

CTR | EXCELLENT PERFORMANCE.

The compact rack conveyor dishwasher



A machine for perfect cleanliness and hygiene. Perfectly coordinated accessories. Specially developed chemicals. Advice and personal support. Planning expertise and training courses. Monitoring, reporting and service. All that and more from Winterhalter.



HIGH DEGREE OF FLEXIBILITY

It offers a wide range of machine variants, is available with up to three tanks and has modules and features that can be retro fitted: The CTR is based on a modular system and can be customised to precisely meet your individual requirements. Even for confined spaces.

HYGIENE SAFETY

The CTR is designed with hygiene always in mind. Doors that open 180° and deep-drawn tanks. Hygiene tank heater. In addition, a hygiene mode that can be preset: If the tank or boiler temperature falls below the set value, the machine automatically reduces the transport speed, thus guaranteeing a hygienic wash. In accordance with hygiene standard DIN SPEC 10534 confirms. The CTR ensures you are always on the safe side.



EVERYTHING IS POSSIBLE.

It has to be compact. Because there's generally not a lot of space in the kitchen. It has to be fast. Because there's a lot to wash at peak times. It has to be modular. So that it can be tailored precisely to meet individual requirements and demands. Naturally it should also be economical to operate. The impossible becomes reality with the CTR from Winterhalter: high washing performance and compact dimensions. Up to 195 racks per hour. Lower consumption values and lower operating costs. Maximum hygiene safety – and a huge degree of flexibility. This is thanks to the modular system, which enables the CTR to be easily planned, individually configured and retrofitted. The perfect solution for 100 to 400 diners.

PERFECT WASH RESULTS

An efficient warewashing system. A new concept with a simplified design. And effective hygiene safety and filtration solutions: The CTR also guarantees first-class wash results for large loads.

ECONOMICAL AND EFFICIENT

Despite its huge rack capacity, it has been possible to reduce rinse water consumption by up to 50 % – to a minimum of just 130 litres per hour. The speed-dependent control of the rinse water volume makes this possible. So you can wash as economically and environmentally friendly as possible.





MODULAR SYSTEM

The CTR is available with up to three tanks, with additional pre-wash and drying zones, and optional exhaust air heat recovery. Which means: The CTR always offers you a customised solution. Precisely configured to your individual requirements. And should they change in the future – no problem: The modular design means that modules and features can be retrofitted at any time. You can find an overview on the following pages.

OPERATING CONCEPT

The CTR makes washing remarkably simple: It is convenient to operate and easy to clean. A smart touch display is at the heart of the CTR cockpit. With single-button operation. With a language-neutral operator interface. And with self-explanatory pictograms. Different programmes can be selected for the tank draining process: Each uses the standard drain pump, which protects the user from contact with the wash water and ensures greater safety at work. All wash arms and curtains can be taken out separately and quickly and easily cleaned when necessary. The colour coding means they can't get mixed up.

RACK CAPACITY

The CTR delivers an impressive rack capacity but with compact dimensions: With a transport speed of up to 195 racks per hour, it can handle a high volume of dishes during peak times. This allows you to simply and effortlessly set the machine according to your specific requirements at any given time: By selecting one of the three speed levels: fast, standard and intensive. The stored settings can be adjusted by the service technician according to individual requirements.

WAREWASHING SYSTEM

The CTR high-performance washing system comprises of five wash arms at the top and four wash arms at the bottom. Thanks to their shape and nozzle geometry, they ensure that water is distributed over the entire wash area. The system has been balanced so that it provides the optimum pressure distribution between the top and bottom elements of the system. This means that dishes are held securely in position to ensure maximum washing performance.

HYGIENE CONCEPT

The CTR delivers a perfect hygiene concept. The hygiene mode is one innovative feature: If the tank or boiler temperature falls below the set value, the machine automatically reduces its transport speed and thus ensures a hygienic wash. The user can also change to the »Speed mode« at any time. The CTR thus maintains its constant transport speed and washes with the selected rack capacity.

Other hygiene features: the hygiene design of the interior of the machine and exhaust air heat recovery with an integrated and easily cleaned grease filter. The hygiene logbook provides additional hygiene safety: It stores all important operating data and the current operational status including fault messages and can also be called up via CONNECTED WASH *. The hygiene certificate in accordance with DIN SPEC 10534 confirms the high hygiene standards of the CTR.

CONNECTED WASH *

Greater safety, greater efficiency: The CTR can be networked with a computer or mobile device via CONNECTED WASH. This creates the basis for the analysis and evaluation of all the important operating data. To optimise the entire washing process.

* You can find out in which countries CONNECTED WASH is currently available and what functions and options it offers at www.connected-wash.com

PRE-WASH ZONE S

The pre-wash zone S is a space-saving addition to the main wash zone and increases the rack capacity of the CTR. It comes without a separate tank and its own wash pump and is 500 mm wide. Wash arms at the top and bottom remove coarse food residues prior to the main wash phase. Its inbuilt filter cassette traps coarse soiling and can be easily removed and cleaned. The pre-wash zone S can be retrofitted.

DRYING ZONE

Would you like to reuse the cleaned dishes as quickly as possible? Then take advantage of the optional drying zone which can also be retrofitted. This is especially recommended for wash items that are particularly difficult to dry. The CTR drying zone is available not only in a straight design, but also in a corner variant, so that your room planning can be as flexible as possible. For small kitchens and confined spaces.

EXHAUST AIR HEAT RECOVERY

Intelligent use of energy: The CTR is available with an optional Energy exhaust air heat recovery system. This uses the energy from the steam produced by the machine to pre-heat cold inlet water. This is good for the environment, reduces energy consumption, lowers operating costs and also improves the kitchen climate.

FILTRATION SYSTEM

The cleaner the wash water, the fewer changes of water are required – and the better the wash result. That's why the CTR is fitted with an effective filtration system: In the first step, coarse soiling is trapped in the removable strainer in the main wash zone. In the second step, the Mediamat filters out the finest particles, such as coffee grounds, from the wash water. Moreover, a pump inlet filter ensures that the pump is protected from mechanical damage. If the CTR is fitted with a pre-wash zone, food residues are trapped in a separate and easy-to-clean filter system before the main wash zone.

FILLING AND EMPTYING

The CTR has several programmes for filling and emptying the wash tanks. Quick start: The machine fills in approximately eight minutes (depending on on-site conditions) and is ready for use shortly thereafter. Individual water change: Depending on how soiled the water is and the time available, a part or full regeneration of the tank water can be performed by means of the tank water exchange programme. Quick drainage: In addition to the regular drainage programme, there is also a programme that will pump out all the tank water in just five minutes.

PRE-WASH ZONE M

For a better wash result and a significant increase in the rack capacity: The pre-wash zone M has its own deep-drawn tank, a double warewashing system at the top and bottom and its own pump. It has a width of 800 mm. The two-part filter system filters out food residues and prevents them entering into the main wash zone. A further advantage: By using the energy from the main wash zone, it pre-heats the dishes without any additional costs – and thus stabilises the temperature level across the entire washing process. Its own door ensures easy operation and ergonomic cleaning. The pre-wash zone M can be retrofitted.

RACK-CONTROLLED ZONE ACTIVATION

An economical feature of the CTR: The zones for the pre-wash, main wash and rinse are only activated by the machine control unit if they are actually required – that is, the zones only activate when the dishes enter the respective zone. This conserves resources and lowers the operating costs when the machine is running below capacity. Because water, power, detergent and rinse aid are used efficiently and economically.

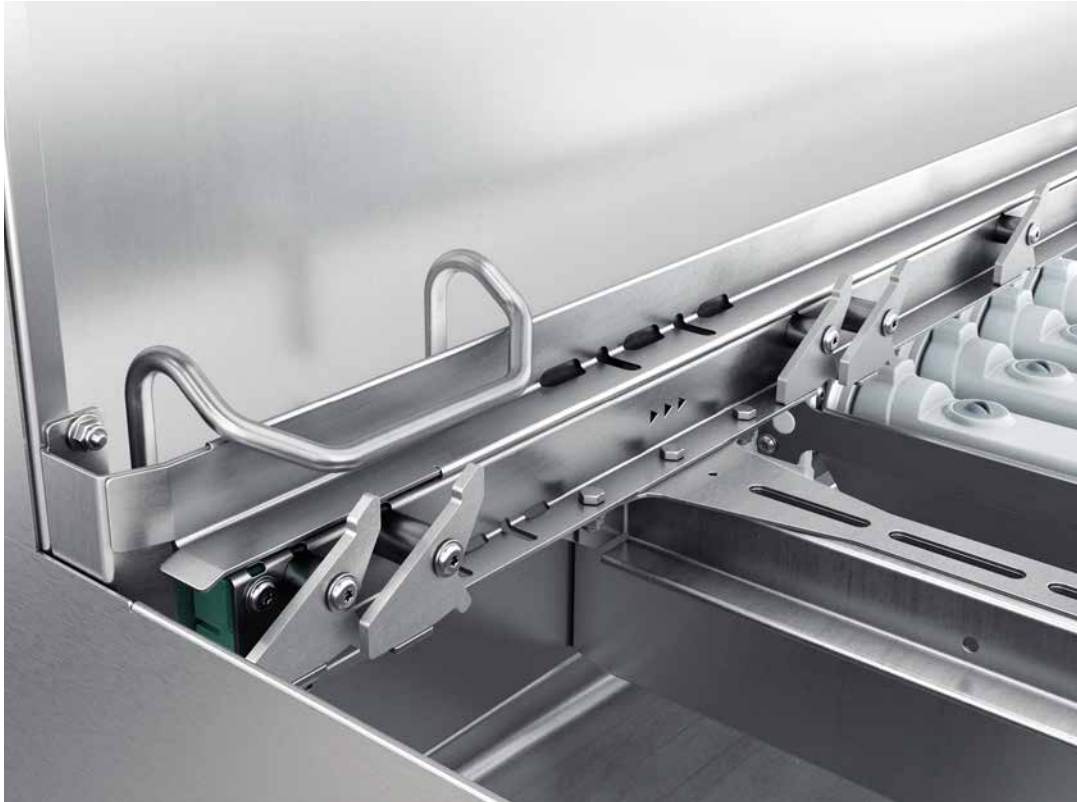
SPEED-DEPENDENT RINSE WATER VOLUME

For a significant reduction in water consumption and operating costs: The CTR adapts the rinse water volume automatically to the current transport speed. Based on need – from an economical 130 litres per hour up to a maximum of 260 litres per hour. Furthermore, an individual setting allows you to determine whether your washing operation is designed for the highest possible energy savings or a high rack capacity.



A detailed overview of the CTR is available
on our website at:

>> www.winterhalter.com/ctr



CTR MODULES

MAIN WASH ZONE

CTR M single rinse
Length of zone: 1,400 mm.
CTR L dual rinse
Length of zone: 1,600 mm.

PRE-WASH ZONE S

Length of zone: 500 mm.
Extends the main wash zone.
Increases rack capacity as a priority.
Retrofittable.

PRE-WASH ZONE M

Length of zone: 800 mm.
Prevents soiling entering the main wash zone.
Increases rack capacity.
Improves the wash result and reduces energy demand.
Retrofittable.

SINGLE RINSE



DUAL RINSE



↔ = Retrofittable

What needs to be done to develop a conveyor dishwasher that offers more possibilities? This question resulted in the creation of the CTR. Our engineers abandoned the conventional path of the static machine model and designed the CTR to be a flexible system: with a compact and powerful machine model at its heart. With various modules for attachment, the machine can be perfectly customised to meet the customers' requirements. The CTR's area of application is therefore exceptionally broad and ranges from restaurants through to canteens and even motorway services. The result is always the same: a tailor-made rack conveyor dishwasher.

DRYING ZONE

Length of zone: 700 mm.
A drying zone in a linear configuration.
To make sure cleaned wash items are quickly ready for reuse.
Retrofittable.



CORNER DRYING ZONE

Length of zone: 795 mm.
Corner drying zone (90° or 180° angle).
For small kitchens and confined spaces.
Retrofittable.



EXHAUST AIR HEAT RECOVERY

Utilises energy contained in the generated steam for optimum energy utilisation.
Improves the room climate and lowers operating costs.
Retrofittable.



PROFESSIONALLY PLANNED. NEATLY SOLVED.

Washing up plays a key role in foodservice but is rarely in the limelight. Only when everything is running smoothly in the wash up area can the overall kitchen function effectively. This means it is even more important to professionally plan the washing process and warewashing solutions with skilled partners.

ERGONOMICS

Pre-sorting dirty dishes can often be a bottleneck. The solution: A professionally planned and ergonomically designed work space with short work routes. For smooth and fast work.

ROOM CLIMATE

Pleasant room temperatures and reduced humidity: Modules such as the Energy exhaust air heat recovery create a well-balanced room climate. The option of retrofitting makes the planning process even more flexible.

COMPACT

Compact dimensions and a Multi-module concept, simplify kitchen planning. And enable tailor-made solutions even for complex room conditions.



HYGIENE

The separation of »clean« from »dirty« areas is often a challenge. Flexible machine systems like the CTR enable the most diverse planning and installation options and ensure the required hygiene.

EFFICIENCY

One of the most important subjects when it comes to a kitchen: efficiency and economy. It's great if a machine with an intelligent control unit can ensure operating costs are reduced to a minimum.

USER FRIENDLINESS

Good kitchen planning can become outstanding when employees enjoy working with a machine. 180° rotating doors for example, make it easy to access the interior and consequently particularly easy to clean. Making everyone's life that little bit easier.



A WIN-WIN-WIN SITUATION.

The perfect kitchen: with tailor-made washing technology and an efficient washing process. This is the goal of professional kitchen planning. That's why we do everything possible to support our customers and partners during the planning phase. With our expertise as worldwide washing specialists. With expert advice on technology, potential savings options and the digital possibilities of process optimisation. With modern and high-quality dishwashing technology such as the CTR: the compact and powerful rack conveyor dishwasher that can be tailor-made to precisely meet individual customer requirements. And of course with everything to make the work of experts in specialist planning easier: from BIM to 3D tools. This gets the project off to a great start under the best conditions. And makes everyone happy: the customers, the specialist planners and all of us at Winterhalter.

WORKFLOW

Ensure an efficient washing process with the CTR: from the return of dirty wash items to restocking with clean dishes. Perfectly coordinated work processes make employees and guests happy.

»200 employees eat in our company canteen every day. However, our kitchen is very small. That's why it was a real challenge to find the right dishwasher. CTR gives us exactly that. Thanks to its modularity, it fits perfectly into our kitchen and can handle even large amounts of dishes in a short period of time.«

Falko Geis, COMPANY TECHNICIAN, AVIRA | TETTNANG





Cleanliness and hygiene. Every single one of our products plays its part. Together they create the perfect wash result. Welcome to the complete Winterhalter system!

WASH RACKS

Custom-made for glasses, trays, dishes or cutlery. With their functional design they adapt precisely to the respective wash items, protecting them and preventing damage. They ensure ideal water and air circulation and fast drying. And of course they make handling and transporting wash items easier.

Wash racks have a decisive influence on the quality of the wash result and the total operating costs. We advise which racks best suit your requirements. Culminating in the best solution for you.



CHEMICALS

Usually overshadowed by the machine. Often underestimated. But they have a crucial influence on the wash result: the chemicals. This is the reason they are an important component of the overall Winterhalter system.

We therefore established a research department with an in-house laboratory many years ago at our headquarters in Meckenbeuren. Here we develop and test formulae for a premium range of detergents and hygiene products. They are perfectly tailored to the various types of wash items and soiling, economical to use and perfectly coordinated to the other products in the range. They work together perfectly and deliver brilliant wash and drying results.



WATER TREATMENT

Deposits. Streaks. Marks. They are »unwanted gifts from the kitchen« and the natural enemies of any restaurateur. They are the hallmark of a poor wash result. Limescale impairs the effect of detergent and rinse aid, and damages the machine in the long-term. The problem is water quality – the solution is professional water treatment. Specifically for powerful machines such as the CTR, Winterhalter offers the DuoMatik 3 softener: Winterhalter developed the DuoMatik 3 softener: The external device requires no power supply and works mechanically to ensure consistently high-quality water – and it does this without a regeneration break due to two alternating ion exchange cartridges. If you demand even higher water quality: The compact RoMatik 420 reverse osmosis device achieves almost 100 % demineralisation, even where large volumes of water are required. The result is gleaming wash results, with no need for subsequent polishing.



ACCESSORIES AND SPACE PLANNING

The product: first class. Washing technology from Winterhalter stands for the highest standards of wash results. However, as the worldwide washing specialists, our demands are higher: Our objective is not just to offer our customers first-class wash results. Our desire is to design their washing process as efficiently as possible. The original Winterhalter accessories create the basis for this.

The tailor-made solution: Washing technology is only perfect when it is precisely tailored to meet individual requirements: the space and the employee environment, the capacities and the special requirements and demands. Winterhalter has developed a diverse range of handling systems: Inlet or outlet tables, in linear or corner configurations. Mechanical and electrical corner conveyors, at an angle of 90° or 180°. Clearing and sorting stations, drying zones, roller tables and rack shelves. This provides a wide range of installation and combination options: for flexible space planning. And the optimal washing process for you.

What can we do for you? Let's talk about it: Tel. +49 7542 402-5408 or www.winterhalter.com/contact



Karl Winterhalter



Jürgen Winterhalter



Ralph Winterhalter

»We are family people!«

Down-to-earth. Forward-looking. With a focus on family. The culture and values of our family have shaped the Winterhalter company for three generations. Close to staff, customers and partners. Long-term thinking with a view to the generations to come. Taking personal responsibility – all typically Winterhalter. We are proud of our family company. And we are pleased to grow a little more every day.



THE FIRST WINTERHALTER

It all began in 1947: Karl Winterhalter established his own company in Friedrichshafen. He started by salvaging scrap metal from the war, which he used to manufacture household goods. Cooking pots and ovens, for example. A short time later he specialised, and in 1957 launched the GS 60 model: the first commercial warewasher from Winterhalter. That was the starting signal. Since then the company has always pursued a single goal: perfect wash results as part of an efficient washing process. With this holistic approach, Winterhalter has developed from a machine supplier to the full system provider of warewashing solutions it is today.

»Products, advice, service – three factors that intertwine seamlessly at Winterhalter. And that makes our customers feel safe in the knowledge that they have the right partner for any issue relating to the washing process.«

FROM WAREWASHER TO WAREWASHING SOLUTION

In days gone by, all we needed to do was deliver the new warewasher to our customer's kitchen on a hand truck. Now it's about the development of a new, individual warewashing solution, which is perfectly coordinated with the on-site situation and the special requirements and preferences of the customer. A solution of this type is based on clear analysis and planning. To achieve this, we visualise the room layout using state-of-the-art CAD software in 2D and 3D. For a bespoke and efficient washing process.



OVER **2.000**

EMPLOYEES WORLDWIDE

High quality standards. Diligence. Curiosity and ambition. These are the typical attributes of a Winterhalter employee. And with them, we have grown from a small Swabian family company into a global player: with over 40 branches worldwide and distribution partners in over 70 countries. We are proud of what we have achieved. And we are proud of each and every employee who has done their bit. So we would just like to take this opportunity to officially say »Thank you!«



OUR ACADEMY OF WASHING SCIENCE

Almost 1,000 participants per year and 250 training days worldwide: as part of our training programmes we pass on our knowledge and experience in the discipline of »warewashing«. We provide training to our own personnel as well as to our retail and service partners. Our objective: every Winterhalter customer should receive informed advice and professional support in the specific situation. Whether it's an initial informative discussion, installing a warewasher, or service and maintenance appointments.

IN-HOUSE LABORATORY FOR IMPROVED CHEMICALS

As a specialist in warewashing, do we want to rely on the products of other manufacturers? The answer to this question was an immediate and resounding »No!«. This was the moment when our in-house research laboratory was born: we have been developing our own formulas for original Winterhalter chemicals for many years now: from detergents and rinse aids to hygiene products.

Good to know

As a specialist in warewashing, at Winterhalter we set high standards for ourselves: we don't just want to meet our customers' current requirements. We want to support them proactively and gain their trust for the long term. Service plays an important role here: our comprehensive network guarantees fast and professional support on site. Worldwide.

We and our service partners are there when you need us. On that you can always rely with Winterhalter.



What opportunities does new technology offer? How is our society and the world of work changing? Which trends and developments will shape commercial warewashing in the future? We find all of these questions extremely exciting. And that's why we are already working on developments that will affect us and our customers tomorrow, and the day after that. You can take a look at the solutions that we have developed in our NEXT LEVEL SOLUTIONS. Current examples include CONNECTED WASH and PAY PER WASH.

>> www.connected-wash.com >> www.pay-per-wash.com

»See you again soon!«

Customers often own a Winterhalter warewasher for 15 or 20 years. So our customers only have to worry about disposing of their old equipment once every few decades. What's more, we take care of this ourselves. We design our machines as modular systems, so they are easy to dismantle if ever the need arises. We reduce the range of materials, use standardised construction materials and label plastic parts for easy recycling. Winterhalter warewashers have a particularly high recycling ratio thanks to these and many other measures.



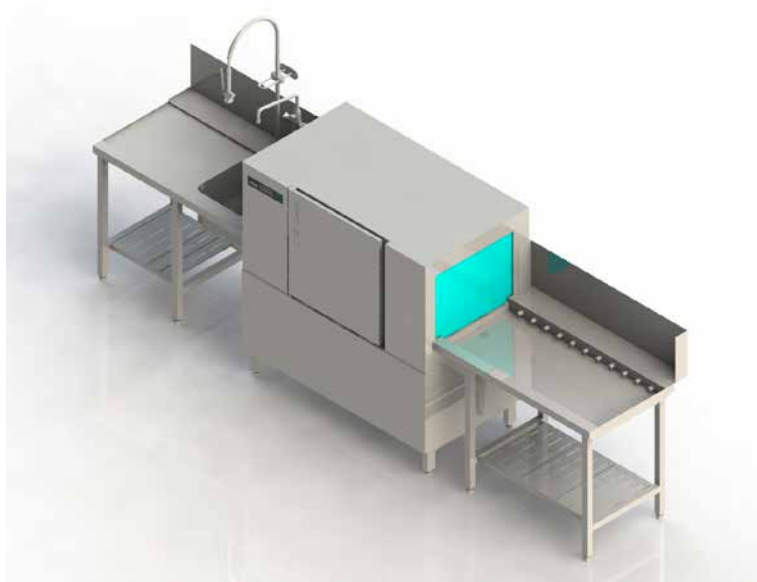
MADE IN GERMANY AND SWITZERLAND

As ever, it is not simply an indication of origin, but a seal of quality: products made in Germany and Switzerland are recognised worldwide for their premium quality and total reliability. For engineering skill, ingenuity and precision. Winterhalter is the perfect testament to this: in Meckenbeuren, Endingen and Rüthi, we develop and produce solutions for first-class cleanliness and hygiene. This is our promise for every single warewasher that leaves our factory.

CTR CONFIGURATION EXAMPLES

Ideal for any room: The CTR's various setup and combination options offer the best solution for every kitchen.

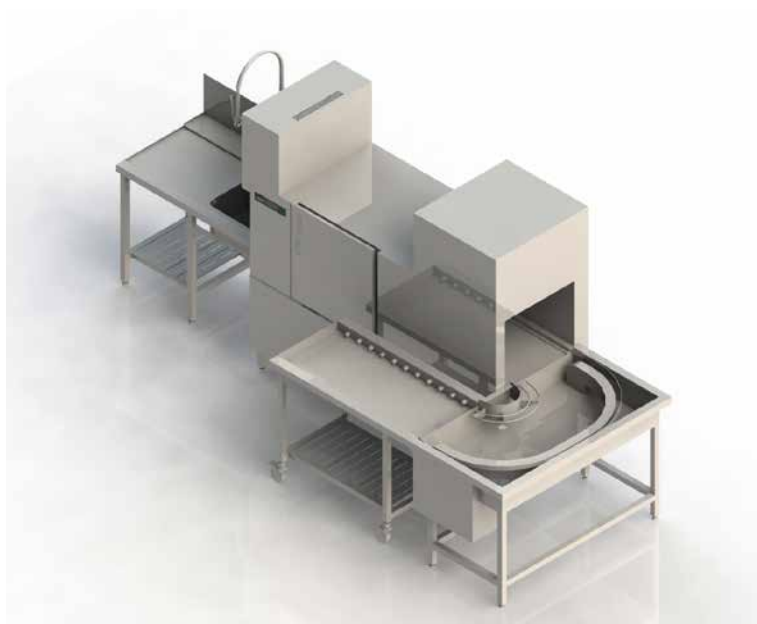
CTR M CONFIGURATION EXAMPLE



**Hotel, restaurant, canteen meals
for 100 to 200 diners**

- Performance: up to 120 racks per hour
- Total length/depth: 3,800 mm / 815 mm
- Loading area: Inlet table with sink and pre-spray unit, space for two racks
- Unloading area: outlet roller table, space for two racks

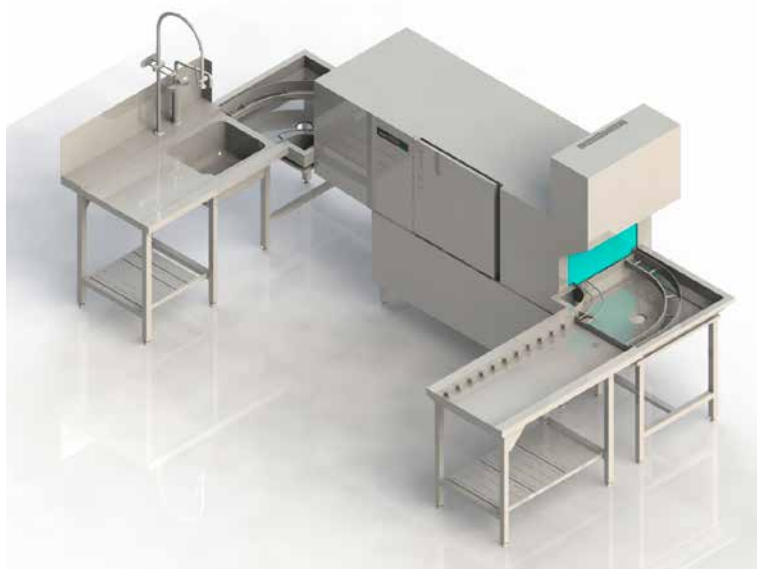
CTR M-M WITH ENERGY CONFIGURATION EXAMPLE



**Hotel, restaurant, canteen meals
for 100 to 200 diners**

- Performance: up to 120 racks per hour
- Total length/depth: 4,100 mm / 1,550 mm
- Loading area: Inlet table with sink and pre-spray unit, space for two racks
- Unloading area: electric 180° outlet corner conveyor, rotating outlet roller table, space for two racks

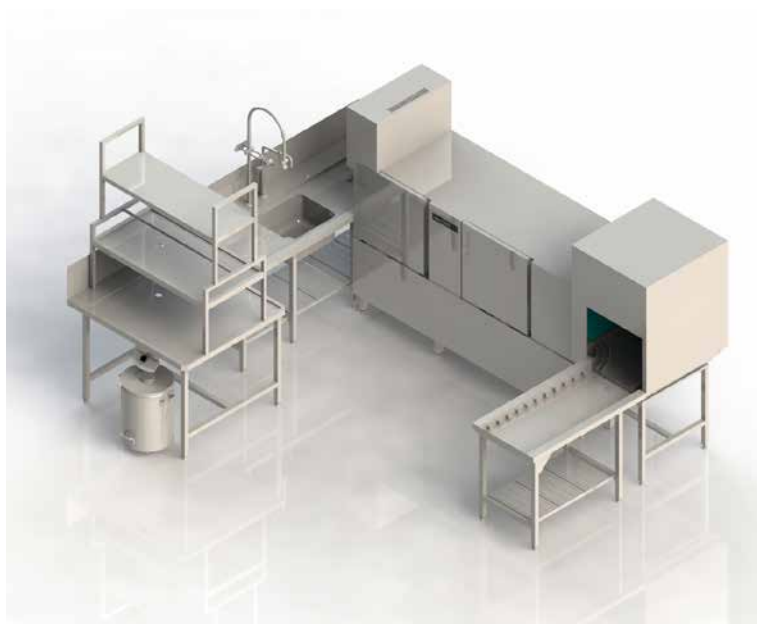
CTR SL WITH ENERGY CONFIGURATION EXAMPLE



Hotel, restaurant, canteen meals for 150 to 300 diners

- Performance: up to 160 racks per hour
- Total length/depth: 3,800 mm / 2,100 mm
- Loading area: Inlet table with sink and pre-spray unit, space for two racks, mechanical 90° inlet corner conveyor
- Unloading area: mechanical 90° outlet corner conveyor, outlet roller table, space for two racks

