

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

Technical data	MonoMatik 3	DuoMatik 3	TE 15/TE 20	VE 15/VE 20
Capacity	20l/min, continuous operation soft water extraction possible up until regeneration: Can be used up to max. 29 °dH total hardness	30l/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: 14,000l*2 TE 20: 18,000l*2	Capacity at 10 °total salt content: VE 15: 4,000l*2 VE 20: 5,500l*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	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.

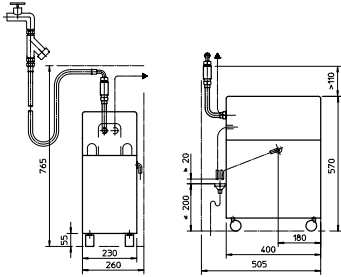
In order to protect against solid substances such as clay, sand etc., which are not retained by the dirt trap (retention capacity > 150 µM), it is necessary to use a sediment filter. This prevents the membranes from becoming blocked.

Caution

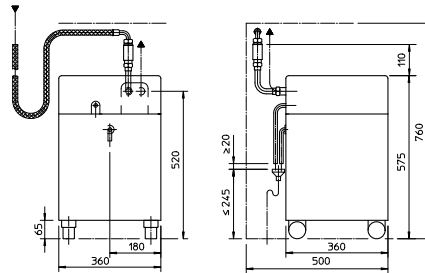
Demineralised water or water treated by reverse osmosis must not come into contact with copper pipes, galvanised pipes or brass parts (e. g. screw fittings).

TECHNICAL DRAWINGS AND DIMENSIONS

MonoMatik 3



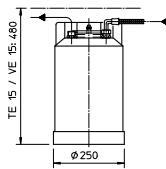
DuoMatik 3



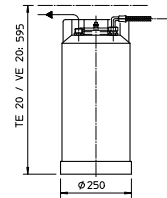
MonoMatik/DuoMatik WSD set

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.

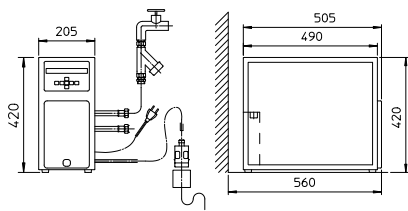
TE 15/VE 15



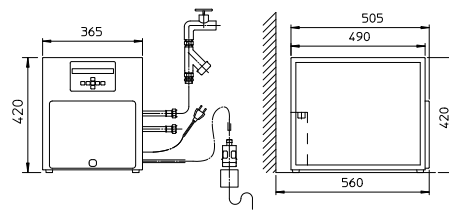
TE 20/VE 20



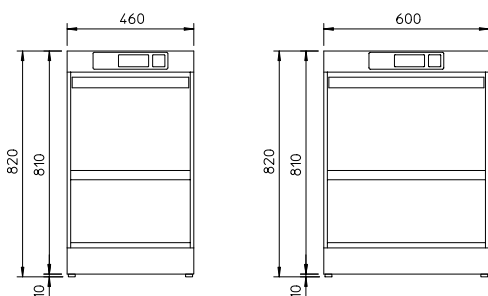
AT Excellence-S



AT Excellence-M



AT Excellence-i



RoMatik 210/RoMatik 420

