

A large, semi-transparent blue rectangular box containing the text 'Commercial Water Treatment Solutions' in white, bold, sans-serif font. The background of the entire page is a photograph of a modern city skyline with tall skyscrapers, viewed from a high vantage point. A portion of a modern building's glass facade is visible on the right side of the image.

# Commercial Water Treatment Solutions

# BWT UK – Water Solutions



## Domestic Water Treatment

Water treatment for the home

- Comprehensive range
- Reliable & patented technology
- Nationwide merchant and installer support
- Industry leading warranties
- Outstanding customer service



## Commercial Water Treatment

Process & drinking water specialists

- Design and build system capability
- Unique and patented technology
- International award-winning products
- Nationwide field support
- Outstanding customer service



## Hospitality and Catering

BWT Water & More

- Complete system analysis
- Off-the-shelf & bespoke solutions
- Patented water enhancing technology
- Tailored market solutions
- Outstanding customer service



## Business Water Solutions

Great tasting water nationwide

- **MG2+ technology**
- Advanced filtration
- Bottled and filter coolers
- Modern hot water boilers
- Outstanding customer service



## Consumer Products

Innovative water Solutions

- **Unique MG2+ filtration technology**
- Modern and tactile design
- Luxury water solutions for the whole home
- International award-winning products
- Outstanding customer service

## Specialist Water Solutions

BWT Pharma & Biotech

- Full design and build capability
- Sterile manufacturing systems
- Patented technology
- Systems offer 100% traceability
- Outstanding customer service



## On-Site Service

Supporting BWT customers

- Nationwide coverage
- BWT trained engineers
- Comprehensive spare parts catalogue
- Maintenance and service plans
- Breakdown support and routine servicing
- Outstanding customer service



### PHYSICAL WATER CONDITIONERS

- Simple to install
- Single appliance or system protection
- No maintenance
- Suitable for pipe sizes up to 108mm



### AQA TOTAL - ADVANCED SCALE REDUCTION

- No chemicals
- Guaranteed performance
- No storage or carrying of salt
- Low maintenance



### WATER FILTRATION

- Single tap to whole site
- Simple particle removal to specialist applications
- Stand alone or integrated water treatment solutions
- Off the shelf or bespoke
- Flow rates up to 26m<sup>3</sup>/H



### POWERMAG SCALE INHIBITOR

- 100% Conditioning
- Chemical free
- No appreciable drop in feed water pressure
- Sizes from 3/4" to 4" for flow rates from 1.8 up to 108m<sup>3</sup>/H



### CHLORINE DIOXIDE

- Flexible and effective means of water disinfection i.e. legionella control
- No after taste or odour
- Automatic or manual operation modes
- Suitable for flow rates up to 200m<sup>3</sup>/H



### REVERSE OSMOSIS

- High quality water without chemicals
- Single appliance, process or whole facility protection
- Will remove 90-99% of all dissolved solids and 98% of all bacteria
- Suitable for stand alone or integrated solutions



### WATER SOFTENING

- Efficient and effective limescale prevention
- Buildings, equipment and plant protection
- Stand alone or part of a modular water solution
- Flow rates up to 500m<sup>3</sup>/H



### ULTRA VIOLET DISINFECTION

- Disinfection without chemicals
- Kills most waterborne viruses and bacteria
- Simple, safe and cost effective
- Available as a single unit or as part of a complete system

# Commercial Water Treatment

# BWT UK Limited

BWT UK Limited is part of the Best Water Technology (BWT) Group, Europe's leading water technology company.

With over 25 years of experience, BWT UK Limited is leading the UK in water treatment technology, supplying safe, high quality water to domestic, business and commercial & industrial environments.

BWT – For You and Planet Blue. – expresses our mission of developing environmentally friendly and economic water treatment products and services. A task we took on with the establishment of our company in 1990. Since then, BWT products and processes have set technology standards worldwide and today the Best Water Technology Group is Europe's leading water technology enterprise.

More than 3,300 employees have the goal of providing customers from private households, industry, trade, hotels and communities with the maximum possible safety, hygiene and health in their daily contact with water - the elixir of life - by using innovative, economic and ecological processing technologies.

BWT offers products, water treatment systems and services for:

- drinking water
- water for the pharmaceutical industry and process water
- heating water
- boiler and cooling water
- water in air-conditioning systems
- swimming pool water

For technological lead in all areas of water treatment the BWT-innovation centres are constantly researching, developing and optimizing processes for filtration, filter media and ion exchange systems for demineralisation, softening, decarbonisation, membrane technologies (micro, ultra, nano filtration, reverse osmosis), pure steam generators, pure water distillation, UV-systems, ozone generators, ion exchange membranes, electrolysis, electro dialysis, electro deionisation, chlorine dioxide generators and dosing pumps, which are used worldwide for the achievement of excellent water quality. With unique high-performance membranes for fuel cells and batteries BWT takes part in the design of a clean and sustainable energy supply in the 21st century.

Whether at the Point of Entry of the domestic water pipe or at the Point of Use of water, BWT-products 'made in Europe' have proved in a million of applications. With the new patented Magnesium-Mg<sup>2+</sup> table-top water filters for tea and coffee preparation, filters for water optimization for coffee machines, vending devices, baking ovens and steam cookers, under-table filters, drinking water dispensers as well as reverse osmosis and UV-devices BWT also offers innovative and compact products for best water quality for final customers.

Subject to continuous review our range is one of the most comprehensive in the market today, reflecting our ongoing commitment to delivering the very best water treatment solutions. We offer a wide range of products and services that can provide water treatment solutions wherever the need arises.

**BWT UK Limited.** BWT House, The Gateway Centre, Coronation Road, High Wycombe, Buckinghamshire HP12 3SU

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[bwt.com](http://bwt.com)

For You and Planet Blue.  **BWT**  
BEST WATER TECHNOLOGY

A background image showing a close-up of water splashing, with a hand visible on the right side. The water is captured in mid-air, creating a dynamic and refreshing scene. A semi-transparent blue box is overlaid on the left side of the image, containing the main title.

# Alternative Water Treatment





## PHYSICAL WATER CONDITIONERS

Physical water conditioners are available in a variety of sizes and types. The final choice of model should take into consideration a number of factors including water hardness, flow rate, pipe size, pressure and system design.

### THERE ARE FOUR MAIN TYPES OF WATER CONDITIONER:

electromagnetic, magnetic, electrolytic, and electronic. These types of devices are often referred to as scale inhibitors. They work by altering the characteristics of the hardness minerals within the feed water to help prevent limescale forming. Unlike a water softener, a scale inhibitor will not soften the treated water. Instead, the benefits are derived from the reduction of deposited hard scale within the treated water system.

BWT have also developed an additional technique for scale prevention and control. By using unique, three phase technology, the revolutionary AQA Total stabilises water by forming nanocrystals, making limescale unable to be deposited in installations.

Physical water conditioners offer a range of benefits including low running costs, simple installation and require minimal maintenance. Chemical free operation ensures the composition of the treated water remains unchanged which is particularly important on potable water supplies. The flexible nature of their design makes physical water conditioners suitable for a wide range of applications and pipe sizes. It is not uncommon to use more than one type or size of unit to protect different areas of large and complex system and in particular, where the system has a secondary return.

## TYPICAL APPLICATIONS

- Heat exchangers
- Central heating systems
- Hot water heaters
- Electric showers
- Immersion heaters
- Hot water cylinders

## MARKETS

- Hotels
- Offices
- Local authorities
- Leisure centres
- Schools and colleges
- Sheltered housing
- Prisons
- Manufacturing
- Public buildings
- Hospitals

# AQA Total Energy



AQA Total Energy 1500



## FEATURES AND BENEFITS:

- Fully automatic
- Low energy costs
- No down time, and is online 24 hours a day
- Chemical free protection against water hardness
- Easy to operate
- Ideal for use with modern heating units with built in storage and pumps

## WITH REVOLUTIONARY, UNIQUE 3-PHASE-TECHNOLOGY

AQA Total Energy offers optimum limescale and corrosion protection for your drinking water installation whilst retaining all of its original mineral content, ensuring you get the most from your water.

### OPTIMAL LIMESCALE PROTECTION

Due to its revolutionary bipolar technology, the limescale in the water is stabilised by forming nanocrystals, making it unable to deposit itself in the pipes, installation or boiler.

### EFFICIENT CORROSION PROTECTION

The AQA Total creates an effective corrosion protection coating in metallic pipes for an increased lifespan.

### DRINKING WATER PACKED WITH VITAL INGREDIENTS

AQA Total Energy keeps all essential mineral content in your water, helping you maintain your mineral intake from your drinking water.

### MAINTENANCE FREE PROTECTION

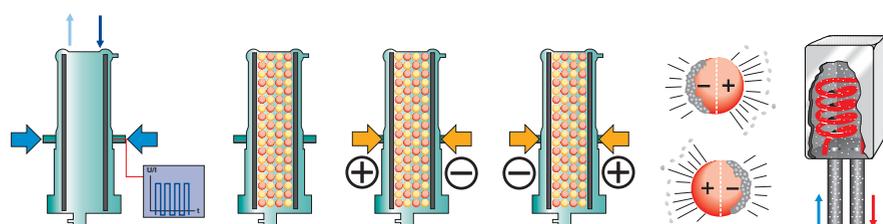
With a long life refill cartridge and no salt or brine tank to maintain, the AQA Total offers a convenient way to get effective limescale and corrosion protection.



AQA Total Energy 1500



## THE PROCESS





AQA Nano Limescale Protection



AQA Total Energy 4500



1 limescale protection unit cartridge system. The used cartridge systems can be disposed with domestic waste or recycled with plastics.

# AQA Nano Limescale Protection System

The AQA Nano alternative limescale protection system prevents limescale and corrosion deposits in pipes and boilers in areas with water hardness of up to 350ppm.

