

Rack conveyor dishwasher

■ WD ICS+ and PRM



Wexiödisk 

BECAUSE WE DO CARE



Every installation must result in a good reference!

www.wexiodisk.com

WD-ICS+

The new generation of rack conveyor dishwashers for medium size kitchens.



■ ICS+ Rack conveyor dishwasher – with savings of up to 70%!



The operating costs of the ICS+ dishwashers are lower than for any other rack conveyor dishwasher. All measurements taken in laboratories and in the field show that the patented ICS+ system is by far the most intelligent control system for dishwashers.

Wexiödisk ICS+ is a cost-effective investment when considering the operating cost and the entire service life. Apart from the excellent wash results, Wexiödisk's environmentally-friendly dishwasher uses up to two-thirds less detergent than standard rack conveyor dishwashers.

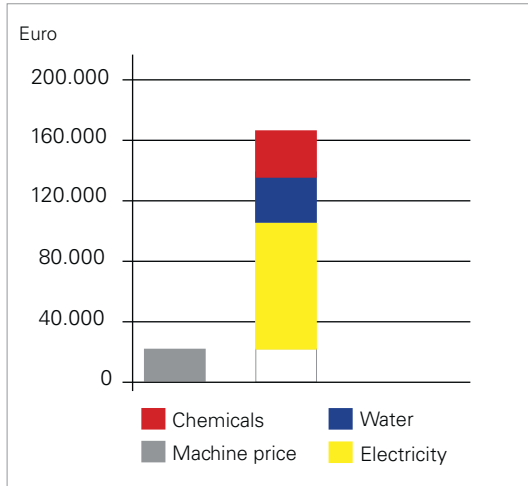
The Wexiödisk ICS+ system is already being used by hundreds of satisfied customers, among others Scandic Hotels, all over Sweden.



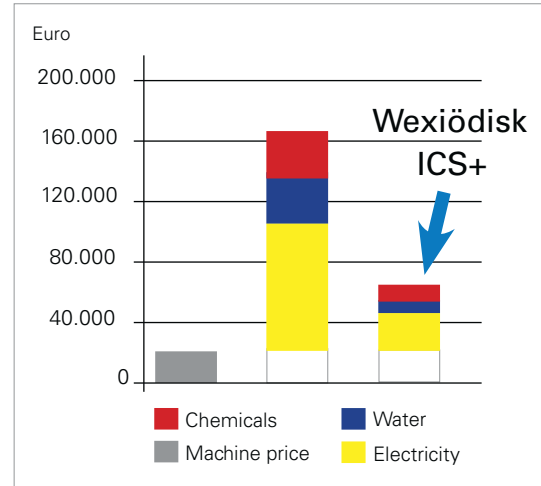
Wexiödisk's ICS+ rack conveyor dishwashers use the ingenious control system, ICS+ "Intelligent Control System".

The price in relation to service life – Life cycle cost!

Investing in a dishwasher is not just about its price, it's also a decision determined by the cost for the machine's entire service life. The price of the machine is a mere fraction of this cost.



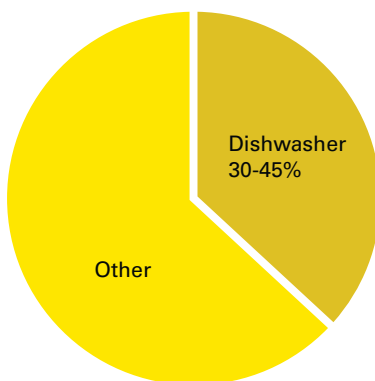
A rack conveyor dishwasher is an investment in which the purchase price makes up only 10-20%, while the operating costs constitute 80-90% of the total costs involved in the machine's service life.



Wexiödisk ICS+ is taking the concept of operating costs to a new dimension. The operating costs of an ICS+ rack conveyor dishwasher are 30-70% lower than for other dishwashers.

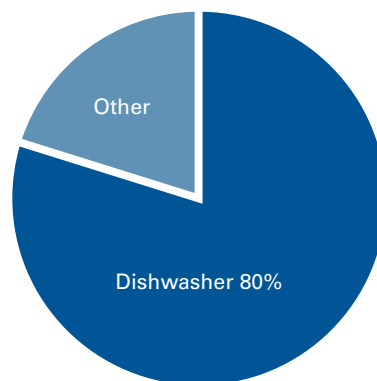
Of all kitchen appliances, it is the dishwasher that has the greatest impact on the environment.

