



The Winterhalter MT Series –
Economical, Hygienic and on a Large Scale



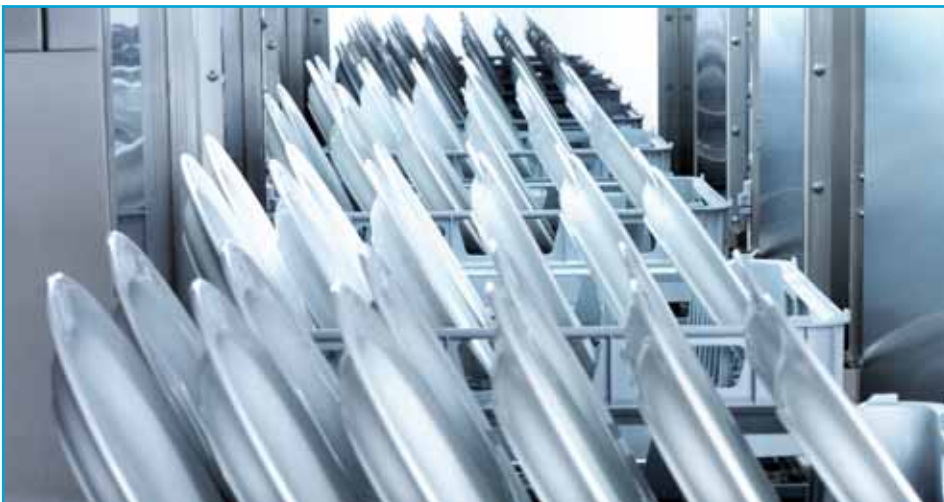
Modularity as a principle – tailored to your specific requirements

Winterhalter's new generation of multi-tank conveyor dishwashing systems set new standards in the professional kitchen. The introduction of the MT Series of rack and flight-type machines means Winterhalter now offers dishwashing solutions on the largest scale.

Economy and efficiency are vital with high-volume warewashers. From the start we concentrated our development expertise on these two areas, in order to build machines that reduce operating costs and times to a minimum. Another exciting feature is the MT Series Hygiene-Plus which provides you with the highest possible level of safety. Winterhalter's approach is holistic. Achieving perfect washing results is not just about the machine, but also detergents, water treatment and accessories. And our professional planning, consultancy and engineering services work with you to fulfil your specific requirements. That's how we deliver a total dishwashing solution.

Winterhalter – the specialist for dishwashing solutions

- + family enterprise now in the third generation
- + worldwide presence in more than seventy countries
- + at home in the biggest and best kitchens
- + professional dishwashing technology from under-counter dishwashers to flight conveyor machines
- + perfect solutions, featuring machine technology, detergent products, water treatment and accessories from a one-stop supplier





Plates, cups, pans, trays, glasses and cutlery – the name Winterhalter guarantees scrupulous hygiene. Now that guarantee is available on the largest scale: the new generation of Winterhalter rack and flight-type conveyor dishwashing machines.



Modularity as a principle – tailored to your specific requirements

Of course you have your very own ideas about how your future dishwashing solution should look. Winterhalter's innovative machine concept will show you how to combine a maximum of individuality with a maximum of efficiency.

Based on modules and equipment options designed for practical working, the dishwashing processes of the new **multi-tank rack conveyor dishwashers (MT)** can be tailored to your individual business.

The intelligent building-block system offers us the greatest possible degree of creative freedom to ensure all your requirements are fulfilled and at the same time providing economical dishwashing. This principle carries on into day-to-day operations, for instance, there are special programmes for washing glasses and containers, as well as additional ways to adjust the machine to different kinds of dishes and how heavily soiled they may be.

Especially innovative is the fact that all features and options are available on both the **rack conveyor (MTR)** and **flight-type (MTF)** dishwashing machines since the **only difference between them are their conveyor systems.**



The modular concept and the slim dimensions of the MT Series are proven to be unquestionably beneficial. They make it easier to get the machine in place and leave more room where space is at a premium.