**SAFE** reliable protection against limescale, blocked pipes and the unnecessary hygiene risks caused by deposits.

## DRINKING WATER QUALITY

**GUARANTEED** all valuable minerals are retained in the water.

**CONVENIENT** the electronic controller provides a reliable reminder of an annual service.

## EFFECTIVE LIMESCALE

**PROTECTION UP TO 350PPM**

TYPE AQA TOTAL ENERGY		AQA NANO
Nominal width	DN	25
Nominal connection		1"
Nominal flow rate per DIN 19636 (EN 14743)	l/h	1500
Treatment capacity to max. 22°dH	m <sup>3</sup>	110
PN operating pressure PN	bar	16
Dimensions (H x B)	mm	300x710
<b>ORDER NO.</b>		23301

## AQA NANO LIMESCALE PROTECTION UNIT

<b>ORDER NO.</b>	23937
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1 limescale protection unit cartridge system. The used cartridge systems can be disposed with domestic waste or recycled with plastics.

# AQA Total Energy

1500/ 2500/ 4500

The AQA Total is a series of environmentally friendly and safe drinking water treatment system. It offers pipes, boilers and installations full limescale protection by forming nanocrystals, ensuring limescale remains in the water, not in the pipe or boiler. In addition to this, it also creates a natural formation of an effective protective coating in pipes to prevent corrosion and help prolong lifespan. With the unique 3 phase technology, the AQA Total provides vitality in drinking water by retaining all of the valuable minerals found in drinking water without the use of chemicals or salt.

TYPE AQA TOTAL ENERGY		1500	2500	4500 L*	4500 R*
Nominal width	DN	25	25	40	40
Nominal connection		1" male	1 1/4" male	1 1/2" male	1 1/2" male
Accommodation		1	2-4	5-12	5-12
No. of unit modules		1	1	2	2
Flow rate	l/h	1500	2500	4500	4500
Dimensions (H x W x D)	mm	1100x320x200	1130x310x280	1105x320x320	1105x320x320
Treatment capacity	m <sup>3</sup>	380	380	760	760
<b>ORDER NO.</b>		80007	80008	80009	80006

\*L= Flow direction from left to right, R= Flow direction from right to left

<b>ORDER NO.</b>	84130
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# AQA Total Energy

5600-8400/11200-14000

Wall-mounted unit (in quick mounting frame), distribution pipe system made of high quality yellow brass casting. Modular construction with integrated shut-off set and water meter (no water shut-off in case of cartridge exchange, no by-pass necessary). The modules are connected with the patented rapid connection system. Water connection on left or right, as required. Scope of delivery includes connection unions with male thread and cover for dust protection.

**CONTROL SYSTEM** Ready for installation in a standard control panel (safety class IP 54). Power electronic with separate fuse protection for each module; the whole system is controlled and monitored by one central processor. Completely electrically wired, connection 230 V/50 Hz. Connection for building automation (pre-warning in case of cartridge exchange and fault indication). Control lamps on the cabinet door.

**FOR ALL TYPES** Nominal pressure PN 10, water/ambient temperature max. 30/40°C, mains connection 230/50 V/Hz, electrical power rating 60 W, power consumption 0.055 kWh/m<sup>3</sup>, safety class IP 54.



AQA Total Energy  
5600-14000  
(Tested to DVGW 512)



OPTIMUM  
PROTECTION  
AGAINST  
LIMESCALE

EFFICIENT  
CORROSION  
PROTECTION

DRINKING WATER  
RICH IN VITAL  
MINERALS

TYPE AQA TOTAL ENERGY		5600	8400	11200	14000
Nominal width	DN	40	40	50	50
Nominal connection		1 1/2" male	1 1/2" male	2" male	2" male
Accommodation		13-18	19-24	25-36	30-50
No. of unit modules		2	3	4	5
Flow rate	l/h	5600	8400	11200	14000
Dimensions (H x W x D)	mm	1280x560x470	1280x560x470	1280x825x470	1280x825x470
Treatment capacity	m <sup>3</sup>	1150	1725	2300	2875
<b>ORDER NO.</b>		80010	80011	80012	80013

## CARTRIDGE REFILL FOR AQA TOTAL ENERGY

5600 - 14000

With the new generation AQA Total Energy, the cartridge replacement, which is required for hygienic reasons, is simple. Only the working unit, so-called cartridge refill, must be changed. This new cartridge refill for AQA total Energy ensures permanent constant efficiency, that means:

**PHASE 1** for limescale protection – through stabilisation of the lime particles in the water  
**PHASE 2** for corrosion protection – through the natural formation of an effective protective coating  
**PHASE 3** for vitality – through optimisation of magnesium and oxygen

TYPE CARTRIDGE-REFILL AQA TOTAL ENERGY	5600 - 14000
<b>ORDER NO.</b>	84131



# POWERMAG Electromagnetic Scale Inhibitor

AQA Total Energy  
5600-14000  
(Tested to DVGW 512)



- LCD display
- Volt free contacts for remote monitoring
- WRAS approved
- Suitable for pipe sizes from 3/4" to 4"
- Flow rates up to 30.5 l/sec
- Can help reduce plant downtime and prolong plant life
- With no by-products or consumables, the Powermag is environmentally friendly
- 100% conditioning
- Sensitive temp shut off avoids Legionella
- Stainless Steel Core

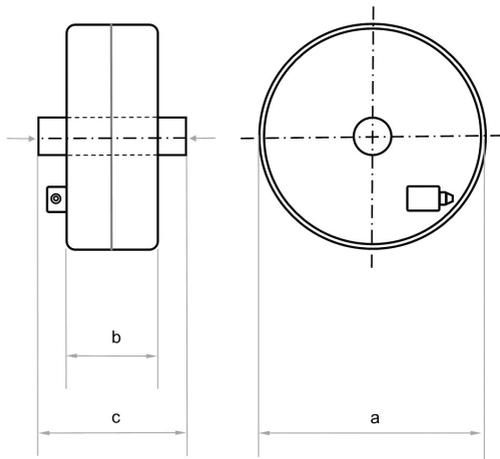
The Powermag electromagnetic physical water conditioner uses the principles of magnetism to inhibit formations of crystalline scale within hot and cold water services. When the untreated water passes through the conditioning chamber, the scale forming elements molecular structure is altered, so that scale-forming particles do not readily precipitate as hard scale forming deposits.

The Powermag allows the magnetic flux generated by an internal coil to interface with the water as it passes through the conditioning chamber. The 360-degree magnetic flux is specifically sized to meet a range of water flow rates, determined by pipe size and site conditions.

Energy efficiency is optimised by the use of constant temperature monitoring within the unit, thereby ensuring lower running costs. Water treated by the Powermag remains potable, so it can also be used in drinking water situations.

The Powermag is an in-line conditioner with a full bore flow, so does not require a bypass or separate drain. BWT recommends fitting isolating valves before and after the unit to facilitate servicing.

All models come complete with a control panel which shows important operating information for the unit including running temperature, coil current, set temperature, coil status and hours run.



#### NOTES:

- All units operate on a 230v /50Hz power supply
- Maximum operating water temperature 25°C
- Maximum operating pressure 16 BAR
- Control panel 300 × 325 × 225mm (h x w x d) 10kg

*\*When compared with a similar piece of straight pipe*

MODEL	INLET/OUTLET PIPE SIZE BSP (Male)	MAX FLOW RATE (l/s)	COIL SIZE (DxWxL)	COIL WEIGHT (Kg)	FRICTIONAL LOSS (BAR)	FUSE RATING (amps)	POWER CONSUMPTION DIAMETER WIDTH LENGTH (watts)
PM75	3/4"	0.5	62×50×240	5	0.1	3	50
PM100	1"	1.5	324×140×180	9.24	0.1	10	200
PM150	1.5"	3.0	324×175×240	19.8	0.1	20	200
PM200	2"	6.0	324×225×330	20.4	0.1	20	200
PM250	2.5"	8.0	324×225×330	23.5	0.1	20	200
PM300	3"	15.0	324×225×330	24.26	0.1	20	200
PM400	4"	30.5	324×225×330	27.1	0.1	20	200

# WRAPPA Electronic Scale Inhibitors



WRAPPA Electronic scale inhibitors

The Wrappa series of modern electronic scale inhibitors have been developed to help protect pipes and appliances from the build-up of scale, without the need for extensive maintenance or chemicals. After being fitted to either PVC, copper or iron pipework using the antenna supplied, the WRAPPA creates an electromagnetic field whilst passing swept frequency radio waves into the water, altering the morphology of the scale forming calcium and magnesium salts, and inhibiting their ability to form hard crystalline scale.

- Simple and quick installation – no need to cut the pipe or interrupt the water flow, making it ideal for existing installations
- Maintenance free
- Water remains potable
- Can be used in isolation to protect individual appliances or in conjunction to help maintain conditions in larger water systems
- Suitable for pipe sizes up to 108mm
- Flow rates up to 4.2 l/sec
- Programmable
- With no by-products or consumables, the Wrappa is environmentally friendly

MODEL	PIPE SIZE (mm)	MAX FLOW RATE (l/s)	POWER CONSUMPTION (mw)	FUSE RATING (amps)	SIZE (LxWxD) (mm)	WEIGHT (g)
LW2	Up to 35	0.8	30	3	120x80x46	462
LW10	Up to 76	2.5	48	5	221x157x87	596
LW20	Up to 108	4.2	48	5	221x157x87	596



Limebeater Electrolytic Scale Inhibitor

# Limebeater Electrolytic Scale Inhibitors

The Limebeater in-line range of electrolytic scale inhibitors offer a simple solution to limescale management using an electrolytic principle. The Limebeater induces an electromagnetic field to change the way scale forms by altering the alignment of the mineral molecules during crystalline formation. Molecules are encouraged to form long chains which develop into sharp thin crystals called "Aragonite" which, due to their shape, are less likely to form hard, insulating scale than the more common and naturally occurring calcite crystals they replace.