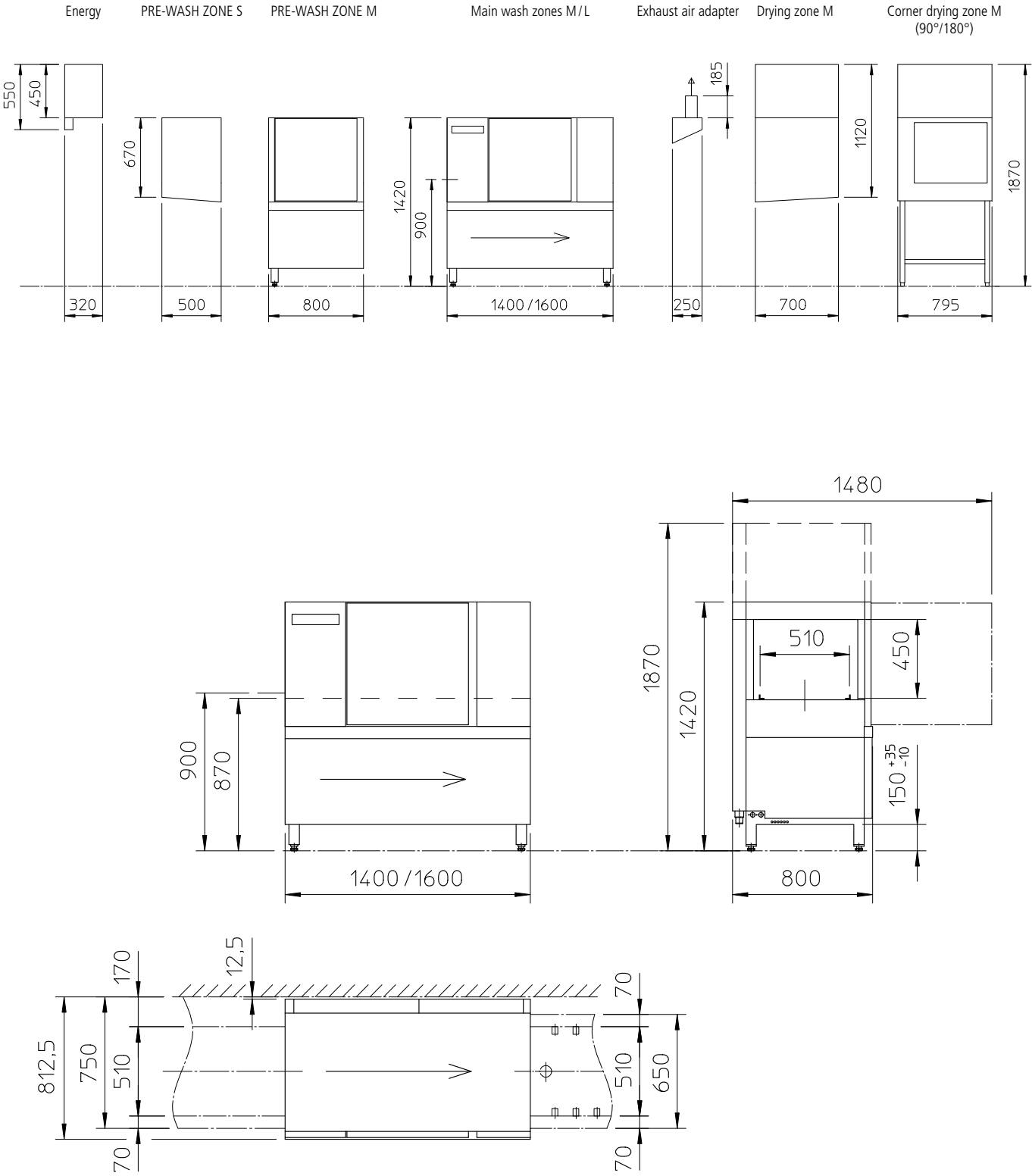
CTR ML-M WITH ENERGY CONFIGURATION EXAMPLE



Hotel, restaurant, canteen meals for 200 to 400 diners

- Performance: up to 195 racks per hour
- Total length/depth: 4,000 mm / 3,150 mm
- Loading area: clearing and sorting station, inlet table with sink and pre-spray unit, space for two racks, 90° corner inlet
- Unloading area: mechanical 90° outlet corner conveyor under corner drying zone, outlet roller table, space for two racks

CTR TECHNICAL DATA



General data		CTR M Single rinse	CTR L Dual rinse
Tank capacity	l	75	83
Rack dimensions	mm	500 x 500	
Clear entry height	mm	450	
Passage width	mm	510	
Working height	mm	900	
Wash pump	kW	2.2	
Noise emission	dB(A)	< 70	
Splash guard		IPX5	
Max. inlet water temperature	°C	60° (Energy: 20)	
Required water flow pressure with pressure boiler	bar/kPa	1.5–6.0 / 150–600	
Tank temperature	°C	55–65	
Rinse water temperature		85	

Weight optional (net/gross)		CTR M Single rinse	CTR L Dual rinse
Straight drying zone	kg	61 / 109	
Corner drying zone	kg	110 / 158	
Energy	kg	38 / 40	

Specific data		CTR M	CTR SM	CTR MM	CTR L	CTR SL	CTR ML
Theoretical rack capacity	Racks/h	50 / 75 / 120	70 / 100 / 150	90 / 125 / 185	60 / 85 / 130	80 / 110 / 160	100 / 135 / 195
Average rinse water consumption * ¹	l/h	114	152	190	130	168	205
Weight net/gross	kg	212 / 264	249 / 315	340 / 418	244 / 296	281 / 347	372 / 450

*¹ Non-binding information. The actual rinse water consumption may vary depending on the on-site conditions.

OPTIONAL EQUIPMENT

- Energy exhaust air heat recovery *²
- direction of travel can be selected: left–right / right–left
- working height: 850 mm, 950 mm *²
- base installation
- pre-wash zone S *²
- pre-wash zone M *²
- straight drying zone *²
- corner drying zone *²
- exhaust air adapter (only outlet end) *²
- emergency stop *²
- dual rinse
- increased boiler heating at the cold water connection *²

*² These modules can be retrofitted.



»In this brochure, we have presented our CTR: its product features, application options and what sets it apart. However we were not able to provide you with the strongest argument of all here: the positive experiences of our satisfied customers. Just ask next time you see a CTR anywhere. There is no better aid to making your decision.«

Jürgen and Ralph Winterhalter



THE LITTLE POWER PACK



GS 630 – the smallest utensil washer in the world

Winterhalter offers the ideal solution for washing utensils in small kitchens or where space is tight. The GS 630 is the smallest utensil washer in the world. As a compact under counter, it delivers outstanding washing results for European standard boxes, baking trays, GN containers, serving trays and grease filters. If required, dishes and cutlery can also be washed in the GS 630.

In foodservice, bakeries, butchers' shops and fast food restaurants, the little utensil washer achieves a lot. It works hygienically and economically, whilst saving a lot of time. With numerous innovative solutions, the GS 630 fulfils the highest demands and sets quality benchmarks. It is easy to

operate, offers hygiene safety and guarantees perfect washing results even with persistent stains. The ease of care and maintenance completes the performance package of the GS 630.

Whether in foodservice, bakeries, butchers' shops or fast-food restaurants, Winterhalter also offer a variety of racks, water treatments and detergent products to suit the items being washed and the type of soiling.

A perfect wash result and hygienic safety

The wash system consists of top and bottom reversing wash arms, that achieve maximum surface coverage with optimum power. As well as the standard programme, there is also an intensive and a short programme available – these can be selected according to how dirty the wash items are. The quadruple filtration system with Mediamat guarantees hygiene safety.

Operation made easy

Thoughtful functionality the language-neutral, colour-coded single-button operation is the ideal solution for frequently-changing dishwashing staff. The tried-and-tested PCB WPS offers even more operating-comfort, for example by displaying the current tank and boiler temperatures or the detergent and rinse-aid levels. The detent position of the door is a space-saving solution for ventilating the interior of the machine at the end of the working day.

Quality and machine maintenance

The high quality materials and construction ensure a long service-life. The GS 630 is also accordingly equipped with IPX5 protection against water jets. The automatic self-cleaning programme facilitates machine maintenance and saves on time and costs. The wash arms with non-detachable wash jets can be individually removed for cleaning, as can all components of the wash-water filtration system.



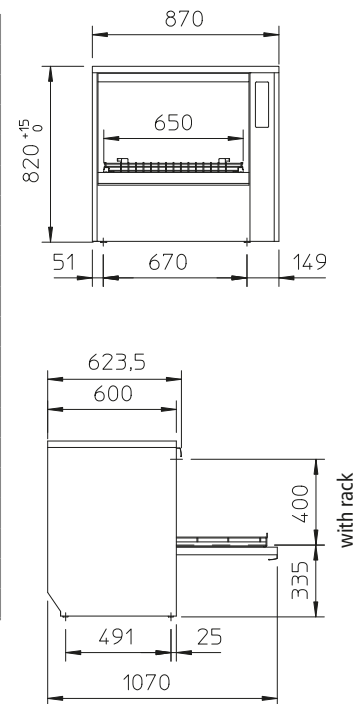
Technical data

	GS 630
Number of programmes	3
Theoretical capacity 1/2/3	[Racks/h] 38/29/12
Water consumption	
Tank capacity	[l] 25
Rinse water consumption per wash cycle*2	[l/rack] 4,4
Temperatures	
Tank temperature	[°C] 60
Rinse temperature	[°C] 85 (65)*1
Rack interior dimensions	[mm] 630 x 465
Electrical information	
Total connection value/fuse protection	Siehe Tabelle unten
Circulating pump (P1)	[kw] 1,5
Tank heating	[kw] 5,3
Boiler heating	[kw] 5,3
Other information	
Max. inlet water temperature	[°C] 60
Required water flow pressure without/with cold water pre-wash	[bar] 1,0–6,0/2,5–6,0
Splash guard	IPX5
Weight (net/gross)	[kg] 105/120

*1 Optional temperature switching

*2 Non-binding information. The actual need for rinse water can vary depending on the on-site conditions.

All other data on the web and in-app.



Completely turning the feet reduces the machine height by 4 mm.

Electrical data

Voltage	Fuse protection	Total connected load Standard Boiler 10.2 kW/tank 5 kW	Countries
380V–415V/3N~ 50–60 Hz	16A	7,1 kW	worldwide
200V/3~ 50–60 Hz	25A	6,6 kW	Japan
380–415V/3N~ 50–60 Hz	16A	8,7 kW	Australia
230V/3~ 50–60 Hz	20A	6,6 kW	Belgium

MonoMatik 3
Water treatment by softening

winterhalter

Soft water – easily and efficiently



Water softening has never been so precise

Water softening is the basic treatment that is essential for professional washing. Over time, the hardness that is present in water deposits itself over the machine and dishes as a white non-soluble crust. Softened water prevents limescale deposits and the eventual damage to the warewasher. There is also the added benefit that the detergent and rinse aid perform to their optimum level, which ensures better washing and drying performance and reduced consumption. The new version of the MonoMatik offers water treatment that is more precise than ever before.

New control head makes the difference

Winterhalter have upgraded the already successful and proven MonoMatik water treatment unit. The new currentless control head now enables precise, on site adjustment that is unique to the industry. Rather than the normal interval settings (e.g. 13–16 degrees), the new MonoMatik can be precisely adjusted to meet on site conditions.

Regeneration – at exactly the right time

The MonoMatik 3 is not only considerably easier to operate, but it only regenerates when it is actually necessary. The regeneration time is triggered by the water flow in the control head.

The reduced regeneration rates compared to interval based solutions, save both salt and water. The unit is also designed to be more efficient, leading to salt savings of 73 % and a 55 % reduction in water consumption for each regeneration.

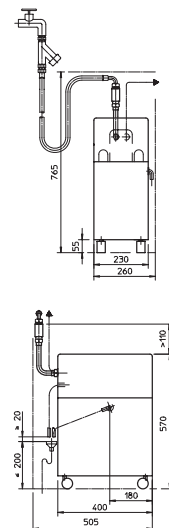
MonoMatik 3 operates without power

The new MonoMatik 3 now operates without power, bringing a range of advantages. When using this water treatment system, there are no costs for locating or installing sockets or for power. This makes the MonoMatik 3 extremely flexible and enables it to be used in different locations. Its independence from the mains avoids downtime and means that regeneration is always carried out exactly when required.

The new, precision adjustable water softener provides the following benefits:

- Precise water hardness adjustment on site
- Demand-based regeneration time
- No downtime due to independence from mains power
- Significantly lower regeneration times (reduced from 30 to 10 minutes)
- Low water and salt consumption
- Significantly improved efficiency

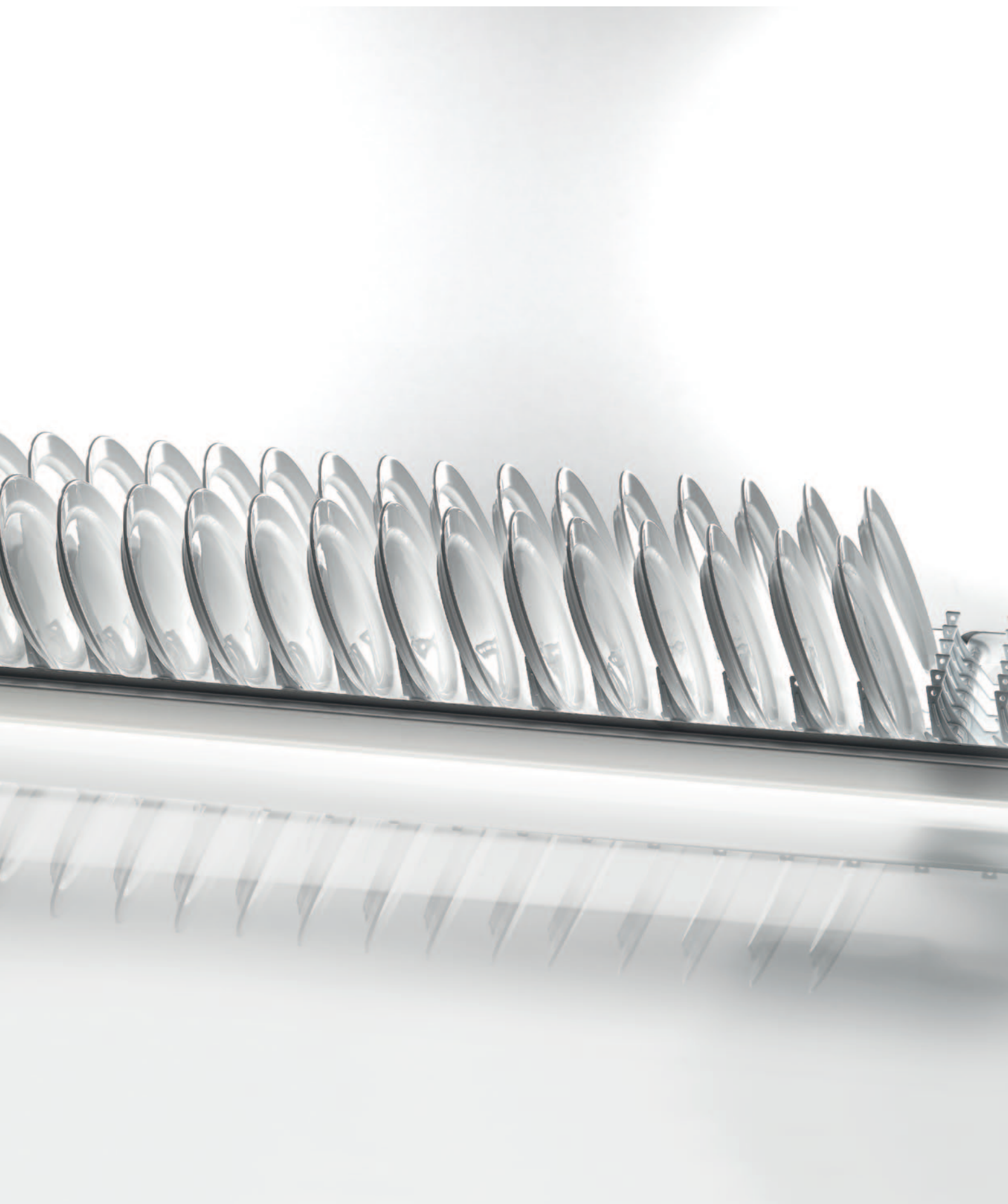
Technical data		MonoMatik 3
Flow rate (at 1.5 bar inlet pressure)	[l/min]	20
Regeneration time	[min]	10
Max. inlet water hardness	[°dH total hardness]	29
Water flow pressure in infeed	[bar]	min.: 1.5 / max.: 8.0
Weight	[kg]	10.2
Pressure loss	[bar]	0.8
Mode of operation	Automatic regeneration program, zero power, controlled by set hardness and water flow	



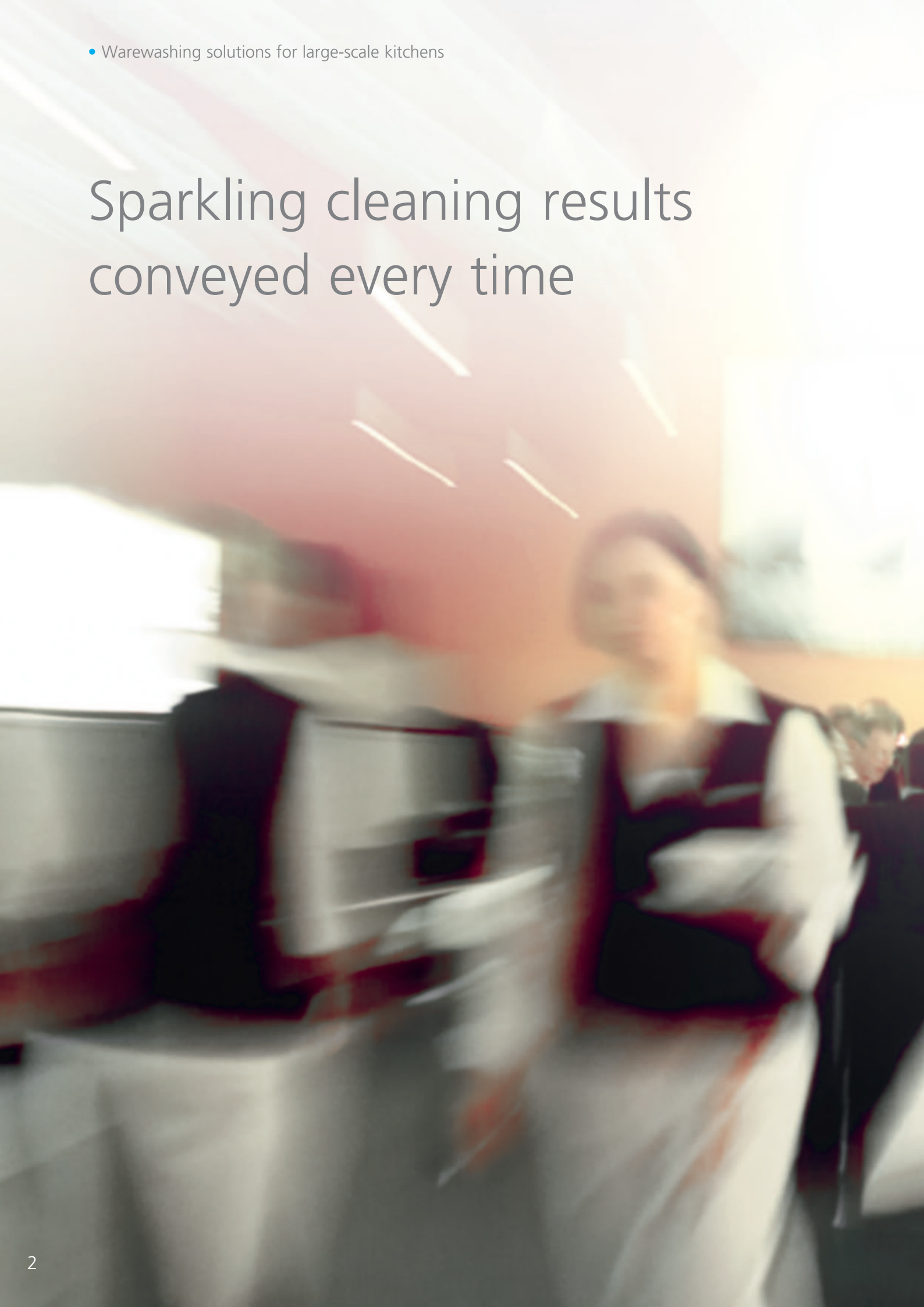
Rack conveyor and flight-type dishwashers
MT Series


winterhalter

Economy and hygiene on a large scale



Sparkling cleaning results conveyed every time





Perfectly clean, hygienic dishes is a fundamental prerequisite – particularly in establishments where large numbers of people dine or drink. So it's important to be able to trust the performance of your warewasher in the way your guests trust the high quality of your cuisine. It is only when various work flows are harmonised, that you can be left to fully concentrate on your guests.

As a warewashing specialist, we know your potential requirements and can precisely offer you a tailored solution. We know what is important – in large restaurants, hotels or staff canteens, in refectories or kitchen hospitals, homes for the elderly or nursing facilities.

- Rack conveyor or flight-type dishwashers

Maximum customisation for optimal warewashing solutions

The type and quantity of dishes varies from one kitchen to another. The MT Series can offer you an appropriate cleaning solution for your needs. Whether rack or flight-type conveyor, the modular design and wide range of options means the MT Series can be configured in line with your requirements.



MTF flight-type dishwasher



MTR rack conveyor dishwasher

Do you need help in choosing a rack or flight type dishwasher?

	MTF flight-type dishwasher	MTR rack conveyor dishwasher
Primary area of application	Cafeterias, hospitals, larger canteens and nursing facilities	Hotels, restaurants, motorway service stations, airports, smaller canteens and nursing facilities
Quantity of dishes	Continual	Irregular
Washing times	Fixed	Variable
Dishes	Uniform	Various
Transport of dishes	On the conveyor belt: plates, trays, cloches, insulating trays, containers, etc. In racks glasses, cutlery, cups and small parts	All items sorted into appropriate racks
Operating personnel	At least 2 people	At least 1 person
Organisation	Straight loading and unloading zones	Individual planning of inlet and outlet tables (including with 90° or 180° curves)
Scraping	General removal of food remnants (no manual pre-wash)	Manual pre-rinse generally required
90° corner entry	—	Possible
90° corner conveyor	—	Possible
90°/180° outlet corner conveyor	—	Possible

Certain features shown in the brochure are special equipment.

Maximum customisation:

- Choose between flight or rack conveyor depending on your requirements
- Precise configuration according to your needs using a modular design
- A multitude of equipment and configuration options

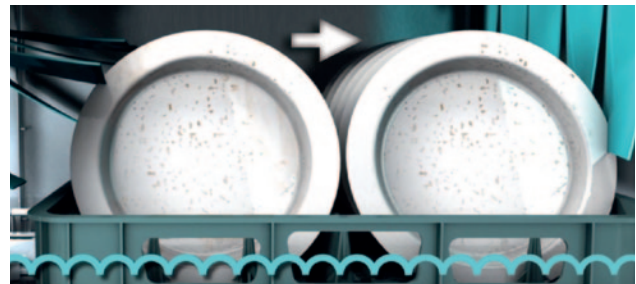


Innovative technology for sparkling cleaning results

First-class results are standard for Winterhalter, especially large quantities of dishes. The secret to this is the intelligent interaction of developed technology.



Without continuous rack conveyor motion: Contact with the rinse water is not uniform *



With continuous rack conveyor motion: Uniform contact with the rinse water *

High-performance warewashing system

Wash arms, profile of jet and pump pressure are optimally coordinated. The angle of the wash arms can be individually adjusted. Where dishes with recesses are being washed, optional side wash arms ensure maximum coverage of surfaces.

Wash water filtration

Every prewash and main wash tank is equipped with a combined filter system, pump inlet and the tried and tested Mediamat. This removes fine, floating particles like coffee grounds from the wash water by using centrifugal force, ensuring perfect cleaning results every time.

Special programmes

With the special glasswashing (optional) and food container programmes, the washing process can be adapted to your special requirements. Where osmosis water is available for instance, it can be switched on for rinsing during the glass-wash programme.

Continual rack conveyor

A special drive system has been developed for the continuous motion of dishes which guarantees uniform contact with the wash water.

Pre-wash zone with heat exchanger

A heat exchanger ensures, constant, low-temperature operation. Pre-washing is considerably improved as the clogging of starch and protein can be reliably prevented. The energy recovered from the pre-wash zone is used for heating up the rinse water.

* Shown in a pre-wash zone



Sparkling cleaning results:

- Developed washing system combined with efficient wash water filtration
- Special programmes for glasses and food containers
- Uniform contact with the rinse water – even with rack conveyor dishwashers



Hygienic safety:

- Hygienically clean machine interior
- Filtered exhaust air for better ambient climate
- Self-cleaning programme

Consistent hygiene concept for added safety

Hygiene safety is imperative, particularly in large kitchens. The extensive hygiene concept including the special machine architecture guarantees process reliability and makes the MT Series unique.



MTF with plinth installation



Roof cleaning jet

Pivoting hygienic doors

The deep-drawn hygienic doors with smooth interiors prevent build-up of dirt and bacteria. They can be pivoted to 180°, enabling easy access to the insides of the doors.

Exhaust air system with grease filter

A grease filter protects the exhaust air duct from dirt. At the same time, deposits are reduced due to the system's rounded shape. The exhaust air conducted into the kitchen area is cleaner, which represents a major plus for the ambient climate.

HighTemp – Washing at high temperatures

For special requirements beyond DIN 10510, MT Series warewashers are also available in HighTemp versions. This function can be switched on or off as required.

Automatic self-cleaning

Rotating jets inside the machine's roof use clean water drawn from the rinse tank to clean during operation, without any additional water consumption. At the end of an operational day, the entire interior is rinsed out with fresh hot water and the tankwater is drained. This greatly reduces manual cleaning.

For maximum hygiene, the MT Series also offers:

- deep-drawn hygienic tanks without corners or edges
- Smooth hygiene rear panel without riser pipes
- Heat exchanger cleaning system with two rotating wash arms (up and down)
- Plinth installation

Sophisticated solutions for minimum operating costs

Reducing costs and saving on resources are important topics when washing large quantities of dishes. The mature technical solutions of the MT Series will enable you to reduce your operating costs daily.



Minimal water consumption

The MT Series optimised rinse system reduces fresh water consumption by up to 30 %. This corresponds to an annual saving of 227.800* litres of water for example. This is equivalent to the average consumption of a five-person household.

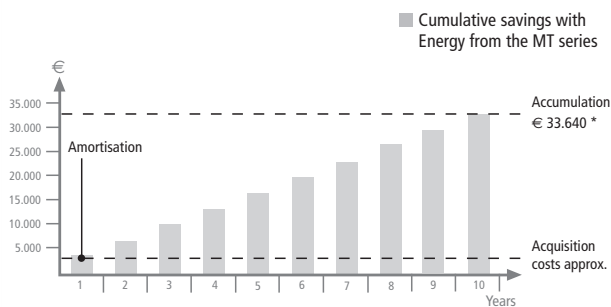
Rack-activated control zone

Rack-activated control zones enables the MT Series to react to the specific load as it passes through the machine: pumps, fresh water supply and drying are only activated when dishes are in that particular zone. Consequently resources like water, detergent, rinse aid and energy are used in a targeted, economical way. In addition emissions of noise, heat and vapours are also minimised.

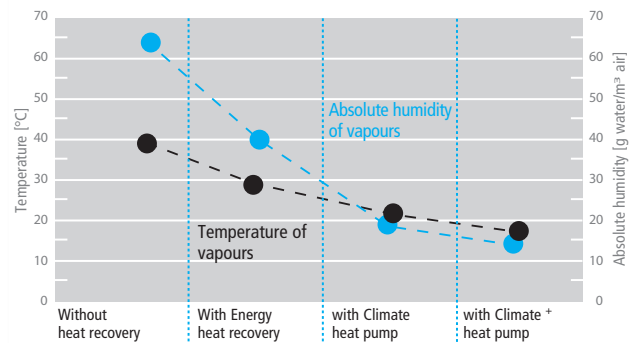
For added economy, the MT Series also includes:

- Double-walled design
- Sealed base cover
- Individual emptying of pre-wash zone tank
- Detergent and energy saving facility: up to 50 % less detergent, up to 3 kWh per hour less energy

* For a water saving of 130 l/h (MTR 5-430 LLLLM), 6 operating hours per day, 365 operating hours per year and 80 % utilisation.