	MTF flight-type dishwashing	MTR rack conveyor dishwashing
primary area of application	student refectories, hospitals, larger canteens, banqueting and nursing facilities	medium-size hotels, restaurants, motorway service areas, staff restaurants and nursing facilities
Volume of dishes	continuous	irregular
Dishwashing times	fixed	variable
Dishes	uniform	non-uniform
How conveyor is loaded	plates, trays, bell jars, thermos systems, containers, etc. stand free on conveyor belt; glasses, cutlery, small items in racks	all items sorted in appropriate racks
Operating staff	at least two persons	at least one person
Organisation	straight loading zones and outlet zones	flexible inlet and outlet lengths (also with bends)
Scrapping	as a rule, only scrapping off food residues (no manual pre-wash)	as a rule, additional manual scrapping using pre-wash basin outside machine
90° corner entry	–	optional
90° outlet curve	–	optional
180° outlet curve	–	optional
dishes sorted	after unloading, by sorting into stacks or in dispenser trolleys, etc.	before loading, by sorting into racks



All in your interest – the machine concept with outstanding savings potential



The innovative irt economy models from Winterhalter reduce your consumption of important resources. They take it easy on the environment and your wallet.



The MT Series has innovative solutions and technology developed to give you the best possible efficiency. All savings potentials – from effective use of employees up to economical use of detergent, rinse aid, water and energy – are exploited to the full.

CostManagement – minimises operating costs

The innovative machine concept of the MT Series reduces resource consumption and connected load, thus leading to a noticeable reduction in operating costs.

- + The **Mediamat wash water filtration system** makes use of centrifugal forces and **constantly removes dirt** particles from the wash water in all pre-wash and main wash zones – this substantially reduces the detergent requirements and the wash water stays so clean that it can be used all day long – this means lasting savings on water and energy.
- + A **gradual rise in temperature** in the triple rinse zone saves approx. 3 kWh per hour of energy, as well as wear and tear on the dishes.
- + The **osmosis water-saving system** reduces the consumption of valuable osmosis water by 50 %.
- + Various **energy recovery systems** take advantage of the machine's heat to preheat the cold water feed.
 - a **heat exchanger** in the pre-wash zone saves up to 3 kWh per hour.
 - an **exhaust air heat recovery Energy** can lower the energy requirement by up to 12 kWh per hour.
 - installing a **heat pump** brings more savings, amounting to 14 kWh per hour.
- + The **fresh air drying zone** of the MT Series only requires a heating output of 4 kW to dry dishes.



Sophisticated and unique – enhanced hygienic for your safety

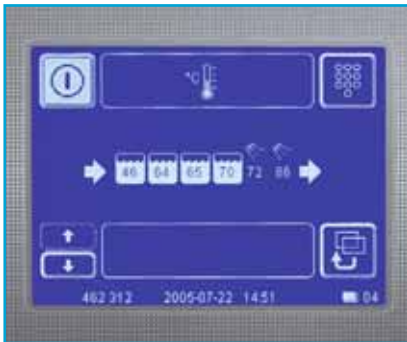
Perfect dishwashing needs a well-thought-out hygiene system. This is especially true for inside the dishwasher, where the actual hygienic condition of the machine is out of sight. With the enhanced hygiene of its MT Series, Winterhalter is once again setting the hygiene standard for flight-type and rack conveyor dishwashers.



OptiWash – always perfect hygiene

The OptiWash equipment package makes it unnecessary to keep constantly inspecting your dishwashing results:

- + **The pressure pump ensures constant, perfect rinsing** – regardless of the incoming water pressure
- + **The pressure and angle of the nozzles** are specifically set for what you are washing and how dirty it is
- + **Lateral wash arms for dishes requiring special treatment**
- + **Constant wash water filtration** by means of the “Mediamat” system tested and proven all over the world
- + **Special programmes** for containers and glasses
- + **Shortest possible service response times** thanks to automatic remote transmission of hygiene-related data by SMS or e-mail directly to the head of the kitchen, technician or other responsible person in charge



SelfControl – the best possible control thanks to the Hygiene Log

In professional kitchens, a reliable safety system for monitoring and tracing machine operation according to hygiene criteria is essential. That is why the MT machines come with a Hygiene Log as a standard feature. This guarantees you:

- + That **all discrepancies trigger an alarm**
- + That all data relevant to HACCP are **documented and archived**

Some features shown in brochure are extras.

conveyor dishwashing machine?