- Maintenance free
- Simple, unobtrusive design, making it ideal for plant rooms where space is limited
- 15 and 22mm WRAS approved\*
- Suitable for pipe sizes from 15 to 54mm
- Flow rates up to 2.8 l/sec.
- Environmentally friendly
- Water remains potable
- Single appliance or partial system protection

MODEL	COMPRESSION FITTINGS (mm)	DIAMETER (mm)	LENGTH INCLUDING FITTINGS (mm)	MAX FLOW RATE (l/s)
LBC2-15V2	15	35	150	0.6
LBC2-22V2	22	235	154	0.6
LBC28	28	41	314	1.08
LBC35	35	41	314	1.08
LBC42	42	67	408	1.60
LBC54	54	67	536	2.80
PUSH - FIT				
LBC2-15	15	35	160	0.6
LBC2-22	22	35	167	0.6

\*Selected models only please ask for details

# Commercial Water Filtration





# Water Filtration

Filtration is one of the most widely used methods of water treatment; it is the process of removing turbidity from the water. Water filters provide a physical barrier to remove undesirable elements from your water supply such as particulates, bad taste, odours and even specific trace elements.

While a single filter will work in some situations, it is often necessary to use a combination of single multiple and specialist filters to satisfy the needs of individual projects. The modular nature of BWT filtration products means that they can be tailored to provide an effective solution for both simple and more complex filtration issues.

BWT's comprehensive range of water filtration products use a mixture of traditional and modern materials, state of the art technology and many years of experience to provide filtration solutions suitable for a wide range of applications, including the protection of plant and equipment, the process water and the overall improvement of drinking water quality.

Correctly specified by our technical sales team, BWT filtration solutions can also be used to protect and increase the effectiveness and efficiency of other water treatment products, including water softeners, reverse osmosis and ultra-violet systems.

Illustrations and pictures are provided for guidance only  
Appearance of actual units vary by size.

THE SIZING OF A WATER FILTER WILL DEPEND ON A NUMBER OF FACTORS AND INCLUDE, BUT ARE NOT LIMITED TO:

- Volumes of water to be treated
- Turbidity
- Suspended Solids
- Flow Rates Required
- Temperature
- Viscosity

TYPICAL APPLICATIONS

- Drinking water supplies
- Borehole and spring water supplies
- Rain water reclamation
- Pre-treatment & protection of plant
- Food processing plants
- Beverage processing

MARKETS

- Offices
- Hotels and restaurants
- Horticultural and agricultural
- Sports and leisure facilities
- Manufacturing
- Food processing
- Healthcare
- Education
- Laboratories

# BWT Infinity

## RF 3/4" - 2



Manually operated backwash filter for cold water with waste water connection in accordance with DIN 1998.

- Flow rates up to 11.0m<sup>3</sup>/h
- Filter effectiveness 90 µm
- Robust and durable construction
- Impact resistant transparent cylinder with filter element
- Brass head
- Backwash reminder ring

INFINITY RF	TYPE	3/4"	1"	1 1/4"	1 1/2"	2"
Connector		module	module	module	4 hole	4 hole
Inlet/outlet connections	DN	20	25	32	40	50
Flow rate at Δp 0.2 bar/0.5 bar	m <sup>3</sup> /h	3.5/6.0	4.5/6.5	5.5/9.0	10.0/15.5	10.0/15.5
Operating pressure (Min / Max)	bar	2/16				
Water temperature (Min / Max)	°C	5/30				
Ambient temperature (Min / Max)	°C	5/40				

# BWT Infinity

## RF DN 65 - DN125

Manually operated backwash filter for cold water with waste water connection in accordance with DIN 1998.

- Flow rates up to 100 m<sup>3</sup>/h
- Filter effectiveness 100 or 200 µm
- Robust and durable construction
- Horizontal installation only



Illustrations and pictures are provided for guidance only. Appearance of actual units vary by size.

INFINITY RF	TYPE	DN 65	DN 80	DN 100	DN 125
Connector		Flange connection in accordance to DIN 2501 Part 1			
Inlet/outlet connections	DN	65	80	100	125
Flow rate at Δp 0.2 bar/0.5 bar	m <sup>3</sup> /h	22/36.0	35/58.0	85/130	100/160
Operating pressure (Min / Max)	bar	2.5/10			
Water temperature (Min / Max)	°C	5/30			
Ambient temperature (Min / Max)	°C	5/40			



## BWT Infinity

### AP 3/4" – 2"

Automatically operated backwash filter for cold water with waste water connection in accordance with DIN 1998.

- Flow rates up to 10.0m<sup>3</sup>/h
- Filter effectiveness 90 µm
- Pressure difference and time-controlled, automatically operated backwashing
- Robust and durable construction
- Impact resistant transparent cylinder with filter element

INFINITY RF	TYPE	3/4"	1"	1 1/4"	1 1/2"	2"
Connector		module	module	module	4 hole	4 hole
Inlet/outlet connections	DN	20	25	32	40	50
Flow rate at Δp 0.2 bar/0.5 bar	m <sup>3</sup> /h	4.0/7.0	5.0/7.5	5.5/9.0	10.0/16.0	10.0/16.0
Operating pressure (Min / Max)	bar	2.5/16				
Water temperature (Min / Max)	°C	5/30				
Ambient temperature (Min / Max)	°C	5/40				



## BWT Infinity

### AP DN 65 – DN125

Automatically operated backwash filter for cold water and with waste water connection in accordance with DIN 1998.

- Flow rates up to 100m<sup>3</sup>/h
- Filter effectiveness 100 or 200 µm
- Pressure difference and time-controlled, automatically operated backwashing
- Robust and durable construction
- Horizontal installation only

INFINITY RF	TYPE	3/4"	1"	1 1/4"	1 1/2"
Connector	Flange connection in accordance to DIN 2501 Part 1				
Inlet/outlet connections	DN	65	80	100	125
Flow rate at Δp 0.2 bar/0.5 bar	m <sup>3</sup> /h	22/35	36/55	85/170	100/160
Operating pressure (Min / Max)	bar	2.5/10			
Water temperature (Min / Max)	°C	5/30			
Ambient temperature (Min / Max)	°C	5/40			

# Filter Housings



Illustrations and pictures are provided for guidance only. Appearance of actual units vary by size.

Cold water filter housings for standard and high flow applications, suitable for use with a wide range of replaceable filters. Models available for the filtration of drinking and service water.

- Flow rates up to 2.4m<sup>3</sup>/h
- Durable polypropylene construction
- Support bracket
- Filter bowl wrench
- 6 models available suitable for 10" and 20" filter cartridges

	INFINITY RF	NP1	IP2	HF76	HF76-1.5	HF97	HF97-1.5
Connector	BSP (Male)						
Inlet/outlet connections		3/4"	3/4"	1"	1 1/2"	1"	1 1/2"
Nominal Flow*	m <sup>3</sup> /h	1.2	2.4	1.2	1.2	2.4	2.4
Maximum Pressure	bar	5	5	8	8	8	8
Water temperature (Min / Max)	°C	5/27					
Height x Diameter	mm	336 × 115	135 × 585	350 × 185	350 × 185	610 × 185	610 × 185
Number of Cartridges		1 × 10"	1 × 20"	1 × 10"	1 × 10"	1 × 20"	1 × 20"

# Stainless Steel Filter Housings

Stainless steel filter housings designed and manufactured to work with a range of replacement filters at water temperatures up to 121°C, and are suitable for a wide range of commercial applications including primary and secondary filtration. They are manufactured from austenitic 316 stainless steel which contains the addition of molybdenum for improved corrosion resistance particularly in commercial environments.

If require a filter with larger flow rates, please contact our technical team on **01494 838117** for free no obligation advice.

- Flow rates up to 90m<sup>3</sup>/h
- Manufactured from high grade 316 stainless steel
- Clean and dirty water drain points for easier maintenance
- Designed to treat the higher flow rates found in commercial applications



MODEL NUMBER	CONNECTOR	INLET/OUTLET CONNECTIONS	NOMINAL FLOW* (M3/H)	MAXIMUM PRESSURE	WATER TEMPERATURE (MAX °C)	HEIGHT X DIAMETER	NUMBER OF CARTRIDGES
SS38	BSP (Male)	3/4"	1.2	21	121	341 × 120	1 × 10"
SS76	BSP (Male)	1"	2.4	21	121	595 × 120	1 × 20"
SS114	BSP (Male)	1"	3.6	21	121	849 × 120	1 × 30"
FSS120	BSP (Male)	2"	3.6	10	121	476 × 262	3 × 10"
FSS240	BSP (Male)	2"	7.2	10	121	731 × 262	3 × 20"
FSS318	BSP (Male)	2"	10.8	10	121	986 × 262	3 × 30"
FSS416	BSP (Male)	2"	18.0	10	121	1079 × 300	5 × 30"
FSS473	BSP (Male)	2"	24.0	10	121	1334 × 300	5 × 40"
FSS510	Flange	3"	36.0	10	121	1191 × 470	10 × 30"
FSS765 (7 BAR)	Flange	4"	54.0	7	121	1208 × 520	15 × 30"
FSS765 (10 BAR)	Flange	4"	54.0	10	121	1208 × 520	15 × 30"
FSS1135	Flange	4"	72.0	10	95	1463 × 520	15 × 40"
FSS2200	Flange	4"	90.0	10	121	1687 × 568	19 × 40"

\*Flow rates on this page are measured at 3 BAR. All flow rates stated are nominal flow and are based around a 5 micron sediment removal cartridge. Flow rates will differ dependent on type of cartridge used.

# SoluTECH Clarifer Filters

## HVAC Service Filtering



SoluTECH Clarifier Filters



SoluTECH Clarifier Units

### OPERATION

SoluTECH CLARIFIER FILTERS are designed to continuously eliminate the following:

- Oxides and magnetisable particles using a powerful magnetic bar.
- Solid impurities, sludge and suspended matter using a felt filtering bag that traps particles bigger than 20 µm depending on the model (other filtering grades to order).

