

# metos

## PRE-RINSE MACHINE WD-PRM 60 & WD-PRM 90

(translation of the original documentation)

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### Installation and operation manual

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Dear Customer,

Congratulations on deciding to choose a Metos appliance for your kitchen activities. You made an excellent choice. We will do our best to make you a satisfied Metos customer like thousands of customers we have around the world.

Please read this manual carefully. You will learn correct, safe and efficient working methods in order to get the best possible benefit from the appliance. The instructions and hints in this manual will give you a quick and easy start, and you will soon note how nice it is to use the Metos equipment.

All rights are reserved for technical changes.

You will find the main technical data on the rating plate fixed to the equipment. When you need service or technical help, please let us know the serial number shown on the rating plate. This will make it easier to provide you with correct service.

For your convenience, space is provided below for you to record your local Metos service contact information.

**METOS TEAM**

Metos service phone number:.....

Contact person:.....

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# 1. General

Read the instructions in this manual carefully as they contain important information regarding correct, effective and safe installation, use and service of the dishwasher.

Keep this manual in a safe place for eventual use 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 machine part warns of electrical equipment. The machine is sensitive to electrostatic discharge (ESD), which is why a static electricity bracelet must be used when handling the electronics.



This symbol explains the right way to perform a task in order to prevent poor results, damage to the dishwasher or hazardous situations.



This symbol gives recommendations and hints that help 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.

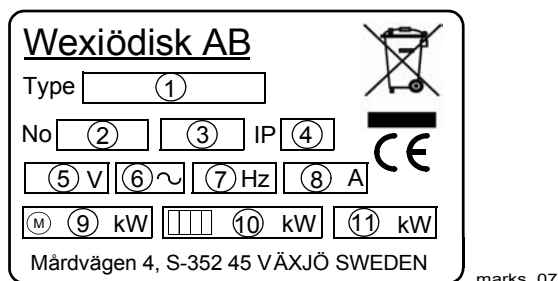
## 1.2 Symbols on the dishwasher



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

### 1.2.1 Machine marking

The machine has two rating plates, one of which is placed on the right 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 number
3. Year of manufacture
4. Enclosure 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 agreement between the appliance and the manual

Check the type description on the rating plate agrees 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 representative. When ordering new manuals, it is important to quote the machine number found on the rating plates.

## 2. Safety instructions

### 2.1 General

The machine is CE marked, which means that the machine complies with the requirements of the EU machinery directive with regards to product safety. Product safety means the machine has a design which prevents personal injury or damage to property.



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

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



Switch off the appliance immediately in the event of failure or malfunction. Only trained technicians may service the machine. Regular checks, as mentioned in the manual, should be carried out as per the instructions. The machine should 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 for preventative care. Dangerous situations may arise if the above is not followed.

Before using the machine, ensure that personnel are given the requisite training in handling and care of the machine.

### 2.2 Transport



Handle the machine with care during unloading and transport to avoid tipping. Never lift or move the machine without the wooden packaging supporting the stand.

### 2.3 Installation



The electrical cabinet may only be opened by a qualified electrician or trained personnel. The machine is sensitive to electrostatic discharge (ESD), which is why a static electricity bracelet must be used when handling the electronics.

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 main switch.

## Safety instructions

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### 2.4 Operation

#### 2.4.1 Risk of crushing



Take care when the door is closed to avoid crushing injuries.

### 2.5 Cleaning



The temperature of the water in the tank is approx. 40°C and contains detergent. Be careful when emptying and cleaning the machine. Use protective gloves.

#### 2.5.1 Cleaning with high-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 enclosure classes are used. There is no enclosure class capable of withstanding high pressure.

#### 2.5.2 Cleaning the floor



When cleaning floors using high-pressure equipment, water can splash up under the machine and damage the components. These have not been designed to withstand rinsing with water. Never use high pressure washes on the floor less than 1 meter from the dishwasher without the special protecting covers available to prevent splashes. Problems with splashing can also occur when using ordinary water hoses.

### 2.6 Repairing and servicing the dishwasher



Turn off the power before working on the machine.

Check the following:

- Has the appliance been used according to the instructions?
- Are all removable parts present?
- Is the main switch in the ON position?
- Are the fuses in the electrical cabinet complete? Ask service personnel to check the fuses.

If nothing else helps, ask authorised service personnel to check the machine.

### 2.7 Recycling the machine



Recycling of the appliance when its economical lifetime has been reached must be carried out in accordance with current rules and regulations. Contact professional personnel specialising in recycling.



## **3. Installation**

### **3.1 General**



The machine must only be installed by authorised personnel.

Read these instructions through carefully as they contain important information regarding correct installation.

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

The machine is CE marked. The CE mark is only valid for the machines with the original design. If the machine is damaged as a result of the instructions not being followed, the supplier guarantee and product liability is invalidated.

### **3.2 Requirements for installation on site**

#### **3.2.1 Lighting**

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

#### **3.2.2 Ventilation**

The machine generates heat and steam when in operation. For a good working environment, a certain air change rate is required in the washing room. The ventilation requirements for the room are calculated as per applicable standards.

#### **3.2.3 Drain**

There must be a floor drain for the machine's waste water.

#### **3.2.4 Service space**

A 1-metre free space should be allowed in front of the machine for service purposes.