*Basis for calculation of exhaust air heat recovery: 12 kWh per hour energy savings x 0,16 €/kWh x 6 washing hours per day x 80 % utilisation x 365 operating days/year = € 3.364 x 10 years = € 33.640



Less temperature and humidity losses from conveyor dishwashers into the room

Energy exhaust air heat recovery

Energy exhaust air heat recovery uses energy from warm exhaust air to heat up the cold incoming water. Humidity and temperature of exhaust air is thereby noticeably reduced. Energy requirements per second are lowered by up to 12 kWh.*¹

Climate heat pump

With the Climate heat pump even more energy can be recovered than with Energy exhaust air heat recovery. The humidity and temperature of the exhaust air is further reduced, with energy savings of up to 14 kWh per hour. No on-site exhaust air system needs to be connected to the exhaust air vent.*²

Climate+ heat pump

With the Climate+ heat pump, as well as the cold incoming water, the tank water in the final main washing tank is also heated up. Energy savings here are around 18 kWh per hour. The humidity and temperature of the exhaust air is again reduced at the same time. No on-site exhaust air system needs to be connected to the exhaust air vent.*²

Lowest operating costs:

- Reduced consumption of resources
- Lower connection values when using heat recovery systems
- Improved ambient temperature

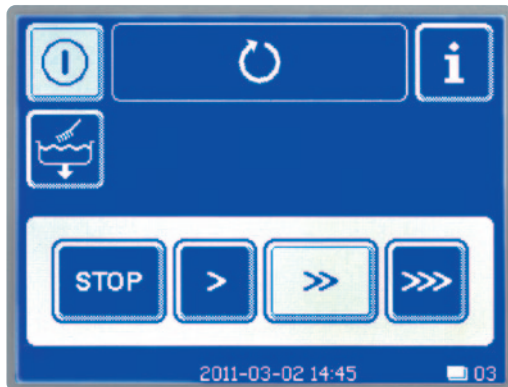
*1 We recommend connecting the exhaust air vent indirectly to the on-site exhaust air system.

*2 A sufficient ventilation system in the room conform to VDI 2052 is required.

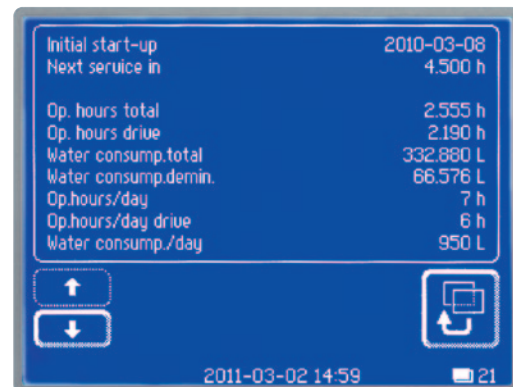
- Operator convenience

The touch screen – intuitive operation, comprehensive monitoring

Data relating to hygiene and operation can be recovered quickly and simply via the touchscreen. Comprehensive data capture enables kitchen management to maintain an overview at all times.



User level with choice of motion speed



Operating data logbook – Language setting: English

Intuitive operation

Language-neutral symbols and animations on the touchscreen enable reliable operation – even by untrained kitchen porters.

The warewasher takes the responsibility

The MT Series communicates machine information and errors via visual and audible signals. This enables immediate detection and refilling of empty detergent and rinse aid containers. Tank and boiler temperatures can be displayed too at any time for the monitoring of safe operation.

Passive hygienic safety

An error signal output by an external detergent metering system on the machine display also increases hygienic safety.

PIN-protected kitchen manager level

With PIN-protected access, kitchen management can query important data such as consumption, utilisation and service intervals at any time. The operating data logbook enables washing habits to be monitored and optimised as required. The hygiene logbook documents all hygiene-relevant events and malfunctions.

Monitoring of external water treatment unit

Error messages from external water treatment units (e.g. RoMatik 420) can also be displayed via the MT Series display. This enables downtimes to be reduced significantly ensuring perfect rinsing results every time.

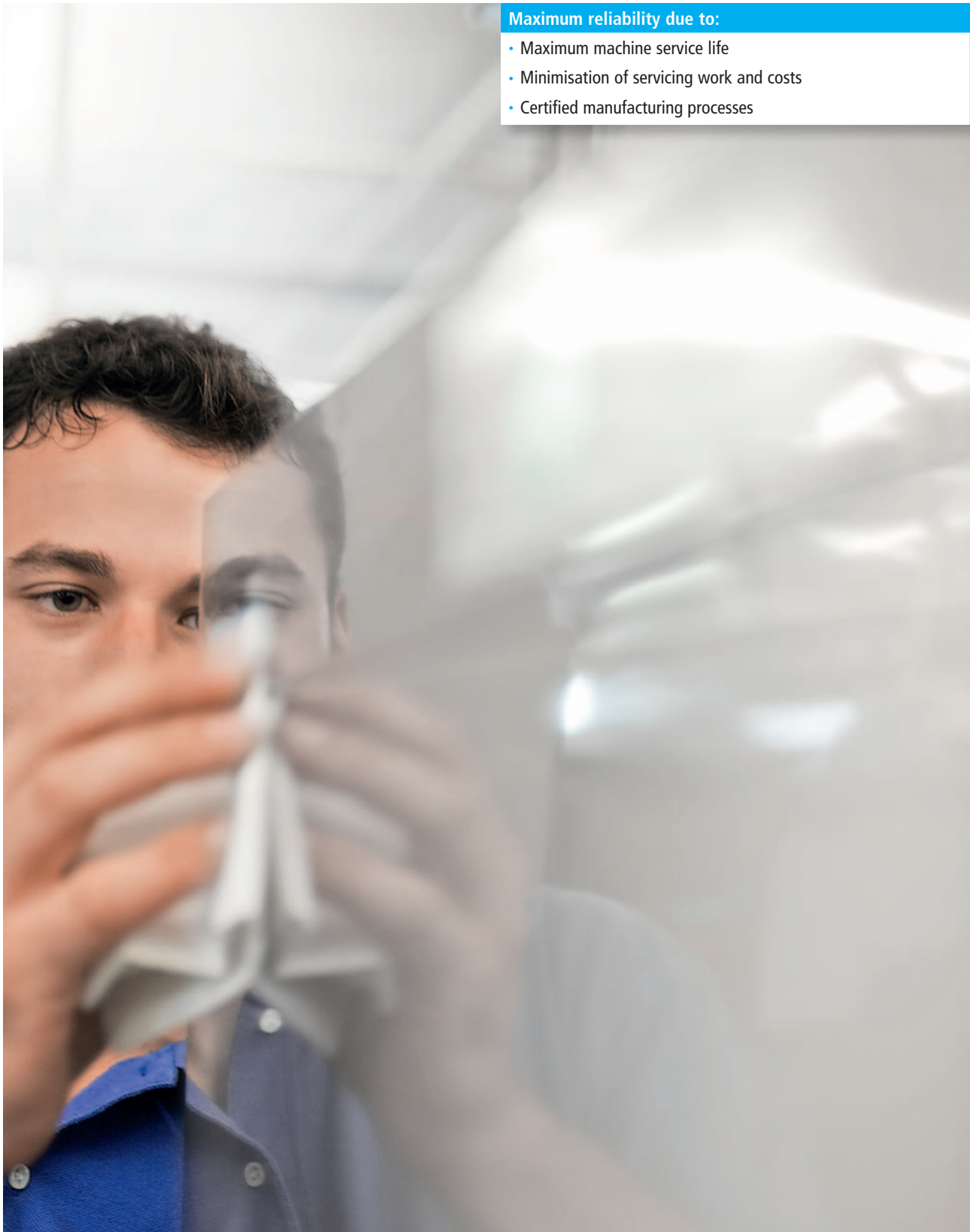
For maximum operating comfort, the MT Series also offers:

- Time-controlled, automatic switch on
- A choice of more than 24 display languages
- GSM module for remote data transfer
- Data interfaces



Maximum operator convenience:

- Minimisation of possible operating errors
- Simple monitoring of hygiene-relevant data
- Comprehensive data retention and machine monitoring
- Rapid error detection – even on external devices



Quality you can completely trust

Quality demands and technical innovation have enabled Winterhalter to repeatedly set new industry standards. Because of this, you profit from reliable and safe warewashing.



Jürgen und Ralph Winterhalter

German quality

Being a family company, which is now in its third generation, Winterhalter has always placed great emphasis on innovation. Extensive material tests are conducted before the ideal components are selected.

The latest manufacturing systems and structured processes enable a constantly high level of product quality to be attained. This results in a long machine service life, which ensures you can work comfortably and safely.



Service friendliness

To reduce maintenance work as much as possible, all relevant components are simple-to-access. Service technicians can access test programs quickly via the touchscreen for troubleshooting purposes.

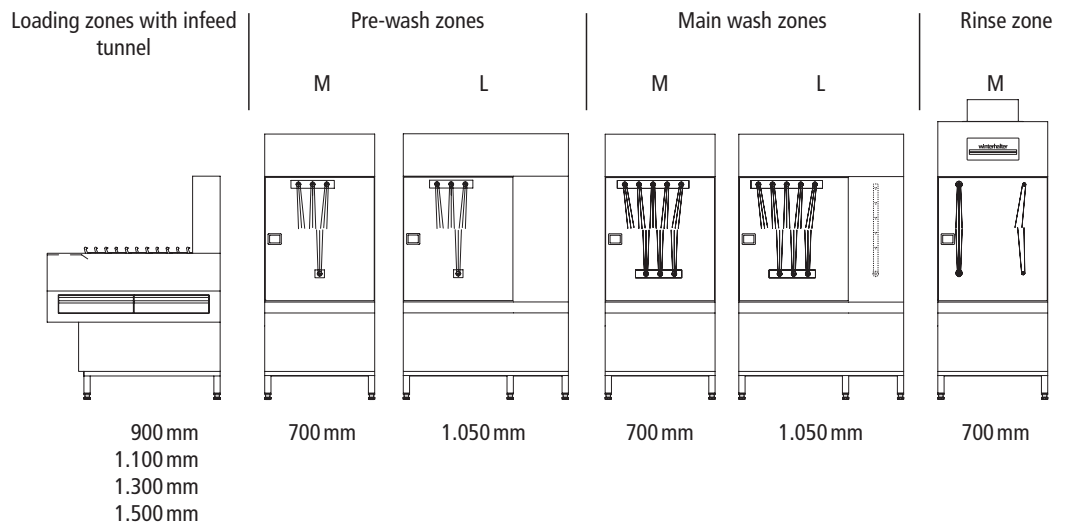
Certified quality and environmental management

Winterhalter was one of the first companies in its sector to be awarded the Certificate for Quality Management Systems (EN ISO 9001), for the Environment (EN ISO 14001) and Health and Safety in the Workplace (BS OHSAS 18001).



These internationally recognised certificates are proof that Winterhalter meets the highest requirements.

• MTF: Technical data for flight-type dishwashers



MTF flight-type dishwashers, 65 conveyor belt		MTF 3-2800 MMM	MTF 3-3300 MLM	MTF 3-3700 LLM	MTF 4-4100 MMLM
Number of washing tanks as per DIN 10510		3	3	3	4
Theoretical machine performance* ¹ [plates/h]					
– Intensive programme		1.200/1.600/1.800	1.400/1.900/2.100	1.600/2.100/2.400	1.700/2.300/2.600
– Standard programme* ²		1.800/2.000/2.400	2.100/2.300/2.800	2.400/2.700/3.200	2.600/2.900/3.500
– Rapid programme		2.400/2.600/2.800	2.800/3.000/3.300	3.200/3.500/3.700	3.500/3.800/4.100
Pre-wash zone		M	M	L	M
Main wash zone(s)		M	L	L	M + L
Rinse zone		M	M	M	M
Blowing-out zone (option)* ³		M or L	M or L	M or L	M or L
Drying zone (optional)		M, L or XL	M, L or XL	M, L or XL	M, L or XL
Dimensions					
Machine length without infeed tunnel, blowing-out zone, drying zone, loading and unloading zones	[mm]	2.100	2.450	2.800	3.150
Machine depth	[mm]	800	800	800	800
Machine height (incl. vent)	[mm]	1.910	1.910	1.910	1.910
– with Energy exhaust air heat recovery	[mm]	2.010	2.010	2.010	2.010
– with Climate/Climate+ heat pump [mm]	[mm]	2.180	2.180	2.180	2.180
Passage width	[mm]	610	610	610	610
Usable belt width	[mm]	530	530	530	530
Max. passage height	[mm]	440	440	440	440
Water consumption					
Total tank filling water quantity	[l]	240	240	240	325
Rinse water volume with double rinse zone (standard)* ⁴	[l/h]	200	200	220	220
Rinse water volume with triple rinse zone (optional)* ⁴	[l/h]	290	290	310	320

*¹ Plate capacity is based on standard conveyor belt (65 mm), factory settings in bold

*² 2 min. contact time as per DIN 10510 for commercial rinsing in conveyor dishwashers

*³ only possible in combination with drying zone M

Equipment variants

Cleaning results	Standard	Option
Mediamat in all pre-wash and main wash zones	●	
Special glasswashing programme		●
Food container wash programme	●	
Side wash arms (only in machines with main wash zone L)		●
Rinse booster pump for fresh water rinsing	●	
Heat exchanger in pre-wash zone* ⁵	●	

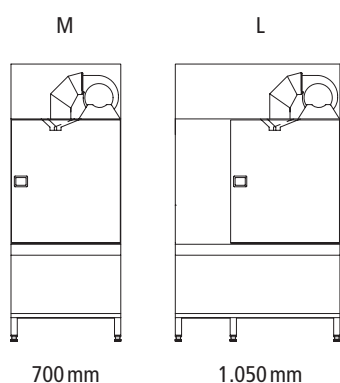
Hygiene	Standard	Option
Pivoting hygienic doors	●	
Hygienic exhaust air system with grease filter and exhaust air ventilator	●	
Automatic self-cleaning programme	●	
Roof cleaning jet	●	
Double cleaning system for heat recovery	Climate+	●
Deep-drawn hygienic tanks	●	
Smooth hygienic rear panel without riser pipes	●	
Plinth installation		●

*⁵ only possible with inflow temperatures < 40 °C

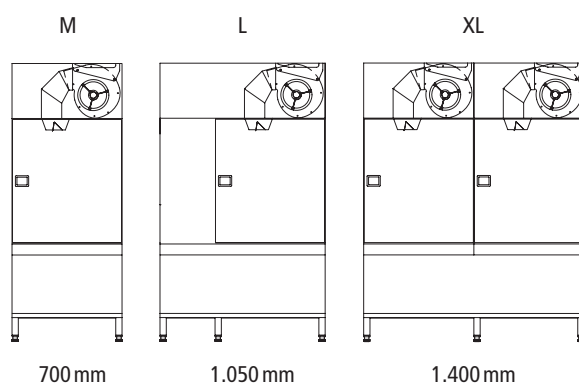
*⁶ not possible in combination with Climate heat pump, osmosis water saving device, HighTemp variants or steam heating

*⁷ not possible in combination with double rinse zone, detergent and energy saving device, osmosis water saving device, osmosis water mode or machine models larger than the 3-tank MMM

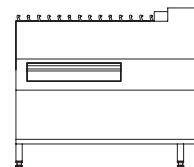
Blowing-out zones



Drying zones



Unloading zones



900 mm
1.200 mm
1.500 mm
1.800 mm

MTF 4-4100 MLMM	MTF 4-4800 MLLM	MTF 4-4800 LLMM	MTF 4-4800 LMLM	MTF 4-5400 LLLM	MTF 5-6300 LLMLM	MTF 5-6600 LLLLM
4	4	4	4	4	5	5
1.700/2.300/2.600	2.100/2.800/3.100	2.100/2.800/3.100	2.100/2.800/3.100	2.300/3.100/3.500	2.700/3.600/4.100	2.800/3.700/4.200
2.600/2.900/3.500	3.100/3.500/4.100	3.100/3.500/4.100	3.100/3.500/4.100	3.500/3.900/4.600	4.100/4.500/5.400	4.200/4.700/5.600
3.500/3.800/4.100	4.100/4.500/4.800	4.100/4.500/4.800	4.100/4.500/4.800	4.600/5.000/5.400	5.400/5.900/6.300	5.600/6.100/6.600
M	M	L	L	L	L	L
L + M	L + L	L + M	M + L	L + L	L + M + L	L + L + L
M	M	M	M	M	M	M
M or L	M or L	M or L	M or L	M or L	M or L	M or L
M, L or XL	M, L or XL	M, L or XL	M, L or XL	M, L or XL	M, L or XL	M, L or XL
3.150	3.500	3.500	3.500	3.850	4.550	4.900
800	800	800	800	800	800	800
1.910	1.910	1.910	1.910	1.910	1.910	1.910
2.010	2.010	2.010	2.010	2.010	2.010	2.010
2.180	2.180	2.180	2.180	2.180	2.180	2.180
610	610	610	610	610	610	610
530	530	530	530	530	530	530
440	440	440	440	440	440	440
325	325	325	325	325	410	410
220	220	220	220	240	270	270
320	320	320	320	340	380	380

*4 Under ideal conditions. Fresh water consumption is dependent on local conditions and utilisation. Minor adjustments will be made on commissioning.

Subject to technical modifications

Economy	Standard	Option
Double rinse zone*6	●	
Triple rinse zone with temperature levels		●
Rack-controlled zone activation	●	
Energy exhaust air heat recovery		●
Climate heat pump (copper)*7		●
Climate+ heat pump (stainless steel)*8		●
Detergent saving device (Rinse water bypass)		●
Detergent and energy saving device*9 (Rinse water bypass with heat exchanger)		●
Individual emptying of pre-wash zone tank	●	
Double-walled design	●	
Sealed stainless steel base cover	●	

Operator convenience	Standard	Option
Electronic control with multi-functional touch screen	●	
3 transport speeds (can be individually adjusted by service staff)	●	
Time-controlled commissioning	●	
Maintenance interval indicator	●	
Conveyor belt reversal	●	
Hygiene logbook with data memory	●	
RS 232 or RS 422 data interface		●
GSM module for remote data transfer		●

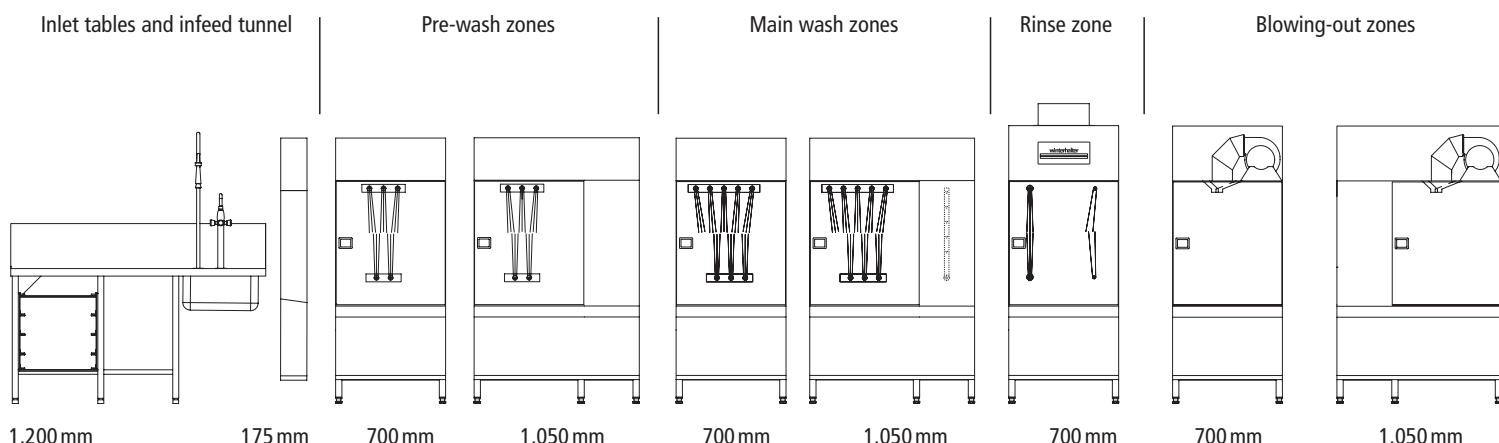
Other equipment	Option
Master switch	●
Rear panel*10	●
Steam-heating (boiler or tank and boiler)	●

*8 not possible in combination with steam heating, osmosis water saving device, detergent and energy saving system or HighTemp variants

*9 Not possible in combination with Climate or Climate+ and water inlet temperatures > 40 °C

*10 With installations that are free-standing (distance to wall > 12.5 mm) a rear panel is necessary to maintain protection against water jets IPX5 (standard)

• MTR: Technical data for rack conveyor dishwashers



Further variants available on request

Standard MTR rack conveyor dishwasher	MTR 2-120 MM	MTR 2-155 LM	MTR 3-185 MMM	MTR 3-215 MLM	MTR 3-250 LLM
Number of washing tanks as per DIN 10510	2	2	3	3	3
Theoretical machine performance* ¹ [racks/h]					
– Intensive programme	50/70/75	65/85/100	80/105/120	90/120/135	105/140/160
– Standard programme* ²	75/85/105	100/110/130	120/135/160	135/155/185	160/180/215
– Rapid programme	105/110/120	130/140/155	160/175/185	185/200/215	215/230/250
Pre-wash zone	-	-	M	M	L
Main wash zone(s)	M	L	M	L	L
Rinse zone	M	M	M	M	M
Blowing-out zone (optional)* ³	M or L	M or L	M or L	M or L	M or L
Drying zone (optional)	M, L or XL	M, L or XL	M, L or XL	M, L or XL	M, L or XL
Dimensions					
Machine length (without infeed tunnel, blowing-out zones, drying zones or table systems) [mm]	1.400	1.750	2.100	2.450	2.800
Length of MTR infeed tunnel [mm]	175	175	175	175	175
Machine depth [mm]	800	800	800	800	800
Machine height (incl. vent) [mm]	1.910	1.910	1.910	1.910	1.910
– with Energy exhaust air heat recovery [mm]	2.010	2.010	2.010	2.010	2.010
– with Climate/Climate+ heat pump [mm]	2.180	2.180	2.180	2.180	2.180
Passage width [mm]	500	500	500	500	500
Max. passage height [mm]	460	460	460	460	460
Water consumption					
Total tank filling water quantity [l]	155	155	240	240	240
Rinse water volume with double rinse zone (standard)* ⁴ [l/h]	190	190	190	190	190
Rinse water volume with triple rinse zone (optional)* ⁴ [l/h]	260	260	260	260	280

*¹ Factory settings in bold

*² 2 min. contact time as per DIN 10510 for commercial rinsing in conveyor dishwashers

*³ Only possible in combination with drying zone M

Equipment variants

Cleaning results	Standard	Option
Mediamat in all pre-wash and main wash zones	●	
Continuous rack conveyor transport	●	
Special glasswashing programme		●
Food container wash programme	●	
Side wash arms (only in machines with main wash zone L)		●
Rinse booster pump for fresh water rinsing	●	
Heat exchanger in pre-wash zone* ⁵	3-tank or above	

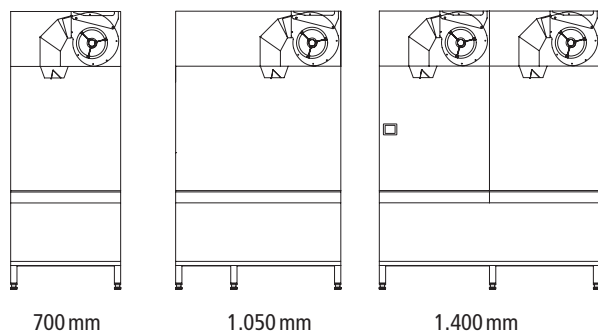
Hygiene	Standard	Option
Pivoting hygienic doors	●	
Hygienic exhaust air system with grease filter and exhaust air ventilator	●	
Automatic self-cleaning programme	●	
Roof cleaning jet	●	
Double cleaning system for heat recovery	Climate+	●
Deep-drawn hygienic tanks	●	
Smooth hygienic rear panel without riser pipes	●	
Plinth installation		●

*⁵ only possible with inflow temperatures < 40 °C

*⁶ not possible in combination with Climate heat pump, osmosis water saving device, HighTemp variants or steam heating

*⁷ not possible in combination with double rinse zone, detergent and energy saving device, osmosis water saving device, osmosis water mode or machine models larger than the 3-tank MMM

Drying zones

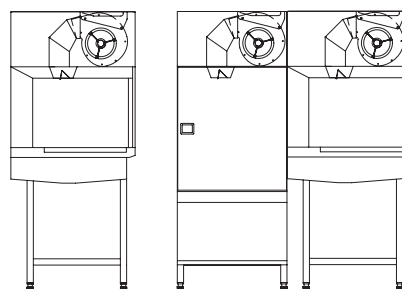


700 mm

1.050 mm

1.400 mm

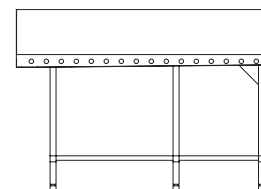
Corner drying zones



795 mm

1.495 mm

Outfeed roller conveyors



1.200 mm

1.700 mm

2.200 mm

Other dimensions available on request

MTR 4-250 MMMM	MTR 4-285 MMLM	MTR 4-285 LMMM	MTR 4-285 MLMM	MTR 4-315 MLLM	MTR 4-315 LLMM	MTR 4-315 LMLM	MTR 4-350 LLLM
4	4	4	4	4	4	4	4
105/140/160	120/165/185	120/165/185	120/165/185	135/180/200	135/180/200	135/180/200	150/200/225
160/180/215	185/205/245	185/205/245	185/205/245	200/225/270	200/225/270	200/225/270	225/250/300
215/230/250	245/265/285	245/265/285	245/265/285	270/295/315	270/295/315	270/295/315	300/325/350
M	M	L	M	M	L	L	L
M + M	M + L	M + M	L + M	L + L	L + M	M + L	L + L
M	M	M	M	M	M	M	M
M or L	M or L	M or L	M or L	M or L	M or L	M or L	M or L
M, L or XL	M, L or XL	M, L or XL	M, L or XL	M, L or XL	M, L or XL	M, L or XL	M, L or XL
2.800	3.150	3.150	3.150	3.500	3.500	3.500	3.850
175	175	175	175	175	175	175	175
800	800	800	800	800	800	800	800
1.910	1.910	1.910	1.910	1.910	1.910	1.910	1.910
2.010	2.010	2.010	2.010	2.010	2.010	2.010	2.010
2.180	2.180	2.180	2.180	2.180	2.180	2.180	2.180
500	500	500	500	500	500	500	500
460	460	460	460	460	460	460	460
325	325	325	325	325	325	325	325
190	210	210	210	220	220	220	250
280	300	300	300	320	320	320	360

*4 Under ideal conditions. Fresh water consumption is dependent on local conditions. Minor adjustments will be made on commissioning.

Subject to technical modifications

Economy	Standard	Option
Double rinse zone* ⁶	●	
Triple rinse zone with temperature levels		●
Rack-controlled zone activation	●	
Energy exhaust air heat recovery		●
Climate heat pump (copper)* ⁷		●
Climate+ heat pump (stainless steel)* ⁸		●
Detergent saving device (Rinse water bypass)		3-tank or above
Detergent and energy saving device* ⁹ (Rinse water bypass with heat exchanger)		3-tank or above
Individual emptying of pre-wash zone tank	●	
Double-walled design	●	
Sealed stainless steel base cover	●	

*⁸ Not possible in combination with steam heating, osmosis water saving device, detergent and energy saving system or HighTemp variants

Operator convenience	Standard	Option
Electronic control with multi-functional touch screen	●	
3 transport speeds (can be individually adjusted by service staff)	●	
Time-controlled commissioning	●	
Maintenance interval indicator	●	
Hygiene logbook with data memory	●	
RS 232 or RS 422 data interface		●
GSM module for remote data transfer		●

*⁹ Not possible in combination with Climate or Climate+ and water inlet temperatures > 40 °C

Other equipment	Option
Master switch	●
Rear panel* ¹⁰	●
Steam-heating (boiler or tank and boiler)	●

*¹⁰ With installations that are free-standing (distance to wall > 12.5 mm) a rear panel is necessary to maintain protection against water jets IPX5 (standard)



WE BREATHE NEW LIFE INTO YOUR KITCHEN.

The new PT ClimatePlus: energy saving
heat pump technology that cools the kitchen.





IMPROVED ROOM CLIMATE,
GREAT WORKING
ATMOSPHERE, LOWEST
OPERATING COSTS.

Things are hotting up in the kitchen and we've always been at the forefront of developing dishwashers that are able to think and which make your life easier. The new PT ClimatePlus is the world's first pass-through warewasher with an integrated heat pump which acts like an air conditioner to deliver cool, dry air in the kitchen. No steam escapes when the hood is opened which further reduces heat build up.

**THE FIRST AIR-CONDITIONING SYSTEM THAT
CAN WASH.**

The new PT ClimatePlus washes at the same temperatures and as hygienically as a conventional dishwasher. The integrated heat pump uses the heat generated by the wash and also the kitchen atmosphere, to heat the tank and rinse water.

75%

**LESS HEAT POLLUTION
IN THE AREA**



The cooling effect of the PT ClimatePlus provides a pleasant temperature and improved working conditions. According to a test by TÜV SÜD, the PT ClimatePlus reduces heat output to the room by as much as 75% compared to a conventional machine.