### SOLUTECH CLARIFIER FILTERS - STANDARD EQUIPMENT

- 20 µm filter bag
- Magnetic candle
- A cover with swing bolts for easy cleaning
- Adjustable stand: adjustable height for easier connection – Flow rates – 0 to 320 m<sup>3</sup>/h

### SOLUTECH CLARIFIER UNITS - STANDARD EQUIPMENT

- Circulator included
- Inlet/outlet valve and purge valve included
- Automatic purger
- Adjustable stand height (easy connection)

### ON BMS MODELS

- Control cabinet to control and protect pump
- Light Indicator to show the filter condition: Clean or Clogged
- Dry contact output for clogged filter fault
- Flow rates – 0 to 50 m<sup>3</sup>/h

TECHNICAL SPECIFICATIONS		5/9	10/20	21/50	80	120	160	220	320
Coupling diameter	DN	DN 32	DN 50	DN 80	DN 100	DN 150	DN 150	DN 200	DN 250
Rated flow	m <sup>3</sup> /h	9	20	50	80	120	160	220	320
Filtering grade	microns	25	50	50	50	50	50	50	50
Max service pressure	bar	10	10	10	10	10	10	10	10
Min/max water temperature	°C	85	85	85	85	85	85	85	85
Number of bags		1	1	1	2	3	4	5	7
Steel version item code		-	-	-	P0003652	P0003653	P0003654	P0003655	P0003656
Stainless steel version item code		P0069208	P0069209	P00692011	P0003657	P0003658	P0003659	P0003660	P0003661
SIZE SPECIFICATIONS									
Width	mm	200	290	290	700	800	900	1000	1100
Min height	mm	590	785	1225	1410	1630	1700	1780	2020
TYPE		XS	5/9		10/20		21/50		
TECHNICAL SPECIFICATIONS									
Coupling diameter	DN	32	32		50		80		
Rated flow	m <sup>3</sup> /h	4	9		20		50		
Filtering grade	microns	25	50		50		50		
Max service pressure	bar	10	10		10		10		
Min/max water temperature	°C	85	85		85		85		
Number of bags		1	1		1		1		
Filter material		Stainless Steel		Steel		Steel		Steel	
Item code		P0003884		P0003637		P0003638		P0003640	
BMS version item code		-		P0003641		P0003642		P0003643	
SIZE SPECIFICATIONS		XS	5/9	5/9 GTC	10/20	10/20 GTC	21/50	21/50GTC	
Width	mm	380	324	363	441	466	480	480	
Length	mm	423	562	668	668	785	1320	1320	
Min Height	mm	883	685	686	875	875	1530	1508	

On request, the filters can be sized to adapt to non standard pressures and temperatures.

# Filter Cartridges

Available in a range of sizes and materials, each filter should be selected to suit the specific application and the appropriate filter housing. A combination of filter types and other water treatment equipment may be necessary to achieve any given specific water quality required. Filter cartridges can be used to remove unwanted substances including, but not limited to:

- Sediment
- Pesticides
- Taste and odour
- Organic chemicals

TO SUIT FILTER HOUSING	MODEL NUMBER	MATERIAL	APPLICATION** (SEE KEY)	MICRON RATING	CLEANABLE	WATER TEMPERATURE (MAX °C)	NOMINAL LENGTH (**)
SS38, FSS120, NP-H10	SB10-1	Polypropylene	SR	1	X	95	10
SS38, FSS120, NP-H10	SB10-5	Polypropylene	SR	5	X	95	10
SS38, FSS120, NP-H10	SB10-25	Polypropylene	SR	25	X	95	10
IP2, SS76, FSS240, NP-H20	SB20-1	Polypropylene	SR	1	X	95	20
IP2, SS76, FSS240, NP-H20	SB20-5	Polypropylene	SR	5	X	95	20
IP2, SS76, FSS240, NP-H20	SB20-25	Polypropylene	SR	25	X	95	20
SS114, FSS1800	SB30-5	Polypropylene	SR	5	X	95	30
FSS1135, FSS2200	SB40-5	Polypropylene	SR	5	X	95	40
HF76	HSB10-1	Polypropylene	SR	1	X	95	10
HF76	HSB10-5	Polypropylene	SR	5	X	95	10
HF76	HSB10-20	Polypropylene	SR	20	X	95	10
HF97	HSB20-1	Polypropylene	SR	1	X	95	20
HF97	HSB20-5	Polypropylene	SR	5	X	95	20
HF97	HSB20-20	Polypropylene	SR	20	X	95	20
HF76	HFPL5	Pleated Cellulose/ Polyester	SR	5	Yes	63	10
HF97	HFPL5-20	Pleated Cellulose/ Polyester	SR	5	Yes	63	20
HF76	HFGAC5	Granular Activated Carbon	SR	5	X	52	10
HF97	HFGAC5	Granular Activated Carbon	SR	5	X	52	20
HF76	HFR10	Resin	SC		X	38	10
HF76	HFCR10	Carbon/Resin	TO, SC, OC, P	5	X	38	10
HF97	HFR20	Resin	SC		X	38	20
HF97	HFC20	Carbon	TO, OC, P	5	X	38	20
HF97	HFCR20	Carbon/Resin	TO, SC, OC, P	5	X	38	20
IP2	MX-1	Carbon Block	SR, TO, OC, P	5	X	52	20
IP2	C20	Carbon	TO, OC, P	5	X	38	20
IP2	R20	Resin	SC		X	38	20
IP2	CR20	Carbon/Resin	SC, TO, OC, P	5	X	38	20
NP1	C1	Carbon	TO, OC, P	5	X	38	10
NP1	R1	Resin	SC		X	38	10

There are a number of filtering materials available. It is important to select the correct cartridge for the application. **Cartridge Selection Chart provided for guidance only.**

**SR** - Sediment Removal  
**P** - Pesticides  
**TO** - Taste and Odour

**OC** - Organic Chemicals  
**SC** - Scale

# Commercial Water Softeners





# Water Softeners

Water softeners are available in a variety of sizes and configurations and the final choice of model should take into consideration a number of factors including: *Water hardness, flow rate, daily water consumption, pressure and system design.*

A modern water softener is fully automatic and works by passing hard water through an ion exchange resin. This resin consists of tiny beads that attract and retain the calcium and magnesium ions that cause the scale normally associated with hard water.

Periodically these resin beads are cleaned and regenerated by rinsing with an accurately controlled brine solution. The brine and the accumulated hardness are then flushed to drain automatically.

The whole process is controlled using modern electronics and either a timer or volumetric valve control unit. Timer models can be preset to regenerate at regular intervals regardless of the quantity of water used, normally every two to three days. Whilst volumetric models constantly monitor water usage and only regenerate as necessary.

Softened water provides vital protection for equipment and plant, especially where water is heated to high temperatures. It also allows soaps and detergents to lather more freely and rinse away more easily saving time and money.

Unlike most other forms of water treatment softened water can be stored until required without reverting back to its untreated state.

## TYPICAL APPLICATIONS

- Cooling Towers
- Steam generators
- Dishwashers
- Washing machines
- Heat exchangers
- Central heating systems
- Steam boilers
- Hot water heaters
- Steam ovens
- RO Pre-treatment
- Process water

## MARKETS

- Hotels
- Offices
- Pharmaceutical industry
- Professional kitchens
- Restaurants
- Bakeries
- Laundries
- Manufacturing
- Water treatment
- Stock breeding
- Oil and Gas

# AQAPEARL

## Cabinet Series

### Water Softener

A concise range of compact cabinet water softeners, available with either timer or volumetric valve control. The 1" valve and reliable electronic control unit make them ideal for light commercial operations.

- 5 Cycle control valve
- Integrated blending valve
- Proportional regeneration
- Digital display
- Electronic valve control unit



MODEL NUMBER	AQAPEARL-05SE	AQAPEARL-10SE	AQAPEARL-20SE	AQAPEARL-30SE
Resin volume in litres	10	16	20	28
Inlet/outlet pipework size	DN 25 / 1"			
Exchange capacity, m <sup>3</sup> @ 300ppm	1.4	2.5	3.4	4.7
Service flow rate m <sup>3</sup> /h	1	2	2.5	2.5
Peak flow rate m <sup>3</sup> /h	2.0	2.0	2.5	2.5
Max / min pressure (bar)	1.5/7			
Salt consumption per regeneration (kg)	1.25	2.0	2.5	3.75
Waste water volume per regeneration (lts)	78	103	123	163
Dimensions H x D x W (mm)	655 x 500 x 385	1110 x 500 x 385	1110 x 500 x 385	1110 x 500 x 405

# 6000 Series

## Water Softener



The 6000 series water softener is an entry-level product for communal applications and is ideal to meet the softened water needs of small kitchens, or to fill low volume closed loop systems. The 6000 range is also widely used in the production of water for intermittent or continuous industrial processes.

- Glass fibre-reinforced polyester body
- Noryl control unit
- AX5 Control Box
- Alarm and information report
- Industrial option: turnkey installation on stainless steel chassis
- Counter current regeneration

MODEL NUMBER	6025	6050	6075
Resin volume in litres	25	50	75
Inlet/outlet pipework size	DN32 / 1 1/4"		
Exchange capacity, m <sup>3</sup> @ 300ppm	4.6	9.1	13.7
Service flow rate m <sup>3</sup> /h	2.4	2.6	3
Peak flow rate m <sup>3</sup> /h	3	3	3
Max / min pressure (bar)	1.5/7		
Salt consumption per regeneration (kg)	2.2-4.5	4.5-9	7.0-13.5
Waste water volume per regeneration (lts)	175	350	560
Resin tank dimensions, inc valve D x H (mm)	210 X 1580	260 X 1830	335 X 1830
Salt tank dimensions D x H (mm)	480 x 860	530 x 780	720 x 800

# 7000 Series Water Softener



The 7000 series of water softeners is designed to treat water flow rates up to 9.5 m<sup>3</sup>/h (@ 300mg/l). The range is suitable for the prevention of scaling of sanitary, heating / air conditioning and commercial and industrial installations.