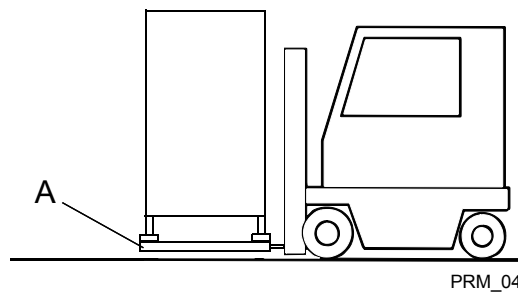
### 3.3 Transport and storage

Always transport the machine in an upright position.



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

NB! The machine must not be transported without a pallet or other support. The machine may be damaged otherwise. When transporting the machine without the ordinary wooden pallet, always check that none of the machine components can be damaged.



*A=Wooden pallet*

If the machine is not being installed straight away, it must be stored frost-free in premises with dry air.

#### 3.3.1 Unpacking

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

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

#### 3.3.2 Recycling the packaging



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

### 3.4 Installation

#### 3.4.1 Positioning the machine

Remove the protective plastic on the sides to be placed against the wall.

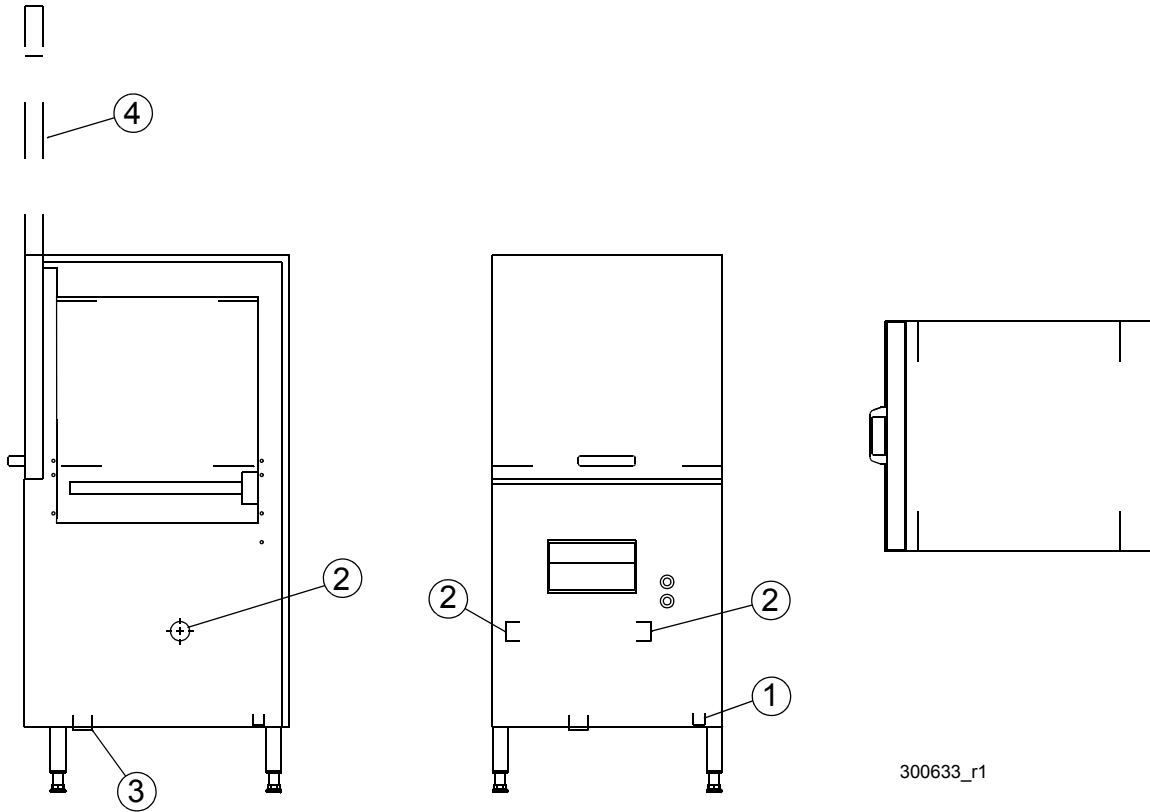
Position the machine and check that it is horizontal using a spirit level.

Adjust the height using the legs of the machine.