→ Enhanced Convenience

Improved washing environment and simple controls – at your finger tips

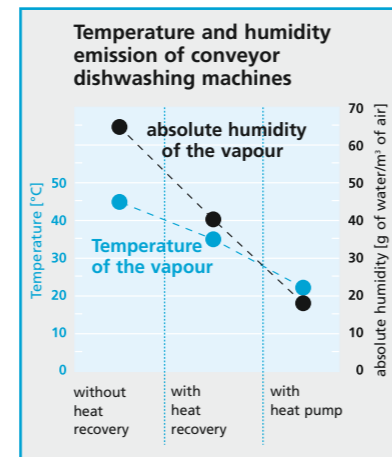
Dishwashing is hard work. That is why Winterhalter thinks it important to make working conditions as pleasant as possible and to keep the machine's controls as simple as possible.



FeelGood – all the best for the air in your rooms

Humidity, heat and noise are among the primary causes of disquiet in dishwashing operations. The following features and options will help you minimise these conditions:

- + Installing a heat pump greatly improves the air in the room, since the hot exhaust air from the machine is cooled and dehumidified.
- + The double-walled insulated panelling reduces noise and heat emissions.
- + The contents-controlled zone activation prevents operating during idle times and thus unnecessary heat and noise. Pumps and blowers are only activated when dishes are actually in the zones.



Some features shown in brochure are extras.



AutoClean – the unique self-cleaning system

This automatic self-cleaning system guarantees ongoing cleaning for the interior of the machine, which is essential for hygienic dishwashing:

- + The interior is rinsed out with fresh, hot water when the machine stops running
- + Rotating nozzles clean the top cover
- + The patented cleaning system (DE 10 2005 050 305 B3) protects the heat exchanger against deposits



HygieneDesign – the anatomy of the machine guarantees hygiene

To make sure that dirt and bacteria find no nooks or crannies, smooth, seamless surfaces in all area of the machine's interior are of the utmost importance:

- + Smooth surfaces on the inside of the doors, deep-drawn hygienic tanks and an exhaust air system without seams, corners or edges
- + 180° pivoting hygiene doors offer much better access to the machine's interior and the inside of the doors than conventional machines with sliding doors
- + The back panel in the machine's interior has no pipes or risers
- + A grease filter protects the exhaust air channel against soiling



Winterhalter flight or rack



Planned Stage by Stage – the Way to Your Dream Machine



The Winterhalter MT Series combines maximum economy with the highest hygiene standards. Here's a look beneath the surface – into the machine.



Winterhalter MTR with rack conveyor

1 Inlet table with inlet tunnel

- Basic functions**
- + Inlet table with sink, back guard plate, dish racks
 - + Rack shelf
 - + Prespray unit for manual prespraying
 - + Single hole mixer tap assembly
- other options can be supplied

2 Pre-wash zone

- Basic features**
- + wash water temperature between 40°C and 50°C (in compliance with DIN 10510) prevents starch residues from sticking
 - + four-way wash water filtration system with two total coverage tank cover filters, inline pump filter and Mediamat

3 Main wash zone

- Basic features**
- + wash water temperature between 55°C and 65°C (in compliance with DIN 10510)
 - + high-performance washing system
 - + three-way wash water filtration with total coverage tank cover filter, inline pump filter and Mediamat

4 Rinse zone

- Triple rinse zone with temperature levels**
- level 1: pump rinse at 65°C for removing dirt particles and detergent residues
 - level 2: fresh water rinse I at 70°C
 - level 3: fresh water rinse II at 85°C
- irt-rinse (optional)*