Electricity consumption



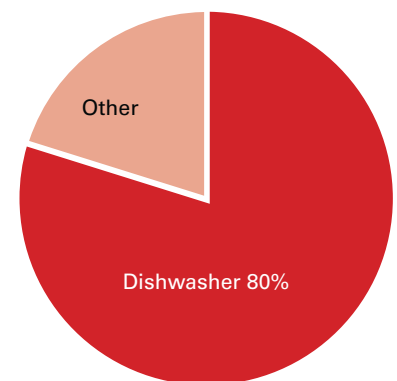
A standard rack conveyor dishwasher accounts for 30-45% of a kitchen's total electricity consumption.

Water consumption



A standard rack conveyor dishwasher accounts for approx. 80% of a kitchen's total water consumption.

Chemical consumption



Almost every chemical is water-soluble. Since the dishwasher accounts for approx. 80% of the water consumption, it is also responsible for approx. 80% of a kitchen's total chemical consumption.



■ Wexiödisk ICS+ – our “Intelligent Control System”

- **No empty spaces washed**
 - Empty Space Elimination (ESE).
- **Optimised rinsing water consumption**
 - Constant Rinse Time (CRT) – from 1 litre of rinsing water per basket regardless of capacity.
- **Optimum use of rinsing water**
 - Double Transport System (DTS) with unique double feed.
- **Maximum hygiene – HACCP function**
 - Simple cleaning and good access.
- **Adjustable contact time**
 - Flexible washing programmes for variable items.
- **Double heat recovery**
 - With condensing battery and reuse of rinsing water.

No empty spaces washed – ESE

This unique control system eliminates the empty spaces normally found between the baskets while they are being washed. In a standard dishwasher this empty space can be anything up to 50% of the capacity, something which is not normally considered when specifying water consumption. ICS+ checks the basket feed using a photocell. By not washing the empty spaces, the customer's costs are considerably reduced.

When the machine is waiting for the next basket, the pumps stop, which significantly reduces the sound level in the dishwashing room.

Optimised rinsing water consumption CRT – from 1 litre of rinsing water per basket regardless of capacity

The majority of rack conveyor machines have at least two speeds: one slow and one fast. When operating at the slow speed, the dishwasher can use up to double the amount of energy, water and chemicals. ICS+ is equipped with CRT, Constant Rinse Time, which ensures that the time and also the amount of water used in the final rinse does not depend upon the speed chosen. Normally only around 1.0 -1.4 litres of rinsing water are used per basket.



Optimum use of rinsing water thanks to our double feed system, DTS

When baskets are being fed through a conventional rack conveyor machine, it is normal for the baskets to remain stationary 50% of the time. This results in high water consumption and unnecessary costs. By having an even speed through the rinsing zone, considerably less water is needed. ICS+ is equipped with DTS – a unique double feed system that feeds the baskets at an even speed to ensure optimum use of the rinsing water.

Maximum hygiene with HACCP function

The HACCP quality system involves a number of critical control points from a hygiene perspective. HACCP is a preventive system which ensures that hygiene requirements are met during the washing process. Critical points, such as temperature and water flow, are easily followed and secured by the control system.

Semi-lateral rinse pipes reduce the consumption.

Semi-lateral rinse pipes with optimized nozzles give a perfect spray pattern which divides the final rinsing water more accurately over the wash ware, giving lowest possible rinsing water consumption.

Adjustable contact time provides flexible washing programmes.

The contact time is one of the main factors necessary for successful washing results. Contact time refers to the time it takes for the baskets to pass from the pre-wash zone with chemicals to the fresh water rinse. The easy-to-use control panel allows the operator to quickly adjust the contact time when needed. This gives the operator full control of the washing result.

Examples of suitable contact times:

Contact time (s)	
40	Rinsing
50	Trays
70	Lightly soiled items
90	Normally soiled items
120	DIN 10510
160	Heavily soiled items



Control panel for WD-243 ICS+

Service-friendly

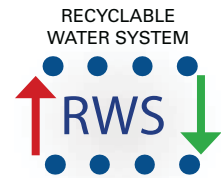
Wexiödisk's rack conveyor dishwashers are designed with easy servicing in mind. Most components are easily accessible and servicing can normally be carried out from the front of the machine. The position of the electrical cabinet at a convenient working height gives a clear overview of components and offers protection from water when the floor is being cleaned.

■ PRM – a unique pre-rinse machine

- **Ergonomic** – replaces the repetitive manual pre-rinsing movement that can lead to occupational injuries.
- **Economic** – unique reuse of washing water from the rack conveyor dishwasher provides significant overall water savings.
- **Better wash results** – effective rinsing and soaking of soiled items which at the same time reduces the rinsing water consumption.

Wexiödisk's PRM rinses the items, both from above as well as underneath the basket, with a powerful flow of water, which is impossible to achieve manually. The PRM reuses the overflow water from the rack conveyor machine. The 40°C water contains a small amount of detergent. The efficient rinsing system in the PRM removes food residue and has the same effect as soaking during the time the basket is transported to the dishwasher. This has major benefits, especially when washing dishes with dried-on food.