- Glass fibre-reinforced polyester body
- Noryl control unit
- AX5 Control Box
- Rapid dissolution salt tray (to 150 litres)
- Alarm and information report
- Option of "duplex" operating mode, with parallel or alternating assembly
- Industrial option: turnkey installation on stainless steel chassis
- Counter current regeneration

MODEL NUMBER	7050	7075	7125	7150
Resin volume in litres	50	75	125	150
Inlet/outlet pipework size	DN42 (1 1/2")			
Exchange capacity, m <sup>3</sup> @ 300ppm	9.1	13.6	22.8	27.5
Service flow rate m <sup>3</sup> /h	7	7	7	9.5
Peak flow rate m <sup>3</sup> /h	10.5	10.5	10.5	10
Max / min pressure (bar)	1.5 / 7			
Salt consumption per regeneration (kg)	7	9	14	18
Waste water volume per regeneration (lts)	600-750	650-800	900-1110	1000-1300
Resin tank dimensions. inc value D x H (mm)	375 x 1245	375 x 1750	425 x 1790	460 x 1880
Salt tank dimensions D x H (mm)	720 x 800	720 x 800	720 x 800	715 x 1400

# BWT Rondomat Duo

- Continuous soft water production
- Advanced control system for effective softening at high flows rates
- Low water and salt consumption for maximum efficiency
- Fitted with exclusive bacterial growth prevention system
- Compact unit with single brine tank for smaller footprint
- BMS reporting

MODEL NUMBER	1	2	3	6	10
Resin volume in litres	2 x 14	2 x 18	2 x 43	2 x 100	2 x 150
Inlet/Outlet pipework size DN/inch	32 (1 1/4")	32 (1 1/4")	32 (1 1/4")	50 (2")	50 (2")
Exchange capacity m <sup>3</sup> @300ppm	1.6	2.1	5.7	15	21.5
Service flow rate m <sup>3</sup> /hr	1.0	2.0	3.0	6.0	10.0
Peak flow rate m <sup>3</sup> /hr	1.9	3.0	4.5	9.0	15.0
max/min pressure (bar)	2.0-8.0				
Salt consumption per regeneration (kg)	1.2	1.44	3.4	8	12.5
Waste water volume per regeneration (lts)	54	75	140	350	440
Resin tank dimensions DxH (mm)	see data sheet	269x870	269x1380	400x1540	552x1550
Salt tank dimensions DxH (mm)	see data sheet	470x630	470x630	650x880	650x880



# 8000/9000 Series Composite Water Softener



The 8000/9000 Composite range of softeners guarantee effective treatment against hardness, even at very high flow rates. Specially adapted for humid or corrosive conditions, or any environment that is incompatible with corrodible metals, this range meets the requirements of large communal applications or industrial processes.

- Glass fibre-reinforced polyester body
- Cast Iron control unit
- AX5 Control Box
- Option of "duplex" operating mode, with parallel or alternating assembly

MODEL NUMBER	9175 SC		9225 SC		9300 SC	
Resin volume in litres	175		225		300	
Inlet/outlet pipework size			DN50 (2")			
Exchange capacity, m3 @ 300ppm	32		41		13.7	
Service flow rate m3/h	13		13		3	
Peak flow rate m3/h	19.5		19.5		3	
Max / min pressure (bar)			2/7			
Salt consumption per regeneration (kg)	31.5		40.5		54	
Waste water volume per regeneration (lts)	1200		1750		2100	
Resin tank dimensions. inc value D x H (mm)	460 x 2110		550 x 1965		610 x 2205	

MODEL NUMBER	BWT 8150	BWT 8300	BWT 8400	BWT 8600	BWT 8800	BWT 81250
Resin volume in litres	150	300	400	600	800	1250
Inlet/outlet pipework size	DN65 (2 1/2")					
Exchange capacity, m3 @ 300ppm	27.5	55	73.3	110	146.6	229.1
Service flow rate m3/h	20	22	26	20	20	20
Peak flow rate m3/h	30	33	39	30	30	30
Max / min pressure (bar)	1.5 / 7					
Salt consumption per regeneration (kg)	19-27	38-45	38-45	75-108	100-144	156-225
Waste water volume per regeneration (lts)	1100	2100	2800	4200	6700	10,000
Resin tank dimensions. inc value D x H (mm)	550 x 2210	550 x 1965	770 x 2400	930 x 2430	1075 x 2395	1225 x 2455

## Ronduo 1000 Duplex Series Water Softener

The Ronduo 1000 series is a range of value for money fully automatic water softeners capable of delivering softened water at flow rates up to 3.5 m3/h. These water softeners are comprised of two seamless glass fibre reinforced cylinders, linked to a single control valve mounted on the master cylinder. All units have volumetric control and can be supplied with an optional blending valve.

- Glass fibre-reinforced polyester body
- Single control valve
- Fully automatic operation
- Robust construction
- Continuous supply of softened water
- Compact design
- Simple to set up and operate



Please see page 6 for technical specifications

# Ronduo 1000

## Duplex Series Water Softener

Continued from page 5

MODEL NUMBER	1015	1030	1050	1075	1100	1150	1200	1300
Resin volume in litres	15	30	50	75	100	150	200	300
Inlet/outlet pipework size (flange)	DN 20 / 3/4"	DN 20 / 3/4"	DN 20 / 3/4"	DN 25 / 1"	DN 25 / 1"	DN 40 / 1 1/2"	DN 40 / 1 1/2"	DN 40 / 1 1/2"
Exchange capacity, m3 @ 300ppm	2.5	5	8.3	12.5	16.6	25	33.3	50
Service flow rate m3/h	0.8	1.3	2.3	3	3	5.6	6.8	6.8
Peak flow rate m3/h	0.9	1.5	2.5	4	4	8.3	8.4	8.4
Max / min pressure (bar)	1.7 / 6							
Salt consumption per regeneration (kg)	2.1	4.2	7	10.5	14	21	28	42
Waste water volume per regeneration (lts)	90	175	219	397	590	818	1703	2301
Resin tank dimensions. D x H (mm)	184 x 1057	257 x 1057	257 x 1550	333 x 1529	369 x 1830	406 x 1875	469 x 1997	610 x 2090
Salt tank dimensions. DIA	550 x 850	550 x 850	680 x 775	685 x 975	860 x 900	1110 x 875	1030 x 1110	1030 x 1110



## BWT Rondomat HVD

The Rondomat HVD range of water softeners deliver quality controlled softened water for commercial use. An advanced control system ensures optimum performance and continuous softened water by using the full capacity of each resin vessel before an automatic regeneration is triggered and service flow is switched to the second vessel. They run counter current to ensure a low salt and water consumption and high efficiency. This range should be selected when reliability, safety and economical operation are high on the requirement.

Compared to conventional water softening system the HVD series is characterised by:

- Composite vessels
- Up to 80% lower water consumption
- Up to 60% lower salt consumption
- Up to five times better water quality

MODEL NUMBER	400	600	900	1200	1550
Resin volume in litres	400	600	900	1200	1550
Inlet/Outlet pipework size mm	50	50	50	100	100
Exchange capacity m3@300ppm	64	99	148	193	255
Service flow rate m3/hr	10.0	18.0	25.0	32.0	41.0
Peak flow rate m3/hr	15.0	21.0	30.0	39.0	50.0
max pressure (bar)	10				
Salt consumption per regeneration (kg)	31	48	72	94	124
Waste water volume per regeneration (lts)	550	750	1050	1480	2000
Resin tank dimensions HxWxD (mm)	2520 x 2800 x 1400	2600 x 3000 x 1500	2800 x 3120 x 1600	2750 x 3550 x 1800	2800 x 4000 x 1900
Salt tank dimensions DxH (mm)	1120x1350				

# BWT Infinity

## RF 3/4"-2"

MANUALLY OPERATED BACKWASH FILTER  
FOR COLD WATER WITH WASTE WATER  
CONNECTOR IN ACCORDANCE WITH DN 1988



- Flow rate from 3.0 to 11.0m<sup>3</sup>/h
- Filter effectiveness 90µm
- Backwashing manually operated
- Filter with capability of connecting on the HYDROMODUL system
- For horizontal and vertical installation
- For water temperature from 5 to 30 °C
- Operating pressure min./max. 2.0/16 bar
- Exchange indicator date ring
- HT or hose connector for flushing water

TYPE	3/4"	1"	1" 1/4	1" 1/2	2"
Connector	module	module	module	4 Hole	4 Hole
Nominal connectional width (DN)	20	25	32	40	50
Flow rate at Ap = 0.2/0.5 bar m <sup>3</sup> /h	3.0/6.0	3.5/3.5	40.0/8.5	9.0/15.0	11.0/15.5
Filter effectiveness	90				
Nominal pressure (PN)	16				
Operation pressure min./max. (bar)	2/16				
Water temperature min./max. (°C)	5/30				
Ambient temperature min./max. (°C)	5/40				
<b>DIMENSIONS (mm)</b>					
Total height/total height with crank	500/550				
Height with hose connector/height with HT connector	360/345				
Overall length with fitting	205	205	218	240	240
Minimum distance pipe centre to floor	670				
Hose connector/HT connector, diameter	14/50				
BWT Group Part Number (Filter)	10305	10305	10305	10306	10306
BWT Group Item Number (Coupling)	830012	830014	830020	50961	50962

# Commercial Ultra Violet Disinfection





# Ultra Violet Disinfection

## What is Ultra Violet Disinfection?

Ultra Violet disinfection (commonly abbreviated to U.V) is a well established, simple and safe technology, used for the purpose of disinfecting water without the use of chemicals. UV disinfection effectively renders Legionella, Salmonella, Ecoli and most other waterborne bacteria harmless, with no undesirable by-products to dispose of.

UV disinfection works with a UV light penetrating the cell of microorganisms living in the water, halting their reproduction and rendering them harmless. The outer wall of bacteria and viruses differ in thickness. The thickness of their cell wall determines the amount of UV light exposure required to prevent their reproduction. The intensity of the light is measured in Joules per metre squared ( $J/m^2$ ). Drinking water applications require a dose of  $400 J/m^2$ . Rain water harvesting applications typically require a lesser dose.

## Intended Use

UV treatment of water is an extremely effective and low cost solution that kills most waterborne viruses and bacteria. UV disinfection does not result in any negative changes in the taste or odour of the treated water, so it is ideal for drinking water supplies in the private, community and business sectors.

## How the system works

The water to be treated flows through the stainless steel or UPVC radiation chamber and past the UV lamps. The UV lamps generate UVC light at a wave length of  $254nm$ , which is particularly effective for the disinfection of water and destroys the DNA within the bacteria cells and viruses.