Our resource saving technology continues to set new standards and the PT ClimatePlus will allow the environment to breathe. The new Winterhalter offers 53% energy savings with every cycle compared to traditional pass-through warewashers. The pay-back period for the PT ClimatePlus is short and in addition you can save on the cost of additional extraction.

SECURING GOVERNMENT FINANCE.

Some Governments may offer incentives to purchase the PT ClimatePlus because of the efficiency of the heat pump.

Calculate your own potential savings in the PT-Scout at www.winterhalter.biz/pt-scout



The PT ClimatePlus at a glance.

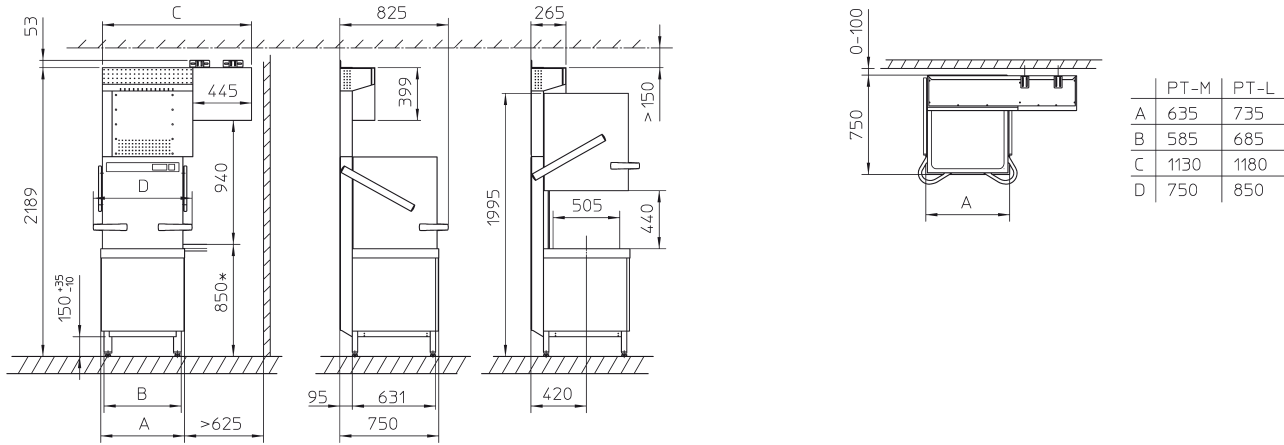
Technical data

PT Series		PT-M ClimatePlus	PT-L ClimatePlus
Width	[mm]	635/1,130	735/1,180
Depth	[mm]	750	
Height with hood open/closed	[mm]	2,242	
Tank heating	[kW]	–	–
Max. inlet water temperature	[°C]	< 20	
Inlet water conductivity	[µS/cm]	> 200	
Required water flow pressure	[bar/kPA]	1.5 – 6.0/150 – 600	
Splash guard		IP X5	
Weight (net/gross) incl. heat pump	[kg]	214/256	218/263

Combinations with other options are possible only to a limited extent.
All other data on the web and in-app.

Electrical data

Voltage	Fuse protection	Total connected load with 6.4kW boiler heating element
380 V/3 N~/50 Hz	16 A	7.1 kW
400 V/3 N~/50 Hz	16 A	7.9 kW
	25 A/32 A	10.2 kW
415 V/3 N~/50 Hz	15 A	6.9 kW
	16 A/20 A	8.4 kW
	25 A	10.9 kW
230 V/3 N~/50 Hz	25 A	7.8 kW
	32 A	10.1 kW



* 900 mm working height also available instead of 850 mm.
That increases the vertical dimensions by 50 mm.

Rack Pass-Through Dishwashers
PT Series

winterhalter

Top Performer – A New Level of Washing Efficiency



Top Performance – A Perfect Finish for All Dishes

Winterhalter has long set the standards for pass-through dishwashers. The demands on the new generation were always going to be particularly high. The new series of pass-through dishwashers surpasses levels of efficiency and ergonomics ever seen before. Accordingly, Winterhalter demands for its new generation were particularly high. The result is a series of machines that surpasses all of its successful predecessors and is nothing short of pioneering in its efficiency and ergonomics:

[Simply brilliant](#)

Unrivalled cleaning results

[Superior speed](#)

Minimal cleaning times with fast filling and heating

[Guaranteed economy](#)

Minimal consumption of resources and intelligent energy recycling

Whether glasses, crockery, pizza dishes, GN-2/1 trays or European standard crates – all foodservice companies have to wash a wide range of items. To meet these demands, Winterhalter developed the new PT Series in three different machine sizes.

You can use the links and QR codes in this brochure to access animations, calculations and much more information on the PT Series.



- Cleaning result

Simply Brilliant





A commercial warewasher must deliver hygienic cleaning results and a perfect finish every time. With its innovative technology, the PT Series is designed to deal with even the most stubborn of soiling. All of the washing elements and processes are coordinated simultaneously, resulting in brilliant cleaning results, unmatched by any other machine to date.



The cleaning result of the PT-M was certified by the independent testing institute TÜV Rheinland LGA Products GmbH, Germany.



Simply brilliant thanks to:

- Variable washing pressure – coordinated for dish type and degree of soiling
- Full coverage washing
- Wash water is clean at all times

Perfect Results for the Toughest Demands



Interior of the machine (top view)



Interior of the tank (cross section)

Customised washing power

The washing pressure is a key factor in ensuring hygienically clean results. By selecting the corresponding programme, VarioPower automatically adjusts the washing power to the type of dishes and the degree of soiling. Anything with light soiling is washed at low pressure, while items with heavy soiling are cleaned at a higher pressure. VarioPower delivers a polished result with minimum wear to the dishes.

Adjustment of other washing elements

In addition to the VarioPower pressure adjustment, all other elements involved in the cleaning process are adjusted automatically, in particular temperatures, time, detergent and rinse aid. That means that perfect results are always guaranteed, even with stubborn soiling.

Complete coverage

The elliptical wash fields with integrated wash and rinse jets maximise coverage. The shape, size and angle of each individual jet is designed to guarantee brilliant cleaning results throughout the entire machine.

Wash water is clean at all times

In the new PT series, the wash water is constantly filtered and monitored during the whole washing process. Three pioneering components ensure that the water remains clean with unprecedented quality:

The patented full jet filtration, consisting of a tank cover, filter cylinder and pump inlet filter, filters 100 % of the wash water. The proven Mediamat also removes fine impurities such as coffee grounds using centrifugal force.

A sensor continuously monitors the quality of the wash water. If necessary, more fresh water is fed into the tank which gradually regenerates the wash water. This means that the machine always provides brilliant cleaning and hygienic results.

Superior Speed





Perfect cleaning results in no time – crucial for optimising kitchen logistics. Clean dishes must be used again immediately to minimise the dish stocks and storage space required. Efficient workflow organisation is essential at peak times in particular. That is why Winterhalter redefined the cleaning process: The PT Series is faster than standard warewashers, but still produces brilliant cleaning results. The innovative developments reduce both the heating and programme times significantly.



Superior speed thanks to:

- Needs-based provision of power
- Faster programme times
- Far shorter heating times

Increased Speed for More Throughput



Interior of the machine and plinth (cross section)

Shorter programme times

Winterhalter pass-through dishwashers are the first of their kind to feature energy management. That reduces the cleaning time and thus increases the rack capacity by up to 28 % per hour.

The flexible VarioPower water pressure adjustment, the full-coverage elliptical full jet wash fields and the patented full-flow filtration achieve a brilliant cleaning result, even with short programme times.

Short waiting times

Winterhalter is the first manufacturer to equip all its machines in the PT Series (except the PT-500) with the waste water heat exchanger EnergyLight. The cold water supply is continuously pre-heated, which means that it reaches the required rinse temperature faster. The time taken to heat up the rinse water decreases noticeably by up to 26 %, making back-to-back rack washing possible at peak times.

Reduced heating times

The active energy management makes optimal use of the available energy to prepare the machine for operation rapidly. That reduces the heating time by up to 50 %. As a result, the PT Series machines are ready for operation far faster than other pass-through dishwashers.

Guaranteed Economy

Saving resources and energy plays a key role in warewashing solutions. When investing in a warewasher, considering the running costs should play a major factor in your decision, due to the rising costs of electricity and water. Lower operating costs can help amortise the purchase cost quickly. Back in 2007, Winterhalter was the first manufacturer to set new standards in energy recovery with the Energy models. The PT Series is now the second generation of machines to lead the way in energy efficiency.

Thanks to a variety of innovative technical solutions, the PT Series is a perfect example of Winterhalter's economy principle, which incorporates three aspects: efficient energy use, consistent energy recycling and the economical use of resources.





- Efficient

More Performance at a Lower Cost

Efficient energy use

For the first time in the industry, all pass-through dishwashers in Winterhalter's PT Series (except PT-500) are equipped with heat recovery systems. The compact waste water heat exchanger Energy Light uses the heat from the waste water to heat the cold water supply. This makes these machines extremely economical and reduces energy costs by up to 10 %.

Consistent energy recycling

The PT Series machines can also optionally be equipped with the large waste water heat exchanger and an additional exhaust air heat exchanger. These EnergyPlus models then use the energy from the waste water and the exhaust air for the two-step heating of the cold water supply. The operating costs will be reduced by up to 20 % per wash cycle. As the exhaust air temperature is also reduced by more than half, investments in additional extraction hoods may also be unnecessary.*

The EnergyPlus models are a worthwhile investment to save energy in the long term: The additional costs for the EnergyPlus option pay off rapidly. Calculate your personal amortisation via the link below.



Economical use of resources

With the new driven rinse system (optional), fresh water is no longer required to rotate the wash fields. This revolutionary drive reduces the standard rinse water volume significantly. That reduces the operating costs by approx. 12 % per wash cycle. This optimised rinse system ensures that cleaning results remain brilliant even though far less fresh water is used.

Maximum economy

The combination of EnergyPlus and the driven rinse system in a PT warewasher guarantees maximum economy in the long term. Compared with standard rack pass-through dishwashers, the operating costs are reduced by up to 32 %.

Other potential savings are derived from the combination with the low temperature warewashing system, effect.

* Please refer to guidelines for kitchen ventilation systems.



Guaranteed economy thanks to:

- Maximum energy efficiency
- Consistent energy recycling
- Minimum consumption of resources
- Reduced energy costs

- User-friendly and ergonomic

Incredibly Easy

Warewashers must be simple and self-explanatory to operate. Unskilled, frequently changing personnel must be able to get their bearings immediately. That is why the new Winterhalter pass-through dishwashers use symbols to maximise ease of operation.

The machines control many workflows automatically and can detect and report errors, and even rectify some errors themselves. That makes day-to-day work in kitchens significantly easier – it reduces the workload of the personnel and virtually rules out operating errors.

Although careful thought has been given to the operation of the Series, there is also great focus on ergonomics and cryptoclimates.





- User-friendly and ergonomic



Incredibly easy thanks to:

- Self-explanatory operation
- Perfectly harmonised washing programmes
- Better cryptoclimate in the kitchen
- Ergonomic design

Maximum Convenience for greater Safety



Extremely easy to use

The touchscreen is the basis for self-explanatory, language-neutral operation: Three standard programmes can be selected depending on the type of dishes and degree of soiling. You simply tap the appropriate pictogram to start. All washing elements like water pressure, detergent quantity, temperatures and time are adjusted automatically.

Visual and audible signals allow operators to react quickly to machine messages, e.g. blocked wash fields or lack of detergent. The staff can intervene immediately and rectify the error directly. That guarantees hygienic cleaning results and reduced downtime.

The PIN-protected chef level gives access to the operating and hygiene logbook. Hygiene-related events like lack of detergent, cleaning behaviour and malfunctions are documented here.



Interior of the machine with wash field (top view)

Pleasant cryptoclimate

The EnergyPlus models reduce the exhaust air temperature and humidity, which leads to a better cryptoclimate in the long term.

Sophisticated ergonomics

The ergonomic machine design facilitates workflows in the kitchen. The unique, ergonomic hood handles and optional automatic hood opener ensure effortless machine operation, even for long working days. The machine can be programmed to start up automatically in the morning and close down in the evening.

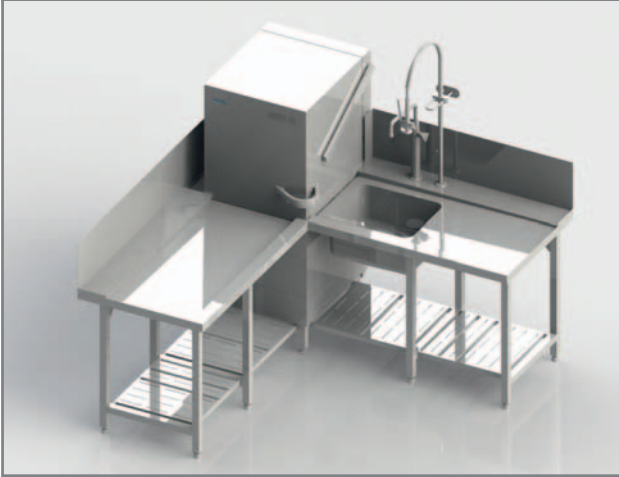
In addition, it reduces the workload of the kitchen staff, with innovative special programs and the hygienic design of the interior of the machine.

PT Series	PT-M	PT-L	PT-XL
Cleaning result/Speed			
Elliptical wash fields with special jet geometry	●	●	●
VarioPower washing pressure adjustment	●	●	●
Full-flow filtration: tank cover, filter cylinder, pump inlet filter with safety prompt, Mediamat	●	●	●
Clouding sensor	●	●	●
Integrated detergent dosing device	○	○	○
Integrated rinse aid dosing device	●	●	●
Integrated softener	○	○	○
Active energy management	●	●	●
Economy			
EnergyLight heat recovery	●	●	●
EnergyPlus heat recovery	○	○	○
Driven rinse system (magnetic drive)	–	○	○
ECO special programme	●	●	●
User-friendly and ergonomic			
Touchscreen	●	●	●
Colour-coded single-button control with progress display	●	●	●
Glass, dishes, bistro, cutlery software	●	●	●
Short and intensive programmes	●	●	●
Basic cleaning programme for dishes	●	●	●
Special Silent Programme	●	●	●
Guided self-cleaning programme	●	●	●
Machine descaling programme	●	●	●
Time-controlled automatic start-up	●	●	●
Time-controlled automatic shut-down	●	●	●
Audible event signaling	●	●	●
Separate container empty indicator for detergent/rinse aid	●	●	●
Wash fields blocked error message	●	●	●
Lack of salt error message (with integrated softener)	○	○	○
Maintenance interval indicator	●	●	●
PIN-protected chef level	●	●	●
PIN-protected service technician level	●	●	●
Integrated hygiene and operating logbook	●	●	●
Animated operating instructions and washing tips	●	●	●
Contact data for service technician and chemical suppliers stored	●	●	●
Double skinned hood with lock position	●	●	●
Automatic hood opening	○	○	○
Automatic hood start	●	●	●
Deep-drawn hygienic tank	●	●	●
Hygiene tank heater	●	●	●
Hygienic rack guide	●	●	●
Miscellaneous			
TwinSet (combination of 2 PT machines)	○	○	○
Cool version (cold water rinse)	○	○	○
HighTemp version	○	○	○
Low temperature warewashing system effect for glasses/dishes	○	○	○
Third dosing device can be installed	○	○	○
Soft start for washing pump	●	●	●
Thermostop for hygienic safety	●	●	●
Drain pump	●	●	●
Rinse booster pump	●	●	●
Leak sensor	●	●	●
Multiphasing	●	●	●
RS 232/RS 422 data interfaces	○	○	○
Transfer strip for external dosing units	●	●	●
Multifunctional output as an interface to external devices	●	●	●

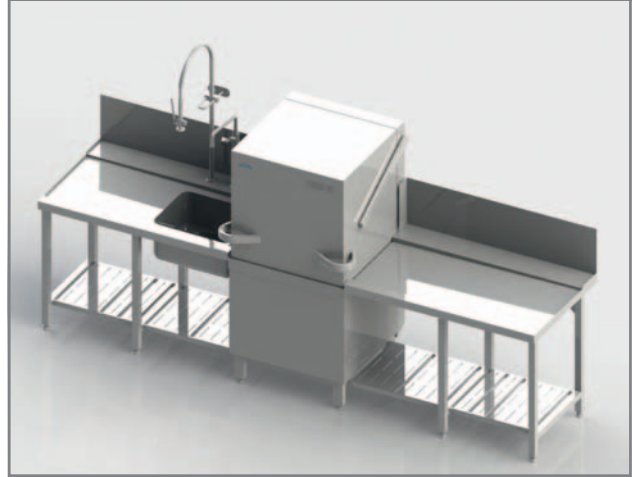
● Standard ○ Option – Not available

Design examples for PT Series

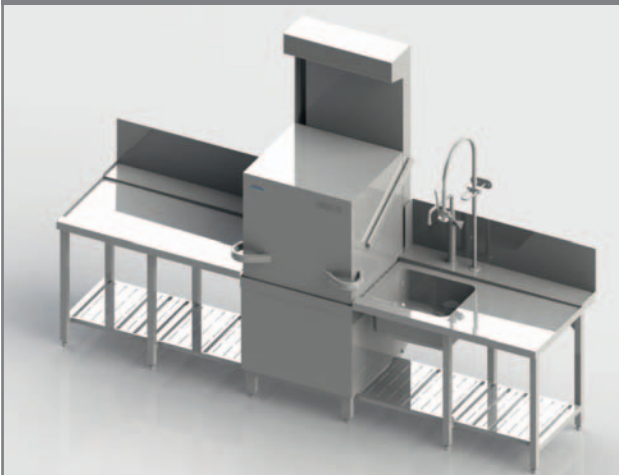
PT-M corner installation pass-through direction right-front



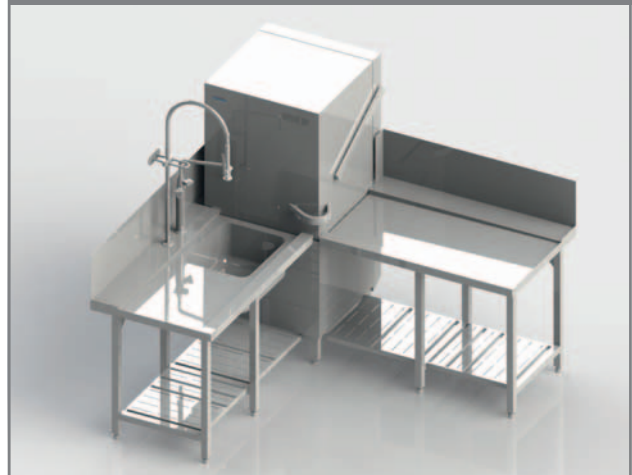
PT-L pass-through direction left-right



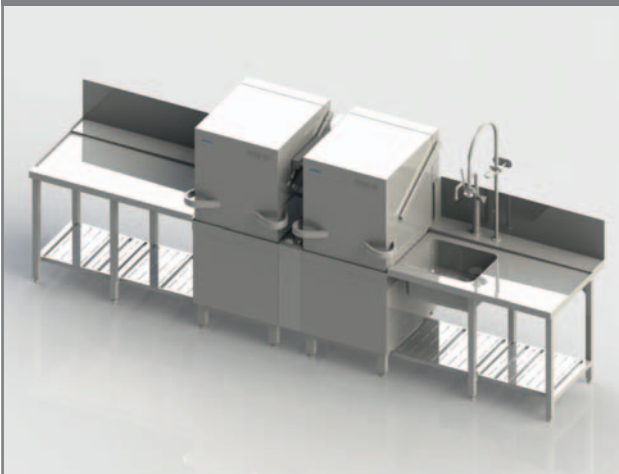
PT-L EnergyPlus pass-through direction right-left



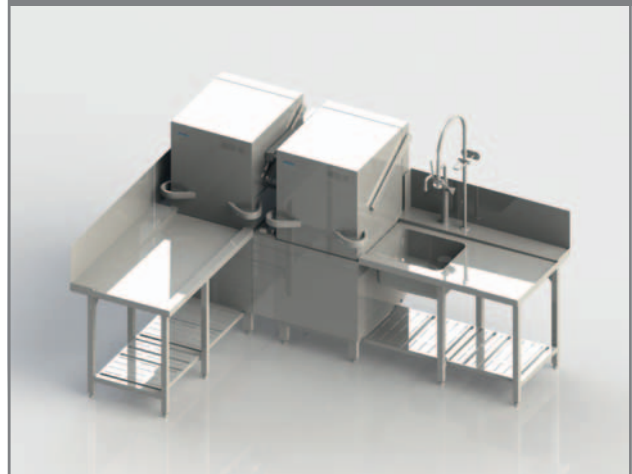
PT-XL corner installation pass-through direction front-right



PT-M TwinSet pass-through direction right-left

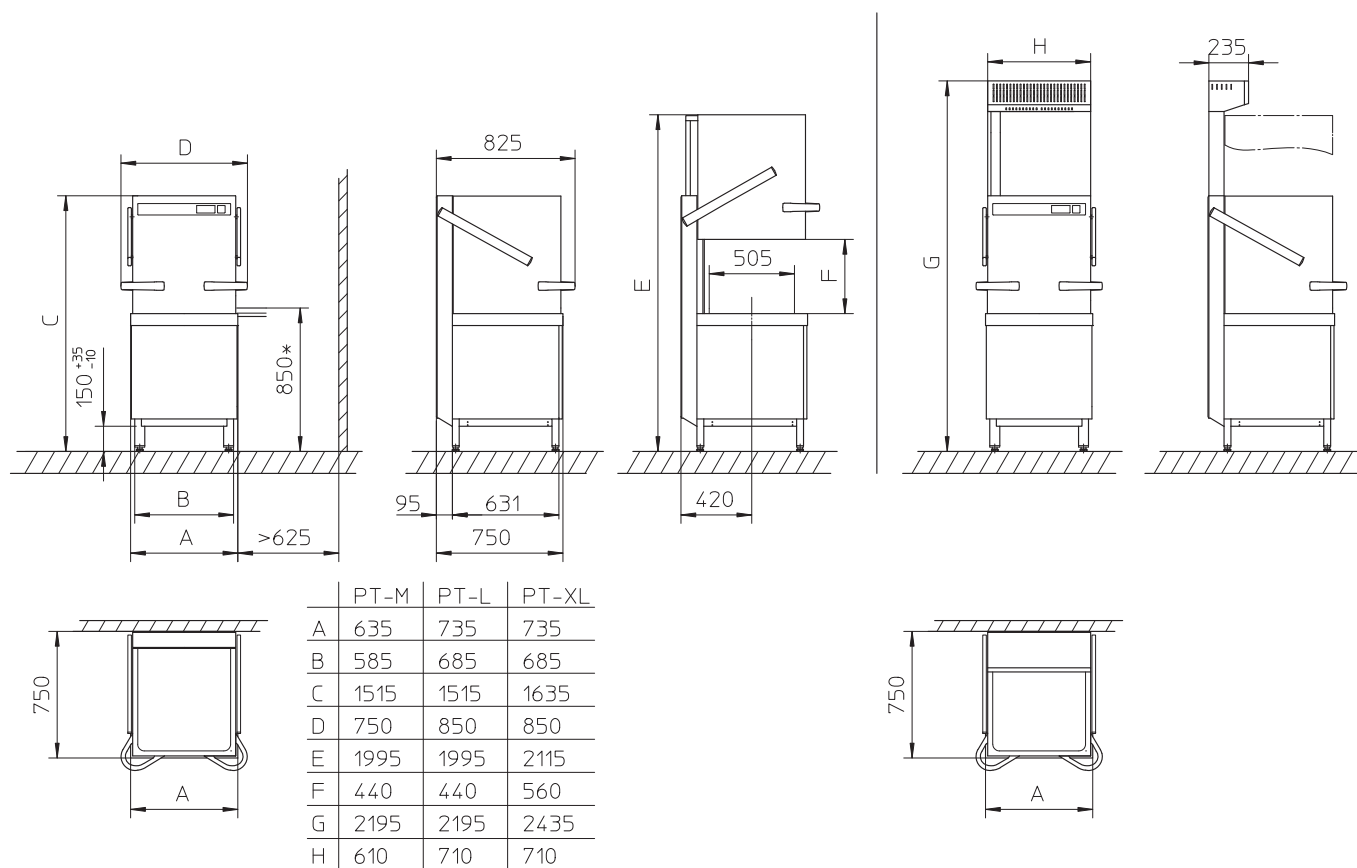


PT-M TwinSet corner installation pass-through direction right-front

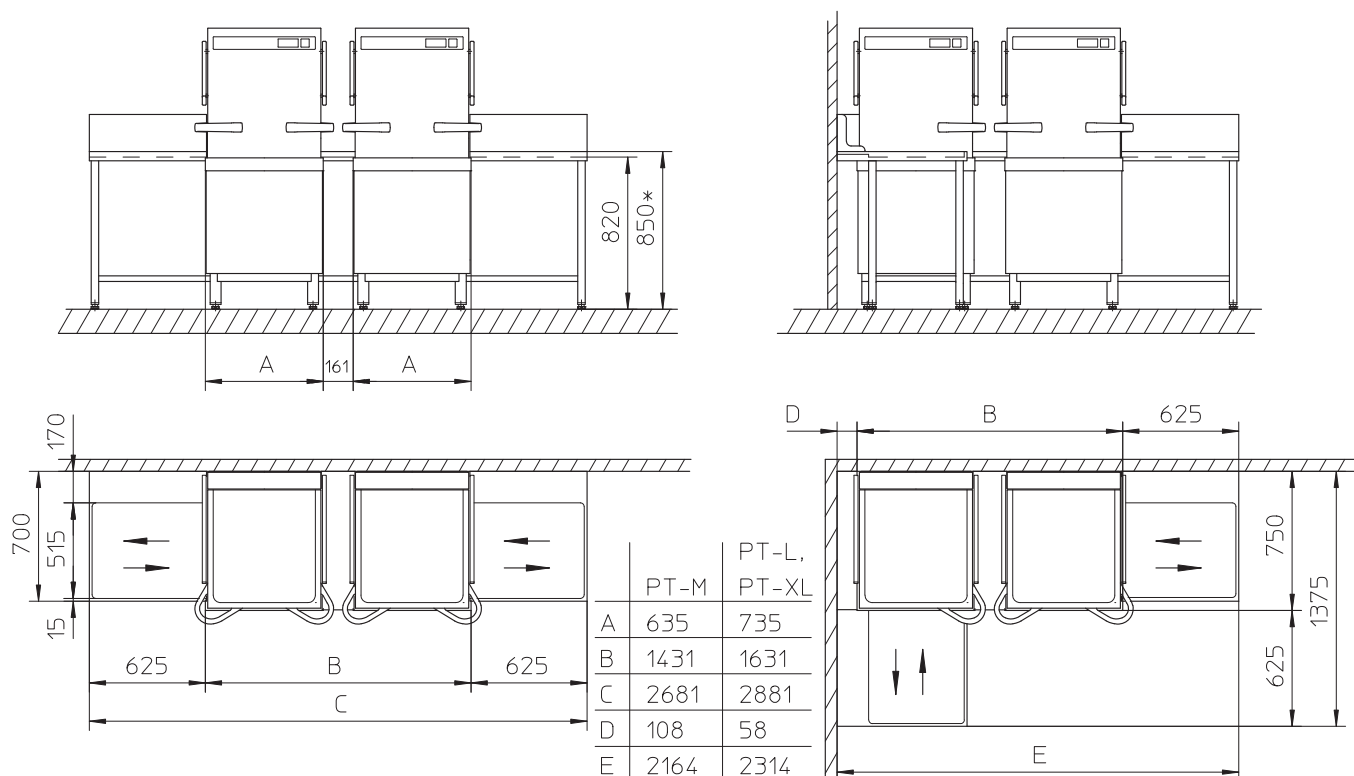


Without EnergyPlus

With EnergyPlus



PT TwinSet dimensions and installation variants



* 900 mm working height also available instead of 850 mm. That increases the vertical dimensions by 50 mm. For installation variants, see page 23.

Table depth: 700 mm / Table length: 625 mm and 1,200 mm

900 mm working height also available instead of 850 mm. Table depth 800 mm available on request.