Installation

3.4.2 Connections

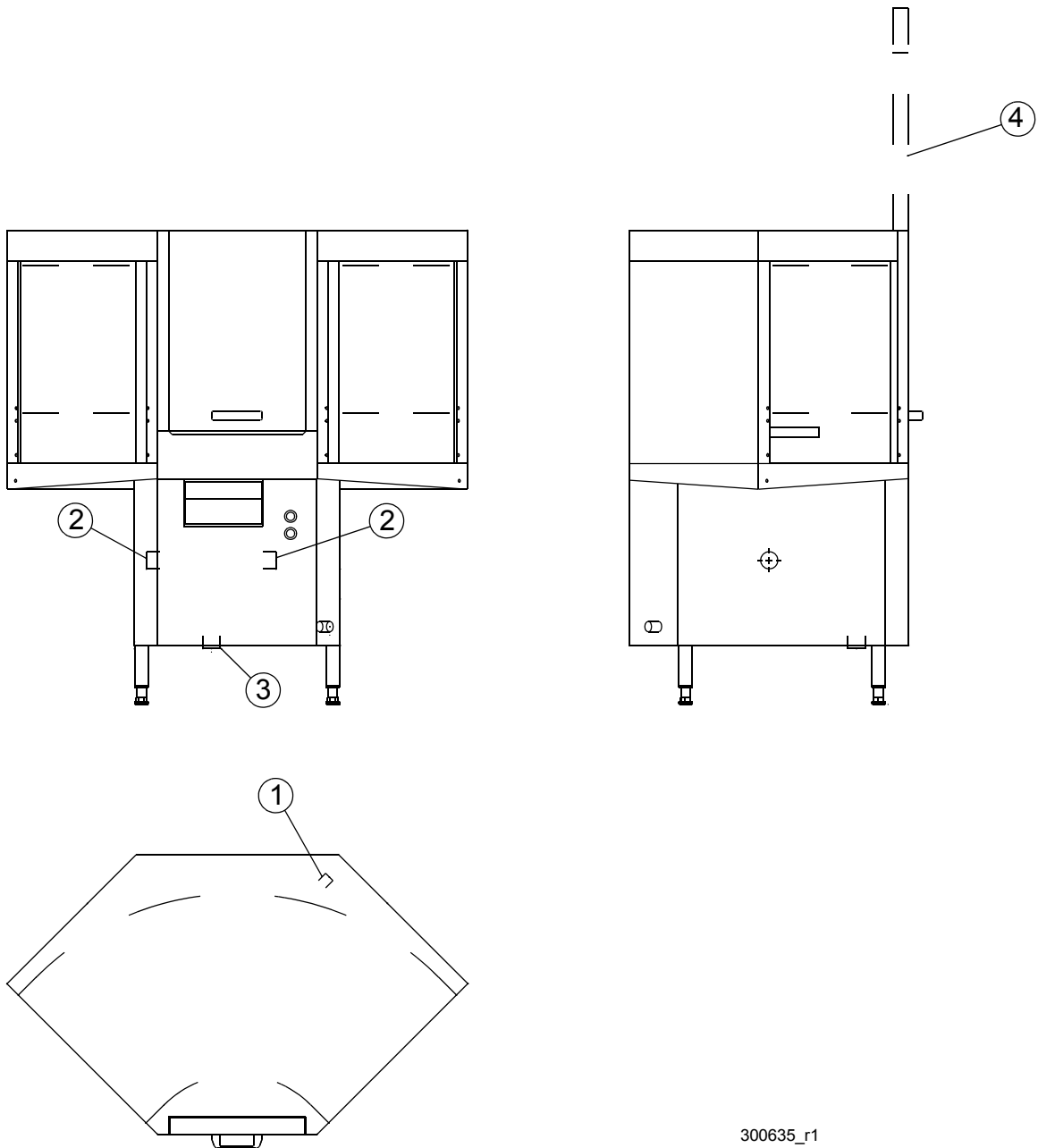
Connections WD-PRM 60



300633\_r1

1. Electrical connection
2. Water connection from dishwasher
3. Drain
4. Door (open position)

Connections WD-PRM 90



- 1. Electrical connection
- 2. Water connection from dishwasher
- 3. Drain
- 4. Door (open position)

300635\_r1

### Electrical connection



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

The machine should be connected to a lockable main switch. This should be placed on the wall, well protected against water and steam emissions.

Information for and on electrical connection is shown on the machine's wiring diagram. This is placed in the plastic pocket on the inside of the electrical cabinet door.

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

Power can also be supplied to the machine via a connected dishwasher (option).

### Water connection



The dishwasher fills with water (2) via the rack conveyor machine that the WD-PRM 60/90 is connected to.

### Drain connection



The drain connected to (3) should use 50 mm metal pipes that tolerate mechanical collision in those cases where there is a risk of collision; otherwise it should use 50 mm PV pipes. The drain is run to a floor drain, where it must end above the water level. The capacity of the floor drain must be 3 litres/second.

### 3.4.3 Installation of auxiliary equipment

Once the machine is in place and adjusted horizontally and vertically, any peripherals can be mounted.

NB! When connecting sinks and conveyors, no holes must be drilled in the machine.

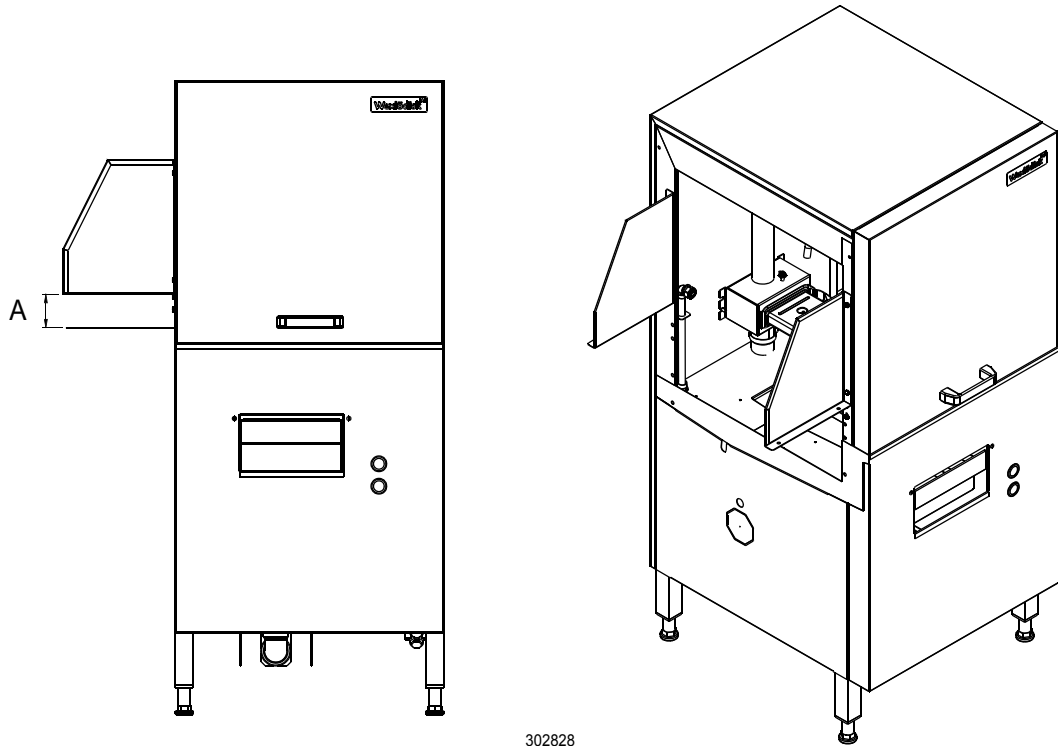
The sinks are hooked firmly on to the top edge of the tank.