The UV system is accurately controlled by modern electronics, whilst the UVC sensor (where fitted) monitors lamp ageing, the radiation intensity, the UV transmission of the water to be treated and any deposits formed on the quartz sleeve. Water passing through the system will be disinfected, but there is no residual effect. Due consideration must be paid to the overall design and installation of any system to ensure that contamination does not occur downstream of the unit. Two sample points should be provided prior to and after the unit for periodic testing.

## Sizing Considerations

The most important aspect when deciding on the choice or size of a UV system is determining the UV transmission of the water to be treated. This will differ depending on the maximum flow rate, type and origin of the water. Performance will be compromised if the maximum flow rate is exceeded. Where local site conditions are unpredictable, then additional control systems must be installed.

# Pre-treatment

The quality and type of water source may make it necessary to pre-treat the source water before disinfection. Our technical team are available to offer free advice on a full range of water pretreatment including: sediment filtration, water softening and iron removal.

A suitable sediment filter should always be installed prior to the UV unit to protect it from particulate matter and shadowing. Over time, the output of the UV lamp reduces with age. This means that typically, the UV lamp will need replacing on an annual basis. For most models, a UV intensity monitor is available separately to accurately monitor lamp output. This enables optimum performance to be maintained without unnecessary lamp replacement.

## NOTE:

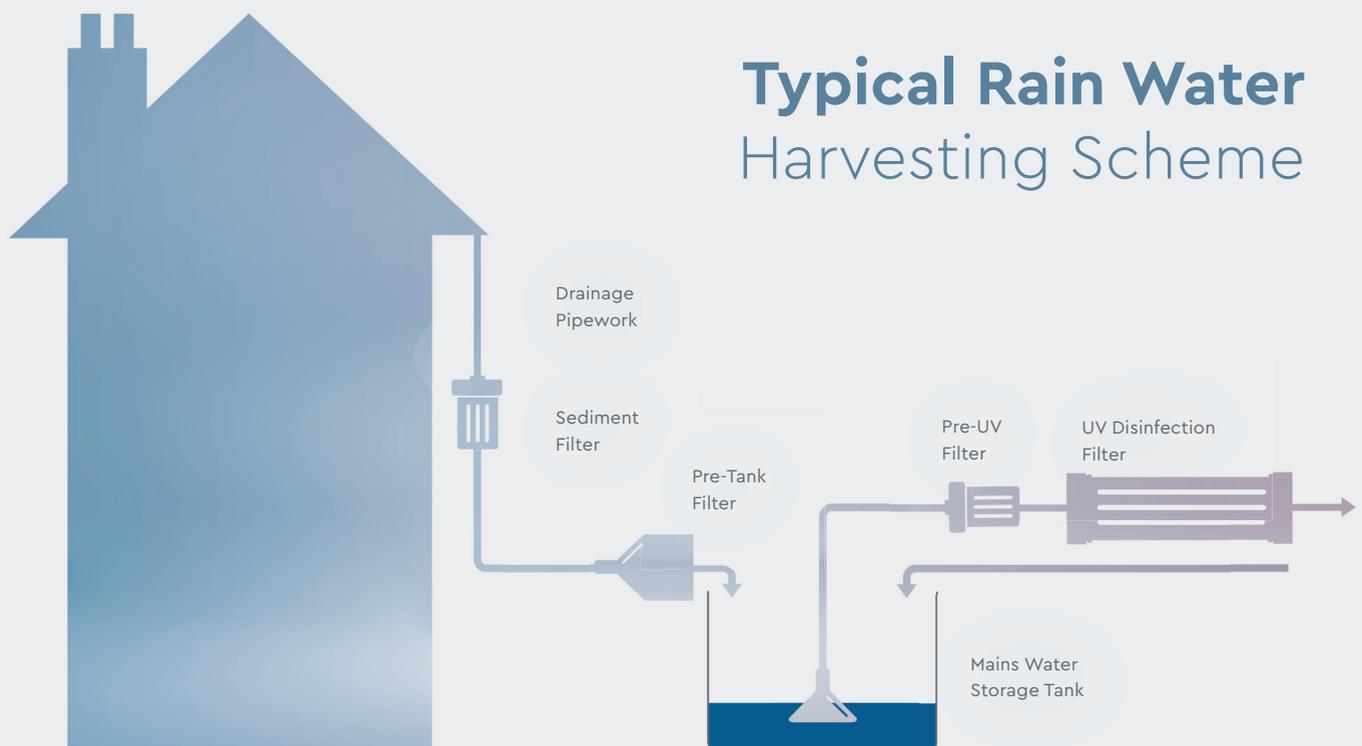
It is recommended that isolating valves are fitted to either side of the unit and sufficient clearance should be left on at least one side of the unit to withdraw the lamp and quartz sleeve for maintenance purposes.

## TYPICAL APPLICATIONS

- Potable water supplies
- Grey water and water re-use
- Cold water services
- Private water supplies
- Rain water harvesting systems
- Humidifiers
- Laboratory water supplies

## MARKETS

- Office blocks, hotels and apartments
- Schools, colleges, and universities
- Local authorities
- Leisure centres/ leisure parks
- Food and manufacturing industries
- Pharmaceutical industry
- Paper and electronics industries
- Public buildings



# BWT Liff Ultra Violet Disinfection

The BWT Liff branded entry level range of UV units provide a cost effective, chemical free solution to the treatment of problem water that is, may or likely to suffer from microbiological contamination. A wide range of models make these units the ideal choice for projects of all sizes.

- Quartz sleeve,
- Stainless steel body
- Suitable for pipe sizes from 1" to 4"
- Flow rates 0.5 – 22.6 m<sup>3</sup>/h
- Optimal wavelength 254 nanometres
- Environmentally friendly with no by-products



MODEL	CONNECTIONS	FLOW RATE AT 300J/m <sup>2</sup> (m <sup>3</sup> /hr)	FLOW RATE AT 400J/m <sup>2</sup> (m <sup>3</sup> /hr)	POWER CONSUMPTION (Watts)	MAXIMUM PRESSURE (Bar)	CONSTRUCTION	NUMBER OF LAMPS	DIMENSION L x D x H (mm)	WEIGHT (kg)
S15ND	3/4" bspm	0.65	0.5	18	10	S/ST	1	465 × 78 × 111	6
S30ND	3/4" bspm	1.65	1.25	33	10	S/ST	1	920 × 78 × 111	11
S55ND	3/4" bspm	4.1	2.1	50	10	S/ST	1	920 × 78 × 111	11
LS6ND	2" bspm	8.4	6.4	90	10	S/ST	1	950 × 140 × 190	15
LS6NAD	2" bspm	9.5	7	100	10	S/ST	2	950 × 180 × 240	22
LS7ND	2" bspm	15.5	12	145	10	S/ST	3	950 × 180 × 240	20
LS7NAD	4" bspm	40	30	290	10	S/ST	4	950 × 184 × 365	40

## NOTE:

- WRAS approved units available on request
- For increased flow rates, multiple units can be used
- Cold water only
- 220 Volts
- Intensity monitor optional on selected units

# AS & AL Series Systems

CONSTRUCTED FROM 304 STAINLESS STEEL THROUGHOUT, THE WATER CHAMBER IS PRESSURE RATED TO 10 BAR.

The chamber incorporates low pressure UV lamps contained within a high purity quartz sleeve, physically isolating it from the liquid.

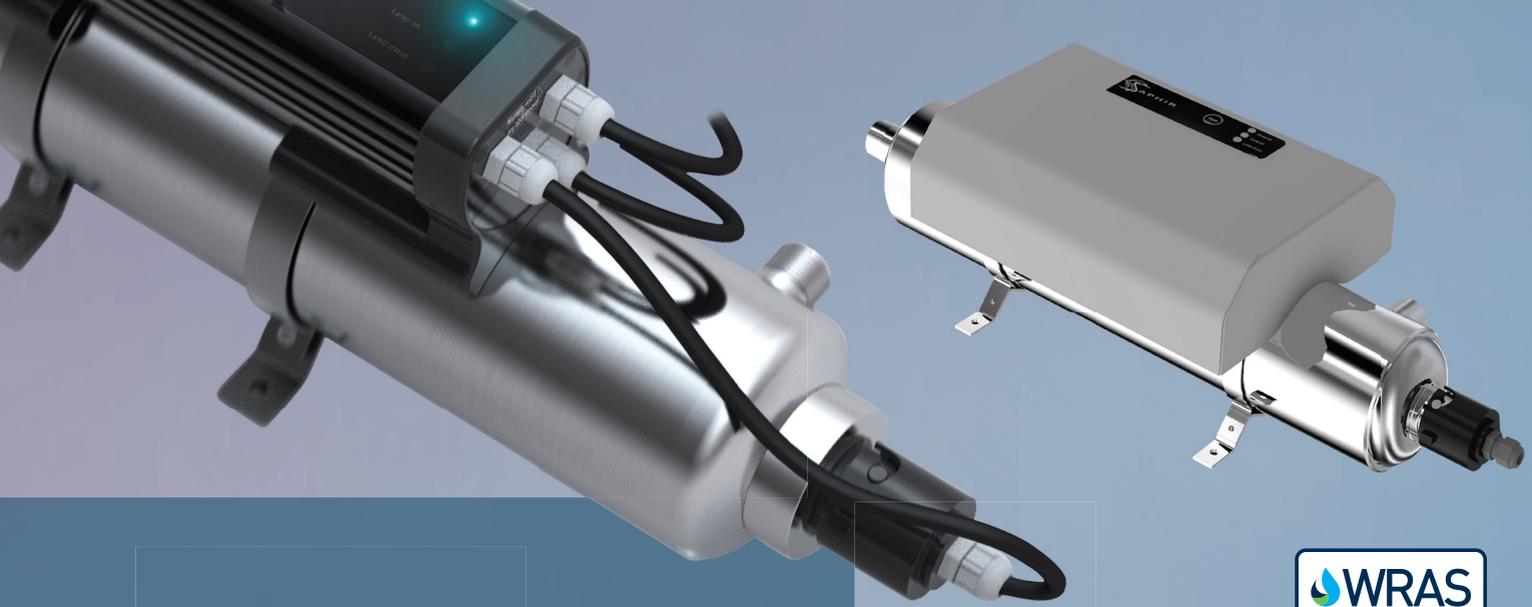
Chamber connections are as per the specification table. Other fittings are available on request.