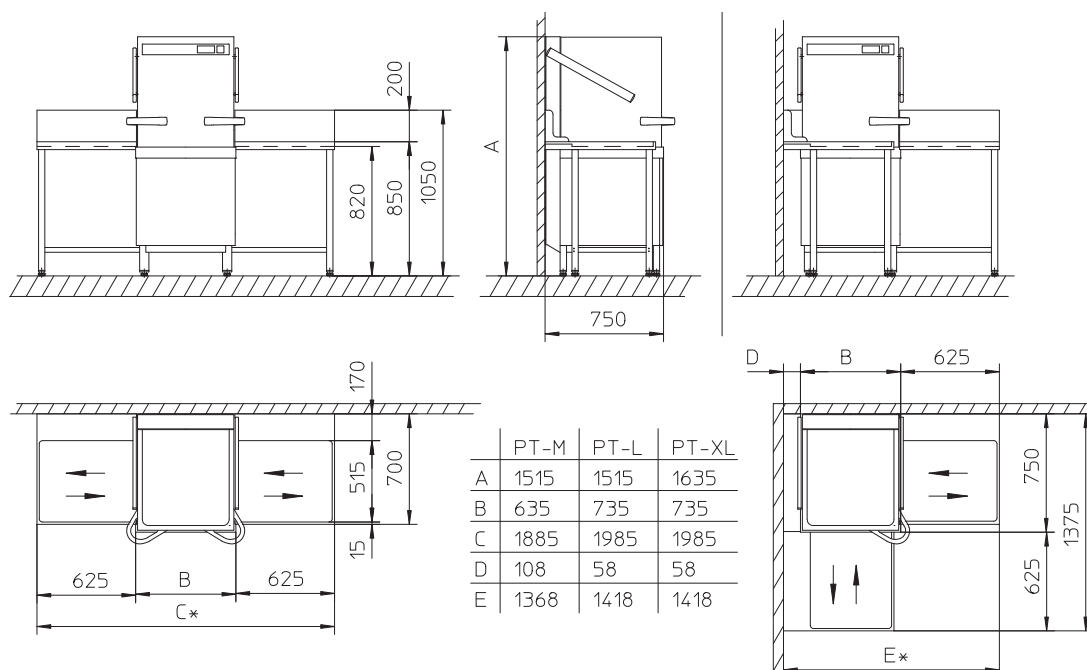
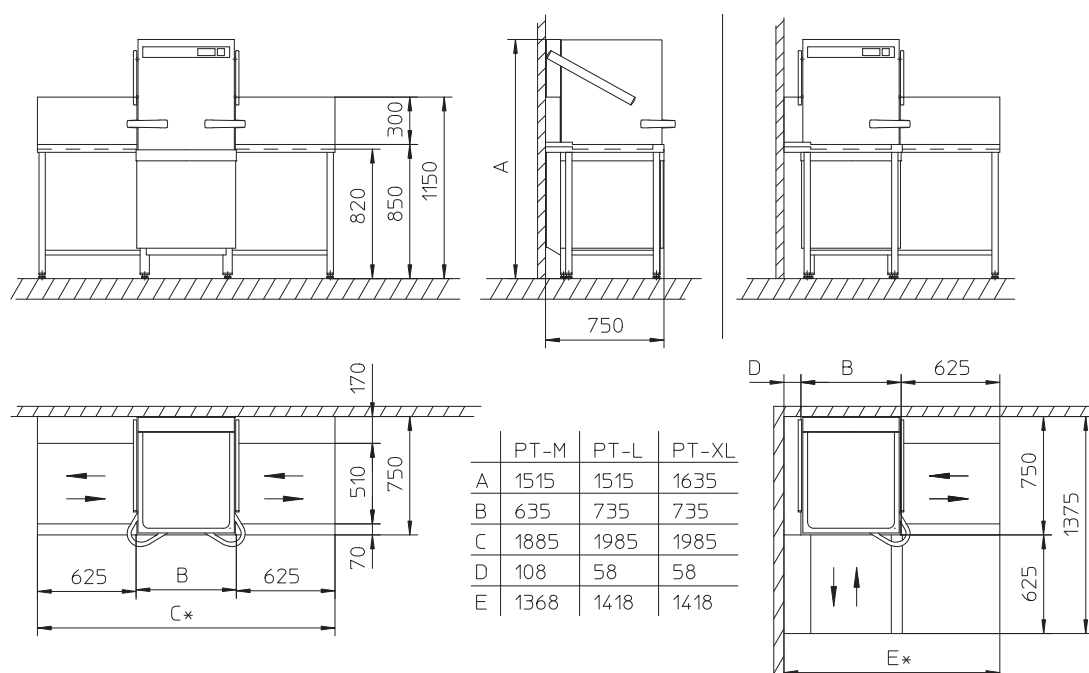


Table depth: 750 mm / Table length: 625 mm – 2,900 mm

900 mm working height also available instead of 850 mm. Table depth 800 mm available on request.



* Dimensions C and E depend on the table length. Table length 625 mm is shown.

Technical data

PT Series		PT-M	PT-L	PT-XL
Number of programmes		Up to 3 (+ special programmes)		
Theoretical capacity	[racks/h]	Differs depending on software, see page 25 above		
Water consumption				
Tank capacity	[l]	35	35	35
Rinse water consumption per cycle	[l]	2.4	2.4	2.4
Temperatures				
Tank temperature	[°C]	Differs depending on software, see page 25 above		
Rinse temperature	[°C]	Differs depending on software, see page 25 above		
Dimensions				
Width	[mm]	635	735	735
Depth	[mm]	750	750	750
Height with hood closed	[mm]	1,515	1,515	1,635
Height with hood open	[mm]	1,995	1,995	2,115
Height for EnergyPlus design	[mm]	2,195	2,195	2,435
Working height	[mm]	850	850	850
Clear entry height	[mm]	440	440	560
Rack dimensions	[mm]	500 x 500	500 x 600	500 x 600
Electrical specifications				
Total connected load				
– Three-phase AC	[kW]	Differs by country and fuse protection, see page 25 below		
– Alternating current	[kW]	Differs by country and fuse protection, see page 25 below		
Fuse protection	[A]	Differs by country and fuse protection, see page 25 below		
Circulating pump (P1)	[kW]	1.0	1.5	1.5
Tank heating	[kW]	2.5	2.5	2.5
Tank heating for Cool design	[kW]	2 x 2.5	2 x 2.5	2 x 2.5
Boiler heating				
– Three-phase AC	[kW]	Differs by country and fuse protection, see page 25 below		
– Alternating current	[kW]	Differs by country and fuse protection, see page 25 below		
Other information				
Max. water inlet temperature	[°C]	60	60	60
Required water flow pressure	[bar/kPA]	1.0–6.0/100–600	1.0–6.0/100–600	1.0–6.0/100–600
Water flow pressure required for EnergyPlus design	[bar/kPA]	1.5–6.0/150–600	1.5–6.0/150–600	1.5–6.0/150–600
Splash guard		IP X5	IP X5	IP X5
Weight, net/gross	[kg]	134/159	137/165	140/171
– With EnergyPlus design, net/gross	[kg]	157/185	165/196	173/207

Subject to technical modifications.

Comparative calculations based on comparisons with predecessor GS 502.

Software settings

		Standard	Cool	effect	EnergyPlus ^{*5}	HighTemp
Glasswashers						
Theoretical capacity 1/2/3 ^{*1}	[racks/h]	22/32/48	22/32/48	20/20/20	22/32/48	–
Short programme	[racks/h]	77	77	36	77	–
Rinse water consumption per cycle (driven rinse system) ^{*2}	[l]	2.4 (2.0)	4.0 (3.6)	2.4 (2.0)	2.4 (2.0)	–
Tank temperature	[°C]	62	55	45	62	–
Rinse temperature	[°C]	65	^{*3} / ^{*4}	50/ ^{*4}	65	–
Dishwashers						
Theoretical capacity 1/2/3 ^{*1}	[racks/h]	44/32/22	–	20/20/20	44/32/22	25/20/15
Short programme	[racks/h]	72	–	36	72	–
Rinse water consumption per cycle (driven rinse system) ^{*2}	[l]	2.4 (2.0)	–	2.4 (2.0)	2.4 (2.0)	3.8 (3.8)
Tank temperature	[°C]	62	–	55	62	66
Rinse temperature	[°C]	85	–	60/ ^{*6}	85	85
Bistro dishwashers						
Theoretical capacity 1/2/3 ^{*1}	[racks/h]	28/32/40	–	–	28/32/40	–
Short programme	[racks/h]	72	–	–	72	–
Rinse water consumption per cycle (driven rinse system) ^{*2}	[l]	2.4 (2.0)	–	–	2.4 (2.0)	–
Tank temperature	[°C]	62	–	–	62	–
Rinse temperature	[°C]	85	–	–	85	–
Cutlery washers						
Theoretical capacity 1/2/3 ^{*1}	[racks/h]	11	–	–	11	–
Short programme	[racks/h]	21	–	–	21	–
Rinse water consumption per cycle (driven rinse system) ^{*2}	[l]	4.0 (3.6)	–	–	4.0 (3.6)	–
Tank temperature	[°C]	69	–	–	69	–
Rinse temperature	[°C]	86	–	–	86	–

^{*1} Depending on conditions on-site (water inlet temperature/electrical supply), the values specified may be reduced.

^{*2} Under ideal conditions. Minor adjustments will be made on commissioning.

^{*3} Depending on the water inlet temperature.

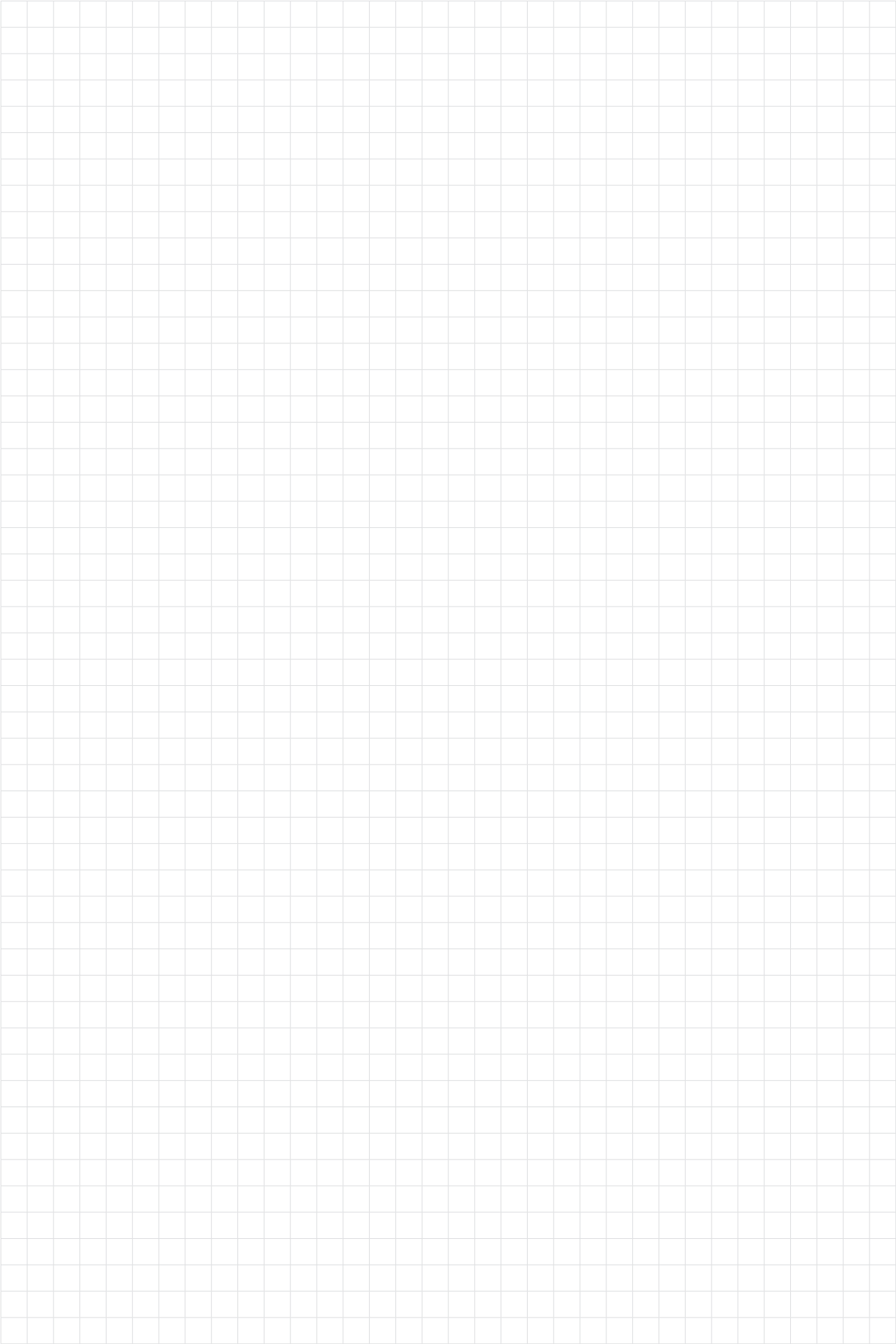
^{*4} Can be switched to 65 °C.

^{*5} Water inlet temperature < 20 °C.

^{*6} Can be switched to 85 °C.

Electrical specifications

Voltage	Fuse protection	Total connected load with 6.4 kW boiler heating element	Total connected load with 10.8 kW boiler heating element
380 V / 3N~ / 50–60 Hz	16 A	7.1 kW	8.3 kW
400 V / 3N~ / 50–60 Hz	16 A	7.9 kW	9.1 kW
	25 A	10.2 kW	13.2 kW
	32 A	–	14.7 kW
415 V / 3N~ / 50–60 Hz	15 A	6.9 kW	9.5 kW
	16 A/20 A	8.4 kW	9.7 kW
	25 A	10.9 kW	14.2 kW
	32 A	–	15.7 kW
200 V / 3N~ / 50–60 Hz	25 A	6.6 kW	7.1 kW
	32 A	8.0 kW	8.1 kW
230 V / 3N~ / 50–60 Hz	25 A	7.8 kW	–
	32 A	10.1 kW	–
	50 A	–	14.5 kW
230 V / 1N~ / 50–60 Hz	32 A	6.9 kW	–
240 V / 1N~ / 50–60 Hz	25 A	5.1 kW	–
	32 A	6.8 kW	–
	40 A	8.4 kW	–
	50 A	10.9 kW	–





Rack pass-through dishwasher
PT-500

winterhalter®

Impressive performance and convenience



PT-500 – simply brilliant cleaning

Winterhalter presents the PT-500, a new pass-through dishwasher which produces excellent cleaning results quickly and efficiently due to new components and innovations. The PT-500 is easy to operate and its sophisticated, ergonomic design reduces staff workload but still delivers hygienically clean results, even for long working days.

PT-500 by Winterhalter is a warewasher that impresses with reliability and efficiency in every way.



Brilliant, fast cleaning results thanks to:

- Reduced programme times
- Far shorter heating times
- Comprehensive washing power
- Effective quadruple filtration system

Get great cleaning results, quickly



Interior of the tank (cross section)

Short programme times

You can choose one of three programmes depending on the degree of soiling: short, standard and intensive. With active energy management, the machine has an hourly capacity of up to 60 racks in the short programme.

Reduced heating times

The active energy management also makes optimal use of the available energy to prepare the machine for rapid operation. That reduces the heating time by up to 50 %. As a result, PT-500 is ready for operation far faster than other pass-through dishwashers.

Complete coverage

The new elliptical wash fields with specially-developed jets ensure comprehensive washing power, which give brilliant cleaning results throughout the entire machine. In spite of the low rinse water volume, perfectly hygienic results can be guaranteed even for dishes with stubborn soiling.

Effective filtration

The PT-500 is equipped with a quadruple filtration system. Food residue and soiling are trapped by the strainer which has a removable sieve. The Mediamat also removes fine impurities such as coffee grounds using centrifugal force. The pump inlet filter provides additional reliability.

Comparative calculations based on comparisons with predecessor GS 502.

Impressively easy to operate



Convenient operation and hygienic safety thanks to:

- Self-explanatory operation
- Labour-saving control functions
- Workload-reducing hygiene concept

Extremely easy to use

To ensure untrained, frequently changing staff can learn to use the machine quickly, PT-500 has a colour-coded display showing the various machine states; heating, washing and standby. Selected washing programmes are also started using the single-button control or automatic hood start. The unique, ergonomic hood handles support effortless operation of the machine especially on long working days.

Integrated control functions

PT-500 has numerous control functions which further reduces staff workload. Tank and boiler temperatures can be shown on the display at any time. Simple symbols warn the personnel when there is a lack of detergent and rinse aid. A leak sensor monitors uncontrolled water outflows and shuts off the machine's water inlet. Thus PT-500 guarantees process reliability and prevents resulting damage.

Time-saving hygiene concept

A deep-drawn tank, a hygiene tank heater and a hygiene rear panel prevent limescale and dirt deposits. These components guarantee that the interior of the machine is clean at all times. In addition, the self-cleaning programme considerably reduces kitchen staff workload.

PT-500	
Speed and cleaning result	
Active energy management	●
Elliptical wash fields with special jet geometry	●
Filtration system with sieve, strainer, pump inlet filter and Mediamat	●
Integrated detergent dosing device	○
Integrated rinse aid dosing device	●
Integrated softener	○
User-friendliness and hygienics	
Electronic control unit with a colour-coded display	●
3 washing programmes (short, standard and intensive)	●
Washing programme adjustment via parameters	●
Display of tank and boiler temperatures	●
Self-cleaning programme	●
Detergent container empty indicator (for integrated detergent dosing device)	●
Rinse aid container empty indicator	●
Lack of salt error message (with integrated softener)	●
PIN-protected chef level	●
PIN-protected service technician level	●
Integrated error logbook	●
Hood with locking position	●
Automatic hood start	●
Deep-drawn hygienic tank	●
Hygiene tank heater	●
Hygienic rack guide	●
TwinSet (combination of 2 PT-500 machines)	○
Low temperature warewashing system effect for glasses*	○
Low temperature warewashing system effect for dishes*	○
Thermostop for hygienic safety	●
Drain pump	●
Rinse booster pump	●
Leak sensor	●
Multiphasing	●
Transfer strip for external dosing devices	●
Multifunctional output as an interface to external devices	●
Stainless steel rear cover	●

● Standard ○ Option

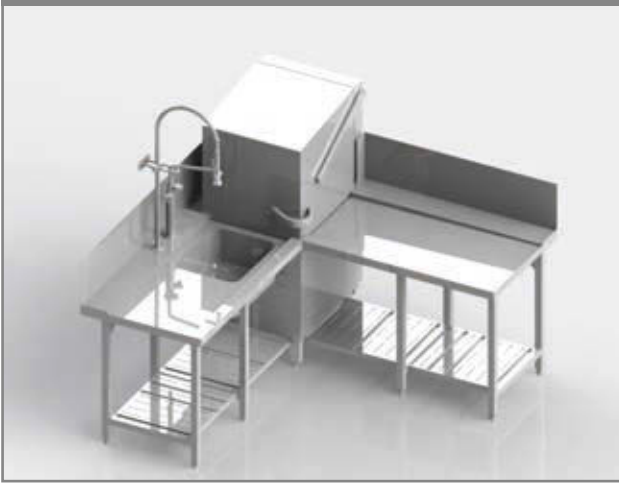
* Not available in all countries.

Inlet water temperature max. 50 °C for glasswashers / max. 60 °C for dishwashers.

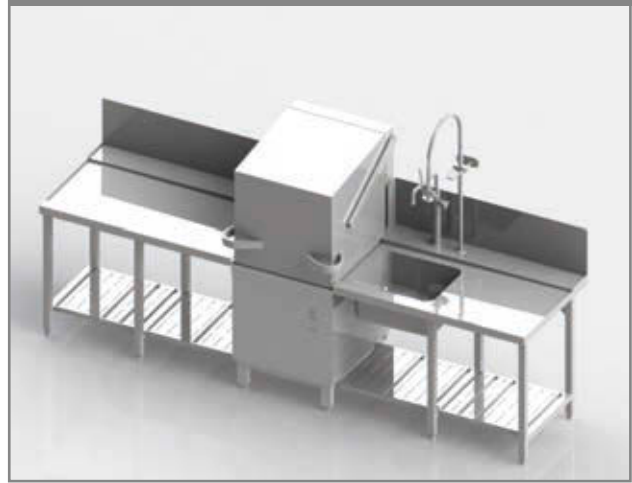
- Individual planning/technical data

Design examples

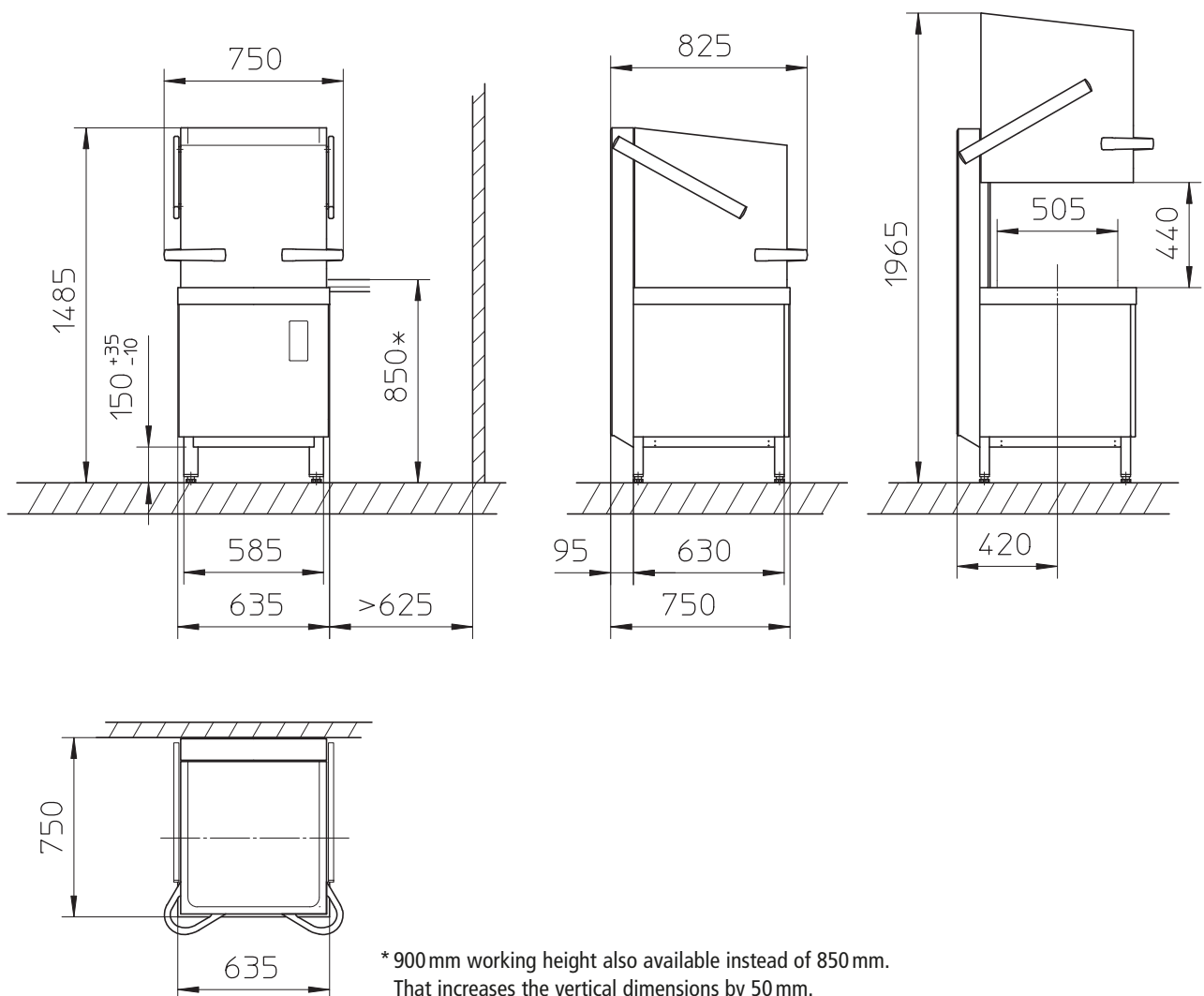
PT-500 corner installation pass-through direction front-right



PT-500 pass-through direction right-left



Dimensions



Technical data

PT-500		
Number of programmes		3
Theoretical capacity (short/standard/intensive programme) ^{*1}	[racks/h]	60/30/15
Water consumption		
Tank capacity	[l]	35
Rinse water consumption per cycle	[l]	2.4 ^{*2}
Temperatures		
Tank temperature	[°C]	62 ^{*3}
Rinse water temperature	[°C]	85 ^{*4}
Dimensions		
Width	[mm]	635
Depth	[mm]	750
Height with hood closed	[mm]	1,485
Height with hood open	[mm]	1,965
Working height	[mm]	850
Clear entry height	[mm]	440
Rack dimensions	[mm]	500 x 500
Electrical specifications		
Total connected load		
– Three-phase AC	[kW]	Differs by country and fuse protection, see below
– Alternating current	[kW]	Differs by country and fuse protection, see below
Fuse protection	[A]	Differs by country and fuse protection, see below
Circulating pump (P1)	[kW]	0.75
Tank heating	[kW]	2.5
Boiler heating		
– Three-phase AC	[kW]	Differs by country and fuse protection, see below
– Alternating current	[kW]	Differs by country and fuse protection, see below
Other information		
Max. inlet water temperature	[°C]	60 ^{*5}
Required water flow pressure	[bar / kPa]	1.0–6.0/100–600
Splash guard		IP X5
Weight, net/gross	[kg]	103/128

^{*1} The values stated may be lower depending on the on-site conditions (inlet water temperature/power connection)

^{*2} Non-binding information. The actual need for rinse water can vary depending on the on-site conditions.

^{*3} Tank temperature 55 °C for "effect" machines

^{*4} Rinse water temperature 60 °C for "effect" machines

^{*5} Max. inlet water temperature 50 °C for "effect" glasswashers

Electrical specifications

Voltage	Fuse protection	Total connected load with 6.4 kW boiler heating element	Total connected load with 10.8 kW boiler heating element	Countries
380 V / 3N~ / 50–60 Hz	16 A	7.1 kW	8.3 kW	Worldwide
400 V / 3N~ / 50–60 Hz	16 A	7.9 kW/8.1 kW as Cool version	9.1 kW	
	25 A	10.2 kW	13.2 kW	
	32 A	–/11.5 kW as Cool version	14.7 kW	
415 V / 3N~ / 50–60 Hz	15 A	6.9 kW	9.5 kW	Worldwide
	16 A/20 A	8.4 kW/8.6 kW as Cool version	9.7 kW	
	25 A	10.9 kW	14.2 kW	
	32 A	–/12.4 kW as Cool version	15.7 kW	
200 V / 3N~ / 50–60 Hz	25 A	6.6 kW	7.1 kW	Japan
	32 A	8.0 kW	8.1 kW	
230 V / 3N~ / 50–60 Hz	25 A	7.8 kW	–	Belgium*
	32 A	10.1 kW	–	
	50 A	–	14.5 kW	
230 V / 1N~ / 50–60 Hz	32 A	6.9 kW	–	Worldwide
240 V / 1N~ / 50–60 Hz	25 A	5.1 kW	–	
	32 A	6.8 kW	–	
	40 A	8.4 kW	–	
	50 A	10.9 kW	–	

* Special voltage



Optimum power – minimum space



- Perfectly fitting warewashing solutions

Cleanliness and hygiene

Rack for rack



Flexibility and performance are what counts in the hotel, foodservice industries and in commercial catering – this is as true for kitchen personnel as it is for equipment. Winterhalter have taken these into account for the STR series, single-tank rack conveyor dishwashers. By adopting a holistic approach, the machine has the flexibility to adapt to any quantity of dishes or variations of space.

All models ensure perfect cleaning results with reliable hygiene and maximum economy.



Optimal solutions for every need

As varied as your requirements are – with its numerous combination options, the STR series provides maximum flexibility.



Customised planning

Thanks to its compact dimensions the STR single-tank rack conveyor dishwasher can be installed as a straight or a corner version – perfect for a custom plan, especially in small and awkward spaces.



Highest flexibility

With two conveyor speeds to choose from, the STR series adapts to the degree of soiling and the quantity of dishes, during operation. Additionally the optional pre-cleaning zone increases the machine capacity – ensuring that an increased number of dishes are reliably cleaned. For dishes that will be needed immediately the optional drying zone is recommended.

Available for use in small kitchens and as a corner variant. Fitted on a 90° corner conveyor, the machine dimensions remain very compact and make room planning simpler and more flexible.

You can find sample plans on page 10.



Maximum flexibility:

- Numerous combination options with minimal space requirements
- Adaptable capacity, independent of the degree of soiling and quantity of dishes

High performance and sparkling results

The STR series provides optimum cleaning results achieved through the intelligent interaction of perfected warewashing technology.



High performance warewashing system

Top quality cleaning results are guaranteed by the perfectly coordinated combination of a powerful pump, five upper and three lower wash arms, optimal water distribution and jets positioned for total coverage. In the standard programme, the STR series fulfils the hygiene requirements of the DIN 10512.

Wash water filtration

Large dirt particles are trapped by a removable strainer and pump inlet filter. The Mediamat uses centrifugal force to permanently remove fine impurities, such as coffee grounds, from the wash water.