5 Fresh air drying zone

- Basic features**
- + air extracted from the room to reduce humidity and aid efficiency

6 Outlet table

- + Rollers for easy rack conveyor movement
 - + End switch in case racks are not removed
- other options can be supplied



SmartTouch – intelligent and easy machine controls

Winterhalter is the first German dishwasher manufacturer to develop a multifunctional touch screen. This is entirely self-explanatory and very convenient to use:

- + **The most important operating functions:** temperature, conveyor speed, error management, self-cleaning programme, container washing programme, glass washing programme visible at all times.
- + **Symbols and animation** help you go step by step through the menu – **operating errors simply cannot happen.** Employees can be instructed easily and in very little time.
- + **Three different levels of access ensure security:**
 - 1st level: dishwashing staff can operate the machine
 - 2nd level: head of kitchen can access operating data safeguarded by a PIN
 - 3rd level: service technician can access the machine parameters safeguarded by a PIN
- + Language-independent controls thanks to **self-explanatory pictograms and animations.**





Correct planning, sorting tables, conveyors and system design. Simple organisation and the correct tools ensure Winterhalter is able to improve the efficiency of all commercial ware wash operations



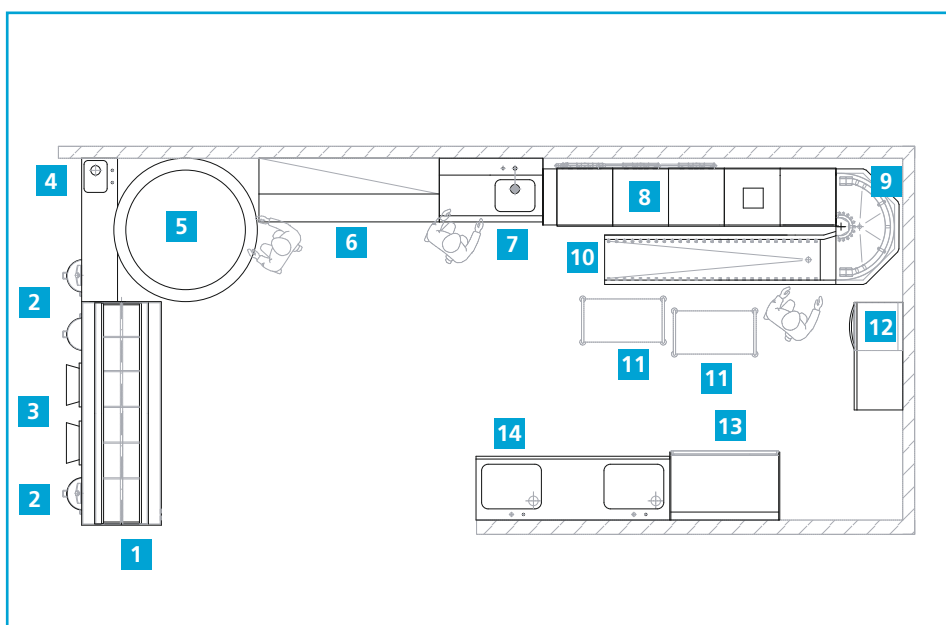
Some features shown in brochure are extras.

From planning to accessories – Winterhalter gives you all-round dishwashing solutions

Perfect dishwashing operations begin with the proper planning. A dishwashing system will only be a success if all aspects of the operation are considered. All processes and work flows must be understood to achieve an outstanding result. Winterhalter can vouch for this dishwashing quality – thanks to its many years' experience as a specialist solutions provider. Only a specialist can:

- + Go through your dishwashing plans to ensure that every detail is thought through
- + Match our accessories to your specific dishwashing situation and
- + Get together with you to define the best possible work routines.

Of course, we are the right people to ask whenever you have any questions about dishwashing, and we are also happy to pass on our expertise in our training courses. This is because Winterhalter is focused on producing hygienically clean dishwashing.



