



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.

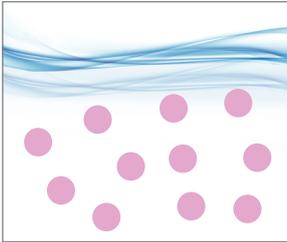
There are many benefits to utilising balanced water treatment:

- ▶ 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.

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

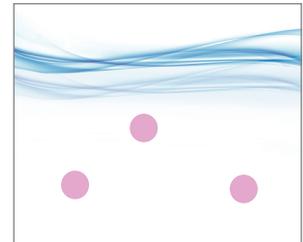
With its two ion exchange cartridges which alternate during the softening process, the DuoMatik 3 enables continuous water treatment without a regeneration break. This external device controls softening and regeneration mechanically without the need for electricity. It can be used for mains water hardnesses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



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.



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.

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°CCH (carbonate hardness)

*² at 10°GS (total salt content)

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

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.

WE BRING BRILLIANT SHINE 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

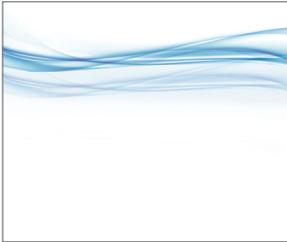
Colour-coded status displays, language-neutral symbols supported by language-specific text that facilitate operation and reduce instances of misuse.

▶ 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	Integrated, 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!

TH = total hardness

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

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, GS 630

*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 of 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*)	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	STR, MT Series
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	

* Only for cold water connections up to 25°C
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 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. 1.4	min. 1.4	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 + 13.5	UC value + 13.5	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		31 °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.

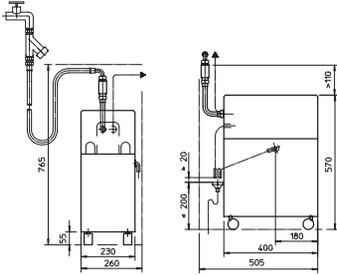
In order to protect against solid substances such as clay, sand etc., which are not retained by the dirt trap (retention capacity > 150 µM), it is necessary to use a sediment filter. This prevents the membranes from becoming blocked.

Caution

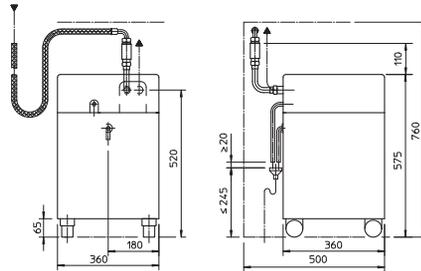
Demineralised water or water treated by reverse osmosis must not come into contact with copper pipes, galvanised pipes or brass parts (e. g. screw fittings).

TECHNICAL DRAWINGS AND DIMENSIONS

MonoMatik 3



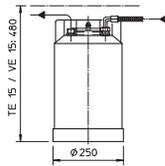
DuoMatik 3



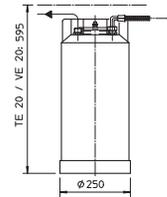
MonoMatik/DuoMatik WSD set

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.

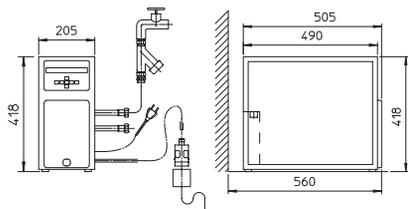
TE 15/VE 15



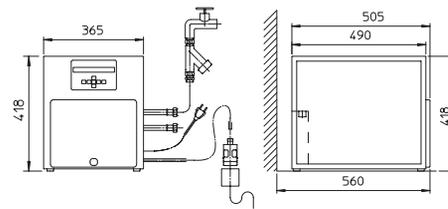
TE 20/VE 20



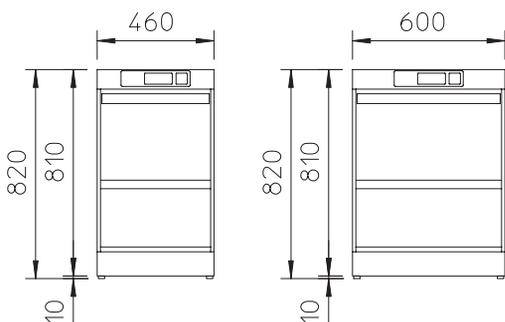
AT Excellence-S



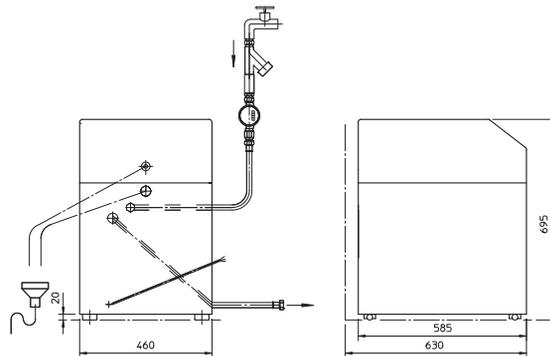
AT Excellence-M



UC Excellence-i / UC Excellence-iPlus



RoMatik 210/RoMatik 420



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