Pre-cleaning zone – extra cleaning power

The pre-cleaning zone of the STR 130 removes coarse food residue from dishes, which is then captured in an easily removable filter cassette. This reduces the dirt entering the main wash zone.

Gentle glass washing

With optional temperature switching, the rinse water temperature can be reduced to 65°C. This ensures the gentle washing of glasses.

Sparkling results:

- Well-designed warewashing system
- Efficient wash water filtration
- Pre-cleaning zone for stubborn soiling
- Temperature switching for gentle glass washing

Hygiene design ensures safety

The construction of the STR Series dramatically reduces dirt and bacteria deposits. The control display provides support with the monitoring of hygiene data.



Smooth surfaces

Limescale and dirt particles do not collect because of the smooth door interior, the seamless, deep-drawn tank with rounded corners and the hygiene rear panel with exterior riser pipes.

Fully accessible

The STR series 180° pivoting hygiene door has clear advantages over conventional lift sliding doors: It is wear-free and allows for ergonomic access to the interior of the machine and the inside of the door during cleaning.



Controlled hygiene

Hygiene monitoring is done via the control display using a temperature display for boiler and tank. In combination with optional suction tubes, the warewasher shows when detergent and rinse aid need refilling. This can make a significant contribution to hygiene safety.

Self-cleaning programme and automatic shutdown

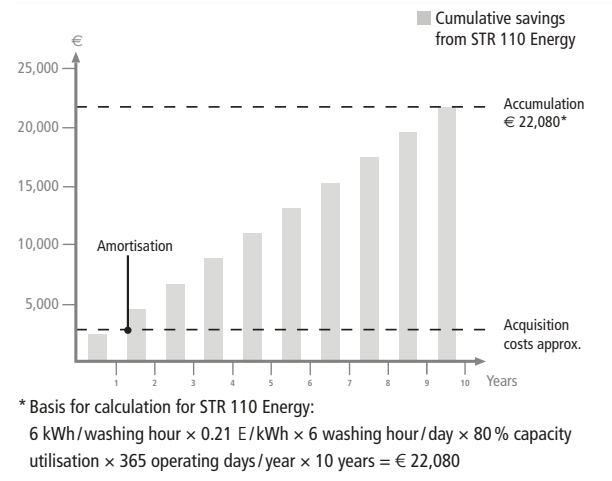
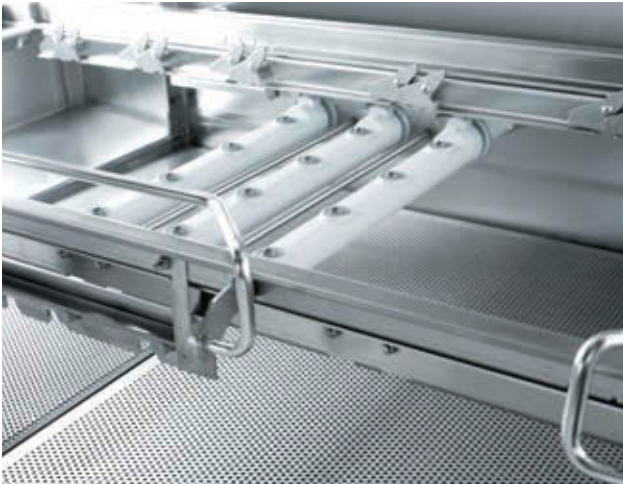
At the end of an operational day, the machine interior is automatically rinsed. In addition, the integrated drain pump ensures that the tanks are completely emptied – the effort required for manual cleaning is reduced to a minimum.

Hygiene safety:

- Machine constructed for optimised hygiene
- Easy access to the interior of the machine
- Continuous hygiene monitoring

Savings through efficiency

The STR series is designed for economy. Well-designed technical solutions reduce the consumption of resources and minimise operating costs.



Efficient consumption

Thanks to rack activated zones, the STR series automatically reacts to the quantity of dishes. Pumps and fresh water supply are only activated when a washing rack is in a particular zone. The proven wash water filtration system reduces the necessity of repeatedly filling the tank. In addition, the STR series has an extremely low rinse water volume (2l per rack). The consumption of detergent, rinse aid and energy is also proportionately lower, which also significantly reduces operating costs.

Energy exhaust air heat recovery

During operation, warm moist steam escapes from the inlet and outlet areas of the conveyor dishwasher – valuable energy that disappears into thin air. The Energy versions of the STR series use this energy to warm the cold inlet water supply. The steam is collected and drawn over an exhaust air heat exchanger. The connected load is subsequently reduced – the energy savings are up to 6 kWh per washing hour which leads to annual cost savings of approx. € 2,208. The temperature and moisture of the exhaust air and the room climate is considerably improved.

* Non-binding information. The actual need for rinse water can vary depending on the on-site conditions.



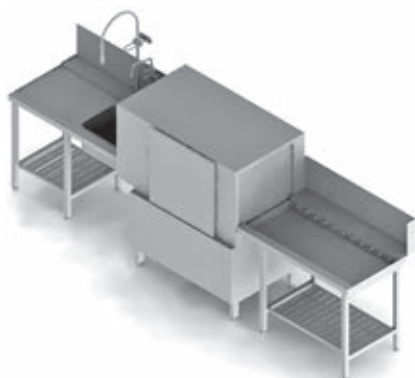
Lower operating costs:

- Reduced consumption of resources
- Lower connection rating thanks to heat recovery

A perfect fit in any room

The STR's numerous installation options provide a fitting solution for any kitchen. With many years of planning experience, Winterhalter can offer you project support.

Example plan STR 110



Hotel, restaurant, commercial catering with 100–200 diners

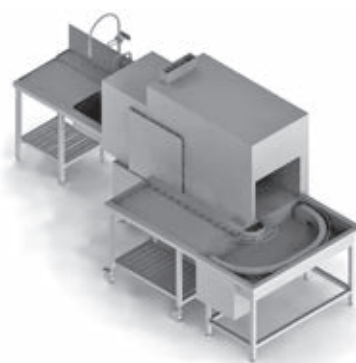
Performance: Up to 110 racks/h

Total length/depth: 3,700 mm / 815 mm

Loading area: Inlet table with sink and pre-spray unit, space for two racks

Removal area: Removal roller conveyor, space for two racks

Example plan STR 110 Energy with drying zone



Hotel, restaurant, commercial catering with 100–200 diners

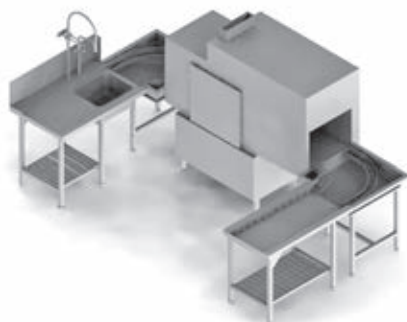
Performance: Up to 110 racks/h

Total length/depth: 4,000 mm / 1,550 mm

Loading area: Inlet table with sink and pre-spray unit, space for two racks

Removal area: 180° outlet corner conveyor, pivoting removal roller conveyor, space for two racks

Example plan STR 110 Energy with drying zone



Hotel, restaurant, commercial catering with 100–200 diners

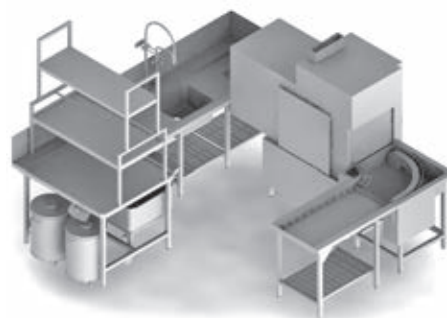
Performance: Up to 110 racks/h

Total length/depth: 3,680 mm / 2,100 mm

Loading area: Inlet table with sink and pre-spray unit, space for two racks, 90° inlet corner conveyor

Removal area: 90° outlet corner conveyor, removal roller conveyor, space for two racks

Example plan STR 130 Energy



Hotel, restaurant, commercial catering with 150–250 diners

Performance: Up to 130 racks/h

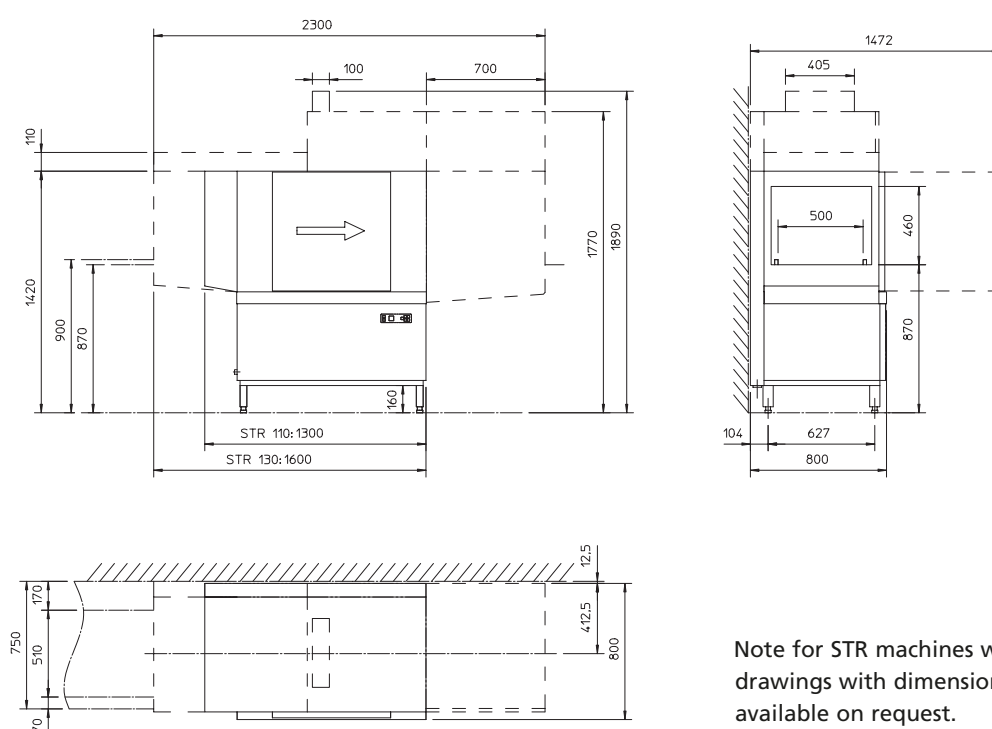
Total length/depth: 3,150 mm / 3,000 mm

Loading area: Sorting station, inlet table with sink and pre-spray unit, space for two racks, 90° corner entry

Removal area: 90° outlet corner conveyor, removal roller conveyor, space for two racks

		STR 110	STR 130
Theoretical capacity	[racks/h]	70/110	90/130
Length	[mm]	1,300	1,600
Depth with door closed	[mm]	800	800
Depth with door open	[mm]	1,472	1,472
Height without exhaust air vent	[mm]	1,420	1,420
Height with exhaust air vent (outlet area)	[mm]	1,600	1,600
Height with Energy	[mm]	1,890	1,890
Working height	[mm]	900	900
Clear entry height	[mm]	460	460
Passage width	[mm]	500	500
Circulating pump	[kW]	1.7	2.0
Tank temperature	[°C]	55–65	55–65
Boiler temperature	[°C]	85	85
Rinse water consumption (full load)*	[l/h]	260	260
Optional features <ul style="list-style-type: none"> • Energy exhaust air heat recovery • Direction of travel freely selectable: left–right / right–left • Working height: 850 mm • Plinth installation • Rinse booster pump to compensate for on-site fluctuations in water pressure • Temperature switching for glass washing 85°C/65°C • Drying zone (length: 700 mm) / corner drying zone (length: 795 mm) • Infeed tunnel with integrated exhaust air vents (only when equipped with drying zone) • Outlet tunnel with exhaust air vents (not in combination with drying zone) • Emergency switch • Steam-heating (0.3–4.0 bar) 			

* Non-binding information. The actual need for rinse water can vary depending on the on-site conditions.



Note for STR machines with corner drying zone: drawings with dimensions will gladly be made available on request.



STR 110 Single tank
high-volume rack conveyor
dishwashing machine

winterhalter



Optimum power – minimum space



Optimum cleaning results

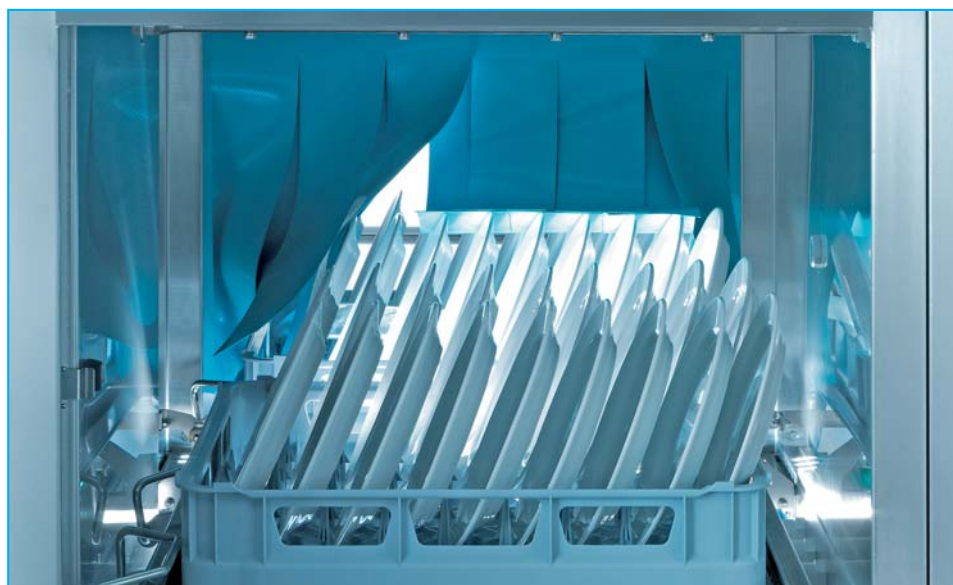


STR 110 – Powerful performance and flexibility

Winterhalter – The specialist in innovative dishwashing solutions

- + Represented in more than 70 countries worldwide
- + Commercial dishwashing technology from front loading to flight machines
- + Complete solutions consisting of machine, detergent products, water treatment and accessories – all from a single source

Performance and flexibility are what count in the hotel and restaurant sectors, as well as in cost sector catering. This applies to chefs and kitchen personnel – and dishwashers. The STR 110 single tank rack conveyor dishwasher delivers the power you need at busy times, and saves energy when it's quiet. From automatic zone activation to variable speed, the STR 110 conveyor system adapts to the quantity of dishes you are washing and provides flexible washing capacity. Yet it takes up only a modest amount of space. Variable setup options allow you to adjust the cleaning process to your exact needs.





Performance at your fingertips

The STR 110 single tank rack conveyor dishwasher has a proven high-performance washing system that adapts automatically to how busy you are.

+ High-performance washing system

Top quality cleaning results are guaranteed by the perfectly coordinated combination of a powerful pump, five upper and three lower wash arms, optimum water distribution and jets positioned for total coverage.

+ Optimum speed

With **two conveyor speeds (standard and rapid programme)**, the STR 110 can adapt to variable quantities of dishes and to their degree of soiling. The rapid programme is selected to do the job during busy periods or to wash away light soiling, saving both money and time.

+ Gentle glasswashing

The option of reducing the rinse temperature to 65° C significantly increases your glassware's service life. And it delivers the same excellent cleaning results.

+ Flexible washing

Thanks to its **rack-activated zones**, the STR 110 adapts to changing volumes automatically. The pump is activated and fresh water fed in only if dishes are actually in the respective zone. **This STR 110 feature significantly reduces operating costs.** Zone activation also significantly reduces noise, steam and heat emission.

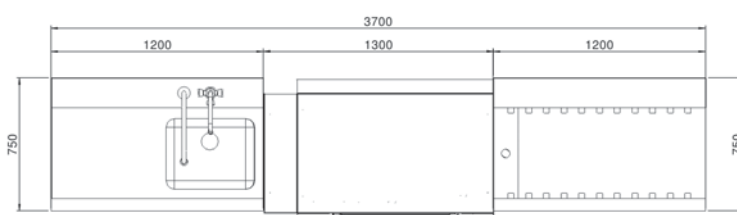
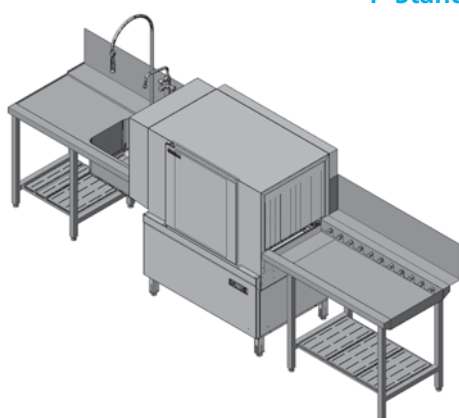




Flexible, and multi-talented

With its **compact dimensions**, the STR 110 single tank rack conveyor dishwasher also fits into the smallest kitchen. When combined with the 90° corner entry and 90°/180° outlet corner conveyor, small or odd-shaped spaces can be fully utilised. A **wide range of setup options means integrated flexibility as early as the planning phase**. So the system can be tailored to deliver optimum cleaning, whatever the onsite conditions.

+ Standard setup variant with straight tables



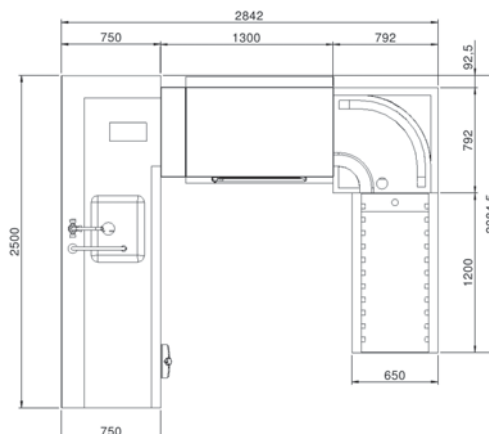
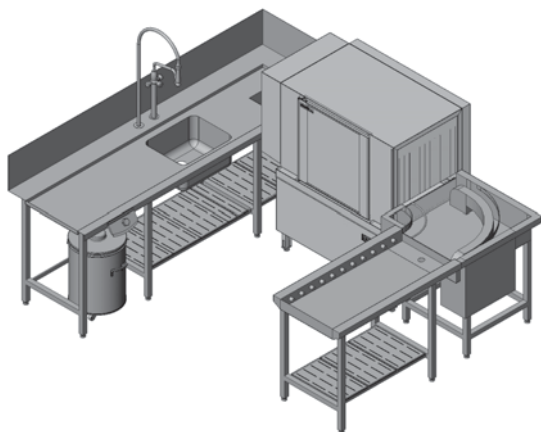
STR 110 in combination with:

- Inlet table with sink; room for two racks*
- Outlet roller conveyor with room for two racks*

Due to the STR 110's compact size, straight setups take up a minimum amount of space – and the machine requires a depth of only 800 mm. The setup variables enable the **inlet and exit areas of the machine to be separated** for optimum workflow (dirty and clean sides).

* It is possible to extend the inlet and outlet tables individually.

+ Compact setup variant for especially small work areas

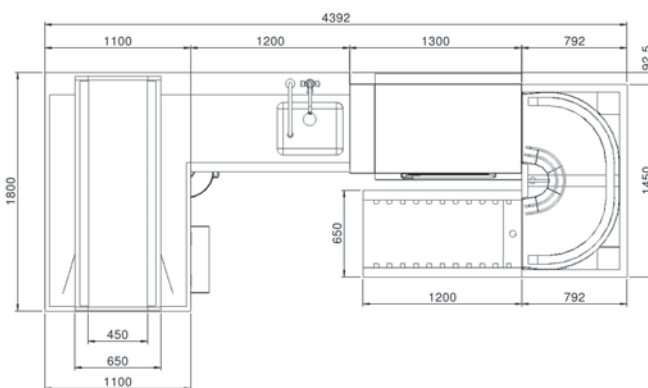
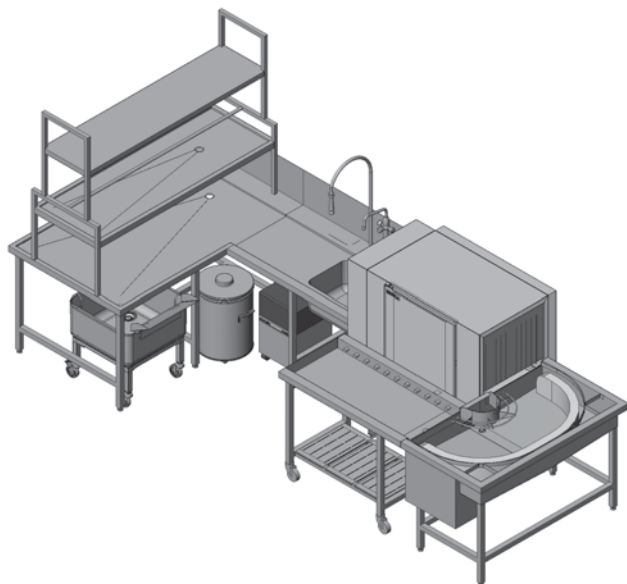


STR 110 in combination with:

- Inlet table with sink and corner entry; room for four racks*
- 90° corner conveyor and outlet roller conveyor with room for two racks*

With a length of only 2842 mm, this setup option is ideal for kitchens with limited space for the washing area. **It saves a significant amount of space.** Even in the smallest areas, optimum washing capacity can be achieved with the STR 110.

+ High performance setup variant with compact dimensions



STR 110 in combination with:

- Sorting station; inlet table with sink and room for two racks*
- 180° corner conveyor and outlet roller conveyor with room for two racks*

The sorting station enables the **cleaning process to be extremely efficient**: it easily accommodates any quantity of dishes, even in peak times. Combined with the 180° corner conveyor, the amount of space required for washing with the STR 110 is kept to a minimum.

* The inlet table and the outlet roller conveyor can be extended individually.

The setup options illustrated are selected examples only. The tables in the inlet and outlet areas can be combined as required.



Economical and hygienic



Improve performance, save costs

The STR 110 single tank rack conveyor dishwasher is exceptionally economical. Water, energy and chemical consumption are optimised for minimum usage and maximum cleaning power.

+ Reduced rinse water volume

The STR 110 requires very little rinse water, and fresh water is supplied only when dishes are actually located in the rinse zone. This reduces the quantities of water, energy and detergent required – which also reduces your operating costs.

+ Continuous tank water cleaning

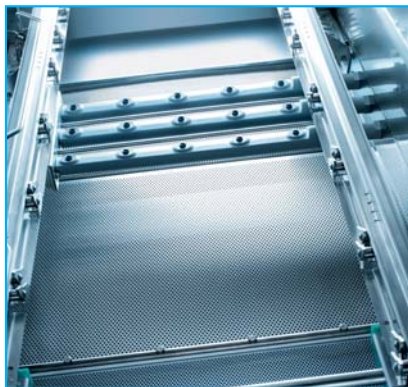
In combination with the total coverage filter system and the pump inlet filter, the Mediamat washwater filtration system continuously filters dirt particles from the tank water. They enable consistently good cleaning results without having to change the tank water. Continuous filtration reduces consumption values and costs, and saves time.

+ Ultimate all-round protection

'All-round protection' consists of the rear panel, closed base cover and double-skinned door. This guarantees minimum heat dissipation and maximum protection for the machine. It also makes the STR 110 extremely quiet.

+ Reliable operation

The clear, colour-coded display prevents operating errors. The wash arms can be removed individually and the filters are easily accessible. This saves time and money.





Uncompromisingly hygienic

The STR 110 machine's interior design ensures maximum hygiene, eliminating the build up of dirt and bacteria. The control panel display delivers effective hygiene monitoring, thus completing the comprehensive hygiene concept.

+ Smooth, seamless surfaces

The smooth interior door surface and the deep-drawn tank with rounded corners provide no place for dirt and deposits to hide.

+ Access all areas

STR 110's 180° pivoting hygiene door has clear advantages compared to a conventional lift sliding door: a perfectly hygienic interior door surface plus maximum, ergonomic access to the interior.

+ Thoroughly clean – automatically

At the end of each working day, the machine interior is automatically cleaned. The advanced tank and drain design, combined with the integrated drain pump, ensures that the tank is completely emptied of water.

+ Controlled hygiene

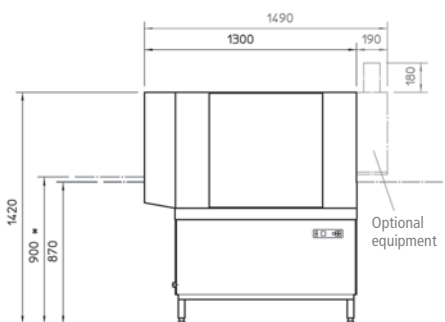
The control panel shows boiler and tank temperature during operation. A special option also allows it to alert the operator when detergent or rinse aid need refilling. This can make a significant contribution to hygiene standards.



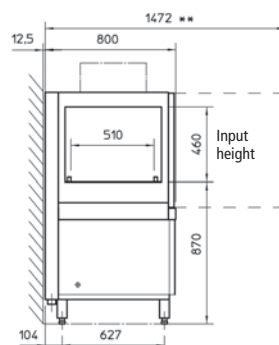
STR 110 – It's your advantage

		STR 110
Theoretical machine output	[racks/h]	70/110
General dimensions		
Machine length	[mm]	1300
Machine depth	[mm]	800
Machine height	[mm]	1420
Clear entry width	[mm]	510
Clear entry height, max.	[mm]	460
Washing zone		
Pump output	[kW]	1.7
Tank temperature	[°C]	60
Rinse zone		
Rinse water consumption per hour*	[l/h]	260
Boiler temperature	[°C]	85
Optional equipment		
<ul style="list-style-type: none"> • Pressure booster pump to compensate for fluctuations in water pressure • Glass washing programme for cleaning glasses especially gently • Outlet tunnel with exhaust air pipe for venting the exhaust in the outlet area • Emergency stop switch • Steam heating 		
→ All other machine features listed in the brochure are standard.		

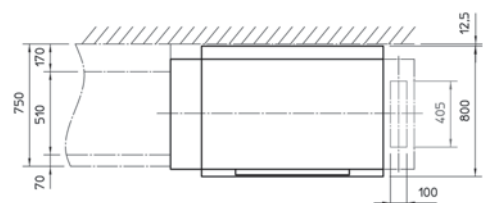
*Under ideal conditions. The fresh water consumption depends on the on-site conditions.
The precise adjustment takes place during commissioning.



*: 850 mm optional



** : with door open



Winterhalter UC Series undercounter dishwashers.

MASTERPIECE

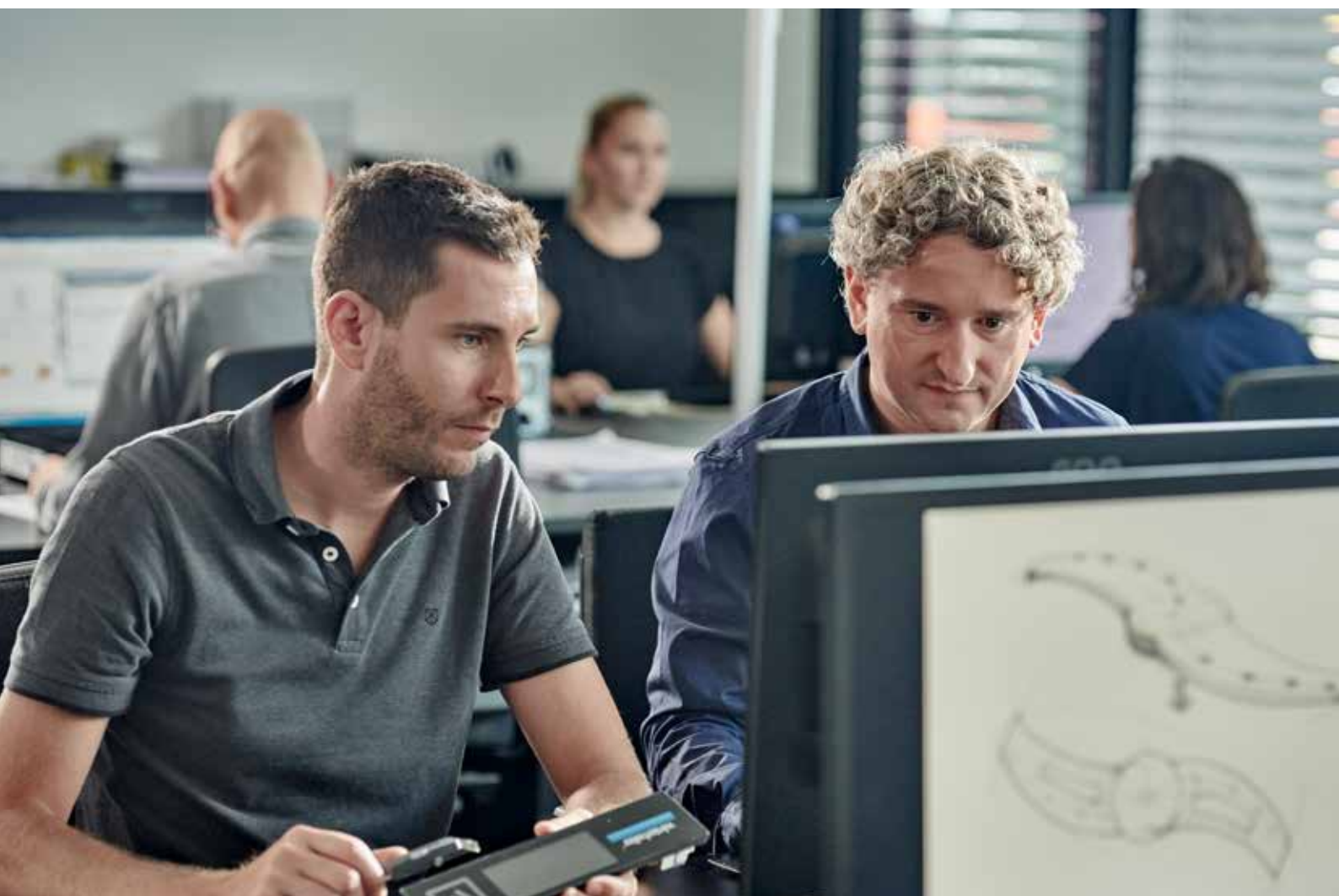
Crafted for you. Prepared for the future.