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

Installation

**WD-PRM 60**

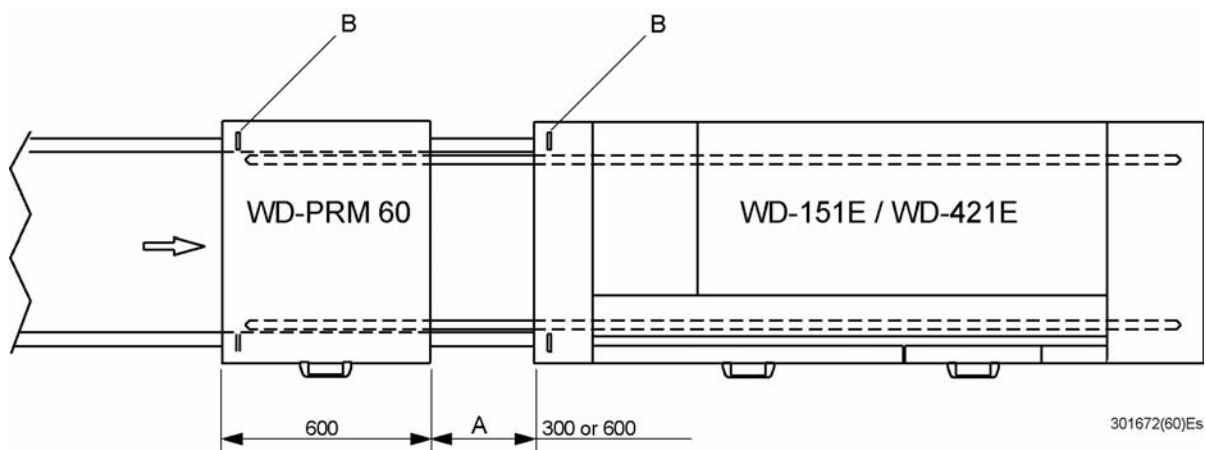
Splashbacks come with the machine. These are mounted as and when necessary on the feed side and thereby prevent water splashing onto the sides.



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A=The height is adjusted so that it fits the connecting table.

**Designed for bar feeder (WD-151E - WD-421E)**



301672(60)Es

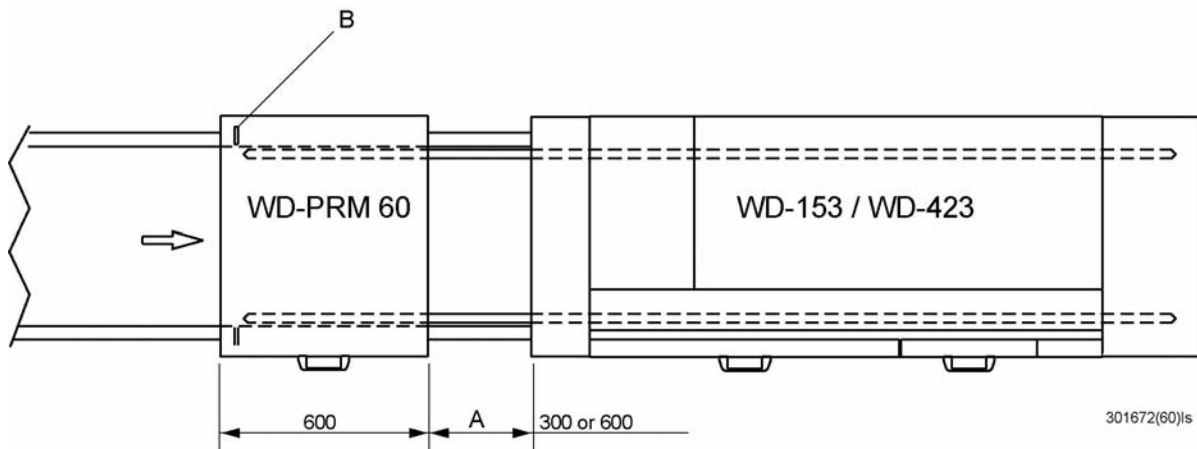
A=Bar feeder. Order separately and then it will be included in the delivery.