- 1 Sorting table
- 2 Waste bins movable
- 3 Mobile pre soak sink
- 4 Tray shelf with sink
- 5 Carousel for dishes
- 6 Pre-sorting table
- 7 Inlet table with sink
- 8 MTR rack conveyor dishwashing machine
- 9 180° outlet curve
- 10 Outlet roller table
- 11 Conveyor trolley
- 12 Cutlery rinsing machine
- 13 Utensil dishwashing machine
- 14 Washing table



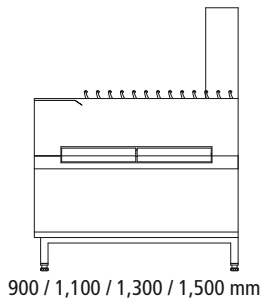
Zones and Accessories



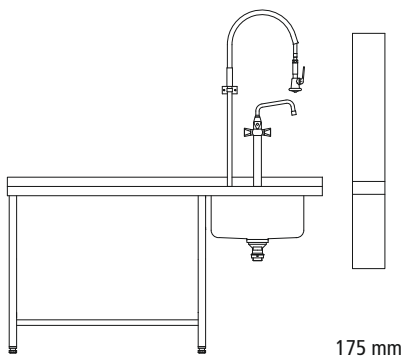
Configured for a perfect fit – the building blocks for your ideal multi-tank dishwasher