PRM, together with ICS+, minimises the total amount of water consumed in the dishwashing room, resulting in major cost savings and keeps washing water clean during long wash cycles. This ensures an excellent washing result. A conveyor is usually fitted to a sorting unit, and placed in connection to the machine. The conveyor passes through the PRM and goes on to the dishwasher. The operator can easily and efficiently sort the soiled items, as no manual basket feed or pre-rinse is required.



By reusing the water from the rack conveyor dishwasher, the best possible water and environmental savings are achieved. – A natural investment for the dishwashing room!



Several PRM versions available



*PRM-60, straight chain conveyor feeding
Chain conveyor is not included.
This must be ordered separately.*

Several models for different dishwashing room layouts

There are two versions of the PRM:

- PRM 60 for straight installation designed for bar feeding or chain conveyor. The bar fed PRM-60 can be used for manual feeding and together with Wexiödisk's corner loading unit.
- PRM 90 for corner installation with chain conveyor. The PRM models are easy to clean with removable doors and wash arms. All service work is carried out from the front of the machine.

*PRM-60, bar feeding
Feeder is not included.
This must be ordered separately.*



*PRM-90, corner installation with chain conveyor
Chain conveyor is not included.
This must be ordered separately.*

WD ICS+ and PRM provide many practical solutions



Thanks to the good clearance height under the machine, it's easy to keep the floor clean. The drain pipe is positioned in the frame of the machine, which also makes it easier to clean the floor.



Double final rinse is standard in all machines, which minimises water consumption.



All the tanks can be emptied using a single lever. Bottom seals and level pipes are closed automatically when the machine is about to fill.



Lightweight wash arms that can be handled and are simple to remove when cleaning.



The doors are removed using a simple handle, which makes cleaning easier.



The most effective heat recovery on the market, and it's also easy to clean. Regular cleaning guarantees the best possible heat recovery, even in the future.



All water connections are on top and the machine has a smooth back. Since all service can be done from the front, the machine can be positioned right up against a wall, which frees up vital space in the dishwashing room.



The PRM has a large and efficient strainer basket, which means it does not need to be emptied as often.



Improved hygiene with selfemptying pumps in wash and rinse zones.



The machines have large filters and strainer baskets that are easy to access when needed. A large strainer basket does not need to be emptied as often.

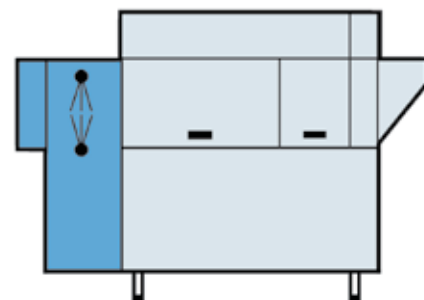


The efficient spray from above and below covers the entire washing basket. The large washing compartment is easy to clean.

Pre-wash and drying zones

Pre-wash zone

If a pre-wash zone is connected to the dishwasher, no more manual washing of dishes is needed. The pre-wash zone saves both water and effort. In the pre-wash zone designed for use with the WD-153, the dirty items are first sprayed with cold water from above and below and then with recirculated final rinse water from below. A pre-wash zone that reuses the pre-wash water is available for the WD-213–423 dishwashers. The filter drawer is pulled out from the front and can be emptied without stopping the dishwasher.



Pre-wash zone

Pre-wash zone* WD-213-423	Part no.	Zone length mm
Loading direction R-L	3-4030ISH	400
Loading direction L-R	3-4030ISV	400

* For part no. for WD-153, see price list

Drying zones

Our dishwashers can be equipped with T60, T80, T60F or T120 drying zones. A powerful fan blows warm air over the washed items. The drying zones are primarily for use with items such as plastic trays which do not accumulate large amounts of heat. The distribution regulator on the fan targets the warm air effectively to keep energy costs low. Part of the energy is used by a condensing battery which heats up the incoming cold water. The T60, T80 and T60F have a heat output of 3 kW, while the figure for the T120 is 2x3 kW. The T80 is intended for use with dishwashers which have a motor-powered turn track.



