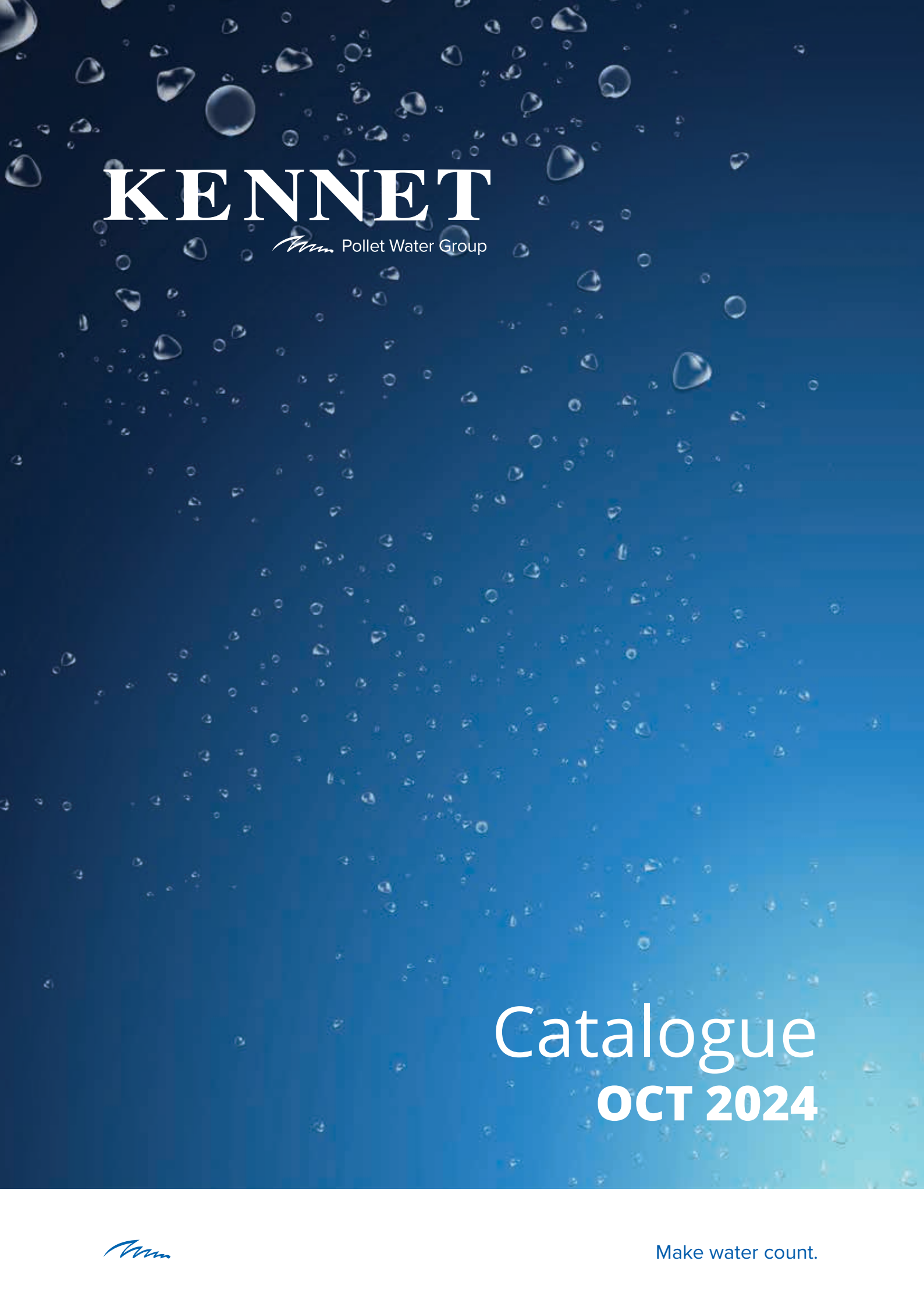




KENNET

 Pollet Water Group

Catalogue
OCT 2024



Make water count.

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If you require any extra copies of the catalogue, or an electronic copy please let us know:
Parts list / price lists are also available on request.

Check out our website with more product information, technical data and manuals.

Valve spare parts list also available - please ask for a copy.

01

CHAPTER 01

DOMESTIC SOFTENERS

ELECTRIC DOMESTIC WATER SOFTENERS

Electric softeners are probably the most reliable softeners on the market. As well as being reliable the simple programming allows high efficiency and low running costs; many also allow historical data to be retrieved for analysis.



Micro
(new smaller model)

- single appliances,
- 1 bed houses, flats



Coral A

- 1-5 bed houses, water saving and high flow versions available



Teal

- 1-5 bed houses
- budget softener



Swan

- 3+ bed houses, B&Bs, offices, canteens



Coral C

- 1-5 bed houses
- Clack 1" Valve with 3/4 or 1" tails

DOMESTIC SOFTENERS

Micro Range (small houses or single appliances - dishwashers)

Ideal softeners to use for small properties / single occupancy properties or single appliances in the home and businesses; these are commonly used in pubs and restaurants with dishwashers, glasswashers where soft water will improve results.

Units built with Autotrol 368 valve, white cabinet, ¾" ports

Inlet/outlet/drain ¾", max flow 3.7 m³/hr, pressure 1.5 to 8 bar

Reference	Config	Volume	Valve	Item Name	Details
15007000019	C00001	4L	368 meter	Micro Range 368 meter - 4L	667 litres capacity @ 300ppm CaCO ₃ White Cover
15007000064	C00001	4L	79B	Micro Range F79 - 4L	667 litres capacity @ 300ppm CaCO ₃ no Cover



NEW smaller model

368 valve from Autotrol

Small

Designed for small households or single appliances.

Reliable

Uses ultra reliable Autotrol valves

Efficient

Uses 1/2 kg of salt per regeneration

Height	Width	Depth
440 mm	225 mm	430 mm

DOMESTIC SOFTENERS

Coral Range (Ideal softener for most houses, to 2/5 bedrooms)



Standard

Available in time or meter control

High Flow

Perfect for customers with high flow requirements

Eco

Meets the Energy Saving Trust Requirements

Model	Coral 10L	Coral 15L	
Width	280 mm	280 mm	
Height	530 mm	620 mm	
Depth	490 mm	490 mm	
Capacity @300ppm Softened water between regenerations @ 300ppm hardness	1667 L	2500 L	
Water area type	Moderately hard	Moderately hard	Very hard
N° one of people in the houshold	1 to 3	4 +	1 to 4+

Standard Coral: Time

Built with (WRAS listed) 255-740 valve: Inlet/outlet/drain 3/4", pressure 1.5 to 8 bar

Reference	Config	Volume	Salt	Details
15007000016	C00001	10L	1.5 Kg salt	1667 litres @ 300ppm CaCO ₃
15007000082	C00001	15L	2.2 Kg salt	2500 litres @ 300ppm CaCO ₃

Standard Coral: Metered

Built with (WRAS listed) 255-760 valve: Inlet/outlet/drain 3/4", pressure 1.5 to 8 bar

Reference	Config	Volume	Salt	Details
15007000015	C00001	10L	1.5 Kg salt	1667 litres @ 300ppm CaCO ₃
15007000081	C00001	15L	2.2 Kg salt	2500 litres @ 300ppm CaCO ₃

DOMESTIC SOFTENERS

Coral Range (Ideal softener for most houses, to 2/5 bedrooms)

High Flow Coral Metered (max flow 95 l/min)

Built with (WRAS listed) 268-760/762 valve: Inlet/outlet 1", drain 3/4", 1.5 to 8 bar

Reference	Config	Volume	Salt	Details
15007000017	C00001	10L	1.5 Kg salt	1667 litres @ 300ppm CaCO ₃
15007000018	C00001	15L	2.2 Kg salt	2500 litres @ 300ppm CaCO ₃

ECO Coral Metered 17% Extra capacity, 40% water saving

Built with (WRAS listed) 255-762 valve: Inlet/outlet/drain 3/4", pressure 1.5 to 8 bar

Reference	Config	Volume	Salt	Details
15007000083	C00001	10L	1.5 Kg salt	1900 litres @ 300ppm CaCO ₃
15007000084	C00001	15L	2.2 Kg salt	2900 litres @ 300ppm CaCO ₃

The ultimate Eco softener using uniform beads with high mechanical strength, less susceptibility to chlorine attack and a greater hardness capacity combined with our water saving technology makes our most economical softener yet using less salt and water per year.

DOMESTIC SOFTENERS

Coral Range - Coral Clack

A compact cabinet using the Clack WS1 valve with 5 buttons and an LCD display. Designed for use in domestic and commercial environments.



Model	Coral Clack 10L	Coral Clack 15L
Width	280 mm	280 mm
Height	530 mm	620 mm
Depth	490 mm	490 mm
Capacity @300ppm Softened water between regenerations @ 300ppm hardness	1667 L	2500 L

Coral Clack WS1 CI Digital Metered

Built with WS1CI : Inlet/outlets 3/4", Pressure 1.5 to 8 bar

Reference	Config	Volume	Salt	Details
15007000070	C00004	10L	1.5 Kg salt	1667 litres @ 300ppm CaCO ₃
15007000071	C00006	15L	2.2 Kg salt	2500 litres @ 300ppm CaCO ₃

Coral Clack WS1 CI : Low Fouling Resin (For Iron & Manganese reduction)

Built with WS1CI : Inlet/outlets : 1", Pressure 1.5 to 8 bar

Reference	Config	Volume	Salt	Details
15007000071	C00007	15L	2.2 Kg salt	2500 litres @ 300ppm CaCO ₃

DOMESTIC SOFTENERS

Teal Water Softener Range

A budget softener in price but not quality. Quality injection moulded cabinet with a metered valve on top. 10 and 15 L versions available.

Teal Metered Water Softener

Inlet/outlet ¾", pressure 1.5 to 6 bar

Reference	Config	Volume	Salt	Details
15007000066	C00001	10L	1.5 Kg salt	1667 litres @ 300ppm CaCO ₃
15007000065	C00001	15L	2.2 Kg salt	2500 litres @ 300ppm CaCO ₃
10507000033				Salt Block Holder (for 2 x 4Kg block salt)



Model	Height	Width	Depth
10L	550 mm	315 mm	470 mm
15L	550 mm	315 mm	470 mm

- ¾" connections
- Simple programming
- Digital display
- Meter controlled

DOMESTIC SOFTENERS

Swan Range (larger houses, B&Bs, Hotels, Offices)

Housed in a white cabinet with, blue hood these units allow higher resin volumes as they are taller than the other ranges. The new Swan range has a more robust cabinet handling the roughest treatment. These size units are very good when the hardness is very high as they can hold more salt or if more capacity and flow is required.



Stylish and exclusive cabinet

New design cabinet exclusive to us

Efficient water use

Very low regeneration water usage (<4% of capacity)

For the larger house or businesses

Height	Width	Depth
1190 mm	325 mm	520 mm

Units built with Autotrol Logix 255-740 digital TIME control (¾" ports)

Built with (WRAS listed) 255-740 valve: Inlet/outlet/drain ¾", pressure 1.5 to 8 bar

Reference	Config	Volume	Salt	Details
15007000027	C00001	25L	3.7 Kg salt	4.2 m³ capacity @ 300 ppm
15007000029	C00001	30L	4.5 Kg salt	5 m³ capacity @ 300 ppm
15007000031	C00001	35L	5.2 Kg salt	5.8 m³ capacity @ 300ppm

Units built with Autotrol Logix 255-760 digital METERED control (¾" ports)

Built with (WRAS listed) 255-760 valve: Inlet/outlet/drain ¾", pressure 1.5 to 8 bar

Reference	Config	Volume	Salt	Details
15007000026	C00001	18L	2.7 Kg salt	3 m³ capacity @ 300 ppm
15007000030	C00001	30L	4.5 Kg salt	5 m³ capacity @ 300 ppm
15007000032	C00002	35L	5.2 Kg salt	5.8 m³ capacity @ 300ppm

DOMESTIC SOFTENERS

Swan Range (larger houses, B&Bs, Hotels, Offices)

Units built with Autotrol Logix 268-762 digital METERED control (1" ports)

Built with (WRAS listed) 268-762 valve: Inlet/outlet 1", drain 3/4", pressure 1.5 to 8 bar

Reference	Config	Volume	Salt	Details
15007000052	C00002	35L	5.2 Kg salt	5.8 m³ capacity @ 300ppm

Units built with Clack WS1 CI digital METERED controller (1" ports)

Built with WSCI1 valve: Inlet/outlet 1", drain 3/4", pressure 1.5 to 8 bar

Reference	Config	Volume	Salt	Details
15007000073	C00003	25L	3.7 kg salt	4.2 m³ capacity @ 300 ppm
15007000073	C00001	30L	4.5 Kg salt	5 m³ capacity @ 300 ppm
15007000073	C00002	35L	5.2 Kg salt	5.8 m³ capacity @ 300ppm
Low fouling resin (for high iron and manganese) and monospheric resin for 10% extra capacity				
15007000073	C00009	35L LFR	5.2 Kg salt	6.3 m³ capacity @ 300ppm

Units built with Clack WS 1.25 CI digital METERED control (1¼" ports)

Built with WS125CI valve: Inlet/outlet 1¼ ", drain 3/4", pressure 1.5 to 8 bar

Reference	Config	Volume	Salt	Details
15007000073	C00004	35L	5.2 Kg salt	5.8 m³ capacity @ 300ppm

02

CHAPTER 02

DOMESTIC RO & FILTRATION

DOMESTIC RO & FILTRATION

Domestic RO

Compact RO consisting of a combined RO and Storage Tank (8 litre) in an attractive two tone outer cabinet.

