarm recurs.
Er33	Non-return valve for recirculating rinse is faulty.	The alarm can be reset by pressing 0/1 on the panel. Contact service personnel if the alarm recurs.
IF34	The detergent alarm.	The alarm can be reset by pressing 0/1 on the panel.
	The machine has run out of detergent.	Check the amount of detergent and refill, if necessary.
IF35	The machine is started with the door/hood closed.	Open and close the door/hood to acknowledge the alarm.
Er96	The motor safety cut-out for the pump has tripped.	Contact service personnel.
Er97	One digital input is shorted to ground.	Contact service personnel.
Er98	Communication fault between the CPU and the panel card.	The alarm can be reset by pressing 0/1 on the panel. Contact service personnel if the alarm recurs.
Er99	Communication fault between the computer and panel cards.	The alarm can be reset by pressing 0/1 on the panel. Contact service personnel if the alarm recurs.

Instructions for use

Troubleshooting

The following errors can be dealt with by the operator. If the problem persists, contact authorised service personnel.

PROBLEM	CAUSE	ACTION
The machine will not start.	The mains switch is off.	Turn on main switch
The machine does not fill with water.	The incoming water stopcock is closed.	Open the stopcock.
	The hood is open.	Close the hood.
	The rinsing pipe nozzles are blocked.	Clean the rinsing nozzles.
The machine fills slowly.	The rinsing pipe nozzles are blocked.	Clean the rinsing nozzles.
The machine does not stop filling.	The level pipe is not in place.	Fit the level pipe.
	The level pipe's rubber sleeve is not sealing against the bottom plate.	Adjust the level pipe. Check that the rubber sleeve has not been damaged. Change the rubber sleeve if it is damaged.
The machine does not start washing.	The hood is open.	Close the hood.
	Dishes are blocking the magnet on the hood.	Remove the dishes in question.
Noise from the wash pump.	Low water level. Foam in the tank.	Check that the level pipe is closed. Change the rubber sleeve if it is damaged.
The machine stops in the middle of the washing cycle and starts taking in water.	The level pipe's rubber sleeve is not sealing against the bottom plate.	Adjust the level pipe. Check that the rubber sleeve has not been damaged. Change the rubber sleeve if it is damaged.
The machine is not cleaning properly.	The rinse and wash nozzles are clogged with dirt.	Check and clean the nozzles.
	There is too little detergent.	Check the amount of detergent. The hose must be submerged in liquid and the filter in the hose must be clean.
	The water in the tank is too dirty.	Change the water.
	Foam forming in tank.	Check that the washing temperature is not too low and that the correct detergent is being used.
	Programme with too short a washing time selected.	Choose a programme with a longer washing time.
	Dirt has dried on the items to be washed.	Soak the items before washing.
	The items are incorrectly positioned in the baskets.	Use the correct type of washing basket and accessories to ensure that the items are correctly positioned.
	Insufficient change of water.	Increase rinsing capacity as per Table 00
The items are tipped over in the baskets.	The items are incorrectly positioned in the baskets.	Put the items in the correct position.
	Light items need washing.	Use a net grid to hold the items.
Items do not dry.	The rinsing nozzles are blocked.	Check and clean the nozzles.
	Too little rinsing agent.	Check the amount of rinsing agent. The hose must be submerged in liquid and the filter in the hose must be clean.
	The washed items have been left in the machine.	Remove the washed items once the programme has ended.

Instructions for use

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

- Machine type and model
- Machine serial number and installation date
- A brief description of the problem
- What happened/was being done immediately before the fault occurred

5. Technical information

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

TECHNICAL DATA	
Washing pump (kW)	1,1
Pump, recirculated final rinse (kW)	0,67
Pump, final rinse (kW)	0,67
Returnpump recirculated tank (kW)	0,045
Booster heater (kW)	9
Tank heater (kW)	5,4
Tank volume, chemical wash tank (litres)	45
Tank volume, final rinse tank (litres)	5,5
Drain pump (kW) *	0,04
Heat recovery fan (kW) *	0,12
Heat recovery fan, flow (m ³ /hour) *	250
Heat recovery, cooling surface (m ²) *	12
Weight, machine in operation (kg)	195
Enclosure class (IP)	45

* Optional

CAPACITY AND OPERATING DATA	
Total washing time P1 (min.) *	1,2
Total washing time P2 (min.) *	1,8
Total washing time P3 (min.) *	3,3
Max. capacity, baskets/hour (no.)	50
Water consumption rinsing/programme (l) **	1,0-1,5
Sound pressure level, LPA (dBA) ***	60 - 62
Sound power level LWA (dBA) ***	72 - 74

* Factory setting. The washing time can be adjusted.

** In combination with WD-PRM 7 the water consumption can be lowered further.

*** according to EN 60 335-2-58, §ZAA.2.8 with measurement equipment complies class 1.

The in situ sound pressure levels were measured in three points 20cm away from any corners of the object under study at 1,55m height.

The sound intensity measurement was operated with a probe consisting of two microphones of opposite polarization. The probe was placed normal to an imaginary measurement surface that lies 1m away from any corners around the object under study.

Technical information

CONNECTION, MACHINE	
Total connected power (kW)	10,1
Main fuse 400 V 3N~ (A) *	16
Max. connection area 400V 3N~ (L1-L3, N, PE) Cu (mm ²) **	2,5

* Other voltages on request

** 2 metre-long cable included

WATER, DRAIN AND VENTILATION CONNECTIONS	
Water quality, hardness (°dH)	2-7
Water connection, hot/cold * (external thread) 5-70 °C	R½"
Drain connection, PP pipe (ø mm)	50
Water capacity, pressure (kPa)	20
Water capacity, flow (litres/min.)	5
Floor drain with functioning water trap, capacity (litres/sec)	3
Heat load to the room, sensible (kW)	1,2
Heat load to the room, latent (kW)	0,5
Heat load to the room, total (kW)	1,7

* When using cold water lower than 55 °C the filling time is longer.

SIZE AND WEIGHT FOR TRANSPORT	
Size (LxWxH) (mm) *	765x805x1650
Weight, standard machine (kg) *	160

* Including packaging