Drying zone WD-T60



Drying zone hood WD-T80 for turn track



Drying zone WD-T120



Drying zone hood WD-T60F, free-standing

Part	Part no. R-L	Part no. L-R	Power (kW)	Main fuse 400V 3N~(A)	Installed length (mm)
Drying zone WD-T60 + WD-153	3-4021H + 3-0153H	3-4021V + 3-0153V	35,9	63	600 + 1655
Drying zone WD-T60 + WD-213	3-4021H + 3-0213H	3-4021V + 3-0213V	43,4	80	600 + 2255
Drying zone WD-T60 + WD-243	3-4021H + 3-0243H	3-4021V + 3-0243V	43,4	80	600 + 2555
Drying zone WD-T60 + WD-333	3-4021H + 3-0333H	3-4021V + 3-0333V	50,9	80	600 + 3455
Drying zone WD-T60 + WD-423	3-4021H + 3-0423H	3-4021V + 3-0423V	61,4	100	600 + 4355
Drying zone WD-T120 + WD-153	3-4027H + 3-0153H	3-4027V + 3-0153V	39,2	63	1200 + 1655
Drying zone WD-T120 + WD-213	3-4027H + 3-0213H	3-4027V + 3-0213V	46,7	80	1200 + 2255
Drying zone WD-T120 + WD-243	3-4027H + 3-0243H	3-4027V + 3-0243V	46,7	80	1200 + 2555
Drying zone WD-T120 + WD-333	3-4027H + 3-0333H	3-4027V + 3-0333V	54,2	80	1200 + 3455
Drying zone WD-T120 + WD-423	3-4027H + 3-0423H	3-4027V + 3-0423V	64,7	100	1200 + 4355
Drying zone hood WD-T80 for turn track + WD-153	3-4023H + 3-0153H	3-4023V + 3-0153V	35,9	63	820 + 1655
Drying zone hood WD-T80 for turn track + WD-213	3-4023H + 3-0213H	3-4023V + 3-0213V	43,4	80	820 + 2255
Drying zone hood WD-T80 for turn track + WD-243	3-4023H + 3-0243H	3-4023V + 3-0243V	43,4	80	820 + 2555
Drying zone hood WD-T80 for turn track + WD-333	3-4023H + 3-0333H	3-4023V + 3-0333V	50,9	80	820 + 3455
Drying zone hood WD-T80 for turn track + WD-423	3-4023H + 3-0423H	3-4023V + 3-0423V	61,4	100	820 + 4355
Drying zone hood WD-T60F free-standing + WD-153	3-4025H + 3-0153H	3-4025V + 3-0153V	35,9	63	600
Drying zone hood WD-T60F free-standing + WD-213	3-4025H + 3-0213H	3-4025V + 3-0213V	43,4	80	600
Drying zone hood WD-T60F free-standing + WD-243	3-4025H + 3-0243H	3-4025V + 3-0243V	43,4	80	600
Drying zone hood WD-T60F free-standing + WD-333	3-4025H + 3-0333H	3-4025V + 3-0333V	50,9	80	600
Drying zone hood WD-T60F free-standing + WD-423	3-4025H + 3-0423H	3-4025V + 3-0423V	61,4	100	600

Accessories

Corner feeder unit

The corner feeder unit is suitable for loading the dishwasher in narrow spaces. It is connected to a feeder and does not require an extra motor. Corner feeder is available for both right and left-loaded machines. The frame is made from stainless steel and fitted with adjustable feet. Standard length 630 mm. Special lengths 631 - 2785 mm.



Powered turn track 90° and 180°

The powered turn track is designed with friction-powered tapered rollers, which make the baskets slide forward easily. The turn track can be used together with all kind of washing baskets and washing machines. Both the top part and the frame are made of stainless steel. Adjustable feet, built-in slip coupling and drain connection DN 32 are standard. The turn track also includes relay switch and internal wiring.

Roller table

Roller table for direct connection to the machine or powered turn track. The construction is made of stainless steel and a solid frame of square tubes. It has an inclined bottom towards the drain. The drainage can either be towards the bottom or a connected curve. The baskets are transported on resistant plastic rollers with bearings. The roller table can be fixed or pivoted with lockable wheels. Shelf and rails for storage of baskets are available. More information of length and variants see price list.



Accessories	Art.no.	Length	Width	Height (mm)	Electrical connection
WD-C 90 Powered turn track 90° R-L	3-4556H	790	790	905 +/- 25 mm	230/400V, 3 fas, 50Hz, 0,12kW
WD-C 90 Powered turn track 90° L-R	3-4556V	790	790	905 +/- 25 mm	230/400V, 3 fas, 50Hz, 0,12kW
WD-C 180 Powered turn track 180° R-L	3-4557H	790	1340	905 +/- 25 mm	230/400V, 3 fas, 50Hz, 0,12kW
WD-C 180 Powered turn track 180° L-R	3-4557V	790	1340	905 +/- 25 mm	230/400V, 3 fas, 50Hz, 0,12kW
Corner feeding unit ICS+	3-4060I	630	603	870 +/- 25 mm	
Corner feeding unit ICS+ special	3-4065I	631-2785	603	870 +/- 25 mm	
Other accessories	See pricelist				

WD ICS+ models

Pre-wash zone without intermediate rinse 1

The items are washed with a weak solution of detergent and water at a temperature of approx. 40°C. Surplus water from the final rinse and chemical wash is reused in the zone.