Pallas Enjoy Smart

Reference	Item Name	Colours	Dimensions mm	Kg
18032000043	Pallas Enjoy Smart SO (UK), no pump	Grey - White	280 x 430 x 550	11
18032000044	Pallas Enjoy Smart BP (UK), pumped,	Black - White	280 x 430 x 550	12



- 12" Inline 5 Micron Spun (Sediment) Filter
- 12" Inline GAC Coconut Carbon Cartridge Filter (UDF)
- 12" Inline Coconut Block Carbon Filter (CTO)
- 10" Inline Coconut Post Carbon Filter
- 75 GPD Membrane
- 8,3 Liter (2,2 US Gallon) Metallic Pressured Storage Tank
- Metallic Ball Valve 1/4"
- LF-30L Pump
- 304 SS faucet
- 24 Volt 1,2 Amp Adapter

Spare Parts

Reference	Search Name	Item Name
General		
18032000004	03000010	1812 - 80 GPD membrane
18032000017	23000005	2,2G Metal Pressured Storage Tank
18032000063	05702016	RO Faucet
18032000016	70260120	Pallas Enjoy Filter replacement kit
18032000083	05719040	Quick 5044 fittings 1/4", 1/4"T
SO (Shut Off) version		
18032000008	05706026	Shut-off valve 1/4"
BP (Booster Pump) version		
18032000058	05703000	75 GPD pump
18032000018	05703055	Transformer 24V 1,5A
18032000021	05710000	24V solenoid valve 1/4" NPT
18032000030	05715005	Leak detector

DOMESTIC RO & FILTRATION

Domestic RO

Compact RO giving about 1/2 l/min of RO grade water.

Pallas Enjoy Slim

Reference	Item Name	Colours	Dimensions mm	Kg
18032000046	Pallas Enjoy Slim DF (UK), pumped	Black	330 x 520 x 265	13.5



- 12" Inline 5 Micron Spun (Sediment) Filter
- 12" Inline GAC Coconut Carbon Cartridge Filter (UDF)
- 12" Inline Coconut Block Carbon Filter (CTO)
- 10" Inline Coconut Post Carbon Filter
- 2 x 150 GPD Membrane in direct flow (with pump)
- 24 Volt 1,2 Amp Adapter
- 304 SS faucet
- Metallic Ball Valve 1/8"

Spare Parts

Reference	Search Name	Item Name
18032000094	03000027	Pallas 2012 - 150 GPD membrane
18032000063	05702016	RO Faucet
18032000073	05703016	300 GPD pump
18032000013	05703067	Transformer 24V 3A
18032000021	05710000	24V solenoid valve 1/4" NPT
18032000016	70260120	Pallas Enjoy Filter replacement kit
18032000083	05719040	Quick 5044 fittings 1/4", 1/4"T

DOMESTIC RO & FILTRATION

Domestic RO

5 stage RO and separate storage tank with and without pump. 3 bar is recommended for non pumped version.

Pallas Viva 5T SO, non pumped

Reference	Item Name	Dimensions mm	Kg
18032000032	Viva 5T-SO (UK)	425 x 570 x 325	11.5



- 10" White Opaque Housing (Double O-Ring)
- 10" 5 Micron Spun (Sediment) Filter
- 10" GAC Carbon Cartridge Filter (UDF)
- 10" Block Carbon Cartridge Filter (CTO)
- 10" Inline Coconut Post Carbon Filter
- 75 GPD Membrane
- 12,11 Liter (3,2 US Gallon) Metallic Pressured Storage Tank
- 304 SS faucet
- Automatic Shut-Off Valve

Pallas Viva 5T BP, pumped

Reference	Item Name	Dimensions mm	Kg
18032000033	Viva 5T-BP (UK)	425 x 570 x 325	15

- 10" White Opaque Housing (Double O-Ring)
- 10" 5 Micron Spun (Sediment) Filter
- 10" GAC Carbon Cartridge Filter (UDF)
- 10" Block Carbon Cartridge Filter (CTO)
- 10" Inline Coconut Post Carbon Filter
- 75 GPD Membrane
- 12,11 Liter (3,2 US Gallon) Metallic Pressured Storage Tank
- 304 SS faucet
- LF-30L Pump
- 24 Volt 1,2 Amp Adapter



Spare Parts

Reference	Search Name	Item Name
18032000001		Pallas Viva Filter kit , (4 filters)

DOMESTIC RO & FILTRATION

Domestic RO

6 stage RO and separate storage tank with pump. 6th stage is a UV

Pallas Viva 6T with frame

Reference	Item Name	Dimensions mm	Kg
18032000037	Viva 6T-BPUV with frame (UK), pumped with UV	530 x 500 x 380	17



- 10" White Opaque Housing (Double O-Ring)
- 10" 5 Micron Spun (Sediment) Filter
- 10" GAC Carbon Cartridge Filter (UDF)
- 10" Block Carbon Cartridge Filter (CTO)
- 10" Inline Coconut Post Carbon Filter
- UV system
- 75 GPD Membrane
- 12,11 Liter (3,2 US Gallon) Metallic Pressured Storage Tank
- 304 SS faucet
- LF-30L Pump
- 24 Volt 1,2 Amp Adapter
- Stand type Bracket
- Automatic Shut-Off Valve

Spare Parts

Reference	Search Name	Item Name
General		
18032000088	23000010	3.2G Metal storage tank
18032000063	05702016	RO Faucet
18032000004	03000010	1812 - 80 GPD membrane
18032000001	Pallas Viva Filter kit , (4 cartridges, sed, CTO, GAC, post C)	
18032000083	05719040	Quick 5044 fittings 1/4", 1/4" T
SO (Shut Off) version		
18032000008	05706026	Shut-off valve 1/4"
BP (Booster Pump) version		
18032000021	05710000	24V solenoid valve 1/4" NPT
18032000058	05703000	75 GPD pump
18032000018	05703055	Transformer 24V 1,5A

DOMESTIC RO & FILTRATION

Domestic RO

5 stage RO direct feed with a 500 GPD membrane and pump. Gives about 1 l/min. Designed for intermittent use.

Palles EF500 Approx 1000L/day

Reference	Item Name	Dimensions mm	Kg
18032000039	Pallas Direct Flow EF-500 with pump & frame	430 x 530 x 270	15

- Direct flow
- 10" White Opaque Housing (Double O-Ring)
- 10" 5 Micron Spun (Sediment) Filter
- 10" GAC Carbon Cartridge Filter (UDF)
- 10" Block Carbon Cartridge Filter (CTO)
- 500 GPD membrane
- 500 GPD Pump
- Adapter
- 304 SS faucet
- Manometer (10 Bar)



Spare Parts

Reference	Search Name	Item Name
13132000017	80001000	Cartridge 10" 5μ sediment
18032000022	07102005	Cartridge 10" GAC
18032000023	07102011	Cartridge 10" CTO
18032000091	03000031	3012 - 500 GPD membrane
18032000063	05702016	RO Faucet
18032000024	05703018	500 GPD pump
18032000025	05703075	500 GPD transformer
13132000004	81001000	Pallas Inline HND Post Carbon Coconut 12"

DOMESTIC RO & FILTRATION

Domestic RO

5 stage RO direct feed with 2 x 500 GPD membranes and pumps. Gives about 2 l/min. Designed for intermittent use.

Pallas RO1000 Approx 3000 l/day

Reference	Item Name	Dimensions mm	Kg
18032000041	Pallas Direct Flow RO1000	515 x 880 x 390	40



- 20" BB Sediment Filter/ Housing
- 20" BB Carbon Filter/Housing
- 12" Post Carbon Filter
- 2 x 500 GPD Membranes/Pump

Spare Parts

Reference	Search Name	Item Name
18032000063	05702016	RO Faucet
18032000091	03000031	3012 - 500 GPD membrane - 2 required
13132000044	80003030	20" BB Sediment Cartridge 5μ
13132000046	07007075	20" BB Carbon Filter
13132000004	81001000	Pallas Inline HND Post Carbon Coconut 12"
18032000024	05703018	500 GPD pump - 2 required

DOMESTIC RO & FILTRATION

Domestic RO

PRF-RO is a compact RO which supplies constantly RO water, without the need of electric pumps or storage tanks.

PRF-RO

Reference	Item Name	Dimensions mm
18042000004	PRF RO (with faucet)	246 x 431 x 515

- 70 litres/hr at 10 °C & 60 psi
- "On demand" system, constant flow, no storage tank required
- No pump or electricity needed, works with water pressure: 2,76 bar
- Constant efficiency of the membrane (22 %)
- Made out of shock resistant PVC
- Compact and elegant
- Custom high flow faucet (with integrated airgap)



Components

Reference	Item Name
18042000002	PRF-RO Membrane (2 required)
18042000003	PRF-RO Carbon pre-filter
18042000001	PRF-RO Carbon postfilter

DOMESTIC RO & FILTRATION

Drinking Water Filter Kit

Drinking Water Filter Kit		
Reference	Config	Item Name
13699000006	C00001	Drinking water filter kit - Basic includes- faucet, tubing, saddle valve filter cartridge
13699000007	C00001	Drinking water filter kit - Premium carbon filter to improve taste & odour, - silver impregnated includes- upgraded faucet, tubing, saddle valve filter cartridge
13699000003	C00001	Drinking water filter cartridge (silver impreg) - Premium
13132000057		Drinking water filter cartridge (GAC) - Basic



Basic Kit



Premium Kit

Filter Systems - include housing, bracket, faucet - one includes UV etc

Includes faucet, housing, self piercing valve, bracket and spanner. Specify filters to be included separately.
Complete under sink filter system with faucet.

Filter Systems		
Reference	Config	Item Name
13699000004	C00001	Under sink single stage filter kit



DOMESTIC RO & FILTRATION

Cartridge Filters

2PCS FILTERS

European made, x2 piece housing, bowls in PET, transparent and white, pressure relief. 1/4" to 3/4" ports.
Includes wrench, bracket and screws in a sturdy box.



2PCS Filters

Reference	Item Name	Connections	Box Qty
13050000033	2 PCS Filters housing 10", white 1/4"	1/4"	12
13050000034	2 PCS Filters housing 10", clear 1/4"	1/4"	12
13050000035	2 PCS Filters housing 10", white 3/8"	3/8"	12
13050000036	2 PCS Filters housing 10", clear 3/8"	3/8"	12
13050000037	2 PCS Filters housing 10", white 1/2"	1/2"	12
13050000038	2 PCS Filters housing 10", clear 1/2"	1/2"	12
13050000031	2 PCS Filters housing 10", white 3/4"	3/4"	12
13050000032	2 PCS Filters housing 10", clear 3/4"	3/4"	12
13050000053	2 PCS Antimicrobial housing 10", clear	3/4"	12

10% discount for box quantities



Accessories

Reference	Item Name
13050000006	Wall Bracket S, white for DP Range
13050000063	Wrench, X for DP range
13099000003	FH-Screw stainless steel - 4 required
13050000024	O-Ring Housing 2P DP

DOMESTIC RO & FILTRATION

Cartridge Filters

PALLAS 3PCS FILTERS

The filters are supplied with a spanner and a wall bracket. For the other filter sizes, you need to order them separately. To ensure the proper functioning of the filters, we recommend that you replace the bowl every 5 years.