B=Photocell

Time relay KT1 shall be set in E-mode.

**Installation**

**Designed for bar feeder (WD-153 - WD-423)**



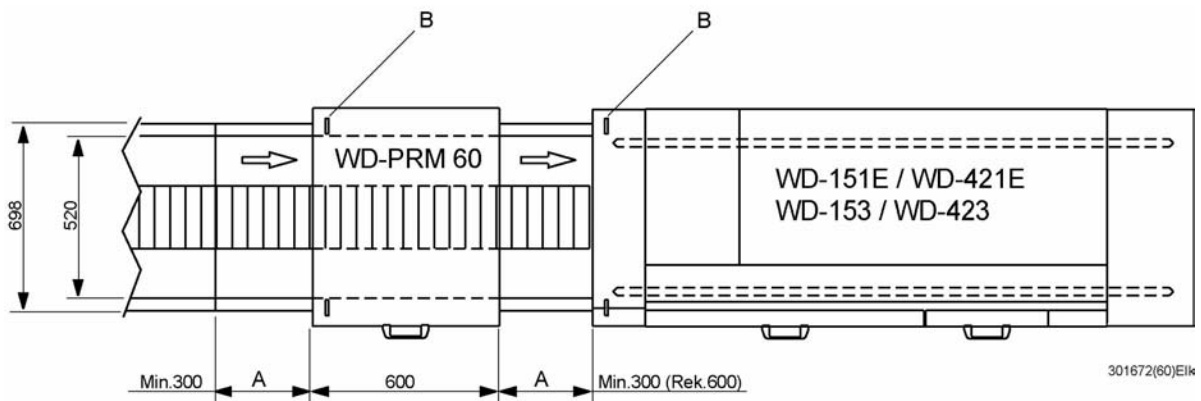
*A=Bar feeder. Order separately and then it will be included in the delivery.  
B=Photocell*

Photocell (B) moves from the machine to the infeed section of WD-PRM 60.

Time relay KT1 shall be set in D-mode.

The reference value for "Corner infeed distance" adjusts to the table of reference values.

**Designed for chain conveyor (WD-151E - WD-421E, WD-153 - WD-423)**

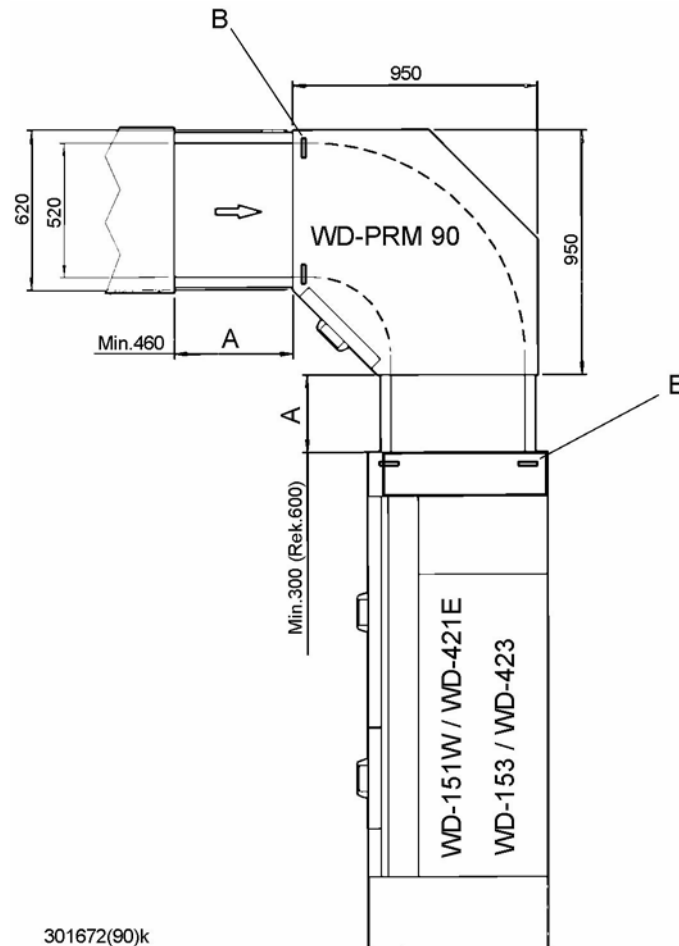


*A=Chain conveyor. Not included in the delivery, order separately.  
B=Photocell*

Time relay KT1 shall be set in E-mode.

**WD-PRM 90**

Designed for chain conveyor (WD-151E - WD-421E, WD-153 - WD-423)



301672(90)k

*A=Chain conveyor. Not included in the delivery, order separately.*

*B=Photocell*

Time relay KT1 shall be set in E-mode.

**3.4.4 Installation of motor-powered conveyors**

If motor-powered conveyors are connected to the dishwasher, the supplier's assembly instructions for these must be followed.



## Installation

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### 3.5 Trial run

Prepare the machine for a trial run using the INSTRUCTIONS FOR USE. This describes the measures that must be taken to make the machine ready for operation.