MTF – flight-type dishwashing machine

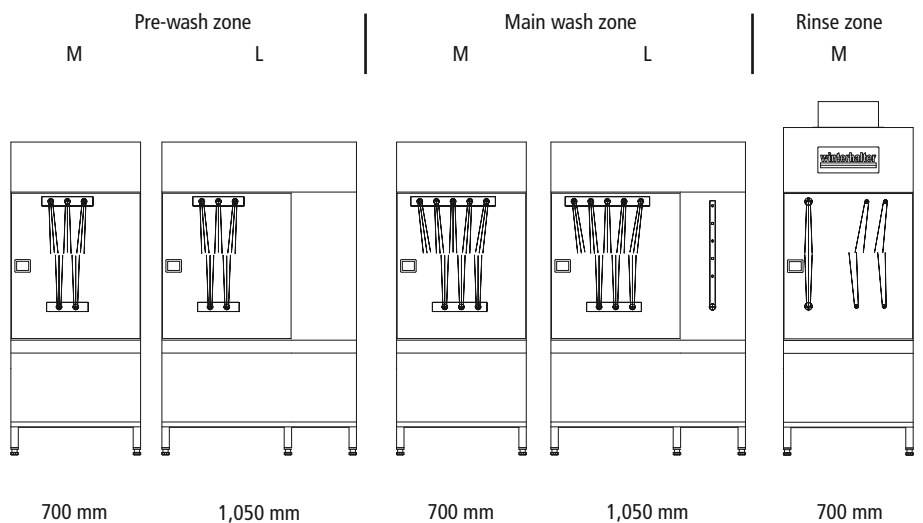
Loading zone and inlet tunnel



Inlet table and inlet tunnel



Machine zones for MTF and MTR



MTR – rack conveyor dishwashing machine



10

12

11

13

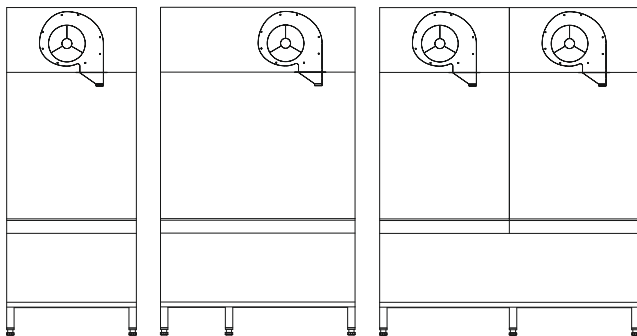
14

Drying- / blowing-out zone M

L

Drying zone

XL

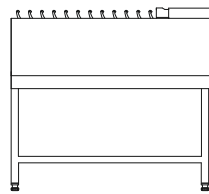


700 mm

1,050 mm

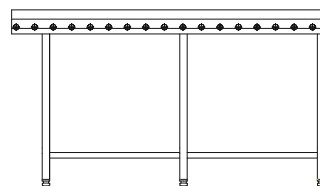
1,400 mm

Unloading zone



900 / 1,200 / 1,500 / 1,800 mm

Outlet table



- 1 Dustbin with lid and wheels
- 2 Carrousel for dishes, with two levels
- 3 Inlet table with sink, splash back collection grates
- 4 5 tier storage rack
- 5 Pre-spray unit
- 6 Single-hole mixer tap
- 7 Reverse osmosis unit
- 8 Water softener
- 9 Detergent and rinse aid
- 10 Rack conveyor dishwashing machine MTR
- 11 180° outlet curve
- 12 Swivel-mounted outlet roller table, with end stop switch
- 13 3 three tier storage racks
- 14 Rack dispenser trolley