Pallas 3PCS Filters			
Reference	Item Name	Connections	Box Qty
13050000002	3PCS Filters 5", Clear 3/4"	3/4" F	12
13050000022	3PCS Filter 10", Blue 3/4" F	3/4" F	12
13050000017	3PCS Filters 10", Clear 3/4"	3/4" F	12
13050000020	3PCS Filters 10", Clear 1"	1" F	12
13050000044	3PCS Filter 20", Blue 3/4" F	3/4" F	6
13050000046	3PCS Filters 20", Clear 1"	1"	6
13050000045	3PCS Filters 20", Clear 3/4"	3/4" F	6

10% off for box quantities



Pallas 3PCS Duplex Filters		
Reference	Item Name	Connections
13050000011	3PCS Duplex Filters 10", Clear 3/4" BSP	3/4"
13050000028	3PCS Duplex Filters 20" Clear, 3/4"	3/4"
13050000049	3PC Duplex Filters 20", Clear 1"	1"



Pallas 3PCS Filters	
Reference	Item Name
13050000018	Wrench
13050000013	O-ring
13150000045	Single Wall Bracket
13050000001	Double Wall Bracket

DOMESTIC RO & FILTRATION

Cartridge Filters

PALLAS RAINMASTER

Pallas Rainmaster

Reference	Item Name	Connections
13050000030	Hydra Rainmaster Trio - 3/4"	3/4"
13050000040	Hydra Single, 90 micron, flow 5300l/hr, stainless steel	3/4"
13050000042	Hydra Single, 90 micron Polyester 1", flow 6000 l/hr	1"
13050000061	Hydra Single Big 90 Micron, Flow 15 m3/hr	1.5"

→ Three-step filtration:

1. Selfcleaning/backwash pre-filter at 90 micron
2. Sediment filtration at 25 micron
3. Activated carbon filtration to remove odors and colors

→ Maxflow: 2500 L/hr Trio



Accessories

Reference	Item Name
13050000008	X - Spanner Black
13150000010	Washable Filtrecartridge Stainless Steel 90 µ
13132000022	10" Wound Sediment Filter Cartridge 25µ (ACS)
13150000032	Filtercartridge CTO AF 10" x 2.5



Stainless
steel 90µ



25µ
wound



CTO

DOMESTIC RO & FILTRATION

Cartridge Filters

FILTERS

Sediment filter cartridges are a cost effective approach to removing particulates in water (turbidity). There is often a balance to be taken on choosing a filter which removes very small particles with one which can handle faster flows. Antimicrobial filters contain silver which is a natural element which reduces bacteria growth on the filters.

Antimicrobial Filters

Reference	Item Name	Box Qty
13150000088	Wound Antimicrobial Filter 10", 1 µ	12
13150000089	Wound Antimicrobial Filter 10", 5 µ	12
13150000090	Wound Antimicrobial Filter 10", 25 µ	12

10" SEDIMENT FILTERS (SLIM 10" X 2.5")

10" Sub Micron Sediment and bacteria reduction

Reference	Item Name	Box Qty
13150000080	Pleated glass sediment filter 0.45 µm 1000 l/hr	10
13150000015	10" AC Pleated Glass Sediment Filter Cartridge 0.2 µ	10



0,45 micron



0,2 micron

5" & 10" Spun Polypropylene Cartridges often look like cotton wool

Reference	Item Name	Box Qty	Flow rate
13150000012	Spun Sediment Filter 5µm, 5"	50	approx 500l/hr
13132000023	Spun Sediment Filter, 1µm, 10"	50	approx 800l/hr
13132000016	Spun Sediment Filter 5µm, 10"	50	approx 1500l/hr
13132000025	Spun Sediment Filter, 10µm, 10"	50	approx 2000l/hr
13132000013	Spun Sediment Filter, 25µm, 10"	50	approx 2500l/hr
13150000052	Spun sediment, 1µm, 10"	50	approx 800l/hr
13150000053	Spun sediment, 5µm, 10"	50	approx 1500l/hr
13150000054	Spun sediment, 10µm, 10"	50	approx 2000l/hr
13150000055	Spun sediment, 25µm, 10"	50	approx 2500l/hr

10% off for box quantities

DOMESTIC RO & FILTRATION

Cartridge Filters

10" Spiral Wound Cartridges look like balls of wool or yarn

Reference	Config	Item Name	Box Qty
13132000049		10" Wound Sediment Budget Filter Cartridge 5 µ	50
13132000022		10" Wound Sediment Budget Filter Cartridge 25 µ	50
13150000020		10" Wound Sediment Filter Cartridge 1 µ	50
13150000006		10" Wound Sediment Filter Cartridge 5 µ	50
13150000040		10" Wound Sediment Filter Cartridge 10 µ	50
13150000016		10" Wound Sediment Filter 25 um, flow 2000 l/hr	50
13150000005		10" Wound Sediment Filter Cartridge 50 µ	50
13150000018		10" Wound Sediment Filter Cartridge 100 µ	50

10" Pleated Cartridges (Sediment removal)

Reference	Config	Item Name	Box Qty
13150000056		10" Pleated Sediment Filter Cartridge 25 µ	50
13150000083		10" Washable Polyester Netting Filter Cartridge 50 µ	50

20" Sediment Filter Cartridges - (Slim 20" x 2.5")

Reference	Config	Item Name	Box Qty
20 Inch Spun Polypropylene Cartridges			
13132000037		Spun sediment filter, 1 micron, 20" flow rate 1400l/hr	25
13132000015		Spun sediment filter, 5 micron, 20" flow rate 2700l/hr	25
13132000038		Spun Sediment Filter, 10 microm. 20" flow rate 3000l/hr	25
13132000039		Spun sediment filter, 25 micron, 20" flow rate 4500l/hr	25
20 Inch Wound Cartridges			
13150000043		Sediment filter, 5 micron, 20" flow rate 3000l/h	25
13150000029		Sediment filter, 10 micron, 20" flow rate 3000l/h	25
13150000022		Sediment filter, 25 micron, 20" flow rate 3000l/h	25
13150000091		Sediment filter Anti Microbial 5 um. flow rate 3000l/h	25
20 Inch Pleated Cartridges			
13150000058		Pleated sediment filter, 25 um, 20" high flow rate 4000l/hr	25
13150000059		Pleated sediment filter, 50 um, 20" washable flow rate 4000l/hr	25

30 and 40 inch Filters are with MultiCartridge filters later in the chapter

DOMESTIC RO & FILTRATION

10" Carbon Filters (Slim 10" x 2.5)

Granular activated carbon (GAC) filters are used to remove chlorine, pesticides and organics from water. The removal of these type of compounds often improves the taste and odour of the water. When GAC is pressed with a mesh the carbon filter becomes a "block" which both adsorbs the chemicals and acts as a sediment filter.

10" Granular Activated Carbon Filters (GAC)

Reference	Config	Item Name	Box Qty
13132000010		Pallas carbon GAC 10" - medium quality flow rate 500l/hr	25
13142000024		GAC - Pentek CC10, coconut 10" Best quality flow rate 500l/hr	25
13150000082		10" 25 µm carbon filled element, sediment/GAC flow rate 500l/hr	50
13150000077		GAC 10" Cartridge LA 10 SX TS (coconut) flow rate 500l/hr	12

10" Block Carbon Filters

Reference	Config	Item Name	Box Qty
13132000047		Block Carbon Cartridge Filter (CTO) 10"	25
13150000050		Carbon block, 5 µm, 10" (Matrix) - High quality flow rate 300l/hr	20
13150000061		Silver impregnated carbon block 0.3µm, 300 l/hr flow rate 250l/hr	20
13199000003		CBR/2 10", lead/cyst removal (Pentek)	20

Nominal 0.5 micron, lead reduction 99.95% reduction of Cryptosporidium, Giardia cysts High capacity chlorine taste and odour reduction

20" Carbon Filters

20" Carbon Filters

Reference	Config	Item Name	Box Qty
13132000006		Budget Granular carbon, 20" flow rate 500l/hr	20
13132000012		Budget Carbon block, 20" flow rate 500l/hr	20
13142000016		Carbon Block, 20", 10µm flow rate 450l/hr	20
13142000003		Carbon impregnated pleated (high flow 19 l/min) flow rate 1100l/hr	20

DOMESTIC RO & FILTRATION

10" Special media Filters

All these filters fit inside a standard 10" slim filter housing. We can make many specialist filters , give us a call.

10" Special Filters			
Reference	Config	Item Name	Box Qty
13199000001	C00002	DI cartridge, 10" - removes all ions	20
13199000001	C00001	DI (colour change) cartridge, 10"	20
13150000057		10" Nitrate reduction filter, 14,000 mg NO ₃ at 80 l/hr. At 50 mg/l =360 litres	12
13199000008		10" Fluoride reduction, activated alumina, 4,500 mg F at 240l/hr (At 1.5 mg /l F = 3000 litres)	25
13199000001	C00003	Remineralisation cartridge	20
13199000001	C00004	Softening cartridge	20
13199000001	C00005	Arsenic reduction filter	20
13199000001	C00007	Organic Scavenger (Colour) Reduction filter	20
13199000001	C00008	Charcoal (metal and fluoride reduction)	20
13199000001	C00009	Dealkalinity cartridge (removes carbonate)	20
13150000047		Empty cartridge,10" x 2.5"	50
13165000013		Watts Empty Cartridge (screw cap) 10"	24

20" Special Media Filters			
Reference	Config	Item Name	Box Qty
13165000012		Watts Empty Cartridge (Screw Cap) 20" x 2.5"	12

10% off for box quantities

DOMESTIC RO & FILTRATION

10" Antiscale & Taste Filters (Polyphosphate/GAC)

DOSAPROP

Anti-scale systems with proportional dosing. European made, 3 piece, transparent and blue housing, ports 3/4" BSP brass inserts and pressure relief. For the treatment of drinking water, in compliance with EU directive 98/83/CE. The Atlas Filtri proportional dosing system is equipped with a special suction device which makes use of the "venturi effect" dosing the main water flow with polyphosphate in accordance with the European regulation thus reducing scale. Maximum hardness is 500ppm.

10" Anti Scale Systems Dosaprop Plus 3P HA (proportional dosing)

Reference	Config	Item Name	Box Qty
13150000064		10" Polyphosphate and GAC (Taste and scale)	12
13150000066		10" Polyphosphate scale removal (non proportional)	12

Reference	Config	Item Name	Box Qty
13167000001		10" Dosaprop Housing with 3/4" Ports	12
13050000064		Polyphosphate Crystals 1.5Kg	12



13150000066
10" Polyphosphate scale removal

DOMESTIC RO & FILTRATION

10" & 20 " Big Filter Housings (BBs)

10" & 20 " Big Filter Housings (BBs) (4.25" diam)			
Reference	Config	Item Name	Box Qty
13050000056		10" Big (Blue), wrench & bracket, 1" BSP	4
13050000025		10" Big (Clear), wrench & bracket, 1" BSP	4
13050000057		20" Big (blue), wrench & bracket, 1"BSP	4
13050000058		20" Big (clear), wrench & bracket, 1"BSP	4
13050000059		20" Big (blue), wrench & bracket, 1.5"BSP	4
13050000060		20" Big (clear, wrench & bracket, 1.5"BSP	4
13050000070		O Ring for bowls	
13050000055		Bracket	

10% off for box quantities



DOMESTIC RO & FILTRATION

10" For "BIG" Filters BB

10" For "BIG" Filters BB (10 x 4.25 diam)

Reference	Item Name	Flow Rates	Box Qty
13132000045	Carbon block, 5um 10" BB Budget range	700l/hr	12
13132000042	Spun PP filter, 5 um. 10" BB	2500l/hr	18
13132000043	Spun PP filter, 25 um. 10" BB	2500l/hr	18
13150000065	Wound sediment filter 5 um. 10" (typ 2m³/hr)	2500l/hr	12
13150000051	Wound sediment filter 25 um. 10"	2500l/hr	12
13142000018	Pleated reusable filter, 20 um. 10", Pentek ECP20	230l/hr	10
13150000093	Wound Sediment Anti Microbial 10" BB 5 um	2500l/hr	12
13165000014	Watts empty cartridge 10" BB		8

20" For BIG BB Filters

20" For BIG BB Filters (20" x 4.25" diam)

Reference	Item Name	Flow Rates	Box Qty
13132000046	20" BB Carbon Filter	1600l/hr	6
13142000008	Carbon block, 20" BB, Pentek EP20 high quality 5um	906l/hr	4
13142000015	Carbon GAC BB Pentek High quality	906l/hr	4
13150000092	20" BIG Wound Antimicrobial filter 5 micron	4000l/hr	6
13132000044	Spun PP 5 um 20" BB	4000l/hr	9
13132000040	Spun 10 um 20"BB	4000l/hr	9
13132000041	Spun PP 25 um 20" BB	4000l/hr	9
13150000013	Wound sediment filter, 1 um 20 x 4.25" BB	4000l/hr	6
13150000041	Wound sediment filter, 5 um 20 x 4.25" BB	4000l/hr	6
13150000081	Wound sediment filter 25 um 20 x 4.25" BB	4000l/hr	6
13150000067	Wound sediment filter, 50 um 20 x 4.25" BB	4000l/hr	6
13150000008	Wound sediment filter, 100 um 20 x 4.25" BB	4000l/hr	6
13142000019	Pleated reusable filter, 5 um 20" BB, Pentek	4500l/hr	6
13142000012	Pleated reusable filter, 20 um 20" BB, Pentek	4500l/hr	6
13165000015	Empty cartridge		4
13142000001	M.A.Z. Cartridge for iron reduction (treats 300,000 litres at 1ppm iron). (pH>7, low manganes)	1600l/hr	4

DOMESTIC RO & FILTRATION



Big Bag Filters & Housings Pentek

Pentek filter housings keep systems on stream longer by reducing bag filter change time. Applications include commercial water, food service, Industrial, & residential.