A machine for perfect cleanliness and hygiene. The best that we have ever designed.

Perfectly coordinated accessories. Specially developed chemicals. Advice. Training. Service. All that and more from Winterhalter.

Our aim was to design the best dishwasher in its class. We completely revised the UC and refined every detail to get the maximum out of it. The result is a professional tool for commercial dishwashing. A piece of the future.





OUR MASTERPIECE.

All our knowledge, experience and passion has gone into it. Developed with an eye to the future, it is equipped with the latest technology and can be connected to the digital network. »Made in Germany« quality and finish. What's more: it meets our customers' wishes and needs across the board. Whether in bars or cafes, bistros or restaurants, hotels or hospitals.

With the new UC Series, Winterhalter is unveiling the next generation of undercounter dishwashers. For perfect wash results. Intuitive and simple to use. Completely safe and reliable to operate. And every detail is of the highest quality. The UC is a piece of engineering artistry. Ready for the requirements of today and tomorrow.

SMART TOUCH DISPLAY

for intuitive and simple operation

CONNECTED WASH

connection to the digital network
for greater transparency, better
safety and improved efficiency

INNOVATIVE WASH FIELD

flow-optimised and with new
nozzle geometry: for water savings
of up to 25 %



FOR EVERY SPACE, LARGE OR SMALL

The UC Series is available in four different sizes: S, M, L and XL. You can therefore choose the machine size that fits best with the space available to you and your wash items. And whatever size you choose: it goes without saying that there's a rack for every application.

CUSTOMISED SOLUTION

Made just for you: the UC comes as a glasswasher, dishwasher, cutlery washer or bistro dishwasher depending on the application. Every machine has up to three standard programmes which can be used to adapt washing quickly and easily to the shape and size of the items being washed and the level of soiling.

ECONOMICAL AND EFFICIENT

The new UC Series is even more economical to operate: the optimised wash field reduces water consumption by up to 25 % compared to the previous model. Consumption of electricity and chemicals also drops, further minimising overall operating costs. And all this with first-class wash results.

SEE FOR YOURSELF.

Glasses. Dishes. Cutlery. Baking dishes, trays, racks and bottles. For every space, large or small. With water softening or without. There's a simple idea behind the UC Series: it's made to meet all your wishes and requirements. An all-in-one system. But configurable in a way that results in a customised solution. Your dream machine.



The mission of the UC: sparkling glasses, clean dishes, impeccable cutlery. Bring a happy smile to the faces of your guests.

USER-FRIENDLY

A smart touch display with programme and progress indicator. Single-button operation. Ergonomic door handle. And particularly easy cleaning, in which the two wash fields can be removed with one hand at the push of a button – without any tools. Operation of the UC is easy and intuitive. Just what you want.

PERFECT CLEANLINESS AND HYGIENE

Sparkling clean. Hygienically clean. Visually flawless. The UC guarantees perfect wash results over a long period. For the highest standards of cleanliness and hygiene. And the highest standards of quality and reliability.



A detailed overview of the UC Series is available
on our website at

>> www.winterhalter.com.au/uc



FLEXIBLE MACHINE CONCEPT

The basic concept of the UC has proven itself over many years and has made the series highly successful: one machine technology for four different applications. The UC comes customised precisely to your specific needs: as a glasswasher, dishwasher, cutlery washer or bistro dishwasher. Up to three standard programmes make it possible to adapt washing quickly and easily to the shape and size of the items being washed and the level of soiling. And if your preferred application ever changes: your service technician can reconfigure the machine and turn a glasswasher into a bistro dishwasher, for example. So you always have flexibility.

SMART TOUCH DISPLAY

Prepared for the future: a smart touch display works in the cockpit of the UC. With single-button operation. A clear user interface with self-explanatory pictograms. And with the gesture control we all know from smartphones. The display responds sensitively and is also easy to use when wearing gloves. The surface is made of glass and is very robust: it has been tested under extreme conditions.

ENERGY HEAT RECOVERY SYSTEM

Less energy consumption, maximum efficiency and a more agreeable room climate: every UC machine is optionally available with an integrated Energy function – an efficient, patented circulating air heat recovery.

VARIOPOWER WASHING PRESSURE ADJUSTMENT

Every UC has VarioPower on board as standard: the automatic variable water pressure regulation in combination with the selected washing programme ensures that fine glasses and fragile bowls are washed at low water pressure, while sturdy dishes are washed at a higher water pressure.

WATER TREATMENT

For even better wash results and to protect the machine: every UC is available with an integrated softener as an option. This is built into the machine to save space and provides continuous soft water. As a result, detergent and rinse aid can take optimum effect and limescale deposits in the machine are reduced significantly. For the highest standards of water quality, there is the »UC Excellence-i« with integrated reverse osmosis: this provides sparkling glasses and gleaming cutlery – with no polishing.

CONNECTED WASH*

Greater safety, greater efficiency: the UC can be linked to a computer or mobile device via CONNECTED WASH. This enables analysis and evaluation of all important operating data. For optimisation of the entire washing process.

* You can find the countries in which CONNECTED WASH is currently available and the functions and options it offers at www.connected-wash.com

Cleanliness and hygiene. Each one of our products plays its part. Together they deliver the perfect wash result. Welcome to the complete Winterhalter system!

WASH RACKS

They are custom-made for glasses, dishes or cutlery. With their functional design they adapt precisely to the respective wash items, protecting them and preventing damage. They ensure ideal water and air circulation and fast drying. They make handling and transporting wash items easier. What's more: special solutions like the double-rack system, which allows you to wash on two levels with just one wash cycle, provide even more flexibility.

Wash racks have a decisive influence on the quality of the wash result and on total operating costs. We can advise which racks best suit your requirements. Culminating in the best solution for you.



CHEMICALS

They are usually overshadowed by the machine. Often underestimated. But they have a crucial influence on the wash result: the chemicals. For this reason, they are an extremely important component within the overall Winterhalter system.

At our headquarters in Meckenbeuren, we have therefore established a research department with an in-house laboratory. Here we develop and test formulas for a premium range of detergents and hygiene products. These are precisely tailored to the different wash items and types of contaminants; they are economical and match perfectly with other products in the range. They thus complement one another and deliver a brilliant overall wash result.



WATER TREATMENT

Deposits. Streaks. Spots. They are »little greetings from the kitchen« and the natural enemies of any restaurateur. Because they are a sign of poor washing quality. Because limescale impairs the effect of detergent and rinse aid, and damages the machine in the long-term. The problem is water quality – the solution is professional water treatment.

Winterhalter has developed an entire product range for this: from simple water softening, through partial and full demineralisation, to reverse osmosis. Integrated into the machine or as an external device. And always tailored precisely to your needs and the local water quality. The result is sparkling glasses which require no polishing, gleaming cutlery, and shining plates.



PLINTHS

Do you want to bring your UC up to the optimal working height and create additional storage space? Do you want to be able to store your wash racks under the machine, for example, without taking up too much space? Or keep detergent and rinse aid containers tidied away under the machine? We've considered these options and developed special plinths for our under counter machines which are tailored to these requirements. Open and enclosed, in various heights, with and without a drawer. For space-saving storage and ergonomic working.

ADVICE AND PLANNING

Winterhalter is the specialist in commercial dishwashing systems. Our knowledge encompasses the widest range of kitchens in the world. We know which aspects are important when it comes to dishwashing, and what has to be taken into consideration. What's more: we enjoy passing this knowledge and experience onto our customers.

Together we analyse your processes, plan your needs and choose the optimal equipment. We organise your washing operation, optimise the washing logistics and provide instruction and training sessions for your employees. When it comes to washing up, we're always there for you. And we help you to make your washing process as efficient as possible.

What can we do for you? Let's talk about it: Tel. +61 29 645 3221 or sales@winterhalter.com.au



Karl Winterhalter



Jürgen Winterhalter



Ralph Winterhalter

»We are family people«

Down-to-earth. Forward-looking. With a focus on family. The culture and values of our family have shaped the Winterhalter company for three generations. Close to staff, customers and partners. Long-term thinking with a view to the generations to come. Taking personal responsibility – all typically Winterhalter. We are proud of our family company. And we are pleased to grow a little more every day.

THE FIRST WINTERHALTER



It all began in 1947: Karl Winterhalter established his own company in Friedrichshafen. He started by salvaging scrap metal from the war, which he used to manufacture household goods. Cooking pots and ovens, for example. A short time later he specialised, and in 1957 launched the GS 60 model: the first commercial warewasher from Winterhalter. That was the starting signal. Since then the company has always pursued a single goal: perfect wash results as part of an efficient washing process. With this holistic approach, Winterhalter has developed from a machine supplier to the full system provider of dishwashing solutions it is today.

»Products, advice, service – three factors that intertwine seamlessly at Winterhalter. And that makes our customers feel safe in the knowledge that they have the right partner for any issue relating to the washing process.«

FROM DISHWASHER TO DISHWASHING SOLUTION

In days gone by, all we needed to do was deliver the new dishwasher to our customer's kitchen on a hand truck. Now it's about the development of a new, individual dishwashing solution, which is perfectly coordinated with the on-site situation and the special requirements and preferences of the customer. A solution of this type is based on clear analysis and planning. To achieve this, we visualise the room layout using state-of-the-art CAD software in 2D and 3D. For a bespoke and efficient washing process.



1.700

EMPLOYEES WORLDWIDE

High quality standards. Diligence. Curiosity and ambition. These are the typical attributes of a Winterhalter employee. And with them, we have grown from a small Swabian family company into a global player: with over 40 branches worldwide and distribution partners in over 70 countries. We are proud of what we have achieved. And we are proud of each and every employee who has done their bit. So we would just like to take this opportunity to officially say »Thank you!«



OUR ACADEMY OF WASHING SCIENCE

Almost 1,000 participants per year and 250 training days worldwide: as part of our training programmes we pass on our knowledge and experience in the discipline of »dishwashing«. We provide training to our own personnel as well as to our retail and service partners. Our objective: every Winterhalter customer should receive informed advice and professional support in the specific situation. Whether it's an initial informative discussion, installing a warewasher, or service and maintenance appointments.

IN-HOUSE LABORATORY FOR IMPROVED CHEMICALS

As a specialist in dishwashing, do we want to rely on the products of other manufacturers? The answer to this question was an immediate and resounding »No!«. This was the moment when our in-house research laboratory was born: we have been developing our own formulas for original Winterhalter chemicals for many years now: from detergents and rinse aids to hygiene products.

Good to know

As a specialist in dishwashing, at Winterhalter we set high standards for ourselves: we don't just want to meet our customers' current requirements. We want to support them proactively and gain their trust for the long term. Service plays an important role here: our comprehensive network guarantees fast and professional support on site. Worldwide.

We and our service partners are there when you need us. On that you can always rely with Winterhalter.



What opportunities does new technology offer? How is our society and the world of work changing? Which trends and developments will shape commercial dishwashing in the future? We find all of these questions extremely exciting. And that's why we are already working on developments that will affect us and our customers tomorrow, and the day after that. You can take a look at the solutions that we have developed in our NEXT LEVEL SOLUTIONS. Current examples include CONNECTED WASH and PAY PER WASH.

>> www.connected-wash.com >> www.pay-per-wash.com

»See you again soon!«

Customers often own a Winterhalter dishwasher for 15 or 20 years. So our customers only have to worry about disposing of their old equipment once every few decades. What's more, we take care of this ourselves. We design our machines as modular systems, so they are easy to dismantle if ever the need arises. We reduce the range of materials, use standardised construction materials and label plastic parts for easy recycling. Winterhalter dishwashers have a particularly high recycling ratio thanks to these and many other measures.



MADE IN GERMANY AND SWITZERLAND

As ever, it is not simply an indication of origin, but a seal of quality: products made in Germany and Switzerland are recognised worldwide for their premium quality and total reliability. For engineering skill, ingenuity and precision. Winterhalter is the perfect testament to this: in Meckenbeuren, Endingen and Rüthi, we develop and produce solutions for first-class cleanliness and hygiene. This is our promise for every single dishwasher that leaves our factory.

TECHNICAL DATA

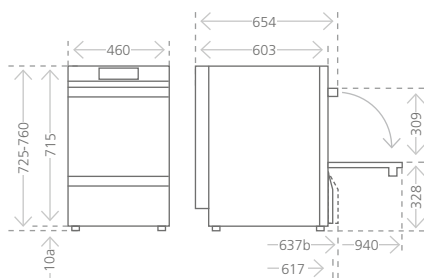
General data		UC-S	UC-M	UC-L	UC-XL
Tank capacity	l	9.5	15.3	15.3	15.3
Rack dimensions	mm	400 x 400	500 x 500	500 x 500	500 x 500 / 500 x 540
Clear entry height	mm	309	309	404	404
Wash pump	kW	0.6	0.6	0.6	0.6
Noise emission	dB(A)	max. 55			
Splash guard with plastic rear cover		IPX3	IPX3	IPX3	–
Splash guard with stainless steel rear cover		IPX5	IPX5	IPX5	IPX5
Weight net / gross	kg	59 / 68	64 / 74	69 / 79	69 / 79
with Energy	kg	64 / 73	70 / 80	75 / 85	75 / 85
with Excellence-i	kg	79 / 88	85 / 95	–	–
Max. inlet water temperature	°C	60 (Energy: 20 / Excellence-i: 35)			
Required water flow pressure	bar/kPa	1.0 - 6.0 / 100 - 600			
with Energy	bar/kPa	1.5 - 6.0 / 150 - 600			
with Excellence-i	bar/kPa	1.4 - 6.0 / 140 - 600			

Specific data depending on software		Glasses	Dishes	Bistro	Cutlery
Theoretical capacity standard*1	Racks/h	22 / 32 / 48	24 / 28 / 40	28 / 32 / 40	11
Theoretical capacity short programme*1	Racks/h	77	66	66	21
Rinse water consumption per wash cycle*2 UC-S	l	Standard: 2.0 Eco: 1.8 Cool: 3.4	Standard: 2.0 Eco: 1.8	Standard: 2.0 Eco: 1.8	Standard: 3.2 Eco: 2.9
Rinse water consumption per wash cycle*2 UC-M, -L, -XL	l	Standard: 2.2 Eco: 2.0 Cool: 3.4	Standard: 2.2 Eco: 2.0	Standard: 2.2 Eco: 2.0	Standard: 3.4 Eco: 3.1
Tank temperature	°C	62 Cool: 55	62	62	69
Rinse water temperature	°C	65 Cool: *3	85	65 - 85	85
Rinse water temperature Energy*4	°C	65	65	65	65

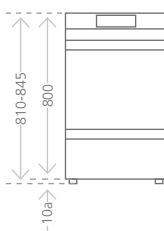
ELECTRICAL DATA

Voltage	Fuse protection	Total connected load*5 Tank heating 1.8 kW Boiler heating 4.9 kW	Total connected load Cool*5 Tank heating 2.5 kW Boiler heating 4.9 kW	Countries
380 V - 415 V, 3N~, 50 Hz / 60 Hz	10 A 16 A	6.0 kW 7.9 kW	– 6.1 kW	Worldwide
220 V - 240 V, 1N~, 50 Hz / 60 Hz	10 A	1.8 kW	–	
	13 A	2.6 kW	–	
	16 A	3.2 kW	3.4 kW	
	20 A	4.1 kW	4.2 kW	
230 V, 2~, 50 Hz / 60 Hz	16 A	3.0 kW	–	Belgium
230 V, 3~, 50 Hz / 60 Hz	25 A	7.3 kW	–	
200 V, 2~, 50 Hz / 60 Hz	20 A	3.3 kW	–	Japan
200 V, 3~, 50 Hz / 60 Hz	25 A	6.9 kW	–	

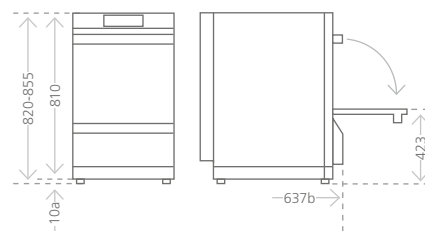
UC-S



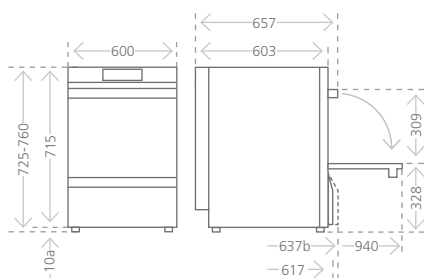
UC-S Energy



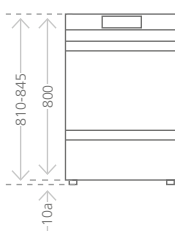
UC-S Excellence-i / UC-S Excellence-iPlus



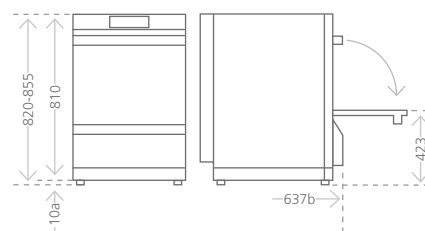
UC-M



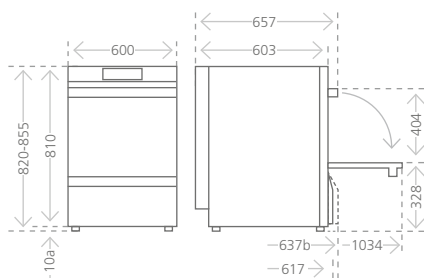
UC-M Energy



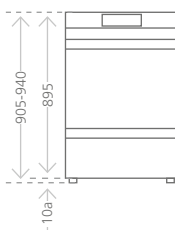
UC-M Excellence-i / UC-M Excellence-iPlus



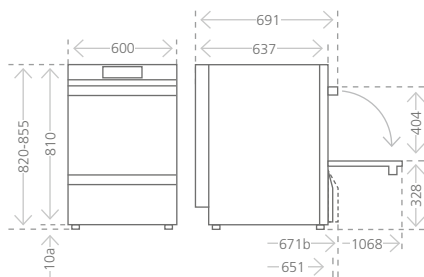
UC-L



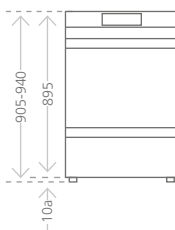
UC-L Energy



UC-XL



UC-XL Energy



Note For installation in a recess, the following changes to the dimensions must be noted:

Height: +5 mm
Width: +10 mm
Depth: +5 mm

a Removing the feet reduces the machine height by 10 mm.

b Without integral containers for detergent and rinse aid, the depth of all machines is reduced by 20 mm.

Further information can be found on our installation diagram.

*1 Depending on local conditions (inlet water temperature / electrical supply), the values stated here may be reduced.

*2 Non-binding information. The actual rinse water consumption may vary depending on the on-site conditions.

*3 Depending on inlet water temperature, switchable to 65 °C.

*4 Inlet water temperature < 20 °C.

*5 The actual connected load varies depending on the mains voltage.



»In this brochure, we have presented our UC Series: its product features, application options and what sets it apart. However we were not able to provide you with the strongest argument of all here: the positive experiences of our satisfied customers. Just ask next time you see a UC anywhere. There is no better aid to making your decision.«

Jürgen and Ralph Winterhalter



WE WASH AS YOU COOK. PASSIONATELY.

The new utensil washers from Winterhalter.
Clean. Ergonomic. Economical.

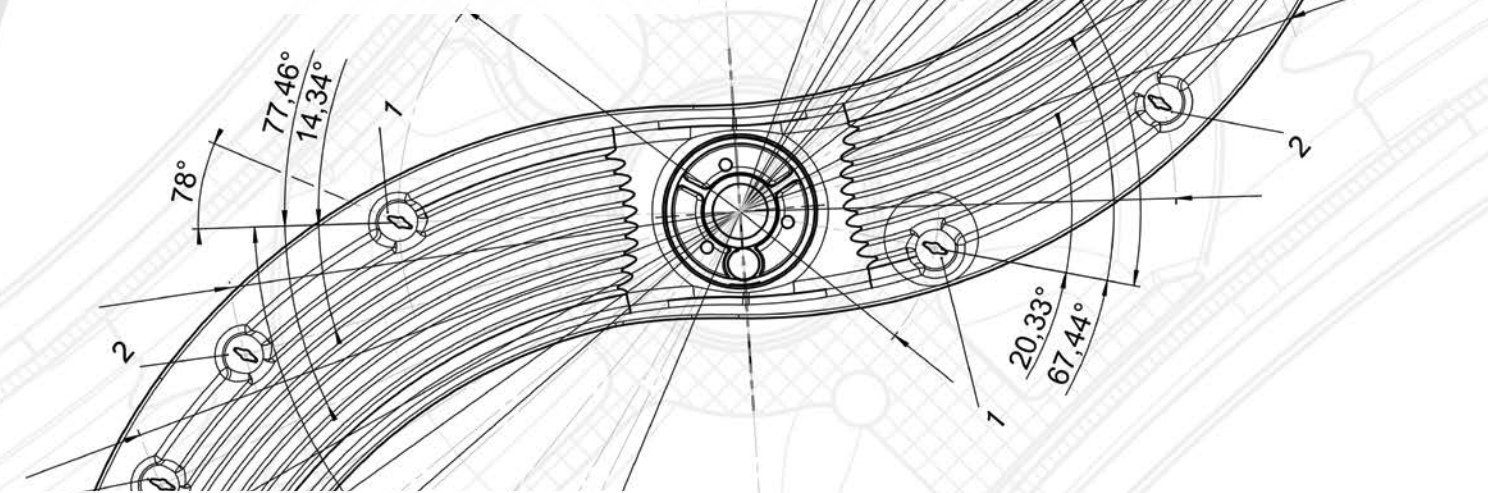
UF Series. Part of your passion.

FCSI

MANUFACTURER
OF THE YEAR

2015

YOU GIVE 100% EVERY DAY. SO DO WE.



Regardless of whether you're a baker, butcher, hotelier or caterer – you and your team give it your all every day and work on your merchandise with care and dedication.

This also applies to Winterhalter. Employing commitment and dedication, our highly-trained staff develop innovative technologies which make your everyday life in the kitchen easier.

Winterhalter is a trusted partner you can rely on. We know your requirements and we make every effort to support you wherever we can. With our innovative warewashing solutions you can concentrate all your efforts on your most important goal: Making your customers happy.

$$a^2 = b^2 + c^2 - 2bc \cos x$$
$$\lim_{x \rightarrow 0} \frac{x}{2} = \frac{1 - \cos x}{\sin x} = \frac{\sin x}{1 + \cos x}$$

YOU DON'T WANT TO HAVE TO THINK ABOUT WASHING. BUT THERE IS NOTHING WE WOULD RATHER DO. SINCE 1947.

Your high quality standards are what drive us. The passion and drive that you put into perfecting your work, is what we put into developing and producing our products for you.

We value the utmost quality

We have kept our self-imposed quality promise since 1947. Winterhalter products represent top-quality material, reliability and durability. At our production sites in Germany and Switzerland we consciously focus on workmanship and quality.

We research and develop

Our specialist development offices and production workshops possess a unique wealth of experience, knowledge and skills. Our customers, partners and service technicians are a constant inspiration in our development process. At Winterhalter we never tire of continually further developing our products for you.

We know our customers

We develop needs-specific solutions which are perfectly tailored to the needs of our customers throughout the world. We offer leading solutions in professional warewashing that

can cope with an array of space considerations, types of items being washed and the degree of soiling.

We value genuine partnership

You are never successful alone! At Winterhalter we live by this motto internally and externally. We are a reliable, family company that delivers a first-class, comprehensive service on a global basis. From the perfect machine, detergent, water treatment and other accessories right through to reliable customer service. We are your specialist in the kitchen.

We think and act sustainably

We regularly set new standards in the industry with our products when it comes to efficiency and ecology. Our in-house research and development team continually trial innovative technologies with the intention of improving efficiency, sustainability and user-friendliness of the cleaning process.



YOUR NEW UF. INNOVATION AS STANDARD.

The new UF from Winterhalter delivers much more than a top-rate utensil washer. You gain a new member of kitchen staff that thinks for itself, mucks in and delivers the best results on demand.

From compact units to large-scale space savers, we have the right solution for every kitchen. You are the inspiration for the innovations in all of our models: Solutions conceived by professionals for professionals.

We help you realise your daily ambitions by delivering excellent wash results, ergonomic design and maximum efficiency.

WE LOVE IT **CLEAN.**
JUST LIKE YOU.



Every professional knows that it is the result that counts in the end. This is no different when it comes to the hygienic cleanliness of items being washed. The new UF Series promises innovation which will make life easier for you.

Customer-specific software

Our utensil washers have been trialed at butchers, bakeries and restaurants. The subtle software differences on our utensil washers allow us to create solutions which are tailored to your exact needs. The UF Series offers custom-made programmes depending on the nature and extent of the soiling.

With our new **TurboZyme** process you can spare yourself the extra work involved in pre-washing. Dried-on residues are loosened during this soaking process using our innovative crust cracker and stubborn dirt is removed before the actual wash cycle.

High Performance Washing System with VarioPower

Sometimes you have to apply a little pressure to make sure everything runs smoothly. The same applies for the UF Series with its unique, high performance system and VarioPower. The powerful water pressure removes even the most stubborn of dirt while at the same time preventing the wash jets from becoming blocked. The result is hygienic cleanliness on every square centimetre throughout the entire interior of the machine. The machine has a soft start so wash items remain in place when the cycle begins. The wash pressure can be

individually adjusted with VarioPower depending on the items being washed and the degree of soiling.

Wash water filtration system

It doesn't matter whether it's the first or last wash cycle of the day:

clean wash water is always the main priority. The UF Series has an intelligent wash water filtration system which sees water quality as a constant priority, ensures the continuous purification of wash water and, where necessary, initiates automatic regeneration.

Cold water pre-wash

Anybody who deals with proteins and starch in their catering facility will be familiar with this problem: If the washing process starts without using a cold water pre-rinse, residues get baked on and become stuck because of warm water. The UF series has a cold water pre-wash option – one press of a button is all it takes!



WE STRETCH OURSELVES. SO YOU DON'T HAVE TO.

You and your staff face daily challenges. Winterhalter supports you in your challenges with numerous, great and small, product innovations – which make using our new utensil washers even more convenient and ergonomic.

Foldable door and swing rack

It is often the little ideas that bring about the greatest benefits. Take for example the foldable door in the new UF Series. It won't get in your way, in fact it will provide your staff with clear access to the interior of the machine – which will make cleaning the interior even easier in future. And never again will you have to take out the heavy stainless steel rack to clean the interior of the machine. Simply fold it up, wipe and fold back – done.

User-friendly touch screen

Our commitment: For your new Winterhalter to be operational from the first day, easy and intuitive operation is required. The start button changes colour from blue to green as the washing process advances. It is possible to tell just by looking, how far through the wash cycle the equipment is and when it will be ready for use again. The universal pictograms are absolutely ideal for an international working environment. Furthermore, your UF machine can detect and report errors and, sometimes, even rectify them itself, ensuring maximum availability. In a PIN-protected area, chefs and service technicians can retrieve important device data and optimise the machine to meet customer-specific needs.

The rack dolly solution

It is tiring to collect dishes by hand from various production stations, particularly in large kitchens, and transport them to the utensil washer. Large distances must be covered and utensils are sometimes large and bulky. With a rack dolly you can move seamlessly through kitchen passages collecting dirty dishes before ergonomically pushing the rack directly from the dolly into the machine. Then the clean dishes need only be pushed back to the work stations. Winterhalter has optimised your workflow!