Note 1: the stated flow rates are based on deionised / RO water. Poorer water quality will result in a lower flow rate. We will calculate the actual flow rate for an application. Please contact our office for further details.

*\*Intensity UV monitor optional on all units*



MODEL	CONNECTIONS	FLOW RATE AT 300J/m2 (m <sup>3</sup> /hr)	FLOW RATE AT 400J/m2 (m <sup>3</sup> /hr)	POWER CONSUMPTION (Watts)	MAXIMUM PRESSURE (Bar)	CONSTRUCTION	NUMBER OF LAMPS	DIMENSION L x D x H (mm)	WEIGHT (kg)
AS1	DN80	33	21	200	10	S/ST	1	954 × 270 × 420	45
AS2	DN80	84	35	390	10	S/ST	2	955 × 270 × 420	47
AS4	DN80	109	80	780	10	S/ST	4	956 × 270 × 420	50
AL1	DN100	78	51	360	10	S/ST	1	1678 × 270 × 420	62
AL2	DN100	130	83	680	10	S/ST	2	1679 × 270 × 420	64
AL4	DN150	260	195	1330	10	S/ST	4	1680 × 270 × 420	67
AL6	DN150	365	250	1990	10	S/ST	6	1681 × 270 × 420	70



## AQA Pure

The AQA Pure system is a compact, economical UV system that is designed with the consumer in mind. The AQA Pure system utilises commonplace single ended low pressure UV lamp technology, thus making the system not only economical for energy running costs, but also for replacement UV lamps. The single ended UV lamp also makes servicing the equipment very simple.

- Water resistant power control module (IP55) – Long life/high reliability UV lamp – Maximum 10 bar working pressure
- Simple to install – Lamp on indicator – Simple to service – Electropolished chamber – Commonplace UV lamps

MODEL	CONNECTIONS	FLOW RATE AT 300l/m <sup>2</sup> (m <sup>3</sup> /hr)	FLOW RATE AT 400l/m <sup>2</sup> (m <sup>3</sup> /hr)	POWER CONSUMPTION (Watts)	MAXIMUM PRESSURE (Bar)	CONSTRUCTION	NUMBER OF LAMPS	DIMENSION L x D x H (mm)	WEIGHT (kg)
AQA Pure 1	3/4" bspm	1.05	0.78	16.5	10	S/ST	1	419 × 122 × 89	5
AQA Pure 2	3/4" bspm	1.8	1.35	30	10	S/ST	1	562 × 122 × 89	6
AQA Pure 3	3/4" bspm	3.2	2.4	38.5	10	S/ST	1	563 × 122 × 89	6
AQA Pure 4	1" bspm	3.65	2.8	42	10	S/ST	1	980 × 122 × 89	8
AQA Pure 7	1" bspm	7.1	5.35	68	10	S/ST	1	981 × 122 × 89	9
AQA Pure 10	1" bspm	9.6	7.2	68	10	S/ST	1	980 × 160 × 114	12

## AQA Pure+

As AQA Pure system Plus: – Additional lamp status information, – Resettable hour counter, Volt free contact facility for remote monitoring of lamp status, via a plug and socket (sealed and capped when not in use. Both configurations are rated to >IP65) UV lamp running indicator – UV lamp status, with a three way indicator display, showing the status of the system.

SYSTEM STATUS	POWER ON	LAMP ON	LAMP STATUS
System operating correctly, lamp less than 11 months old	Green	Blue	Green
System operating correctly, lamp between 11 and 12 months old	Green	Blue	Alternating Green & Red
System still operating, but more than 12 months old	Green	Blue	Red
Lamp Failed	Green	Off	Red

# V Series Systems

- Validated UV system according to NEN – EN 14897
- Sustainable system (low cost)
- Unique flow management system
- Easy to operate and maintain
- Constant monitoring of lamp status
- Supplied with Certificate of validation
- Complies with CE and EMC approvals
- Validated: BS14897



MODEL	CONNECTIONS	FLOW RATE AT 300J/m <sup>2</sup> (m <sup>3</sup> /hr)	FLOW RATE AT 400J/m <sup>2</sup> (m <sup>3</sup> /hr)	POWER CONSUMPTION (Watts)	MAXIMUM PRESSURE (Bar)	CONSTRUCTION	NUMBER OF LAMPS	DIMENSION L x D x H (mm)	WEIGHT (kg)
V100	1" bspm	1.0	0.8	30	10	S/ST	1	637 × 60 × 93	5
V110	1" bspm	1.9	1.5	60	10	S/ST	1	637 × 60 × 93	5
V120	1" bspm	3.1	2.5	60	10	S/ST	1	647 × 89 × 122	7
V130	1.5" bspm	4.8	3.6	60	10	S/ST	1	657 × 129 × 169	9
V140	1.5" bspm	8.3	6.2	70	10	S/ST	1	657 × 129 × 169	9
V150	2" bspm	11.9	8.9	90	10	S/ST	1	1155 × 129 × 169	15
V160	2" bspm	17.8	13.3	140	10	S/ST	1*	1115 × 129 × 169	15
V170	2" bspm	25.5	19.2	230	10	S/ST	1*	1448 × 88.9 × 129	16
V180	2.5" bspm	37.9	28.4	230	10	S/ST	1*	1455 × 129 × 194	18
V190	3" bspm	55.9	41.9	365	10	S/ST	1*	1738 × 129 × 186	22
V200	DN100	95.3	71.5	435	10	S/ST	3*	1269 × 204 × 261	51
V220	DN100	113.1	100.4	690	10	S/ST	3*	1569 × 204 × 261	51
<b>D SERIES - (D100 &amp; D150 WRAS APPROVED)</b>									
D100	DN150	182	136	915	10	S/ST	4*	1569 × 204 × 261	75
D150	DN150	240	180	1085	10	S/ST	3*	1989 × 254 × 314	85

STANDARD LAMP LIFE 8,000, MARKED WITH\* 16000 HOURS

**OPTIONS:**

- UV Sensor with digital display
- Temperature control – lamp off type or via solenoid activated dump valve

*BWT reserve the right to make changes without prior notice*

## Energy efficient reverse osmosis plant with high capacity



### Reliable and maintenance-friendly

The system series supplies high quality permeate for boilers, closed/open cold water cycles in climate systems and cooling towers, closed hot water systems and other process water for industrial applications, where a low conductivity ( $< 20 \mu\text{S/cm}$ ) is required.

Membranes and pumps are selected with a focus on the latest technology, efficiency and quality. This ensures a reliable and efficient system.

Compared to the system's high capacity, the design is compact, maintenance-friendly and allows for easy access to components, as well as simple installation even in sparse spaces.

### Features:

- Robust and compact system mounted on a stainless steel skid
- PLC control system with touch-screen as standard
- The control unit provides information on the system's operation via the LCD touch screen with graphic display
- Alarm for operation interruptions with external output
- Time and quality flush - for better water quality and it protects the membranes
- Effective BWT- high-quality membrane technology
- Energy efficient pump

### Benefits:

- High-performance membranes
- Low energy consumption
- Operation via PLC with touch screen
- Time and quality flush, ensuring improved water quality and protection of the membranes
- Possible to extract historical data to Excel
- Can have a conductivity meter fitted
- The combination with a mixed-bed system can provide an even lower conductivity ( $< 0.5 \mu\text{S/cm}$ )
- All mounted on a stainless steel skid

### Intuitive, user-friendly and flexible

PLC control unit with LCD touch screen and graphic display provides easy viewing of important measurements and detailed status information for service and operations personnel. There is the option to install a USB function for simple and easy transfer of data and operating history to Excel format.

The options include, among others, expanded operational status information and membrane cleaning systems that prolong the membrane's service life.

### The flexible design allows for expansion with:

- Preparing for Clean-In-Place - used for the mobile CIP unit
- Clean-In-Place unit - effective cleaning of the membranes
- Antiscaling dosing - increases the utilisation of the raw water up to 80-85%
- Additional conductivity control - more monitoring points in the installation
- Frequency control of high pressure pump - ensures reliable operation in areas with fluctuating water pressures and temperatures
- GSM option (2-way) - communication via TEXT
- Flow transmitter for permeate
- Temperature and pressure transmitter with log function
- Analogue input level transmitter (depending on temperature/pressure transmitter)