Big Bag Filters & Housings Pentek

Reference	Config	Item Name	Box Qty
13042000012		Big Blue Bag Vessel 20" Blue 1.5" BSP inc wrench	4
13142000022		Filter bag 20" 1µm (60lpm)	20
13142000021		Filter Bag 20" 5µm (60lpm)	20
13142000013		Filter Bag 20" - 25µm (60lpm)	20
13142000017		Filter Bag 20" - 50µm (60lpm)	20
13042000009		Bracket for BIG housing	
13042000004		Wrench for 20" housing	
13042000002		O Ring	



DOMESTIC RO & FILTRATION

Cintropur Filters

Made from synthetic material, CINTROPUR filters are suitable for drinking water.

The filter uses centrifugal spin to throw larger particles to the bottom of the filter bowl.

Pressure Rating: NW25 to NW 32 is 16 bar
NW500 and above 10 bar



Cintropur Filters

Reference	Config	Item Name	Connections
13351000073		Cintropur Filter NW 25 Max flow 5.5m³/hr (no guages)	1"
13351000053		Cintropur Filter NW 32 Max flow 6.5 m³/hr (no guages)	1.25"
13351000049		Cintropur Filter NW 500 Max flow 18m³/hr (two guages)	2"
13351000034		Cintropur Filter NW 800 Max flow 32m³/hr (two guages)	3"

Required accessories (bracket not included with housings)

Reference	Item Name
13351000100	Bracket for NW 18/25/32
13351000029	Bracket for NW 500/600/800

Replacement Sleeves

Reference	Item Name
13351000055	Set 5 Filtering sleeves type NW 25 - 5 µ
13351000031	Set 5 Filtering sleeves type NW 25 - 10 µ
13351000014	Set 5 Filtering sleeves type NW 25 - 25 µ
13351000096	Set 5 Filtering sleeves type NW 25 - 100 µ
13351000107	Set 5 Filtering sleeves type NW 25 - Nylon - 300 µ
13351000021	Set of 5 filtering sleeves type NW 32 - 5µ
13351000061	Set of 5 filtering sleeves type NW 32 - 25µ
13351000056	Set 5 Filtering sleeves type NW 500/620/750 - 5 µ
13351000092	Set of 5 filtering sleeves type NW 500/620/750 - 1µ
13351000088	Set 5 Filtering sleeves type NW 500/620/750 - 25 µ
13351000097	Set 5 Filtering sleeves type NW 500/620/750 - 100 µ
13351000089	Set 5 Filtering sleeves type NW 500/620/750 - Nylon - 300 µ

Spares

Reference	Item Name
13351000037	O ring for NW 18/25/32
13351000024	O ring for NW 500/650/800

DOMESTIC RO & FILTRATION

Multi Cartridges Filter

BIG BUBBA NON METALLIC FILTER HOUSINGS

The **Big Bubba** is made of a rugged glass reinforced polypropylene so it will not chip or rust, ideal for chemical compatability and seawater applications. Big Bubba filters are ideal for a wide range of applications including: whole house filtration, commercial filtration, RO pre filtration, sea water, replacements for bag filters and multiple filter systems.

- Maximum temperature 52°C @ 80 psi
- Maximum flow rate * 36 m³/hr
- Maximum flow rate (carbon) 56 L/min
- Maximum flow rate (1 micron absolute) 189 L/min
- Maximum working pressure 125 psi (8.75 bar)
- Connections 2" Solvent
- Overall height 40"
- Width (vessel OD) 12"



Big Bubba

Reference	Item Name	Connections	Flow Rate m³/h
13065000001	Big Bubba Filter Housing 2"	2" Solvent	36

Cartridges

Reference	Item Name
13165000002	Cartridge Big Bubba Activated Carbon Pleated 5 µ
13165000003	Cartridge Big Bubba Depth 1 µ
13165000005	Cartridge Big Bubba Depth 5 µ
13165000004	Cartridge Big Bubba Depth 20 µ
13165000006	Cartridge Big Bubba Depth 50 µ
13165000007	Cartridge Big Bubba Pleated 1 µ
13165000009	Cartridge Big Bubba Pleated 5 µ
13165000008	Cartridge Big Bubba Pleated 20 µ
13165000010	Cartridge Big Bubba Pleated 50 µ

DOMESTIC RO & FILTRATION

Multi Cartridges Filter

MULTI-ELEMENT FILTERS IN A STAINLESS STEEL HOUSING

Typical flow rates are 1m³/hr per ft of filter (3.5 m³/ 40") each.



→ eg 9 filters by 40" would give 36m³/hr (4m³ per filter)

Multi-Element Filters in a stainless steel housing

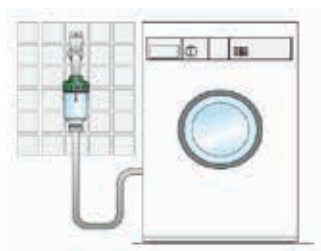
Reference	Config	Item Name	Box Qty
13452000010		Housing for 3 filters 40" long, 1 ½" BSP Normally stock item	
13452000006		Housing for 5 filters 40" long, 2" BSP	
13452000012		Housing for 7 filters 40" long, 2½" BSP Normally stock item	
13452000013		Housing for 9 filters 40" long, 2½" BSP	
13452000009		Housing for 13 filters 40" long, 3" BSP	
13452000005		Pallas Gem 17/40	
13452000018		Pallas Gem 25/40	
13452000019		Pallas Gem 40/40	
13452000001		Accessory kit (Req with all housings)	
13132000029		30" Spun 5 µm filter, 4000l/hr	25
13132000030		40" Spun 1 µm filter, 4000l/hr	25
13132000033		40" Spun 25 µm filter, 4000l/hr	25
13132000031		40" Spun 5 µm filter, 4000l/hr	25
13132000032		40" Spun 10 µm filter, 4000l/hr	25

10% off for box quantities

DOMESTIC RO & FILTRATION

In-line Filters

In-line Filters			
Reference	Config	Item Name	Box Qty
13050000043		Dosal - scale protection for WASHING MACHINES polyphosphate crystals in a plastic housing 3/4" size: 130mm x 68mm (h x diam)	100



10" In line Filters			
Reference	Config	Item Name	Box Qty
13699000003	C00001	Drinking Water Cartridge (silver impreg carbon)	10
13132000057		In line GAC 2" x 10", 1/4" NPT thread	25
13699000005	C00001	In line GAC 2" x 10", 1/4" push fit	25
13132000063	C00001	In Line remineraliser 4 in 1 with 1/4" push fit	
13099000004		In line empty cartridge, 2" x 10", 1/4" NPT	50
18099000006		Uf Membrane Housing	
18099000005		Uf Membrane For 1/4 NPT	

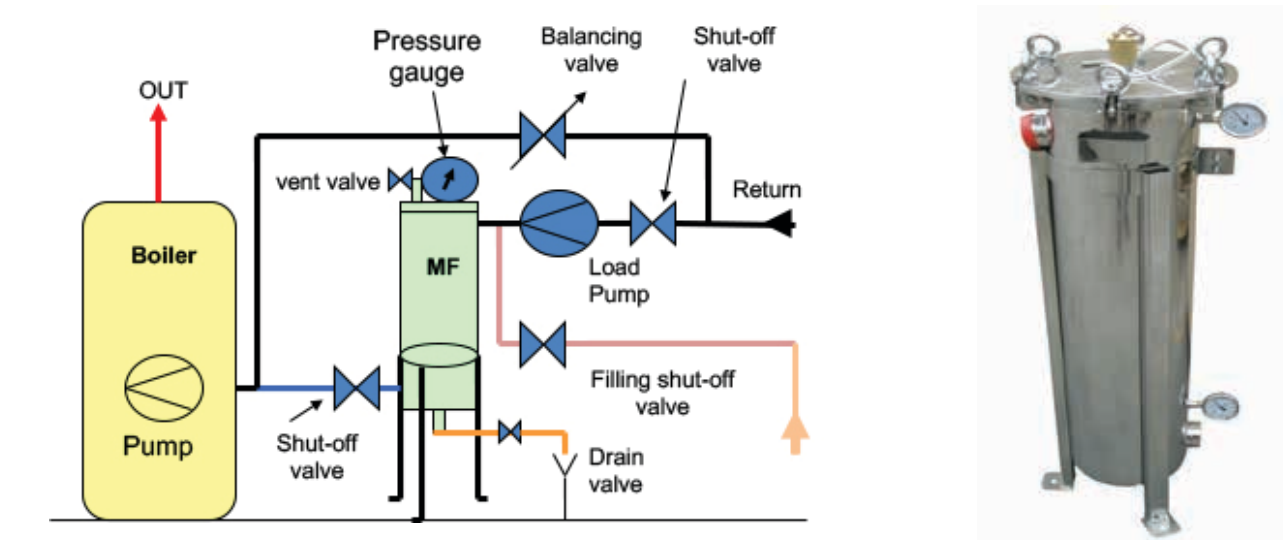


Re mineraliser (1716010010)

DOMESTIC RO & FILTRATION

Pallas Magnetic Filters

To remove sludge in closed heating, cooling and chilled circuits.



- ➔ Bag filter to remove sediment > 50µ
- ➔ Magnet to remove iron oxides

Pallas Magnetic Filters

Reference	Item Name
13560000085	Pallas Magnetic Filter Premium DN20 - 3/4" - 5m³ - BSP - 2 pressure gauges - 1 magnet - kit01
13560000081	Pallas Magnetic Filter Premium DN32 - 1"1/4 - 5m³ - BSP - 2 pressure gauges - 1 magnet - kit01
13560000082	Pallas Magnetic Filter Premium DN40 - 1"1/2 - 20m³ - BSP - 2 pressure gauges - 2 magnets - kit02
13560000115	Pallas Magnetic Filter Premium DN50 - 2" - 40m³ - BSP - 2 pressure gauges - 2 magnets - kit03
13560000083	Pallas Magnetic Filter Premium DN80 - 3" - 50m³ - Flanged - 2 pressure gauges - 2 magnets - kit03
13560000111	Pallas magnetic filter fouling box
13560000113	Dosing pot lids DN20/32 (to add chemicals)
13560000114	Dosing pot lids DN 40/50/80 (to add chemicals)

DOMESTIC RO & FILTRATION

Pallas Magnetic Filters

Replacement filter bags (comes with 1 x 50 micron filter)

Reference	Config	Item Name	Box Qty
13560000035		DN 20/32 Replacement Filter Bag 50 µ	50
13560000037		DN 40 Replacement Filter Bag 50 µ	50
13560000039		DN 50/80 Replacement Filter Bag 50 µ	50
13560000096		DN20/32 Replacement Filter Bag 5 u	
13560000094		DN20/32 Replacement Filter Bag 25 u	
13560000092		DN40 Replacement Filter Bag 5 u	
13560000090		DN40 Replacement Filter Bag 25 u	
13560000088		DN50/80 Replacement Filter Bag 5 u	
13560000086		DN50/80 Replacement Filter Bag 25 u	

Insulation Jackets

Reference	Config	Item Name
13560000104		Insulating Jacket for DN20 Pallas Magnetic Filter
13560000101		Insulating Jacket for DN32 Pallas Magnetic Filter
13560000102		Insulating Jacket for DN40 Pallas Magnetic Filter
13560000103		Insulating Jacket for DN50 Pallas Magnetic Filter
13560000105		Insulating Jacket for DN80 Pallas Magnetic Filter



DOMESTIC RO & FILTRATION



NeutraCalc - Scale Inhibitor

NeutraCalc can be used wherever you want to stop scale forming and can be placed at point of use or point of entry.

The Technology

Each bead is covered in imperfections called media templates that attract minerals (Limescale, carbonates) and combine them to form micro-crystals that slowly grow. They then break off and float freely through the system. These crystals make their way through the plumbing system without sticking to pipes, fixtures, valves or heating elements.

Why NeutraCalc?