#### 3.5.1 Start-up schedule

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

Machine type:

Machine number:

Installation date:

<b>Customer:</b>
Postal address:
Telephone:
Contact person:

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

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

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

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

<b>End user's signature:</b>

<b>Name in block capitals:</b>

## Installation

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Read the contents of the installation and user manuals carefully. Then check off as follows:

1. Check:

- Water and drain connections
- That the machine is evenly balanced
- Filter and level pipe are in place

2. Filling the machine:

- Turn on the main switch (on the rack conveyor machine)
- Close the door
- Press the 0/1 button
- Fill the machine with water as per the INSTRUCTIONS FOR USE

3. Start the machine:

- Check the pump's direction of rotation NOTE! If the direction of rotation is wrong, the phase must be inverted on the lockable main switch.
- Empty the machine and refill

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

- There are no water leaks
- The door breaker works

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

- Re-tighten all connections on contactors and any circuit breakers
- Set all circuit breakers to ON position

6. Train dishwashing staff

### 3.6 Technical 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.

If the service manual accompanies the delivery, this should be passed on to the responsible service technician later on.

If the spare parts manual accompanies the delivery, this should be passed on to the responsible service technician later on.

## Directions for use

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### 4. Directions for use



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

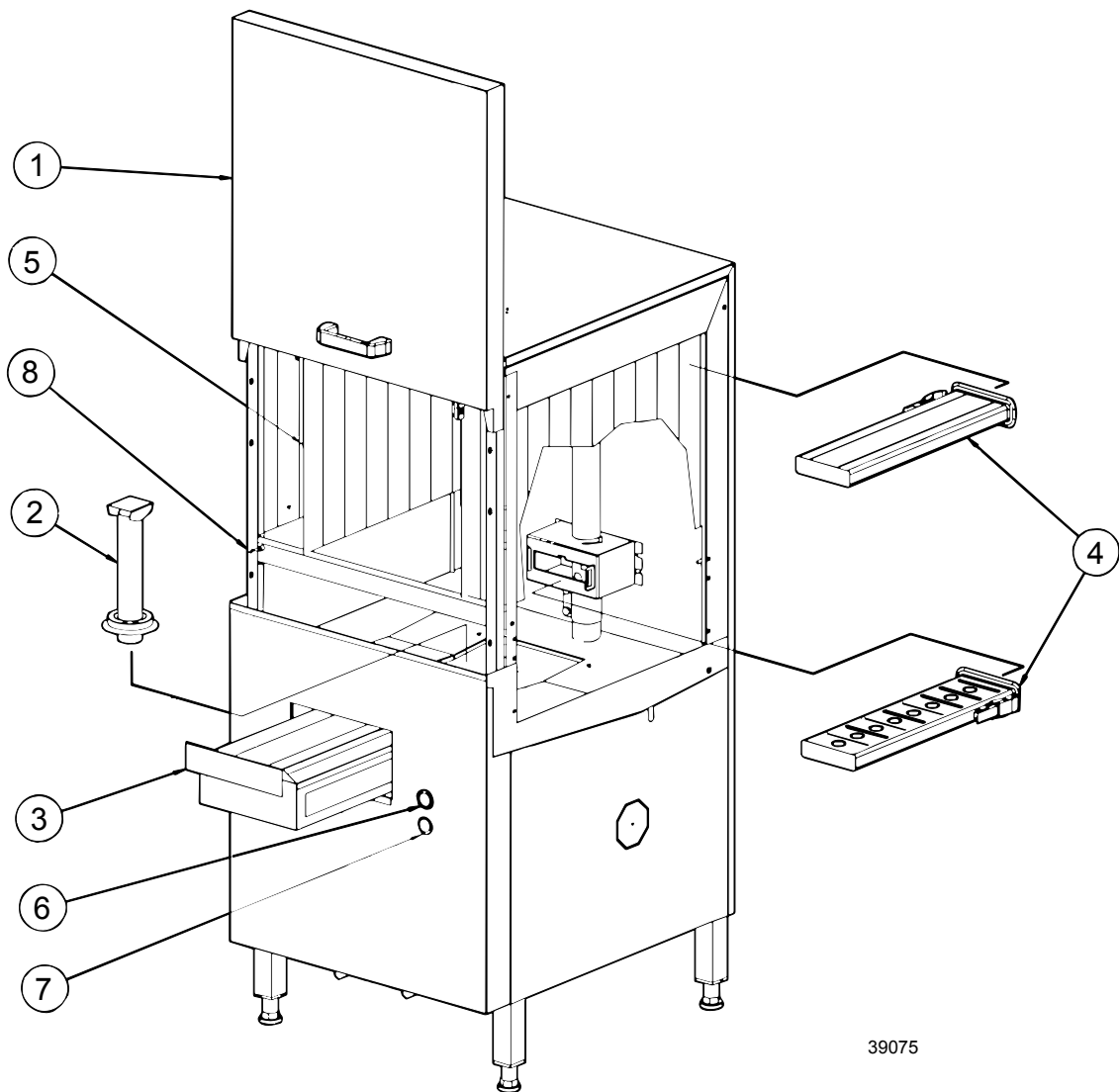
The dishwasher should not be used by anyone suffering from a physical or mental illness.