### BWT HOH A/S

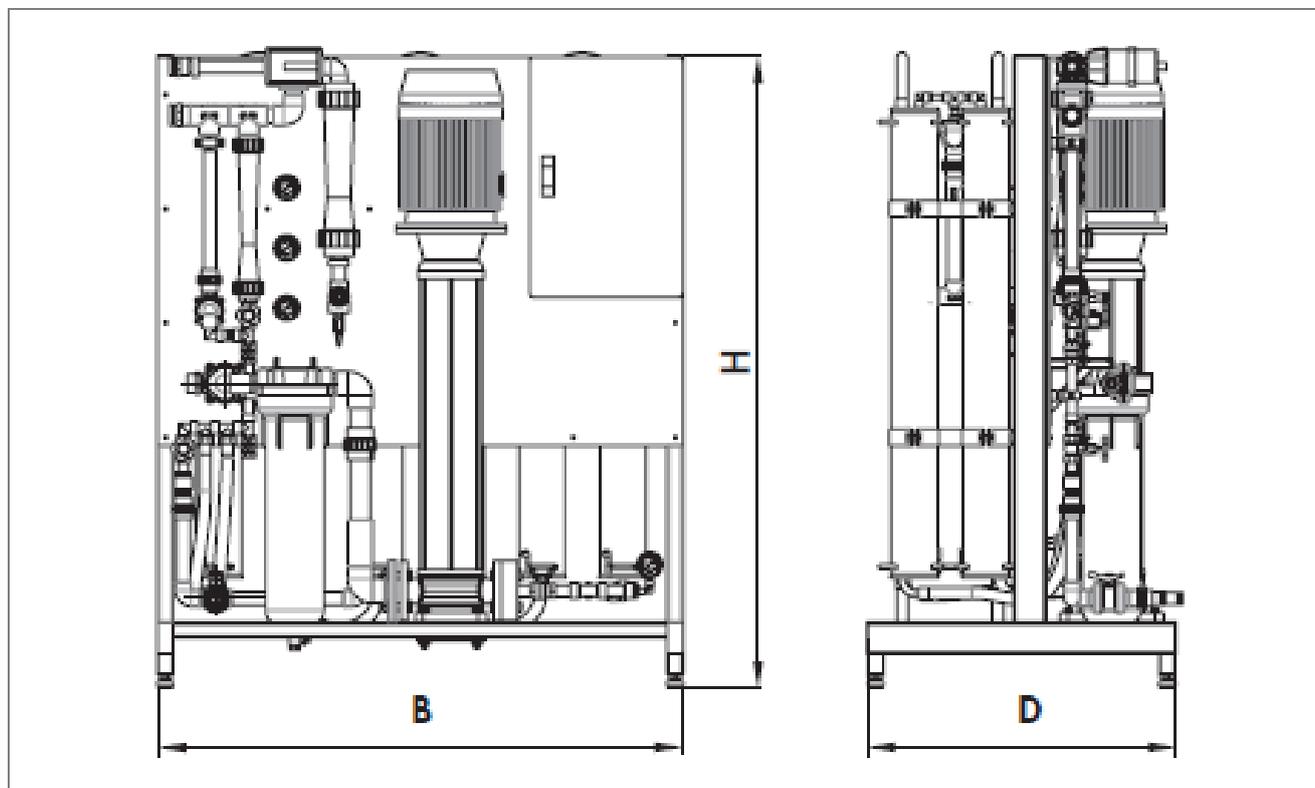
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## Technical data:

BWT PERMAQ® Pro 2500	Unit	2510	2520	2530	2540
Nominal permeate performance *	l/h	3100	4300	5100	6200
Salt reduction	%	>98			
Water utilisation WCF (max) **	%	75			
Inlet pressure (min/max)	bar	3/7			
Electrical connection	V / Hz	3 x 400 / 50			
Fuse	A	20			25
Pump motor size	kW	5.5			7.5
Protection class	IP	54			
Raw water temperature	°C	5 – 25			
Ambient temperature	°C	5 – 35			
Inlet	"	1 ½			
Outlet	"	1			
Drain	"	1 ¼			
Width	mm	1300			
Depth	mm	780			
Height	mm	1630			
Weight (dry), approx.	kg	261	323	355	387
Product number		421072515	421072525	421072535	421072545

\* For water quality of: 10°C, 3 bar, TDS ≤ 500 mg/l ± 15%, SDI ≤ 3.0, oxidants ≤ 0.05 mg/l.

\*\* Based on a water quality of TDS ≤ 500 mg/l, with softening as a pre-treatment.





## BWT OP PRO

### PRODUCTION OF CHLORINE DIOXIDE using diluted NaClO<sub>2</sub> and HCl solutions.

#### General

BWT OP PRO systems produce chlorine dioxide using diluted solutions of sodium chlorite (NaClO<sub>2</sub> 7.5%) and hydrochloric acid (HCl 9%). They are available in four capacity levels, producing 5, 10, 30 and 60 g/h of chlorine dioxide. These are sufficient to treat up to 150 m<sup>3</sup> of drinking water per hour at the maximum admissible concentration of 0.4 mg/l ClO<sub>2</sub>. Chlorine dioxide is produced on demand from diluted solutions using the reliable sodium chlorite/hydrochloric acid method, in accordance with the German Drinking Water Directive.

The chlorine dioxide solution produced is stored in an integrated or external batch tank and is added to the drinking water system as required using the integrated dosing pump or an external dosing pump.

#### Applications

An ideal means of ensuring the purity of drinking water is to use chlorine dioxide as a disinfectant. Chlorine dioxide is highly effective against all types of germs and has a long dwell time in the tubing system, which means it disinfects even without re-dosing. The big advantage of chlorine dioxide over other disinfectants is its effectiveness against biofilms. It destroys the existing biofilm, thus removing the breeding ground for microorganisms, and prevents it from building up again.

Ideal application areas for BWT OP PRO include combating germs and pathogens, such as legionella in building installations, and disinfecting small cooling water systems or drinking water in water plants or industrial processes.

Chlorine dioxide is often used in the food and beverage industry for disinfection of process water or for CIP and bottle washing because it doesn't change the taste or smell of the treated water.

#### No chance for pathogens

Legionella are rod-shaped bacteria that quickly reproduce in temperatures between 30 and 40 °C. They can enter the lungs when a person inhales aerosols containing Legionella when showering. Legionella can cause a life-threatening form of pneumonia known as legionellosis. The ideal breeding ground for legionella in drinking water systems can be found in biofilm, a slimy layer on the inside of water pipes, where other pathogens also build up and reproduce. Legionella also establish themselves in amoebae, which offer them protection against conventional disinfection methods.

Using BWT OP PRO ensures reliable removal of the biofilm with all pathogens and Legionella present in piping and prevents reinfestation. BWT OP 5 and BWT OP 10 systems are designed for small or medium-sized buildings with water flows up to 25 m<sup>3</sup>/h. BWT OP 30 and BWT OP 60 systems are suited for disinfection tasks in waterworks or applications in the food and beverage industry.

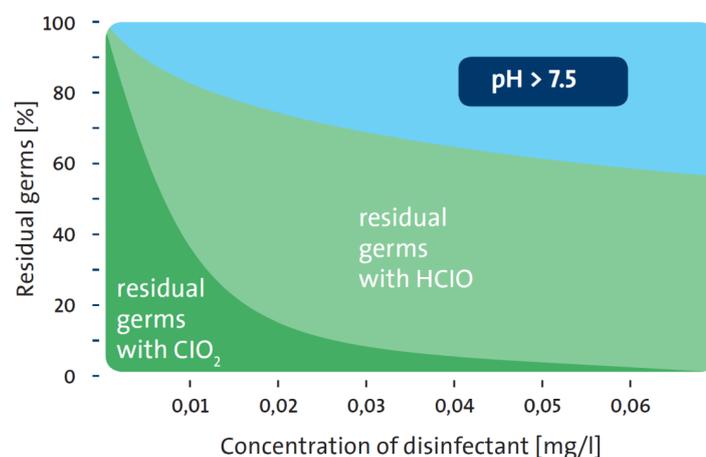
#### Benefits of the BWT OP PRO system

- Compact system, also for confined spaces
- Low operating costs
- Stable product solution, can be stored for several days
- Integrated measured value logging
- Little installation work
- Robust design

## Technical Information

<b>Capacities</b>	<b>OP 5</b> 5 g/h ClO <sub>2</sub> <b>OP 10</b> 10 g/h ClO <sub>2</sub>	<b>OP 30</b> 30 g/h ClO <sub>2</sub> <b>OP 60</b> 60 g/h ClO <sub>2</sub>
<b>Protection level</b>	IP 65 electronics, dosing pumps, solenoid valve	
<b>Admissible concentration of chemicals</b>	<ul style="list-style-type: none"> <li>HCl (according to EN 939) 9 percent by weight</li> <li>NaClO<sub>2</sub> (according to EN 938) 7.5 percent by weight</li> </ul>	
<b>Admissible temperature</b>	<ul style="list-style-type: none"> <li>Admissible ambient temperature: 5 to 35 °C</li> <li>Admissible operation water temperature: 10 to 30 °C</li> <li>Admissible chemicals temperature: 10 to 35 °C</li> </ul>	
<b>Admissible operation water pressure</b>	3 to 6 bars	
<b>Admissible relative air humidity</b>	Max. 80 % (not condensing)	
<b>Total volume of reaction tank and reservoir tank</b>	Reaction tank <b>OP 5</b> 1.00 litre <b>OP 10</b> 1.80 litres <b>OP 30</b> 6.10 litres <b>OP 60</b> 13.40 litres	Reservoir tank (up to max. level alarm) <b>OP 5</b> 1.00 litre <b>OP 10</b> 1.80 litres <b>OP 30</b> 7.00 litres <b>OP 60</b> 13.90 litres
<b>Filling volume of reaction tank and reservoir tank</b>	Reaction tank <b>OP 5</b> 0.87 litres <b>OP 10</b> 1.67 litres <b>OP 30</b> 5.52 litres <b>OP 60</b> 11.96 litres	Reservoir tank <b>OP 5</b> 0.87 litres <b>OP 10</b> 1.67 litres <b>OP 30</b> 6.50 litres <b>OP 60</b> 13.00 litres
<b>Concentration of chlorine dioxide solution</b>	2 g/l (2.000 ppm)	
<b>Material</b>	System rack PP Fastening sleeves stainless steel Solenoid valve PVC Reaction / reservoir tank PVC Internal hoses PTFE Gaskets FPM	
<b>Options</b>	<ul style="list-style-type: none"> <li>Integrated digital dosing pump DDI for product solution or integrated mechanical dosing pump DMI or DMX for product solution</li> <li><b>OP 5 and 10: without integrated dosing pump for product solution</b></li> </ul>	
<b>Connections</b>	ClO <sub>2</sub> dosing line 230 V hose 4/6 ( <b>OP 5 and 10</b> ), 9/12 ( <b>OP 30 and 60</b> ) 115 V hose 1/8" x 1/4" ( <b>OP 5 and 10</b> ), 1/4" x 3/8" ( <b>OP 30 and 60</b> ) Dilution water 230 V hose 6/9 or 6/12 or PVC pipe DN 8 115 V hose 1/4" x 3/8"	

## Effectiveness diagram



In the interest of product development, we reserve the right to alter the specification without prior notice. All photographs and dimensions are guidance for guidance only. Terms and conditions apply. E&EO.



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FOR YOU AND PLANET BLUE.

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