- Green & Eco-friendly: no use of regenerants
- No Salt required
- No rinsing "water saving"
- No regeneration, so no drain required
- No electricity, compact solution & easy installation
- No change in the chemical composition "healthy minerals retained"
- No effect on corrosion
- Maintain the efficiency of your boiler and heating system
- Protects appliances that use hot water



NeutraCalc - Scale Inhibitor

Reference	Config	Item Name	Max flow	Connections
15307000005	C00001	NeutraCalc 10 SL	4 lpm	3/4" F BSP
15307000006	C00001	NeutraCalc 10 BB	10 lpm	1" F BSP
15307000007	C00001	NeutraCalc 817	15 lpm	3/4" M BSP
15307000008	C00001	NeutraCalc 835	38 lpm	1" M BSP
15307000009	C00001	NeutraCalc 935	45 lpm	1" M BSP
15307000010	C00001	NeutraCalc 1035	60 lpm	1" M BSP
15307000011	C00001	NeutraCalc 1054	75 lpm	1" M BSP
15307000012	C00001	NeutraCalc 1252	113 lpm	1" M BSP
15307000013	C00001	NeutraCalc 1465	190 lpm	1" M BSP

DOMESTIC RO & FILTRATION

NeutraCalc - Scale Inhibitor

Refill Packs		
Reference	Config	Item Name
15307000001	C00001	Refill Cartridge for NC10 SL
15307000001	C00002	Refill Cartridge for NC10 BB
15307000002	C00001	Refill Pack for NC817
15307000002	C00002	Refill Pack for NC835
15307000002	C00003	Refill Pack for NC935
15307000002	C00004	Refill Pack for NC1035
15307000002	C00005	Refill Pack for NC1054
15307000002	C00006	Refill Pack for NC1252
15307000002	C00008	Refill Pack for NC1465



03

CHAPTER 03

TEST KITS, HOSES & FITTING

TEST KITS, HOSES & FITTING

Hardness Tests

Hardness Tests			
Reference	Config	Item Name	Packaging
11750000014		Total Hardness Test - 2 reagent drop test	30ml
11750000013		Total Hardness Test - 1 reagent drop test	30ml
11750000015		Test Kit - Hardness yes/no - 250 tablets	PCS

HARDNESS (TOTAL) as CaCO_3
Determination of Total Hardness as CaCO_3



Take a 20 ml sample	Add 5 drops of KW-13	Add drops of KW-14 while mixing	Count drops required to change from RED to BLUE
			
N.B. Colours may vary depending on sample and test conditions			
Total Hardness as CaCO_3 (ppm) = Number of Drops (KW-04) x 10			

Others

Others			
Reference	Config	Item Name	Packaging
11750000017		pH Test Strips 4 - 10 Range	100 Tests
11750000019		Nitrate Test Strip 0-500 PPM	50 Tests
11799000001		TDS-meter Simple	PCS
22305000001		Chlorine/pH test kit	PCS

TEST KITS, HOSES & DOSING

Classic Faucets

Single Faucets

Reference	Item Name
18047000015	Long Reach Faucet - Chrome
18099000007	Long Reach Faucet kit chrome - 1/4" tube attached
18032000063	Brushed Chrome Faucet (Pallas RO)
18052000002	Pallas Faucet Brushed Chrome - excellent quality



Long Reach



Pallas Shiny Chrome



Pallas Brushed Chrome

3 Way Taps

PALLAS 3 WAY TAPS

- drill hole 33 mm
- the ideal way of plumbing in a filtered water supply
- comes with 3 flexible hoses ending in 3/8" bsp female and 1 x 3/8BSP to 1/4 push fit connector
- max pressure 4 bar

Pallas 3 Way Taps

Reference	Config	Item Name
16790000002		Pallas 3 way tap, in chrome effect



Pallas 3 way Chrome Effect

TEST KITS, HOSES & DOSING

Ready Made High Flow Flexible Hoses

STAINLESS STEEL FLEXIBLE HOSES

This non-toxic EPDM rubber hose is very suited for sanitary and (drink) water connections. The SUPERFLEX 20 sanitary hoses are fitted with a durable stainless steel braid, offering a solid and stylish finish in case of connection to toilets, showers or taps.



Male (M) - Female (F)



Female (F) - Female (F)



Female With elbow (FC) - Female (F)

Stainless Steel Flexible Hoses

Reference	Config	Item Name	Length (cm)
3/4" F - 3/4" FC			
14070000058		3/4" Female - 3/4" Female Elbow, Stainless steel - DN13	80
14070000061		3/4" Female - 3/4" Female Elbow, Stainless steel - DN20	60
14070000013		HSH Superflex Stainless Steel 3/4" F x 3/4" FC - DN20 - 80 cm	80
14070000056		HSH Superflex Stainless Steel 3/4" F x 3/4" FC - DN20 WRAS APPROVED	80
14070000060		3/4" Female - 3/4" Female Elbow, Stainless steel - DN20	100
1" F - 1" F			
14070000065		HSH Superflex Stainless Steel 1" F x 1" F - DN25	80
1" F - 1" FC			
14070000035		HSH Superflex Stainless Steel 1" F x 1" FC - DN25	80
14070000017		HSH Superflex Stainless Steel 1" F x 1" FC - DN25	100

Washers

14070000031	3/4" washer (single)
14070000048	1" washer (single)



Inox braided stainless steel

TEST KITS, HOSES & DOSING

Ready Made High Flow Flexible Hoses

PVC FLEXIBLE HOSES

These high-quality, non-toxic EPDM rubber hoses can be used for sanitary and (drinking) water connections. The FLATFLEX 22 flexible water hoses are fitted with a firm polyamide braid and are very suited for cold water connections.

PVC Flexible Hoses			
Reference	Config	Item Name	Length (cm)
3/4" F - 3/4" F			
14070000027		HSH Flatflex Pa22 3/4" F x 3/4" F - DN20	60
3/4" F - 3/4" FC			
14070000015		HSH Flatflex Pa22 3/4" F x 3/4" FC - DN20	60
14070000025		HSH Flatflex Pa22 3/4" F x 3/4" FC - DN20	80
14070000053		HSH Flatflex Pa22 3/4" F x 3/4" FC - DN20	100
14070000028		HSH Flatflex Pa22 3/4" F x 3/4" FC - DN20	125
14070000062		HSH Flatflex Pa22 3/4" F x 3/4" FC - DN20	200
1" F - 1" FC			
14070000040		HSH Flatflex Pa22 1" F x 1" FC - 60 cm	60
14070000032		HSH Flatflex Pa22 1" F x 1" FC - 80 cm	80
14070000008		HSH Flatflex Pa22 1" F x 1" FC - 100 cm	100
14070000063		HSH Flatflex Pa22 1" F x 1" FC - 125 cm	125



Flatflex braided nylon

Spare Parts

Reference	Item Name
14070000031	3/4" Fibre Washer
14070000048	1" Fibre Washer

TEST KITS, HOSES & DOSING

Softener Installation Hoses

Softener Installation Hoses		
Reference	Config	Item Name
14099000002		Hoses (12 mm pair) H148 3/4" Conn



Softener Installation Kits

Softener Installation Kits		
Reference	Config	Item Name
10440000358	C00001	15mm Standard Installation kit 3/4"
10499000017	C00001	15mm Full Flow Installation kit 3/4"
10499000018	C00001	22mm Full Flow Installation kit 3/4"
10499000019	C00001	28mm Full Flow Installation kit 1"
14199000007		Plumbing out (drain) kit

Full Flow Installation kit 3/4"

- ➔ suitable for installation of most water softeners
- ➔ Contains 1 x pair of hoses, 1 x chrome by pass set & drain hose.



15 mm



22 mm

TEST KITS, HOSES & DOSING

Plastic Hoses, Connectors and Fittings

Plastic Hoses, Connectors and Fittings

Reference	Config	Item Name
Waste hose		
14170000072		Low pressure kink free drain tube 12 mm, 30 m grey (M)
14170000064		Reinforced Drain hose 13 mm Clear, 30 m Roll (Roll)
14170000063		Reinforced Drain hose 19 mm Clear, 30 m Roll (Roll)
10599000038		Opaque poly tubing, 3/8", 100 m Roll (Roll)
Drain connectors		
14170000066		Elbow, nut, washer, 3/4" BSP to hose 12.5 mm barb
14170000069		Straight, nut, washer 3/4" BSP to hose 10 mm barb
14170000068		Straight, nut, washer 3/4" BSP to hose 12.5 mm barb
14170000065		Straight, nut, washer 3/4" BSP to hose 19 mm barb
14199000004		Elbow, nut washer, 3/4" BSP to hose 19mm heavy duty
14199000005		Elbow, nut, washer, 1/2" BSP to 1/2" hose con
10599000054		Elbow, nut, washer, 1" BSP to 25 mm hose
14070000066		Hose connector (rubber) washer
10599000008		2pc Overflow white



Washers		
14070000048		1" Fiber Washer
14070000031		3/4" Fiber Washer
14199000003		Screened washer
Clips		
14170000042		O Clip 3/4"
14170000062		Jubilee Clip 12-20 mm



TEST KITS, HOSES & DOSING

Plastic Hoses, Connectors and Fittings

Plastic nipples	
14170000044	Plastic nipple 3/4" x 3/4" Black
14170000046	Plastic nipple 3/4" x 3/4"
22102000037	Plastic nipple 1" x 3/4"
14170000049	Plastic nipple 1" x 1"



Miscellaneous	
99005000005	PTFE tape – roll
10499000025	Silicone grease – 60ml pot



Push Fit Connectors

Push Fit Connectors		
Reference	Config	Item Name
Male Connectors		
18047000024		Male connector 1/4"P x 1/8" thread
18099000019		Male connector 1/4"P x 3/8" thread
18032000079		Male connector 1/4"P x 1/4" thread
14275000028		Male connector 3/8"P x 1/8" thread
18047000026		Male connector 3/8"P x 1/4" thread
14275000030		JG Male connector 3/8"P x 1/2" thread
14275000031		JG Male connector 1/2"P x 1/2" thread
14275000003		Male connector 3/8"P x 3/8" thread
14275000011		3/4" M thread x 15mm Push (plastic)
14275000013		3/4" M thread x 22mm Push (plastic)



TEST KITS, HOSES & DOSING

Push Fit Connectors

Reference	Config	Item Name
Union Tees		
18032000082		Union Tee 1/4"P
18032000067		Union T 3/8"T, 3/8Px2
18032000092		Union T 1/4" stem , 1/4Px2



Push Fit Connectors		
Reference	Config	Item Name
Union Elbows		
18032000099		Union Elbow 3/8" P
18032000083		Union Elbow 1/4" P



TEST KITS, HOSES & DOSING

Push Fit Connectors

Reference	Config	Item Name
Union Connectors		
18032000098		Union Connector 1/4"P
18032000100		Union Connector 3/8"



Push Fit Connectors		
Reference	Config	Item Name
Reducers		
14275000034		JG Reducer 3/8"Stem x 1/4"P
14275000035		JG Reducer 1/2"Stem x 3/8"P



Reference	Config	Item Name
Bulkhead Unions		
18032000097		JG Bulkhead 3/8"P x 3/8"P



TEST KITS, HOSES & DOSING

Push Fit Connectors

Reference	Config	Item Name
Reducing Unions		
18032000081		Reducing Union 3/8"P x 1/4"P
14275000040		Reducing Union 1/2"P x 3/8"P



Push Fit Connectors		
Reference	Config	Item Name
Reducing Elbows		
18032000075		Reducing Elbow 3/8"P x 1/4"P Grey



Reference	Config	Item Name
Plug in Elbows		
14275000002		JG Plug-in Elbow 3/8"S x 3/8"P Grey
18032000071		Plug-in Elbow 1/4"S x 1/4"P Grey



Reference	Config	Item Name
Faucet Connectors		
14275000022		JG Faucet Connector 1/4"P x 1/2"T BSP Grey
14275000024		JG Faucet Connector 3/8"P x 1/2"T BSP Grey



TEST KITS, HOSES & DOSING

Push Fit Connectors

Push Fit Connectors

Reference	Config	Item Name
Female Connectors		
14275000019		JG Female Connector 3/8"P x 1/4"T Grey
14275000004		JG Female Connector 3/8"P x 3/8"FBSP Grey



Reference	Config	Item Name
Female Flare Adaptors		
14275000044		JG Female Adaptor 3/8"P x 1/2"BSP
18047000040		Female Connector 1/4"P x 3/4 BSP
14275000045		JG Female adapter 1/2" P x 3/4" BSP



Push Fit Connectors

Reference	Config	Item Name
Fixed Elbows		
18032000066		Fixed Elbow 1/4"P x 1/8"T white
14275000048		Fixed Elbow 1/4"P x 1/4"T white
18032000065		Fixed Elbow 1/4"P x 1/4"T Grey
18047000029		Fixed Elbow 1/4"P x 3/8"T Grey
18032000074		Fixed Elbow 3/8"P x 3/8"T Grey



TEST KITS, HOSES & DOSING

Push Fit Connectors

Reference	Config	Item Name
Tubing - sold in rolls or feet		
14170000074		1/4"tube blue (500ft) (5' minimum & multiples)
14170000073		3/8"tube blue (500ft) (5' minimum & multiples)
14275000050		1/2" tube blue (250 ft) (5' minimum & multiples)