Standard MT models

		Flight-type dishwashing machine MTF									
		MTF 3-2500 MMM	MTF 3-3000 MLM	MTF 3-3500 LLM	4-3900 MMLM	4-3900 MLMM	4-4400 MLLM	4-4400 LLMM	4-4400 LMLM	4-5000 LLLM	
Number of dishwashing tanks in conformance with DIN 10510		3	3	3	4	4	4	4	4	4	
Number of dishwashing programmes		5	5	5	6	6	6	6	6	6	
Machine performance, theoretical ^{*1)} Intensive programme [plates/hr., racks/hr.]		1,400	1,800	2,000	2,200	2,200	2,500	2,500	2,500	2,800	
Standard programme ^{*2)} [plates/hr., racks/hr.]		1,800	2,200	2,600	2,800	2,800	3,200	3,200	3,200	3,500	
Fast programme [plates/hr., racks/hr.]		2,500	3,000	3,500	3,900	3,900	4,400	4,400	4,400	5,000	
Dimensions, overall											
Machine length (without inlet tunnel, drying, loading and unloading zones) [mm]		2,100	2,450	2,800	3,150	3,150	3,500	3,500	3,500	3,850	
Length of inlet tunnel MTR [mm]		–	–	–	–	–	–	–	–	–	
Machine depth [mm]		800	800	800	800	800	800	800	800	800	
Machine height (incl. Service Connection) [mm]		1,910	1,910	1,910	1,910	1,910	1,910	1,910	1,910	1,910	
with heat recovery <i>Energy</i> [mm]		2,010	2,010	2,010	2,010	2,010	2,010	2,010	2,010	2,010	
with heat pump [mm]		2,180	2,180	2,180	2,180	2,180	2,180	2,180	2,180	2,180	
Pass-through width [mm]		610	610	610	610	610	610	610	610	610	
Clear entry height [mm]		440	440	440	440	440	440	440	440	440	
Pre-wash zone											
Medium		●	●	–	●	●	●	–	–	–	
Large		–	–	●	–	–	–	●	●	●	
with detergent saving device		○	○	○	○	○	○	○	○	○	
with detergent and energy saving device ^{*3)}		○	○	○	○	○	○	○	○	○	
Total length [mm]		700	700	1,050	700	700	700	1,050	1,050	1,050	
Main wash zone(s)											
Medium [units]		1	–	–	1	1	–	1	1	–	
Large [units]		–	1	1	1	1	2	1	1	2	
Total number [units]		1	1	1	2	2	2	2	2	2	
Total length [mm]		700	1,050	1,050	1,750	1,750	2,100	1,750	1,750	2,100	
Triple rinse zone											
Integrated pump rinse		●	●	●	●	●	●	●	●	●	
Number of rinse arms [units]		3	3	3	3	3	3	3	3	3	
Total length [mm]		700	700	700	700	700	700	700	700	700	
Drying zone											
Medium		○	○	○	○	○	○	○	○	○	
Large		○	○	○	○	○	○	○	○	○	
eXtra Large		○	○	○	○	○	○	○	○	○	
Heat output, optional (depends on length of module) [kW]		4 / 8	4 / 8	4 / 8	4 / 8	4 / 8	4 / 8	4 / 8	4 / 8	4 / 8	
Length of module, optional [mm]		700 / 1,050 / 1,400	700 / 1,050 / 1,400	700 / 1,050 / 1,400	700 / 1,050 / 1,400	700 / 1,050 / 1,400	700 / 1,050 / 1,400	700 / 1,050 / 1,400	700 / 1,050 / 1,400	700 / 1,050 / 1,400	
Blowing-out zone^{*5)}											
Medium		○	○	○	○	○	○	○	○	○	
Heating capacity [kW]		4	4	4	4	4	4	4	4	4	
Module length [mm]		700	700	700	700	700	700	700	700	700	
Water consumption											
Tank capacity [l]		240	240	240	325	325	325	325	325	325	
Rinse consumption ^{*6)} [l/h]		290	290	310	320	320	320	320	320	340	
<i>irt</i> -rinse (optional) ^{*6) *8)}		200	200	220	220	220	220	220	220	240	
Enhanced hygiene consisting of:											
– GSM module for remote data transmission		○	○	○	○	○	○	○	○	○	
– Glass washing programme		○	○	○	○	○	○	○	○	○	
– Container washing programme		●	●	●	●	●	●	●	●	●	
– Hygienic exhaust air system with grease filter and fan		●	●	●	●	●	●	●	●	●	
– Automatic self-cleaning system		●	●	●	●	●	●	●	●	●	
– Mediamat wash water filtration in all pre-wash and main wash zones		●	●	●	●	●	●	●	●	●	
– Interior roof cleaning system		●	●	●	●	●	●	●	●	●	
– Hygiene Log with data memory		●	●	●	●	●	●	●	●	●	
– Lateral wash arms		–	○	○	○	○	○	○	○	○	
– Cleaning system for heat exchanger		○	○	○	○	○	○	○	○	○	
– Data interface to customer's PC		○	○	○	○	○	○	○	○	○	
– 180° pivoting hygienic doors		●	●	●	●	●	●	●	●	●	
– Deep-drawn hygienic tanks		●	●	●	●	●	●	●	●	●	
– Tanks in pre-wash zone can be emptied individually		●	●	●	●	●	●	●	●	●	
Enhance efficiency consisting of:											
– Exhaust air heat recovery <i>Energy</i>		○	○	○	○	○	○	○	○	○	
– Heat pump		○	○	○	○	○	○	○	○	○	
– Detergent saving device		○	○	○	○	○	○	○	○	○	
– Triple rinse with temperature levels		●	●	●	●	●	●	●	●	●	
– Double-skinned insulated panelling (Stainless steel rear cover)		○	○	○	○	○	○	○	○	○	
– Contents-controlled zone activation		●	●	●	●	●	●	●	●	●	
– Time-controlled start-up		●	●	●	●	●	●	●	●	●	
– Osmosis water saving system		○	○	○	○	○	○	○	○	○	
– Pressure pump for fresh water rinse		●	●	●	●	●	●	●	●	●	
– <i>irt</i> -rinse (optional) ^{*6) *8)}		○	○	○	○	○	○	○	○	○	
Other equipment / features:											
– Electronic control with multi-functional Touch Screen		●	●	●	●	●	●	●	●	●	
– Maintenance interval display		●	●	●	●	●	●	●	●	●	
– Belt reversal		●	●	●	●	●	●	●	●	●	
– Master switch		○	○	○	○	○	○	○	○	○	
– Water safety device, Type 'AB' in conformance with EN1717		●	●	●	●	●	●	●	●	●	
– Made in Germany		●	●	●	●	●	●	●	●	●	

*1) Plate performance MTF in relation to standard conveyor belt

*2) In conformance with DIN 10510 for professional dishwashing in conveyor machines

*3) Not possible in machines with heat pump or feedwater temperature > 40 °C