Pre-wash zone with intermediate rinse 2

The intermediate rinse 2, rinses-off the remaining dirty water before entering the chemical wash zone 3. The machine can then be used for a longer period without the water needing to be changed. This saves water and detergent.

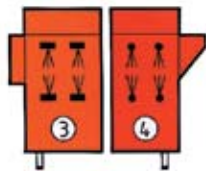
Chemical wash zone 3

During the chemical wash zone 3, the goods are washed with washing water at a temperature of 60°C. Grease needs water to be over 50°C to dissolve properly and detergent works best at around 60°C.

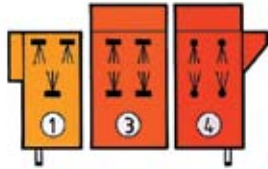
Double final rinse zone 4

The double final rinse 4 reduces the amount of fresh water use and gives the best possible rinse results. Items are first rinsed with reused water and then with fresh water at a temperature of 85°C. Approx. 25% of the surplus water from the zone is reused in the chemical wash tank. The remaining 75% is taken to the pre-wash (WD-213) and to the intermediate rinse (WD-243-423 machines).

WD-153 ICS+



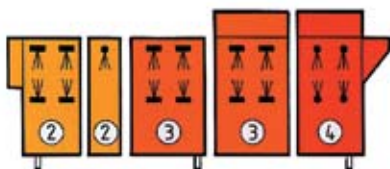
WD-213 ICS+



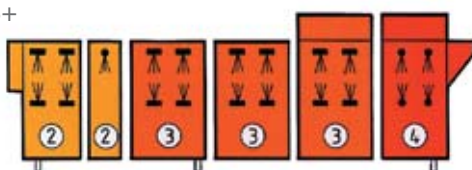
WD-243 ICS+



WD-333 ICS+



WD-423 ICS+



Zone

Zone length in mm

WD-153 ICS+

Steam hood	170
3 Chemical wash	900
4 Double final rinse	585
Total length	1655 *

WD-213 ICS+

Steam hood	170
1 Pre-wash without intermediate rinse	600
3 Chemical wash	900
4 Double final rinse	585
Total length	2255 *

WD-243 ICS+

Steam hood	170
2 Pre-wash with intermediate rinse	900
3 Chemical wash	900
4 Double final rinse	585
Total length	2555 *

WD-333 ICS+

Steam hood	170
2 Pre-wash with intermediate rinse	900
3 Chemical wash	1800
4 Double final rinse	585
Total length	3455 *

WD-423 ICS+

Steam hood	170
2 Pre-wash with intermediate rinse	900
3 Chemical wash	2700
4 Double final rinse	585
Total length	4355 *

* Applies to the installation length at bench height. To include the steam hood (out feed), an additional 280 mm should be added. (see dimensions)

Technical data WD-ICS+

Capacity and operation data	WD-153	WD-213	WD-243	WD-333	WD-423
Capacity (baskets/h)	60-260	80-260	85-260	110-260	135-305
Capacity according to DIN 10510 (baskets/h)	80	120	140	190	245
Max capacity interlocked booster heater (baskets/h)	150	200	200	220	230
Cold water consumption, final rinse normal (litres/baskets) *	1.4	1.3	1.2	1.1	1.0
Cold water consumption, final rinse according to DIN 10510 (litres/h)	112	156	168	209	245

* In combination with PRM the water consumption is further lowered with 0,1 litre

Technical data	WD-153	WD-213	WD-243	WD-333	WD-423
Pump, pre wash (kW)	-	1.5	1.5	1.5	1.5
Pump, chemical wash 1 (kW)	1.5	1.5	1.5	1.5	1.5
Pump, chemical wash 2 (kW)	-	-	-	1.5	1.5
Pump, chemical wash 3 (kW)	-	-	-	-	1.5
Pump, recirculated final rinse (kW)	0.11	0.11	0.11	0.11	0.11
Condensing fan (kW)	0.12	0.12	0.12	0.12	0.12
Motor, feeder (kW)	0.12	0.12	0.12	0.12	0.12
Booster heater 1 (kW)	9*	12*	12*	12*	12*
Booster heater 2 (kW)	9	12	12	12	12
Heater, chemical wash 1 (kW)	12	12	12	9	9
Heater, chemical wash 2 (kW)	-	-	-	9	9
Heater, chemical wash 3 (kW)	-	-	-	-	9
Heat recovery unit, cooling area (m ²)	25	25	25	25	25
Condensing fan, capacity (m ³ /tim)	100	100	100	100	100
Tank volume, pre wash tank (litres)	-	51	77	77	77
Tank volume, wash tank 1 (litres)	100	100	100	100	100
Tank volume, wash tank 2 (litres)	-	-	-	100	100
Tank volume, wash tank 3 (litres)	-	-	-	-	100
Tank volume, final rinse tank (litres)	6	6	6	6	6
Weight, machine in operation (kg)	490	625	655	900	1020
Degree of protection (IP)	55	55	55	55	55
Max. surface temp. at room temp. 20°C (°C)	35	35	35	35	35
Sound level**(dB(A))	68	68	68	68	68