Push Fit Connectors

Reference	Config	Item Name
Miscellaneous fittings including Metric fittings		
18032000103		JG-3/8CSV Check Valve
14170000070		In Line Ball Valve 3/8"JG x 3/8"JG (Shut Off)
18032000095		In Line Ball Valve 1/4" push x1/4" push (Shut Off)
14299000002		3/8" Plastic Insert
14299000003		1/4" Plastic Insert



Reverse Osmosis Components

Reverse Osmosis Components

Reference	Config	Item Name
Saddle Valves		
18032000084		Self Piercing Valve 1/4"
18047000040		3/4"BSP - 1/4" PF Adaptor (use with self pierce valve)
18032000069	05718040	Drain Clamp (40mm) , 1/4" fitting



Reference	Config	Item Name
Membrane Housings - Domestic		
18032000028	22000000	Membrane housing 2012
18032000027	05704031	Membrane housing 3012



TEST KITS, HOSES & DOSING

Reverse Osmosis Components

Reference	Config	Item Name
Membranes – Domestic		
11047000001		Membrane, 50 US/gpd
11047000003		Membrane, 75 US/gpd
18032000004		Membrane 80 US/gpd (1812)
18032000003		Membrane, 100 US/gpd
18032000002		Membrane, 300 US/gpd (3012)
18032000091		3012 - 500 GPD membrane



Reference	Config	Item Name
Domestic RO Components		
18047000020	CL-SGP212W	Single clip - bracket - membrane housing 25
18047000019	CL-SGP204W	Single clip - bracket - in line filter 20



Reference	Config	Item Name
Flow Controls – Including Auto Shut Off Valves, Check Valves & Flow Restrictors		
18052000008	Jaco	Auto shut off valve, (Domestic RO)

Reference	Config	Item Name
Domestic RO Pumps and Accessories		
18032000058		75-100 GPD Pump LF30L
18032000056		Palls pump pre 2019
18042000007		Permeate pump (4 stage RO's)
18032000049		Maximum pressure switch 1/4"
18052000008		Automatic Shut-Off valve 1/4"
18032000073		300 GPD Pump HK-51
18032000024		500 GPD pump



TEST KITS, HOSES & DOSING

Reverse Osmosis Components

Reference	Config	Item Name
Domestic RO Pumps and Accessories		
18032000088		Pressure tank 3.2 Gal, metal
18047000017		Residential tank ball valve 1/4" fem to 1/4"
18032000090		Pressure tank 11 Gall, metal



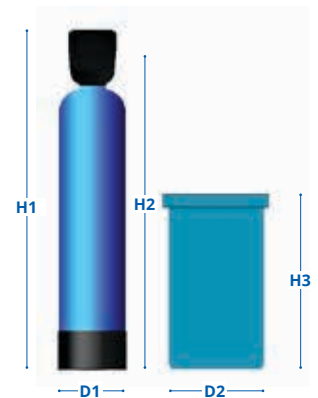
04

CHAPTER 04

COMMERCIAL SOFTENERS

COMMERCIAL SOFTENERS

Simplex Water Softeners



All measurements in mm.

Vessel	Volume	H1*	H2**	H3	D1	D2	Kg	Width	Depth	Height*
817	10L	619	485	450	215	320sq	26	545	320	619
835	20L	1078	944	450	215	320sq	39	545	320	1078
1035	30L	1078	944	950	268	365x430	53	633	430	1078
1044	40L	1305	1171	950	268	365x430	67	633	430	1305
1054	50L	1565	1431	950	267	365x430	80	632	430	1565
1248	60L	1417	1283	830	315	670	90	685	370	1417
1354	75L	1571	1437	980	349	760	115	1109	760	1571
1465	125L	1870	1736	920	370	880	183	1250	880	1870
1665	150L	1862	1713	1150	406	880	216	1286	880	1862
1865	200L	1957	1823	1150	510	880	279	1390	880	1957
2160	250L	1842	1708	1080	552	1000	419	1552	1000	1842
2469	350L	2092	1958	1080	610	1000	519	1610	1000	2092
3072 T&B	500L	2262	2128	1500	770	1260	555	2030	1260	2262
3672 T&B	700L	2359	2225	1500	927	1260	747	2187	1260	2359

Weight excludes water.

* Based on WS1 valve see over for adjustments when other valves used

** Based on WS1 valve see over for adjustments when other valves used
Width , Depth, Height if vessel and brine tank next to each other and touching.

General conditions for installation :

Specifications	
Electrical Rating	Autotrol 230V 50Hz 12V Transformer Clack 230V 50Hz 15V Transformer
Power Rating	Autotrol 3 Watt / Clack 6 Watt
Min. Pressure	200 kPa (2 Bar)
Max. Pressure	700 kPa (7 Bar)
Vacuum	Not Permitted
Average Pressure Loss	100 kPa (1 Bar) under normal circumstances
Min. - Max. Temp.	5-35 °C

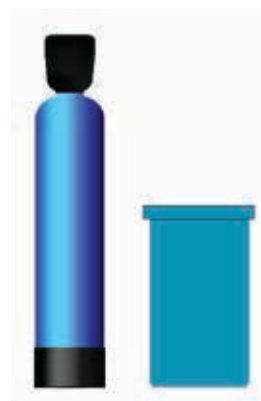
Measurement adjustments by valve :

Vessel	*	**
255	-4 mm	-21 mm
268/278	-4 mm	-21 mm
298	+73 mm	-13 mm
Clack 1"	Same	Same
Clack 1.25"	Same	Same
Clack 1.5" P	+87 mm	+30 mm
Clack 1.5"	+4 mm	+30 mm
Clack 2"	+29 mm	+60 mm

COMMERCIAL SOFTENERS

Simplex Clack (Metered) Water Softeners

Metered water softeners use a meter which measures the water used and calculates when the softener needs to regenerate. In commercial softeners the brine tank is next to the resin vessel (but included in the price).



LOW FOULING RESIN VERSIONS ARE AVAILABLE (for low level reduction of Fe/Mn/Al/Pb/Ni). ADD 75p PER LITRE OF RESIN TO THE COST eg a 50 litre softener costs £37.50 extra.

Simplex Clack WS1 METERED softener, 1"							
Inlet/outlet 1", drain 3/4", max valve flow 6.1 m³/hr, pressure 1.5 to 8 bar, Valve WS1CI							
Reference	Config	Valve	Salt	Size	Flow rate	Volume	Details
15107000133	C00001	WS1CI	1.5 kg salt	8" x 17"	0.4 m³/hr flow	10L	1.7 m³/capacity
15107000057	C00001	WS1CI	3 kg salt	8" x 35"	0.8 m³/hr flow	20L	3.3 m³ capacity
15107000042	C00001	WS1CI	4.5kg salt	10" x 35"	1.2 m³/hr flow	30L	5 m³ capacity
15107000052	C00001	WS1CI	6 kg salt	10" x 44"	1.6 m³/hr flow	40L	6.67 m³ capacity
15107000053	C00001	WS1CI	7.5 kg salt	10" x 54"	2 m³/hr flow	50L	8.3 m³ capacity
15107000055	C00001	WS1CI	9 kg salt	12" x 48"	2.4 m³/hr flow	60L	10 m³ capacity
15107000046	C00001	WS1CI	11.25 kg salt	13" x 54"	3 m³/hr flow	75L	12.5 m³ capacity
15107000058	C00001	WS1CI	15 kg salt	14" x 65"	4 m³/hr flow	100L	17 m³ capacity
15107000059	C00001	WS1CI	18.75 kg salt	14" x 65"	5 m³/hr flow	125L	20.8 m³ capacity
15107000041	C00002	WS1CI	22.5 kg salt	16" x 65"	6.0 m³/hr flow	150L	25m³ capacity
15107000132	C00001	WS1CI	30 kg salt	18" x 65"	6.8 m³/hr flow	200L	33m³ capacity

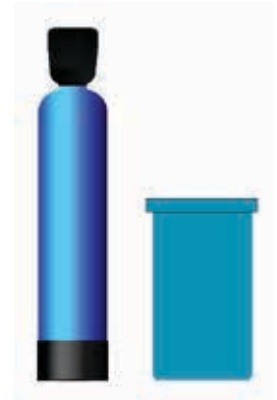
Simplex Clack Softener WITH SALT ALARM Metered ,1"							
Reference	Config	Valve	Salt	Size	Flow rate	Volume	Details
15107000140	C00001	Imp +	7.5Kg salt	10"x54"	2m³/hr flow	50L	6.7 m³ capacity
15107000139	C00001	Imp +	11Kg salt	13"x54"	3m³/hr flow	75L	12.5 m³ capacity

COMMERCIAL SOFTENERS

Simplex (Clack) Water Softeners 1.25" to 3" Valves

Metered water softeners measure the water used and calculates when to regenerate. The brine tank is normally next to the resin vessel (but included in the price).

Purolite C100E/PFC100E is available at a slight extra cost please ask
LOW FOULING RESIN VERSIONS AVAILABLE - please ask



Simplex Clack WS1.25 METERED softener, 1.25"

Inlet/outlet 1.25", drain 3/4", max valve flow 7.7 m³/hr, pressure 1.5 to 8 bar, Valve WS1.25CI

Reference	Config	Valve	Salt	Size	Flow rate	Volume	Details
15107000050	C00001	WS1.25CI	11.25 kg salt	13" x 54"	3 m³/hr flow	75L	12.5 m³ capacity
15107000065	C00001	WS1.25CI	18.75 kg salt	14" x 65"	5 m³/hr flow	125L	20.8 m³ capacity
15107000041	C00001	WS1.25CI	22.5 kg salt	16" x 65"	6.0 m³/hr flow	150L	25 m³ capacity
15107000064	C00001	WS1.25CI	30 Kg salt	18" x 65"	7.7 m³/hr flow	200L	33 m³ capacity

Simplex Clack WS1.5 METERED softener, 1.5"

Inlet/outlet 1.5", drain 1", max valve flow 13.7 m³/hr, pressure 1.5 to 8 bar, Valve WS1.5CI

Reference	Config	Valve	Salt	Size	Flow rate	Volume	Details
15107000043	C00001	WS1.5CI	18.75 kg salt	14" x 65"	5 m³/hr flow	125L	20.8 m³ capacity
15107000045	C00001	WS1.5CI	22.5 kg salt	16" x 65"	6 m³/hr flow	150L	25 m³ capacity
15107000044	C00001	WS1.5CI	30 kg salt	18" x 65"	8 m³/hr flow	200L	33 m³ capacity
15107000047	C00001	WS1.5CI	18.75 kg salt	21" x 36"	5 m³/hr flow	125L	20.8 m³ capacity
15107000048	C00001	WS1.5CI	37.5 kg salt	21" x 60"	10 m³/hr flow	250L	42 m³ capacity
15107000049	C00001	WS1.5CI	52.5 kg salt	24" x 69"	13.5 m³/hr flow	350L	58 m³ capacity

Simplex Clack WS2 METERED softener, 2"

Inlet/outlet 2", drain 1.5", max valve flow 26 m³/hr, pressure 1.5 to 8 bar, Valve WS2CI

Reference	Config	Valve	Salt	Size	Flow rate	Volume	Details
15107000031	C00001	WS2CI	30 Kg salt	18" x 65"	8 m³/hr flow	200L	33 m³ capacity
15107000038	C00001	WS2CI	37.5 kg salt	21" x 60"	10 m³/hr flow	250L	42 m³ capacity
15107000060	C00002	WS2CI	52.5 kg salt	24" x 69"	14 m³/hr flow	350L	58 m³ capacity
15107000130SM	C00001	WS2QC	52.5 Kg salt	24" x 69"	14 m³/hr flow	350L	58 m³ capacity
15107000061	C00001	WS2CI	75 kg salt	30" x 72"	20 m³/hr flow	500L	83 m³ capacity
15107000131SM	C00001	WS2QC	75 kg salt	30" x 72"	20 m³/hr flow	500L	83 m³ capacity
15107000062	C00001	WS2CI	105 kg salt	36" x 72"	26 m³/hr flow	700L	116 m³ capacity
15107000033SM	C00001	WS2QC	105 kg salt	36" x 72"	26 m³/hr flow	700L	116 m³ capacity
15107000035	C00001	WS2HF(SM)	150 kg salt	42" x 78"	37 m³/hr flow	1000L	166 m³ capacity
10440000359	C00001	2" Side mount pipe work (4" threaded vessels)					

COMMERCIAL SOFTENERS

Simplex (Clack) Water Softeners 1.25" to 3" Valves



Purolite C100E/PFC100E is available at a slight extra cost please ask

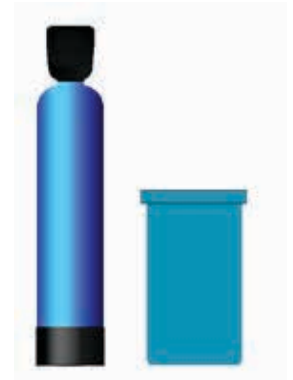
Simplex Clack WS3 METERED softener, 3"							
Inlet/outlet/drain 3", drain 1.5", max valve flow 57 m³/hr, pressure 1.5 to 8 bar, Valve WS3							
Reference	Config	Valve	Salt	Size	Flow rate	Volume	Details
15107000051TM	C00002	WS3	150 kg salt	42" x 78"	40 m³/hr flow	1000L	166 m³ capacity
15107000051SM	C00003	WS3	150 kg salt	42" x 78"	40 m³/hr flow	1000L	166 m³ capacity
15107000063TM	C00001	WS3	187.5 kg salt	48" x 82"	56 m³/hr flow	1250L	208 m³ capacity
15107000063SM	C00002	WS3	187.5 kg salt	48" x 82"	56 m³/hr flow	1250L	208 m³ capacity
15107000037SM	C00001	WS3	270 kg salt	55" x 104"	56 m³/hr flow	1800L	300 m³ capacity
15107000034SM	C00001	WS3	280 kg salt	63" x 86"	56 m³/hr flow	2000L	334 m³ capacity
10440000357	C00001	3" Side mount kit (6" flanged vessels)					

Note:
TM is Top Mount Valve, SM is Side Mount valve. If side mounting the valve, the pipework from the valve to the top and bottom of the vessel is not included. This can be ordered as the side mount kit.