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

## Directions for use

### 4.1 Preparations

#### 4.1.1 The machine's design, WD-PRM 60

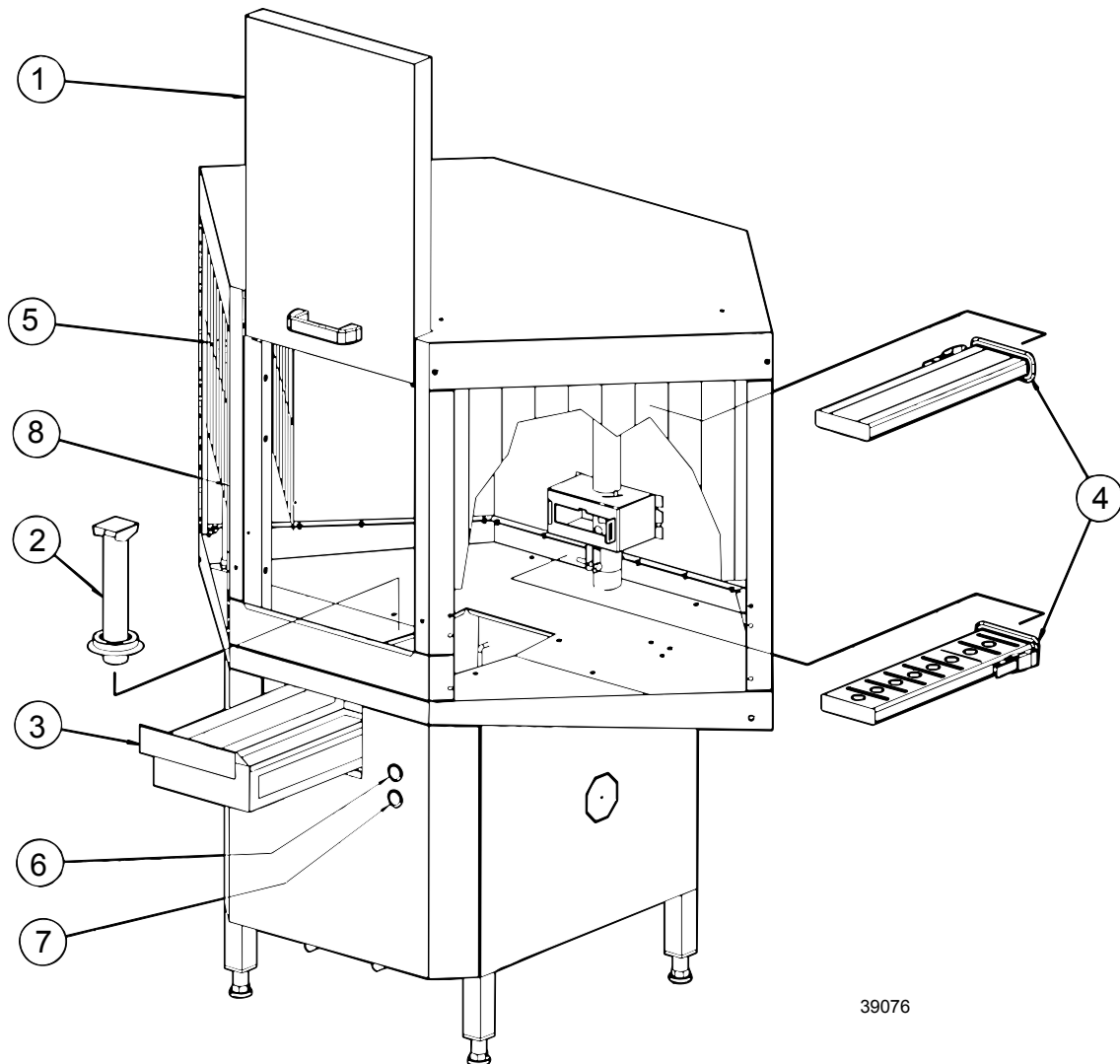


*WD-PRM 60*

1. Door (removable)
2. Level pipe
3. Filter
4. Washer arms, 2x (removable)
5. Curtain, 4 x
6. 0/1 button
7. Pilot light, ready for load
8. Photocell loading

## Directions for use

### 4.1.2 The machine's design, WD-PRM 90



39076

#### WD-PRM 90

1. Door (removable)
2. Level pipe
3. Filter
4. Washer arms, 2x (removable)
5. Curtain, 4 x
6. 0/1 button
7. Pilot light, ready to wash
8. Photocell loading

## Directions for use

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### 4.1.3 Preparations before filling

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

Check:

- that the dishwasher and all removable components are clean and that there is no dirt in the washer arms (4).

Assemble:

- level pipe (2), filter (3) and curtains (5).

### 4.1.4 Filling the machine

NB! The rack conveyor machine must be started.

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

- Press the 0/1 button (6). The tank now fills with water from the connected rack conveyor machine.

## 4.2 Use

### 4.2.1 General

During operation the dishwasher's tank fills automatically.



For optimum results it is essential to keep the filter (3) clean. Remove it and rinse it out regularly.

### 4.2.2 Stopping the machine during operation

If the machine needs to be stopped when it is in operation, use the buttons on the control panel. Press the 0/1 button (6) to turn off the power.

Restart: Press the 0/1 button (6).

## Directions for use

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### 4.3 After use – Cleaning

#### 4.3.1 Emptying

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

- Press the 0/1 button (6).
- Empty the tank by removing the level pipe (2).

#### 4.3.2 Cleaning

##### Daily internal cleaning

Clean the filter (3) and curtains (5). Check the washer arms' (4) nozzles (12); if necessary, remove and clean. Rinse out all of the machine's inside surfaces, and clean the tank.

##### Daily external cleaning

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

##### Weekly cleaning (or as required)

Weekly cleaning should be carried out more thoroughly than daily cleaning.