Customised accessories

With customer-specific utensil racks and tilters (for trays, plates etc.) you can fully customise the interior of your Winterhalter UF and adapt it in a way which is even more practical for your use. Wash items are not thrown around in the machine, optimum use of space and ease of handling are the crucial benefits of this machine.

OUR RESPONSIBILITY.

YOUR **POTENTIAL SAVINGS.**

When choosing an industrial warewasher, the purchase price is just one of the points to consider. The consumption figures for water, chemicals and energy are also an important consideration. These intelligent and resource-efficient systems allow Winterhalter to set the market standard and give you certainty of a worthwhile investment which will pay off in the long-run.

Heat recovery – Energy

A Winterhalter UF does not simply allow the steam generated during the washing process to escape.

Quite the opposite in fact: we use it for the next wash cycle! The hot steam heats up the cold inlet water, while the steam condenses in the heat exchanger. This allows you to make substantial savings in energy costs while considerably improving the room climate because the hot steam no longer escapes into the kitchen.

Standby mode

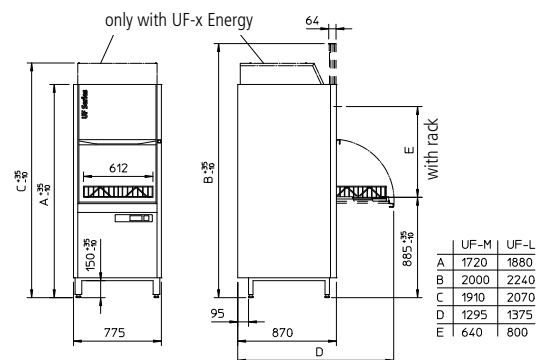
If the machine is not in operation, then it should not be causing you any unnecessary costs either. That is why your Winterhalter UF is equipped with a standby mode. It activates independently and reduces the boiler temperature to such an extent that the machine can heat the boiler up to the target temperature again during the following wash cycle. That way you can rest assured – when you next use your UF there will be no waiting time, the device will once again be ready for operation without any delays.





Technical data

UF Series		UF-M	UF-L	UF-XL
Tank capacity	[l]	69	69	138
Rinse water consumption per wash cycle ¹⁴	[l]	4.7	4.7	7
Tank temperature	[°C]	60	60	60
Rinse temperature	[°C]	85	85	85
Rack interior dimensions	[mm]	612 x 672	612 x 672	1305 x 672
Circulating pump	[kW]	2.5	2.5	2 x 2.5
Tank heating standard/performance	[kW]	5/10	5/10	5/10
Boiler heating standard/performance	[kW]	10.2/16.4	10.2/16.4	10.2/16.4
Max. water inlet temperature	[°C]	60	60	60
Required water flow pressure	[bar/kPa]	1	1	1
Required water flow pressure with Energy	[bar/kPa]	1.5	1.5	1.5
Splash guard		IPX5	IPX5	IPX5
Weight (net/gross)	[kg]	190/220	200/230	305/355
Weight with Energy design net/gross	[kg]	225/255	235/265	350/400



All other data on the web and in-app.

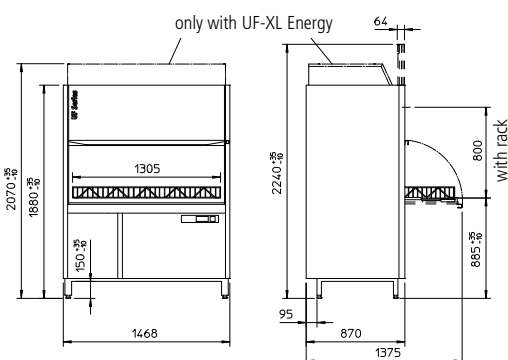
Software settings

UF Series theoretical capacity		Standard ^{*1}	Energy ^{*1*2}	HighTemp ^{*1*3*4}
Universal software	[Racks/h]	40/24/12	40/24/12	20/15/10
Universal software short programme	[Racks/h]	64/42/23	64/42/23	—
Baker software	[Racks/h]	40/24/12	40/24/12	20/15/10
Baker software short programme	[Racks/h]	64/42/23	64/42/23	—
Butcher software	[Racks/h]	40/24/12	40/24/12	20/15/10
Butcher software short programme	[Racks/h]	64/42/23	64/42/23	—

^{*1} Depending on the on-site conditions. ^{*2} Water inlet temperature < 20 °C.

^{*3} Minimum 25A fuse protection, tank and boiler heating performance. Rinse water volume UF-M/L: 5.5l/Rinse water volume UF-XL: 9l. Tank temperature 66 °C, boiler temperature 85 °C.

^{*4} Under ideal conditions. Fresh water consumption is dependent on local conditions. Minor adjustments will be made on commissioning.



Electrical data

Voltage	Fuse protection	Total connected load Standard Boiler 10.2 kW/tank 5 kW		Total connected load Performance Boiler 16.4 kW/tank 10 kW		Countries
		UF-M/L	UF-XL	UF-M/L	UF-XL	
380V/3N~ 50 Hz 380V/3N~ 60 Hz	16A	8.7 kW	8.4 kW	—	—	Worldwide
400V/3N~ 50 Hz 400V/3N~ 60 Hz	16A	9.4 kW	8.8 kW	—	—	Worldwide
	20A	10.0 kW	10.0 kW	—	—	
	25A	16.3 kW	16.2 kW	16.4 kW	16.4 kW	
	32A	17.5 kW	17.4 kW	18.8 kW	18.8 kW	
415V/3N~ 50 Hz 415V/3N~ 60 Hz	40A	—	—	25.1 kW	26.2 kW	Worldwide
	16A	10.0 kW	9.5 kW	—	—	
	20A	10.8 kW	10.8 kW	—	—	
	25A	17.4 kW	17.1 kW	17.7 kW	17.7 kW	
230V/3N~ 50 Hz 230V/3N~ 60 Hz	32A	18.7 kW	18.4 kW	20.3 kW	20.3 kW	Belgium / Malaysia
	40A	—	21.1 kW	25.5 kW	26.8 kW	
	25A	9.4 kW	8.7 kW	—	—	
	32A	10.2 kW	9.9 kW	—	—	
200V/3N~ 50 Hz 200V/3N~ 60 Hz	40A	—	—	15.2 kW	15.1 kW	Japan
	50A	—	—	17.7 kW	17.6 kW	
	25A	7.6 kW	9.1 kW	—	—	
	32A	9.0 kW	—	10.3 kW	10.3 kW	
200V/3N~ 50 Hz 200V/3N~ 60 Hz	40A	—	—	12.2 kW	12.9 kW	Japan
	50A	—	—	15.9 kW	16.8 kW	



OPTIMUM WATER FOR PERFECT WASH RESULTS

Professional water treatment.
To meet every demand and requirement.

SPARKLE BEGINS IN THE WASH.

First impressions count. So attention to detail is imperative for every element of food and drink presentation.

At Winterhalter we are well aware that the wash result plays an important part in brilliant presentation. Our development teams work tirelessly on innovative ideas to add to the perfection of the cleaning process. This doesn't just involve building market-leading warewashers – our professionalism and enthusiasm extends to water treatment, cleaning products, accessories and service too. This means we take full responsibility for your wash results. Trust Winterhalter. We are your cleaning specialist, responding to your requirements and offering integrated solutions tailored to you.

YOUR WATER HAS A SAY IN THE WASH RESULT TOO.

Water quality plays a decisive role when it comes to the quality of the wash result. Professional water treatment can ensure effective prevention of limescale deposits, streaks and marks on dishes.



Water treatment for all eventualities

Winterhalter water treatment covers all quality levels – from water softening and partial demineralisation right through to full demineralisation and reverse osmosis. Whether you are in search of polish-free glasses or cutlery, or simply wanting to protect your warewasher; we have a solution for every need.

There are many benefits to utilising balanced water treatment:

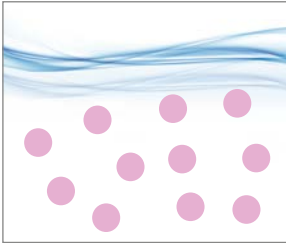
- ▶ long-term maintenance of warewasher functionality, extended service life, reduced costs associated with breakdown, investment and servicing.
- ▶ Detergents and rinse aids achieve their optimum effect and produce a better wash result with reduced consumption volumes.
- ▶ No more limescale deposits on which dirt and bacteria can accumulate.

AT Excellence – Brilliant wash results guaranteed

In order to meet the very highest standards, Winterhalter engineers have put all their expertise into the development of new reverse osmosis devices. The product range includes two external devices, the AT Excellence-S and the AT Excellence-M, as well as a fully-integrated solution within the under counter warewasher, the UC Excellence-i. This new generation of devices guarantees a consistent wash quality, eliminates the need for polishing and saves you time and money. This leaves you free to concentrate on what is most important to you: making your customers happy.

NEW

SOFTENING – THE BASIS OF WATER TREATMENT.



Softened water: The water is decalcified and the lime replaced by water-soluble salts.



Integrated softener

The integrated softener in a warewasher does not take up any extra space. A resin container for the ion exchange provides a continuous supply of water. A regeneration process automatically takes place, regardless of water consumption or hardness, automatically during the wash cycle.

MonoMatik 3 softener

The MonoMatik 3 functions on the basis of the ion exchange principle and is different as a result of its lower water and salt consumption. Its currentless control head enables precise water hardness adjustment on site. The external device remains unaffected by power failures and regeneration is triggered automatically by the water flow in the control head. The brief regeneration of ten minutes enables efficient operation with minimal waiting times.

DuoMatik 3 softener

With its two ion exchange cartridges which alternate during the softening process, the DuoMatik 3 enables continuous water treatment without a regeneration break. This external device controls softening and regeneration mechanically without the need for electricity. It can be used for mains water hardnesses of up to 40°TH.

Device	Dish load	Power at 10 °TH	Required waste water outlet	Electrical supply	Recommended/available for models
Integrated softener	low	1,460l/Salt fill*	none	via the warewasher	UC Series, PT Series
MonoMatik 3	low	20l/min	waste water connection	Not necessary	GS 300 Series, GS 402, GSR 36, UC Series, GS 500 Series, PT Series
DuoMatik 3	high	30l/min (continuous operation)	waste water connection	Not necessary	PT Series, GS 600 Series/UF Series, STR, MT Series

* Salt container fill level: 1.5 kg

TH = total hardness

DEMINERALISATION. FOR INTERMEDIATE AND HIGH WASH RESULTS.



TE 15/TE 20 partial demineralisation

Partial demineralisation cartridges TE 15/TE 20 promise good wash results with low operating costs. They provide treated water but do not generate any waste water. Space-saving cartridges ensure an especially efficient and resource saving water treatment. Ion exchange capacity monitoring takes place via a measurement and display unit and/or via the regeneration symbol on the operating panel of the machine.

VE 15/VE 20 full demineralisation

Full demineralisation cartridges VE 15 and VE 20 deliver the very best wash results. Space saving cartridges are especially efficient thanks to a 100 % yield with no waste water. Capacity monitoring takes place via a measurement and display unit and/or via the regeneration symbol on the operating panel of the machine.



Partially demineralised water:

The water is decalcified and a portion of the salts removed.



Fully demineralised water: The water is decalcified and all salts and minerals removed.



Device	Dish load	Power	Required waste water outlet	Electrical supply	Recommended for models
TE 15	low	14,000* ¹	none	Not necessary	GS 200 Series, GS 300 Series, GS 402, UC Series, GS 500 Series, PT Series
TE 20	high	18,000* ¹	none	Not necessary	
VE 15	low	4,000* ²	none	Not necessary	GS 200 Series, GS 300 Series, GS 310, GS 402, UC Series (particularly as cutlery washer), GS 500 Series, PT Series (particularly as cutlery washer)
VE 20	low	5,500* ²	none	Not necessary	

*¹ at 10 °CH (carbonate hardness)

*² at 10 °GS (total salt content)

NO MORE POLISHING. REVERSE OSMOSIS DEVICES FROM THE AT EXCELLENCE SERIES.

NEW

The AT Excellence Series delivers perfect wash results every time without the need for polishing. Improved productivity allows you to spend more time on your customers whilst simultaneously reducing costs. The two external devices AT Excellence-S and AT Excellence-M differ only in their capacities. The UC Excellence-i integrated in the UC-S and UC-M under counter machines offer additional synergy.



The perfect wash result. Constantly.

The AT Excellence Series reverse osmosis devices, remove almost 100 % of water impurities. This high degree of water purity makes it possible to achieve perfect wash results.

► AquaOpt – the water quality that you want

The AquaOpt function optimises water quality during extended wash break periods. This can be adapted to meet specific on-site requirements. This ensures consistent washing with optimised water and guarantees the desired wash result every time.

► Operational status on machine display

A direct network connection allows the operational status of the AT Excellence Series to be displayed on the warewasher display. Faults (e.g. pre-filter function or water quality) are indicated as fault messages and can be rectified immediately.



BRILLIANT SHINE WE BRING TO YOUR TABLE.

More efficiency and maximum service life

The guiding principle of the AT Excellence Series is increased performance and cost reduction.

► **Plug and play through integrated WSD**

The entire AT Excellence Series has the legally required water safety device (WSD) fitted as standard.* Just connect power and water and the device is ready to go. This doesn't involve additional installation work or extra costs.

► **Adaption to on-site conditions**

The AT Excellence Series can be adapted according to the water hardness on-site. This optimises the yield and extends the service life of the membrane.

► **Intelligent membrane wiring**

The wiring of the membranes contributes to minimising waste water and maximising the service life and efficiency of the AT Excellence.

Convenience and safety

Language-neutral operation, sophisticated safety systems and optimum accessibility are all examples of how the AT Excellence Series delivers reliability, ease of operation and service.

► **Model safety**

Leakage, pre-filter removal and pump protection sensors guarantee device function and minimise consequential damage.

► **Intuitive operation**

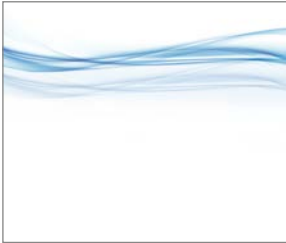
Colour-coded status displays, language-neutral symbols supported by language-specific text that facilitate operation and reduce instances of misuse.

► **Consistent ease of service**

At the heart of the AT Excellence Series is its ease of use. The ease of plug and play installation, the menu assisted start up and service-optimised design are all testament to this.

* National installation and operating regulations must be observed!

EXCELLENCE INSIDE – INTEGRATED REVERSE OSMOSIS.



Reverse osmosis water treatment:
Water is pressed through a membrane by means of mechanical pressure, thus removing up to 98 % of impurities.



UC Excellence-i/UC Excellence-iPlus

UC Excellence-i devices deliver the highest water quality standards and are guaranteed to save you space. The interaction of water treatment and warewasher optimises processes and workflows whilst boosting sustainable efficiency. Communication and operation takes place directly on the machine's touch display. In the UC Excellence-iPlus, which has an additional integrated softener. Glasses can be washed with osmosis water and dishes with softened water thanks to the VarioAqua function; the service life of the membrane is subsequently increased. The water safety device (WSD) required by law in Europe is already built into the device. *1 Therefore the warewasher can be connected quickly and easily via plug and play. Intelligent sensors monitor the reverse osmosis. In the event of a power failure, a bypass function ensures that the wash cycle continues.

Device	Dish load	Power [l/h] (at 15 °C inlet water temperature*2)	For water hardness [°GH]	Required waste water outlet	Preliminary softening	Advantages	Available for models
UC Excellence-i	low	42	max. 35	Waste water connection	Recommended externally, for operation without preliminary softening up to 35 °TH	<ul style="list-style-type: none"> - Highest yield (with external water softening) - Always the best water quality - Communication with warewasher - Integrated WSD - Bypass function 	UC-S, UC-M
UC Excellence-iPlus	low	42	max. 31	Waste water connection	Permitted for operation up to 31 °TH	<ul style="list-style-type: none"> - Highest yield - Always the best water quality - Wash item-adapted water quality - Interaction with warewasher - Integrated WSD - Bypass function 	UC-S, UC-M

*1 National installation and operating regulations must be observed!

*2 Only for cold water connections up to 35 °C

TH = total hardness

PERFECT WASH RESULTS. WITH UNVARYING QUALITY.



Reverse osmosis water treatment:
Water is pressed through a membrane by means of mechanical pressure, thus removing up to 98 % of impurities.



AT Excellence-S / AT Excellence-M

The external reverse osmosis devices AT Excellence-S and AT Excellence-M are winning customers over with their consistent delivery of perfect wash results. Thanks to the AquaOpt function, water is treated until it reaches the desired quality following each wash break.

The operational status of AT Excellence devices are shown on the warewasher display. Faults are detected immediately and can be rectified quickly. The water safety device (WSD) required by law in Europe is already built into the device.*¹ The AT Excellence can be connected to the warewasher quickly and easily via plug and play. Numerous safety devices and intelligent sensors ensure the best possible wash results and optimum protection of the device.



Device	Dish load	Power [l/h] (at 15 °C inlet water temperature* ²)	For water hardness [°GH]	Required waste water outlet	Preliminary softening	Advantages	Recommended for models
AT Excellence-S	low	90	max. 35	Waste water connection	Recommended externally, for operation without preliminary softening up to 35 °TH	<ul style="list-style-type: none"> - Highest yield (with external water softening) - Always the best water quality - Communication with warewasher - Integrated WSD - Sensor monitoring 	GS 200 Series* ³ , GS 300 Series* ³ , GS 402 Series* ³ , UC Series
AT Excellence-M	high	180	max. 35	Waste water connection	Recommended externally, for operation without preliminary softening up to 35 °TH	<ul style="list-style-type: none"> - Highest yield (with softening) - Always the best water quality - Communication with warewasher - Integrated WSD - Sensor monitoring 	GS 500 Series, PT Series

*¹ National installation and operating regulations must be observed!

*² Only for cold water connections up to 35 °C

*³ From production date 01.04.2004. Prior to this, only with pressure expansion vessel kit (Item no. 5101127)

TH = total hardness

REVERSE OSMOSIS – THE BEST RESULTS FOR LARGE WASH LOADS.



Reverse osmosis water treatment:
Water is pressed through a membrane by means of mechanical pressure, thus removing up to 98 % of impurities.



RoMatik 210 / 420

The RoMatik 210 and 420 differ only in their capacities. Membrane filtration enables them to achieve demineralisation of almost 100 % and function with extreme efficiency even where large quantities of water are required, e.g. if connected to several warewashers. The external RoMatik devices are a customer favourite because of their compact design, ease use and safe operation. They deliver wash results which require no polishing, at low operating costs.

Device	Dish load	Power [l/h] (at 15 °C inlet water temperature* ¹)	For water hardness [°GH]	Required waste water outlet	Preliminary softening	Advantages	Recommended for models
RoMatik 210	high	210	max. 10	Floor drain and waste water connection	Recommended, approved for operation without preliminary softening up to 10 °TH	- High yield (with external softening) - Integrated 66l storage tank	GS 200 Series* ² , GS 300 Series* ² , GS 402* ² , UC Series (particularly as cutlery washer), GS 500 Series, STR, MT Series, PT Series (particularly as cutlery washer)
RoMatik 420	high	420	max. 10	Floor drain and waste water connection	Recommended, approved for operation without preliminary softening up to 10 °TH	- High yield (with softening) - Integrated 66l storage tank	STR, MT Series, PT Series (particularly as cutlery washer)

*¹ Only for cold water connections up to 25 °C

*² From production date 01.04.2004. Prior to this, only with pressure expansion vessel kit (Item no. 5101127) in combination with RoMatik 150

TH = total hardness

Technical data	MonoMatik 3	DuoMatik 3	TE 15/TE 20	VE 15/VE 20
Capacity	20 l/min, continuous operation soft water extraction possible up until regeneration: Can be used up to max. 29 °dH total hardness	30 l/min, continuous soft water extraction possible: Can be used up to max. 40 °dH total hardness* ¹	Capacity at 10 °dH Carbonate hardness: TE 15: 14,000 l* ² TE 20: 18,000 l* ²	Capacity at 10 °total salt content: VE 15: 4,000 l* ² VE 20: 5,500 l* ²
Material	Fiberglass cartridge, plastic salt container and cover	Fiberglass cartridge, plastic salt container and cover	Stainless steel cartridge	Stainless steel cartridge
Water flow pressure [bar]	min. 1.5, max. 8	min. 2.5, max. 6	min. 2, max. 6	min. 2, max. 6
Inlet water temperature [°C]	max. 50	max. 60	max. 60	max. 60
Monitoring	–	–	Control display/ Pulse counter	Control display/ Pulse counter
Operating mode	Regenerating program automatically regulated by the hardness range dial and water flow	Regenerating program automatically regulated by the hardness range dial and water flow	Measurement and display unit via mains 230 V (optional)	Measurement and display unit via mains 230 V (optional)
Length of the connection cable [m]	–	–	5.0	5.0
Dimensions [mm]	Width 260 Installation depth 505 Height 680	Width 360 Installation depth 500 Height 790	TE 15: Height 480/Ø 250 TE 20: Height 595/Ø 250	VE 15: Height 480/Ø 250 VE 20: Height 595/Ø 250
Weight (incl. filter mass) [kg]	10.0	21.0	TE 15: 15.0 TE 20: 21.0	VE 15: 15.0 VE 20: 21.0

*¹ At 41 – 45 °dH total hardness: on request

*² Theoretical values, can be up to 25 % less with equivalent mineral content in inlet water

Technical data	AT Excellence-i	AT Excellence-iPlus	AT Excellence-S	AT Excellence-M	RoMatik 210	RoMatik 420
Inlet water temperature [°C]	max. +35	max. +35	max. +35	max. +35	max. +25	max. +25
Permeate capacity at 15 °C [l/h] Inlet water temperature mains voltage-dependent	min. 42	min. 42	min. 90	min. 180	210	420
Yield [%]	max. 55 +/- 5 * ¹ * ²	max. 55 +/- 5 * ²	max. 55 +/- 5 * ¹ * ²	max. 55 +/- 5 * ¹ * ²	max. 75 * ¹ * ²	max. 75 * ¹ * ²
Salt retention rate [%]	≥ 93	≥ 93	≥ 93	≥ 93	≤ 98	≤ 98
Product water quality [µS/cm]	< 80	< 80	< 80	< 80	< 20	< 20
Flow pressure [bar]	min. 1	min. 1	min. 1.2	min. 1.5	min. 1	min. 1
Static pressure [bar]	max. 6	max. 6	max. 6	max. 6	max. 6	max. 6
Max. conductivity of the inlet water [µS/cm]	1,200	1,200	1,200	1,200	2,250	2,250
Inlet water total hardness [°dH]	max. 35	max. 31	max. 35	max. 35	max. 10	max. 10
Storage tank/ Pressure expansion vessel [l]	–	–	optional	optional	66	66
Total connected load [W]	UC value + 200	UC value + 200	50 Hz: 230 - 310 60 Hz: 250 - 320	50 Hz: 450 - 670 60 Hz: 500 - 650	1,400	1,900
Softener	Upstream recommended	Integrated	Upstream recommended	Upstream recommended	Upstream recommended	Upstream recommended
Electrical supply [V, Hz, A]	See UC value	See UC value	200 V–240 V, N~, 50 Hz/1.4–2.0 A 200 V–240 V, N~, 60 Hz/1.4 A–1.5 A	200 V–240 V, N~, 50 Hz/2.9 A–4.0 A 200 V–240 V, N~, 60 Hz/2.7 A–3.0 A	230 V, N~, 50 Hz, 10 A	230 V, N~, 50 Hz, 10 A
Protection class	IPX3 with stainless steel rear cover (option): IPX5	IPX3 with stainless steel rear cover (option): IPX5	IPX5	IPX5	IPX1	IPX1
Silicate/chlorine threshold value [mg/l]	max. 30/ max. 0.2	max. 30/ max. 0.2	max. 30/ max. 0.2	max. 30/ max. 0.2	max. 10/ max. 0.05	max. 10/ max. 0.05
Weight [kg]	UC value + 15	UC value + 15	22	34	63	81

*¹ If connecting to softened water 0 °dH total hardness, cold *² The values given have been determined on the basis of measurements. This data does not relate to one individual device and does not form part of any offer, but serves as a basis for comparison between devices

On site water requirements for the operation of Winterhalter devices refers to the quality of **German drinking water ordinance**, which stipulate, inter alia, the following **threshold values**: Copper 2.0 mg/l, manganese 0.05 mg/l, sulphate 250 mg/l

Technical data		Integrated softener
Inlet water temperature	[°C]	max. 60
Water flow pressure	[bar]	1.0–6.0 (Energy Version: 1.5–6.0)
Maximum inlet water hardness		30 °dH total hardness
Regeneration agent reservoir fill level	[kg]	1.5

Feature	AT Excellence-i	AT Excellence-iPlus	AT Excellence-S / AT Excellence-M
Wash result			
Reverse osmosis	●	●	●
AquaOpt	●	●	●
Communication with the warewasher	●	●	●
Interaction with the warewasher	–	●	–
Pre-filter monitoring	●	●	●
Membrane washing	●	●	●
Water quality monitoring	–	–	●
Efficiency			
Integrated WSD (Plug and play)	●	●	●
Upstream softening	○	●	○
VarioAqua / wash item-adapted water quality	–	●	–
Hardness range adaption	●	–	●
Intelligent membrane wiring	●	●	●
Convenience / Safety			
Bypass	● (automatically)	● (automatically)	● (manually)
Comprehensive safety concept	●	●	●
Language-neutral operation	●	●	●
Optimum serviceability	●	●	●
Cleaning and conservation concept	●	●	●
Incident log	●	●	●
Integrated in the warewasher	●	●	–

- = as standard
- = optional
- = not included

Pre-filters. We recommend the use of pre-filters to protect the reverse osmosis membranes. If there is a very high chlorine content in the inlet water it is necessary to use an active charcoal filter in order to prevent disintegration of the membranes.

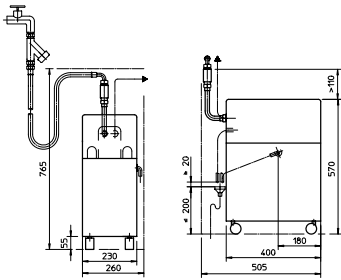
In order to protect against solid substances such as clay, sand etc., which are not retained by the dirt trap (retention capacity > 150 µM), it is necessary to use a sediment filter. This prevents the membranes from becoming blocked.

Caution

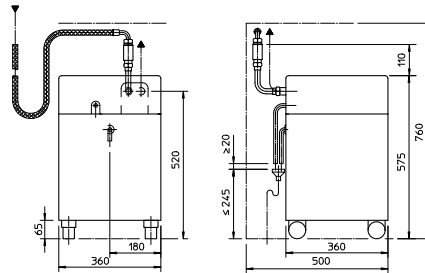
Demineralised water or water treated by reverse osmosis must not come into contact with copper pipes, galvanised pipes or brass parts (e. g. screw fittings).

TECHNICAL DRAWINGS AND DIMENSIONS

MonoMatik 3



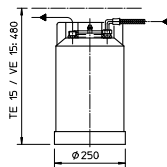
DuoMatik 3



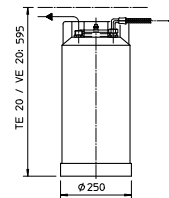
MonoMatik / DuoMatik WSD set

DVGW or DIN-compliant operation of the system requires the use of a MonoMatik 3/DuoMatik WSD set. The set contains a high-pressure safety combination in line with DIN 1717, complete with backflow preventer and breather (Model C), while also conforming to DIN 1988-4. National installation and operation guidelines must be observed.

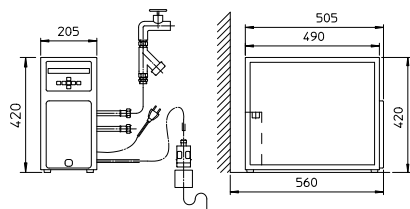
TE 15/VE 15



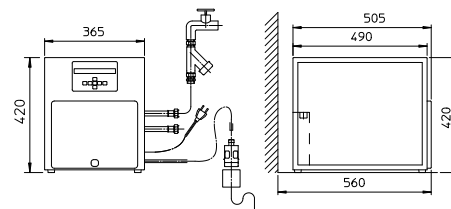
TE 20 / VE 20



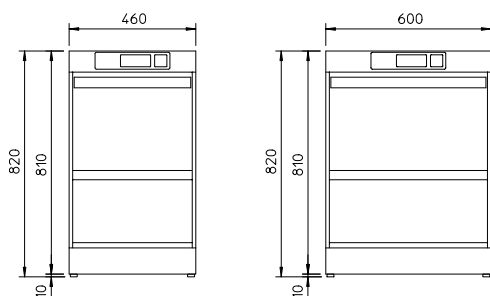
AT Excellence-S



AT Excellence-M



AT Excellence-i



RoMatik 210 / RoMatik 420