COMMERCIAL SOFTENERS

Simplex Autotrol (Metered) Water Softeners

Metered water softeners use a meter which measures the water used and calculates when the softener needs to regenerate. In commercial softeners the brine tank is next to the resin vessel (but included in the price).



Purolite C100E/PFC100E is available at a slight extra cost please ask

Simplex Autotrol 255 METERED softener, 3/4"

Inlet/outlet/drain 3/4", max valve flow 3.5 m³/hr, pressure 1.5 to 8 bar, Valve 255-762

Reference	Config	Valve	Salt	Size	Flow rate	Volume	Details
15107000009	C00001	255	3 kg salt	8" x 35"	0.8 m³/hr flow	20L	3.3 m³ capacity
15107000012	C00001	255	4.5 kg salt	10" x 35"	1.2 m³/hr flow	30L	5 m³ capacity
15107000014	C00001	255	6 kg salt	10" x 44"	1.6 m³/hr flow	40L	6.67 m³ capacity
15107000016	C00001	255	7.5 kg salt	10" x 54"	2 m³/hr flow	50L	8.3 m³ capacity
15107000018	C00001	255	9 kg salt	12" x 48"	2.4 m³/hr flow	60L	10 m³ capacity
15107000020	C00001	255	11.25 kg salt	13" x 54"	3 m³/hr flow	75L	12.5 m³ capacity

Simplex Autotrol 268/278 METERED softener, 1"

Inlet/outlet 1", drain 3/4", max valve flow 5.7 m³/hr, pressure 1.5 to 8 bar, Valve 268/278-762

Reference	Config	Valve	Salt	Size	Flow rate	Volume	Details
15107000029	C00001	268	7.5 kg salt	10" x 54"	2 m³/hr flow	50L	8.3 m³ capacity
15107000030	C00001	268	9 kg salt	12" x 48"	2.4 m³/hr flow	60L	10 m³ capacity
15107000001	C00001	268	11.25 kg salt	13" x 54"	3 m³/hr flow	75L	12.5 m³ capacity
15107000002	C00001	268	15 kg salt	14" x 65"	4 m³/hr flow	100L	17 m³ capacity
15107000006	C00001	278	18.75 kg salt	14" x 65"	5 m³/hr flow	125L	20.8 m³ capacity
15107000007	C00001	278	22.5 kg salt	16" x 65"	5.7 m³/hr flow	150L	25 m³ capacity
15107000008	C00001	278	30 Kg salt	18" x 65"	5.7 m³/hr flow	200L	33 m³ capacity

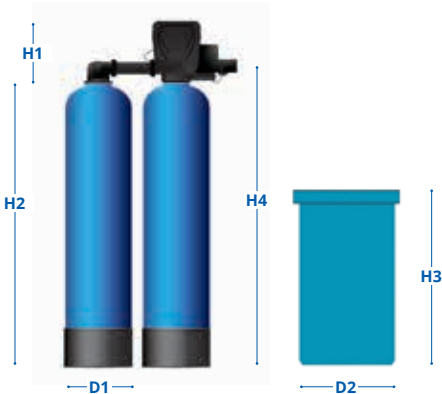
Simplex Autotrol 298 METERED softener, 2"

Inlet/outlet 2", drain 1.5", max valve flow 17 m³/hr, pressure 1.5 to 8 bar, Valve 298-762

Reference	Config	Valve	Salt	Size	Flow rate	Volume	Details
15107000026	C00001	298	37.5 kg salt	21" x 60"	10 m³/hr flow	250L	42 m³ capacity
15107000021	C00001	298	52.5 kg salt	24" x 69"	14 m³/hr flow	350L	58 m³ capacity
15107000027	C00001	298	75 kg salt	30" x 72"	17 m³/hr flow	500L	83 m³ capacity
15107000028	C00001	298	105 kg salt	36" x 72"	17 m³/hr flow	700L	116 m³ capacity

COMMERCIAL SOFTENERS

1" TT Twin Softeners



All measurements in mm.											
Vessel	Volume	H1	H2	H3	H4	D1	D2	Kg	Width	Depth	Height
817	10L	187	432	450	497	215	320sq	37	826	351	619
835	20L	187	891	450	957	215	320sq	61	826	351	1078
1035	30L	187	891	914	957	268	365x430	85	989	365	1078
1044	40L	187	1118	914	1183	268	365x430	110	989	365	1305
1054	50L	187	1378	914	1443	268	365x430	135	989	365	1565
1248	60L	187	1230	830	1295	315	670	158	1276	670	1417
1252	60L	187	1338	830	1403	315	670	158	1276	670	1525
1354	75L	187	1384	980	1449	315	760	200	1390	760	1571
1465	100L	187	1683	920	1748	370	880	270	1620	880	1870
1465	125L	187	1683	920	1748	370	880	320	1620	880	1870
1665	150L	187	1675	1150	1690	406	880	385	1692	880	1862
1865	200L	187	1770	1150	1835	510	880	490	1900	880	1957

*Weight does not include water.
Width Depth and Height refer to the footprint of the system if all items are in a line.

General conditions for installation :

Specifications	
Connection Inlet & Outlet	1" BSPM
Drain Connection	3/4" BSPM or 3/4" Barbed
Electrical Rating	230V 50Hz 12V Transformer
Power Rating	6 Watt
Min. Pressure	200 kPa (2 Bar)
Max. Pressure	700 kPa (7 Bar)
Vacuum	Not Permitted
Average Pressure Loss	100 kPa (1 Bar) under normal circumstances
Min. - Max. Temp.	5-35 °C

COMMERCIAL SOFTENERS

Duplex (Clack) Water Softeners 1" TT and 1.25" Valves

Duplex water softeners consist of two vessels filled with softening resin and one brine tank which is used to regenerate each vessel in turn. One vessel is on line (duty) and the other in standby. When the duty vessel becomes saturated it is regenerated while the standby unit becomes the duty unit. Systems are sized so they run for at least 12 hours.



Purolite C100E/PFC100E is available at an extra cost, please ask

Duplex Clack WS1TT METERED softener, 1" (One TT valve)

Inlet/outlet 1", drain 3/4", max valve flow 6.8 m³/hr, pressure 1.5 to 8 bar, Valve WS1 TT

Reference	Config	Valve	Salt	Size	Flow rate	Volume	Details
15107000121	C00001	WS1TTCI	1.5 kg salt	8" x 17"	0.4 m³/hr flow	10L	1.5 m³ capacity
15107000092	C00001	WS1TTCI	3 kg salt	8" x 35"	0.8 m³/hr flow	20L	3.3 m³ capacity
15107000093	C00001	WS1TTCI	4.5 kg salt	10" x 35"	1.2 m³/hr flow	30L	5 m³ capacity
15107000094	C00001	WS1TTCI	6 kg salt	10" x 44"	1.6 m³/hr flow	40L	6.67 m³ capacity
15107000095	C00001	WS1TTCI	7.5 kg salt	10" x 54"	2 m³/hr flow	50L	8.3 m³ capacity
15107000096	C00001	WS1TTCI	9 kg salt	12" x 48"	2.4 m³/hr flow	60L	10 m³ capacity
15107000097	C00001	WS1TTCI	11.25 kg salt	13" x 54"	3 m³/hr flow	75L	12.5 m³ capacity
15107000101	C00001	WS1TTCI	15 kg salt	14" x 65"	4 m³/hr flow	100L	17 m³ capacity
15107000098	C00001	WS1TTCI	18.75 kg salt	14" x 65"	5 m³/hr flow	125L	20.8 m³ capacity
15107000099	C00001	WS1TTCI	22.5 kg salt	16" x 65"	6 m³/hr flow	150L	25 m³ capacity
15107000100	C00001	WS1TTCI	30 Kg salt	18" x 65"	6.4 m³/hr flow	200L	33 m³ capacity
15107000113	C00001	WS1TT	37.5 Kg salt	21" x 69"	6.4 m³/hr flow	250L	42 m³ capacity
15107000091	C00001	WS1TT	52.5 Kg salt	24" x 69"	6.4 m³/hr flow	350L	58 m³ capacity

Duplex Clack WS1.25 METERED softener, 1.25"

Inlet/outlet 1.25", drain 3/4", max valve flow 7.7 m³/hr, pressure 1.5 to 8 bar, Valve WS1.25CI

Reference	Config	Valve	Salt	Size	Flow rate	Volume	Details
15107000117	C00002	WS1.25CI	18.75 kg salt	14" x 65"	5 m³/hr flow	125L	20.8 m³ capacity
15107000120	C00001	WS1.25CI	22.5 kg salt	16" x 65"	6 m³/hr flow	150L	25 m³ capacity
15107000126	C00001	WS1.25CI	30 Kg salt	18" x 65"	7.7 m³/hr flow	200L	33 m³ capacity
15107000127	C00001	WS1.25CI	37.5 kg salt	21" x 60"	7.7 m³/hr flow	250L	42 m³ capacity
10440000354	C00001	WS1.25CI	Duplex 1.25" interconnect pipe kit				

COMMERCIAL SOFTENERS

Duplex Water Softeners



All measurements in mm.

Vessel	Volume	H1*	H2**	H3	D1	D2	Kg	Width	Depth	Height*
817	10L	619	485	450	215	320sq	40	750	320	619
835	20L	1078	944	840	215	320sq	65	750	320	1078
1035	30L	1078	944	840	268	365x430	85	901	430	1078
1044	40L	1305	1171	840	268	365x430	110	901	430	1305
1054	50L	1565	1431	840	267	365x430	125	901	430	1565
1248	60L	1417	1283	830	315	370	155	1000	370	1417
1354	75L	1571	1437	980	349	760	190	1458	760	1571
1465	100L	1870	1736	920	370	880	270	1620	760	1870
1665	150L	1862	1713	1150	406	880	375	1187	880	1862
1865	200L	1957	1823	1150	510	880	485	1900	880	1957
2160	250L	1842	1708	1080	552	1000	600	2104	1000	1842
2469	350L	2092	1958	1080	610	1000	800	2220	1000	2092
2469 T&B	350L	2214	2080	1080	610	1000	843	2220	1000	2214
3072 T&B	500L	2262	2128	1280	770	1080	1109	2620	1000	2262
3672 T&B	700L	2359	2225	1280	927	1080	1484	2934	1080	2359

Weight excludes water.

* Based on WS1 valve see over for adjustments when other valves used

** Based on WS1 valve see over for adjustments when other valves used

Width , Depth, Height if vessel and brine tank next to each other and touching.