In addition to the measures for daily cleaning, clean the machine as follows:

- Washer arms (4): brush the interior. Also clean the washer arm nozzles.
- Decalcify the machine when necessary.



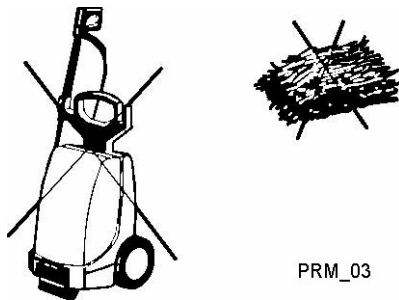
*Cleaning brush 721,0301*

### Incorrect cleaning methods



An incorrect cleaning method may damage the machine. The following therefore applies:

- Do NOT use steel wool as it will corrode the machine.
- High-pressure cleaning 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 without the special protective covers available to prevent splashes. The supplier cannot be held responsible for any faults caused by the use of pressure washers on the machine and such action will void the guarantee.



*Steel wool and pressure washers must not be used for cleaning.*



There is a risk of splashing even if the floor is hosed down.



If detergent is used, it must not contain abrasives. Detergents containing abrasives will damage the stainless steel panels.



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

### Operational disturbances

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
- short description of the fault/problem
- what happened/was being done immediately before the fault occurred



## 5. Technical information

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

TECHNICAL DATA	
Pump motor (kW)	0,75
Tank volume (litres)	30
Weight, machine in operation (WD-PRM 60) (kg)	150
Weight, machine in operation (WD-PRM 90) (kg)	170
IP enclosure class (IP)	55

CAPACITY AND OPERATING DATA	
Normal wash capacity (baskets/hour) (pcs) *	285
Max. surface temperature at room temperature +20°C (°C)	35
Noise level (dB(A)) **	68

\* Maximum capacity depends on the dishwasher model connected.

\*\* Measured 1 metre from the side of the machine.

CONNECTION MACHINE	
Total connection effect (kW)	0,8
Main fuse 400V 3N~ (A) *	10
Max. connection area 400V 3N~ (L1-L3, N, PE) Cu (mm <sup>2</sup> ) **	6

\* Other connection voltages on request.

\*\* Supplied with 3 metre-long cable.

WATER, DRAIN AND VENTILATION CONNECTIONS	
Water connection from dishwasher (Ø mm)	50
Drain connection (Ø mm)	50
Floor drain, capacity (litres/sec)	3
Ventilation of machine (m <sup>3</sup> /h)	200

SIZE AND WEIGHT FOR TRANSPORT	
Size (LxWxH (m)) (WD-PRM 60) *	0,8x0,8x1,5
Size (LxWxH (m)) (WD-PRM 90) *	1,4x0,9x1,5
Weight (WD-PRM 60) (kg) *	155
Weight (WD-PRM 90) (kg) *	175

\* Including packaging.

## 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.

**Manufacturer:** Wexiödisk AB Mårdvägen 4 S-352 45 Växjö, Sweden Tel: +46 470 77 12 00 Fax: +46 470 237 52

**Representative:** Metos Oy AB

**Compiler of technical documentation:** Magnus Ericsson

Our machines are manufactured 2010 in accordance with applicable EU directives and we declare under sole responsibility that the following products:

Single tank dishwashers with accessories:

**WD-4x, WD-6x, WD-7, WD-9x, WD-PRM6/7**

Pot wash machines:

**WD-12GHE, WD-90GR, WD-100GR**

Tunnel dishwashers with accessories:

**WD-11, WD-151C/211C, WD-151E/211E/241E/331E/421E, WD-153/213/243/333/423**

**WD-215T, WD-PRM60/90, WD-T60/60F/80/120, WD-C90°/180°**

Conveyor dishwashers\*:

**WD-B xxx, WD-xxCT, WD-40BRE, ACS-38/47**

Special dishwashers\*:

**WD-18CW, WD-25BR, WD-25T, WD-8020/8020W/8020WL/9020/9020W, ACS 400HC, ACS 800**

Conform to the following directives:

### EU Declaration of Conformity

according to EU's Machinery Directive 2006/42/EG, annex IIA.

#### Harmonised standards

EN 12 100-1 Machine safety: specification for general requirements, part 1

EN 12 100-2 Machine safety: specification for general requirements, part 2.

EN 60 204-1 Machine safety: electrical equipping of machines: general requirements

### EU Declaration of Conformity

according to EU's Low-voltage directive 2006/95/EC.

#### Harmonised standards

EN 60 529 Specification for degrees of protection provided by enclosures (IP code).

#### For products marked with \*

EN 60 204-1 Machine safety: electrical equipping of machines: general requirements

#### For other products

EN 60 335-1 Safety of household and similar electrical appliances - General requirements.

EN 60 335-2-58 Specification for safety of household and similar electrical appliances. Particular requirements.

Commercial electric dishwashing machines.

EN 50106 Safety - Particular rules for routine tests.

### EU Declaration of Conformity

according to EU's EMC-directive 2004/108/EC.

#### Harmonised standards

EN 61 000-6-2 Electromagnetic compatibility (EMC). Generic standards. Immunity standard for industrial environments.

EN 55 014-1 Electromagnetic compatibility. Requirements for household appliances, electric tools and similar apparatus. (EMC) - Part 1: Emission

Växjö 2010-01-04

  
Torsten Nyberg  
Managing Director