* Interlocked if needed, see capacity

** Measured 1 metre from the machine

Connection, electrically heated machine	WD-153	WD-213	WD-243	WD-333	WD-423
Total connected power (kW) interlocked booster heater (kW)*	23.6	28.1	28.1	35.6	46.1
Total connected power (kW)	32.6	40.1	40.1	47.6	58.1
Main fuse 400V 3N~ (A)*	50	63	63	80	100
Max.conn.area 400V** 3N~ (L1-L3,N,PE) Cu (mm ²)	35	35	35	35	35

* See capacity

** Other voltages on request

Connection, steam heated machine 150-250 kPa*	WD-153	WD-213	WD-243	WD-333	WD-423
Total conn.power (kW)	1.9	3.4	3.4	4.5	6.0
Main fuse 400V 3N~ (A)	16	20	20	20	20
Max.conn.area 400V 3N~ (L1-L3, N, PE) Cu (mm ²)	35	35	35	35	35
Steam (internal thread)	R ¾"	R ¾"	R ¾"	R 1"	R 1"
Condense water (internal thread)	R ¾"	R ¾"	R ¾"	R ¾"	R ¾"
Steam consumption* (kg/h)	45	50	50	60	65

* Other pressure on request

Technical data WD-ICS+

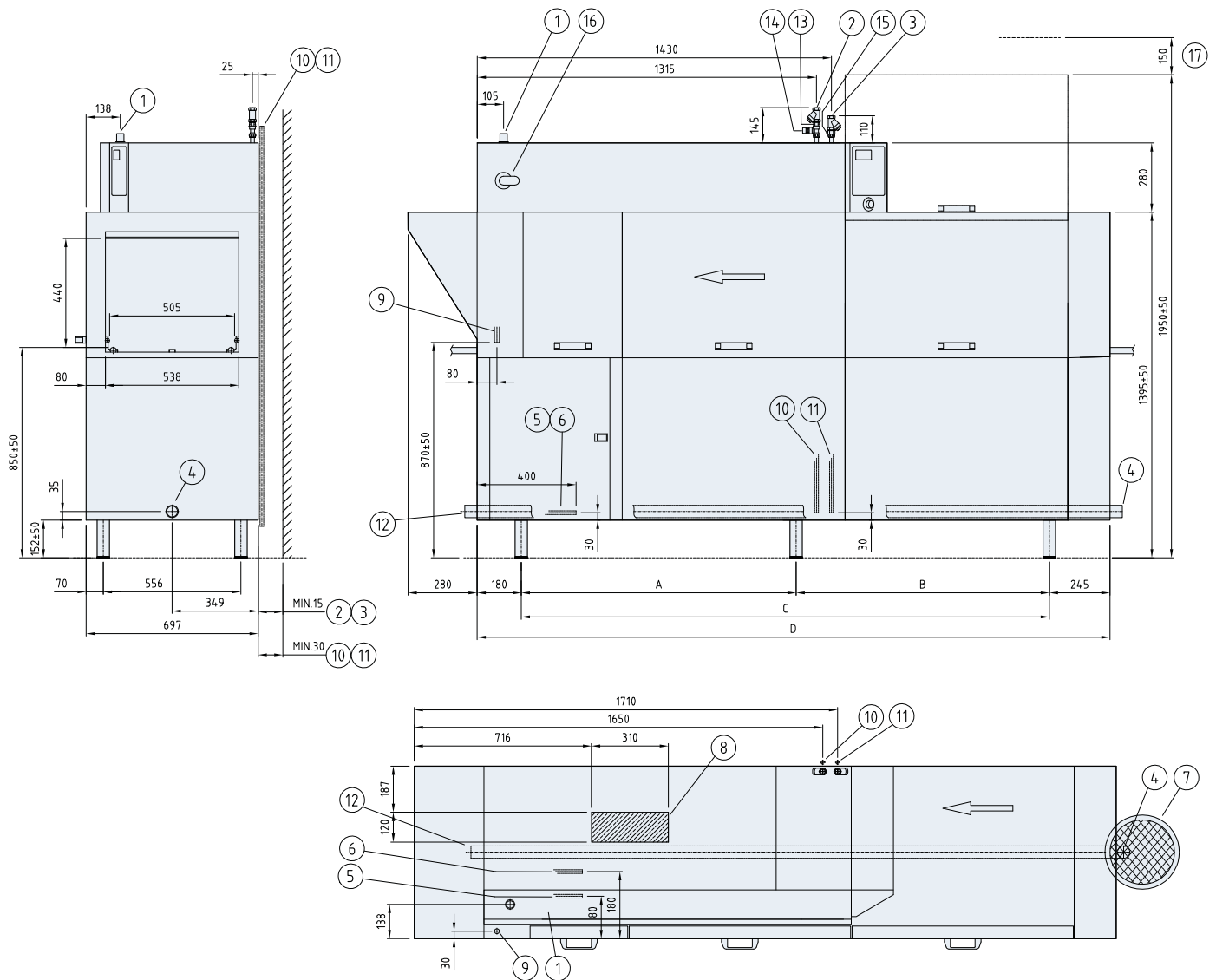
Connection, water, drain and ventilation	WD-153	WD-213	WD-243	WD-333	WD-423
Water quality, hardness (°dH)	2-7	2-7	2-7	2-7	2-7
Hot water conn. 55-70°C (internal thread)	R ½"	R ½"	R ½"	R ½"	R ½"
Cold water connection 5-12°C (internal thread)	R ½"	R ½"	R ½"	R ½"	R ½"
Drain connection, PP pipe (ø mm)	50	50	50	50	50
Water capacity cold water, pressure (kPa)	250-600	250-600	250-600	250-600	250-600
Water capacity cold water, flow (litres/min)	11	11	11	11	11
Water capacity hot water, min/max pressure (kPa)	100/600	100/600	100/600	100/600	100/600
Floor drain, capacity (litres/sec).	3	3	3	3	3
Heat load to the room (total, sensible, latent) (kW)	6,0/3,5/2,5	6,5/3,9/2,6	6,5/3,9/2,6	8,0/4,8/3,2	10,5/6,3/4,2

Size and weight for transportation standard machine*	WD-153	WD-213	WD-243	WD-333	WD-423
Size** (LxWxH (m))	2.1x0.8x2.0	2.7x0.8x2.0	3.0x0.8x2.0	3.9x0.8x2.0	4.8x0.8x2.0
Weight** (kg)	400	510	550	680	790

* Normal delivery in 1 piece, if necessary the machine can be further dismantled

** Packaging included

Dimensional drawings



Dimensions

	WD-153	WD-213	WD-243	WD-333	WD423
A	--	--	--	1360	2260
B	--	--	--	1670	1670
C	1230	1830	2130	3030	3930
D*	1655	2255	2555	3455	4355

* Installation length at bench height

Rack conveyor dishwasher ICS+

1. Electrical connection
2. Cold water connection/filter
3. Hot water connection/filter
4. Drain connection
5. Steam connection
6. Condensation water connection
7. Floor drain
8. Exhaust steam condensing battery
9. Alternative electrical connection
10. Alternative cold water connection
11. Alternative hot water connection
12. Alternative drain connection
13. Non-return valve
14. Vacuum valve
15. Detergent dosage outlet
16. Main switch
17. Service space

Technical data PRM-60/90

Technical data	PRM-60	PRM-90
Pump (kW)	0.75	0.75
Tank volume (litres)	30	30
Weight, machine in operation (kg)	150	170
Degree of protection (IP)	55	55

Capacity and operation data	PRM-60	PRM-90
Max. surface temp. at room temp. 20°C (°C)	35	35
Sound level* (dB(A))	68	68

* Measured 1 metre from the machine

Connection, electrically heated	PRM-60	PRM-90
Total connected power (kW)	0.8	0.8
Main fuse 400V 3N~ (A) *	10	10
Max.conn.area 400V 3N~ (L1-L3,N,PE) Cu (mm ²) **	6	6
Electrical connection of the PRM by the dishwasher	Option	Option

* Other voltages on request

** Delivered with 3 meter cable

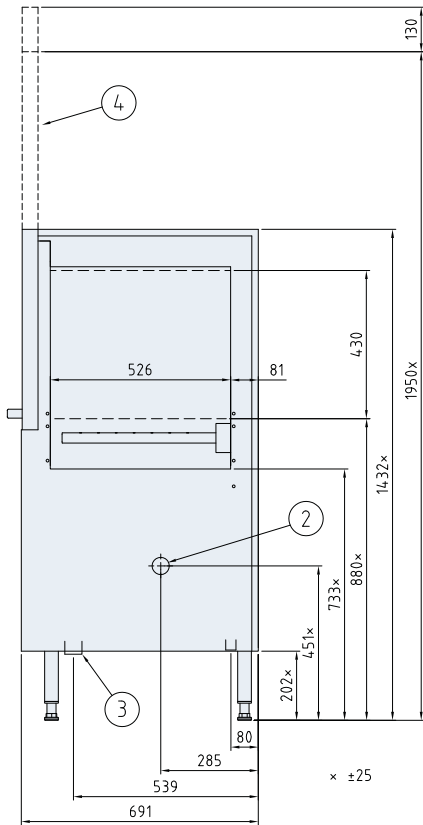
Connection, water, drain and ventilation	PRM-60	PRM-90
Drain connection, PP pipe (ø mm)	50	50
Water connection from dish machine (ø mm)	50	50
Floor drain, capacity (litres/sec)	3	3
Heat load to the room (total, sensible, latent) (kW)	2,3 / 1,7 / 0,6	2,3 / 1,7 / 0,6

Size and weight	PRM-60	PRM-90
Size * (LxWxH (m))	0.6x0.7x1.4	0.95x0.95x1.4
Weight ** (kg)	155	175

* Normal delivery in 1 piece, If necessary the machine can be further dismantled

** Packaging included

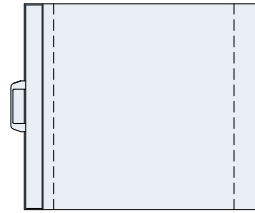
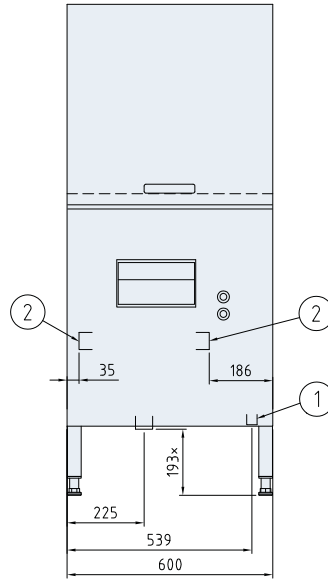
Dimensional drawings



PRM-60

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

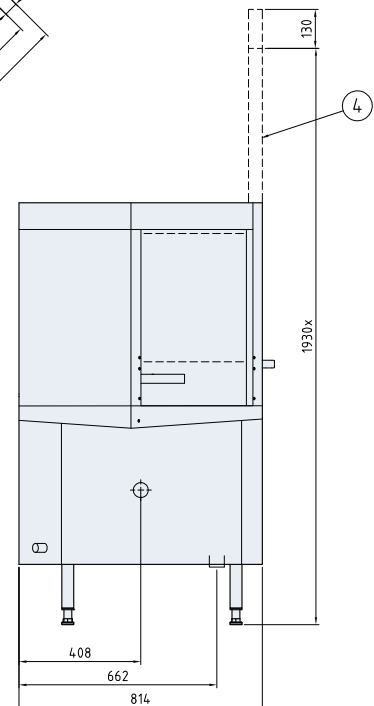
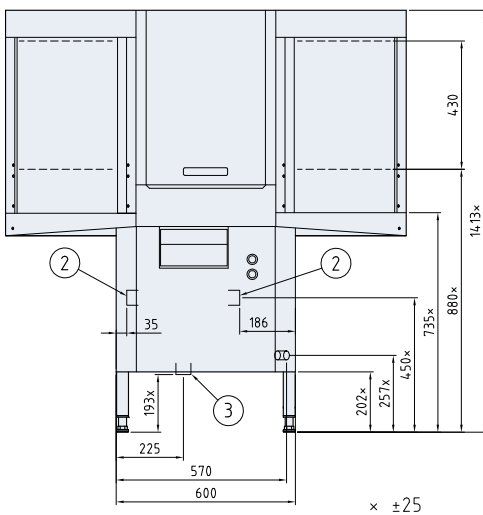
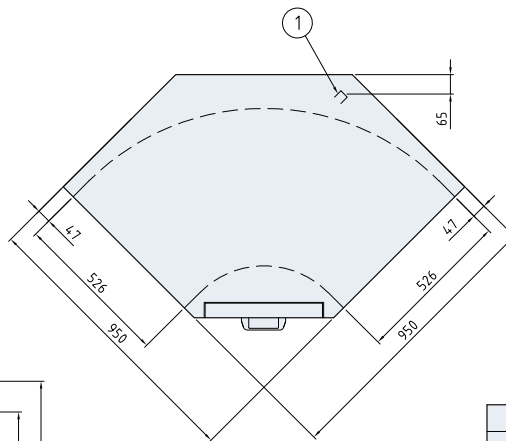
* Can be electrically connected by the dishwasher



PRM-90

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

* Can be electrically connected by the dishwasher



BECAUSE WE DO CARE



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