General conditions for installation :

Specifications	
Electrical Rating	Autotrol 230V 50Hz 12V Transformer Clack 230V 50Hz 15V Transformer
Power Rating	Autotrol 3 Watt / Clack 6 Watt
Min. Pressure	200 kPa (2 Bar)
Max. Pressure	700 kPa (7 Bar)
Vacuum	Not Permitted
Average Pressure Loss	100 kPa (1 Bar) under normal circumstances
Min. - Max. Temp.	5-35 °C

Measurement adjustments by valve :

Vessel	*	**
255	-4 mm	-21 mm
268/278	-4 mm	-21 mm
298	+73 mm	-13 mm
Clack 1"	Same	Same
Clack 1.25"	Same	Same
Clack 1.5" P	+87 mm	+30 mm
Clack 1.5"	+4 mm	+30 mm
Clack 2"	+29 mm	+60 mm

COMMERCIAL SOFTENERS

Duplex (Clack) Water Softeners 1.5" to 3" Valves

Purolite C100E/PFC100E is available at a slight extra cost please ask



Duplex Clack WS1.5TT Metered softener, 1.5" (One TT valve)

Inlet/outlet 1.5", drain 1", max flow 12.3m³/hr, BW4.9m³/hr, Pressure 1.5-8 bar

Reference	Config	Valve	Salt	Size	Flow rate	Volume	Details
15107000138	C00001	WS1.5TT	18Kg salt	14" x 65"	5 m ³ /hr flow	125L	21 m ³ capacity
15107000141	C00001	WS1.5TT	22Kg salt	16" x 65"	6 m ³ /hr flow	150L	25 m ³ capacity
15107000142	C00001	WS1.5TT	30Kg salt	18" x 65"	8 m ³ /hr flow	200L	33 m ³ capacity
15107000143	C00001	WS1.5TT	37Kg salt	21" x 60"	10 m ³ /hr flow	250L	42 m ³ capacity
15107000144	C00001	WS1.5TT	52Kg salt	24" x 69"	12 m ³ /hr flow	350L	58 m ³ capacity

Duplex Clack WS2 METERED softener, 2"

Inlet/outlet 2", drain 1.5", max valve flow 26 m³/hr, pressure 1.5 to 8 bar, Valve WS2CI

Reference	Config	Valve	Salt	Size	Flow rate	Volume	Details
15107000083	C00001	WS2CI	18.75 Kg	14" x 65"	5 m ³ /hr flow	125L	21 m ³ capacity
15107000087	C00001	WS2CI	22.5 Kg	16" x 65"	6 m ³ /hr flow	150L	25 m ³ capacity
15107000111	C00001	WS2CI	30 kg salt	18" x 65"	8 m ³ /hr flow	200L	33 m ³ capacity
15107000123	C00001	WS2CI	37.5 Kg	21" x 60"	10 m ³ /hr flow	250L	42 m ³ capacity
15107000124	C00001	WS2CI	52.5 kg salt	24" x 69"	14 m ³ /hr flow	350L	58 m ³ capacity
15107000084SM	C00001	WS2QC	52.5 kg salt	24" x 69"	14 m ³ /hr flow	350L	58 m ³ capacity
15107000115	C00001	WS2CI	75 kg salt	30" x 72"	20 m ³ /hr flow	500L	83 m ³ capacity
15107000085SM	C00002	WS2QC	75 kg salt	30" x 72"	20 m ³ /hr flow	500L	83 m ³ capacity
15107000112	C00001	WS2CI	105 kg salt	36" x 72"	26 m ³ /hr flow	700L	116 m ³ capacity
15107000086SM	C00003	WS2QC	105 kg salt	36" x 72"	26 m ³ /hr flow	700L	116 m ³ capacity
15107000088	C00001	WS2HFSM	150 kg salt	42" x 78"	35 m ³ /hr flow	1000L	166 m ³ capacity
10440000356	C00001	WS2CI	Duplex 2" interconnect pipe kit				

Duplex Clack WS3 METERED softener, 3"

Inlet/outlet/drain 3", drain 1.5", max valve flow 57 m³/hr, pressure 1.5 to 8 bar, Valve WS3

Reference	Config	Valve	Salt	Size	Flow rate	Volume	Details
15107000118 TM	C00001	WS3	150 kg salt	42" x 78"	40 m ³ /hr flow	1000L	166 m ³ capacity
15107000118 SM	C00002	WS3	150 Kg salt	42" x 78"	40 m ³ /hr flow	1000L	166 m ³ capacity
15107000125 TM	C00002	WS3	187.5 kg salt	48" x 78"	56 m ³ /hr flow	1250L	208 m ³ capacity
15107000125 SM	C00001	WS3	187.5 kg salt	48" x 78"	56 m ³ /hr flow	1250L	208 m ³ capacity
15107000128 SM	C00002	WS3	270 kg salt	55" x 104"	56 m ³ /hr flow	1800L	300 m ³ capacity
15107000136 SM	C00001	WS3	280 kg salt	63" x 86"	56 m ³ /hr flow	2000L	334 m ³ capacity

Note: TM is top Mount Valve, SM is side Mount valve. If side mounting the valve, the pipework from the valve to the top and bottom of the vessel is not included. This can be ordered as the side mount kit.

COMMERCIAL SOFTENERS

Duplex (Autotrol) Water Softeners

Duplex water softeners consist of two vessels filled with softening resin and one brine tank which is used to regenerate each vessel in turn. In normal use one vessel is on line (duty) and the other in standby. When the duty vessel becomes saturated it is regenerated while the standby unit becomes the duty unit. Systems are sized so they run for at least 12 hours. Parallel systems are also available.



Duplex Autotrol 255 METERED softener, 3/4"

Inlet/outlet/drain 3/4", max valve flow 3.5 m³/hr, pressure 1.5 to 8 bar, Valve 255-764

Reference	Config	Valve	Salt	Size	Flow rate	Volume	Details
15107000067	C00001	255	1.5 kg salt	8" x 17"	0.4 m³/hr flow	10L	1.5 m³ capacity
15107000068	C00001	255	3 kg salt	8" x 35"	0.8 m³/hr flow	20L	3.3 m³ capacity
15107000069	C00001	255	4.5 kg salt	10" x 35"	1.2 m³/hr flow	30L	5 m³ capacity
15107000070	C00001	255	6 kg salt	10" x 44"	1.6 m³/hr flow	40L	6.67 m³ capacity
15107000071	C00001	255	7.5 kg salt	10" x 54"	2 m³/hr flow	50L	8.3 m³ capacity
15107000072	C00001	255	9 kg salt	12" x 48"	2.4 m³/hr flow	60L	10 m³ capacity
15107000073	C00001	255	11.25 kg salt	13" x 54"	3 m³/hr flow	75L	12.5 m³ capacity

Duplex Autotrol 278 METERED softener, 1"

Inlet/outlet 1", drain 3/4", max valve flow 5.7 m³/hr, pressure 1.5 to 8 bar, Valve 278-764

Reference	Config	Valve	Salt	Size	Flow rate	Volume	Details
15107000080	C00001	278	11.25 kg salt	13" x 54"	3 m³/hr flow	75L	12.5 m³ capacity
15107000081	C00001	278	15 kg salt	14" x 65"	4 m³/hr flow	100L	17 m³ capacity
15107000082	C00001	278	18.75 kg salt	14" x 65"	5 m³/hr flow	125L	20.8 m³ capacity
15107000078	C00001	278	22.5 kg salt	16" x 65"	5.7 m³/hr flow	150L	25 m³ capacity
15107000079	C00001	278	30 Kg salt	18" x 65"	5.7 m³/hr flow	200L	33 m³ capacity

Duplex Autotrol 298 METERED softener, 2"

Inlet/outlet 2", drain 1.5", max valve flow 17 m³/hr, pressure 1.5 to 8 bar, Valve 298-764

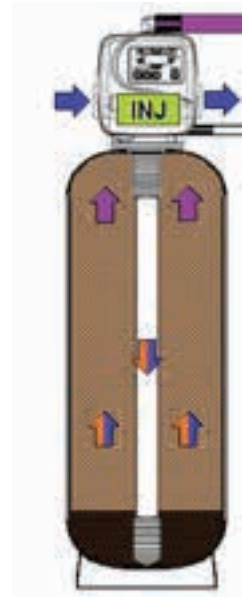
Reference	Config	Valve	Salt	Size	Flow rate	Volume	Details
15107000077	C00001	298	37.5 kg salt	21" x 60"	10 m³/hr flow	250L	42 m³ capacity
15107000076	C00001	298	52.5 kg salt	24" x 69"	14 m³/hr flow	350L	58 m³ capacity
15107000075	C00001	298	75 kg salt	30" x 72"	17 m³/hr flow	500L	83 m³ capacity
15107000074	C00001	298	105 kg salt	36" x 72"	17 m³/hr flow	700L	116 m³ capacity

COMMERCIAL SOFTENERS

Counter Current Softener (Up Flow Brining)

The standard downflow softener process is that hard water flows down through the resin bed and when regenerating the brine does the same, this means the top of the bed is regenerated first and some of the hardness travels through the resin and can re attach. In counter current the brine passes down the riser tube and up through the resin bed, the resin at the bottom of the vessel gets regenerated first. The resin at the bottom is in effect super regenerated which means there is less chance of hardness breakthrough which in critical applications is important. For the resin at the top there is a clear escape for the hardness so that doesn't reattach.

In essence a counter current regenerating softener is around 5 to 10 percent more efficient on salt usage and uses less water to regenerate making it a sound ecological and financial choice for those looking to increase their green credentials.



Benefits

- Salt economy (5-10% saving)
- Same capacity using less salt
- Water savings
- Environmentally friendly
- Lower brine discharge

Simplex Clack WS1 Metered Up Flow softener

Inlet outlet 1", drain 3/4", max valve flow 6.8 m³/hr, pressure 1.5 to 8 bar, Valve WS1

Reference	Config	Valve	Salt	Size	Flow rate	Volume	Details
15107000040	C00001	WS1CI	130g/l	1054	2 m³/hr flow	50L	8.3 m³ capacity
15107000134	C00001	WS1CI	130g/l	1465	4 m³/hr flow	100L	16.7 m³ capacity

Simplex Clack WS1.25 Metered Up Flow softener

Inlet outlet 1.25", drain 3/4", max valve flow 7.7 m³/hr, pressure 1.5 to 8 bar, Valve WS1.25

Reference	Config	Valve	Salt	Size	Flow rate	Volume	Details
15107000135	C00001	WS1.25C	130g/l	1865	7.7 m³/hr flow	200L	33.3 m³ capacity

Duplex Clack WS1 TT Metered Up Flow softener

Inlet outlet 1", drain 3/4", max valve flow 6.8 m³/hr, pressure 1.5 to 8 bar, Valve WS1 TT

Reference	Config	Valve	Salt	Size	Flow rate	Volume	Details
15107000137	C00001	WS1TTCI	130g/l	1865	6.8 m³/hr flow	200L	33.3 m³ capacity

05

CHAPTER 05

COMMERCIAL FILTERS

COMMERCIAL FILTERS

Private Water Supplies Regulations 2018

These regulations say the water must be wholesome to drink - defined by a list of bacterial and chemical parameters - see below. The allowed concentration of sodium is 200 mg/l, there is no mention of softened water. There are extra parameters for supplies over 10m³/day.

Drinking Water quality standards*					
Parameter	Max Concentration		Parameter	Max Concentration	
Escherichia coli (Ecoli)	0	per 100 ml	Pesticides		
Enterococci	0	per 100 ml	Aldrin	0,03	µg/l
Acrylamide	0,1	µg/l	Dieldrin	0,03	µg/l
Ammonia	0,5	mg/l	Heptachlor	0,03	µg/l
Antimony	5	µg/l	Heptachlor epoxide	0,03	µg/l
Arsenic	10	µg/l	other pesticides	0,1	µg/l
Benzene	1	µg/l	PAH	0,1	µg/l
Benzo(a)pyrene	0,01	µg/l	Selenium	10	µg/l
Boron	1	mg/l	Tetra & Trichloroethane	10	µg/l
Bromate	10	µg/l	THM	100	µg/l
Cadmium	5	µg/l	Vinyl chloride	0,5	µg/l
Chromium	50	µg/l	National Requirements		
Copper	2	mg/l	Aluminium	200	µg/l
Cyanide	50	µg/l	Chloride	250	mg/l
1,2 dichloroethane	3	µg/l	Colour	20	mg/l
Epichlorohydrin	0,1	µg/l	Iron	200	µg/l
Fluoride	1,5	mg/l	Manganese	50	µg/l
Lead	10	µg/l	Sodium	200	mg/l
Mercury	1	µg/l	Sulphate	250	mg/l
Nickel	20	µg/l	Trichloromethane	3	µg/l
Nitrate	50	mg/l	Turbidity	4	NTU
Nitrite	0,5	mg/l	pH	6.5 - 9.5	
			EC	<2500	uS

Water consumption figures*			
Human (average)	160 Litres per day	Horses	40 Litres per day
Bath (average)	80 Litres	Sheep	4 Litres per day
Shower (5 Min)	35 Litres	Dry Cow	50 Litres per day
Power Shower (5 Min)	125 Litres	Milking Cow	75 Litres per day
Wash	5 Litres	Dairy Calf	9 Litres per day
Tap (running)	6 Litres per minute	Chicken	0.2 Litres per day
Toilet	6-9 Litres	Pigs	9 Litres per day
Washing Machine	45 Litres	Turkey	0.7 Litres per day
Dish Washer	20 Litres	Boar	15 Litres per day
Hosepipe	9 Litres per minute	Goats	7 Litres per day
		Alpaca	19 Litres per day
		Donkey	22 Litres per day

(*) The above figures are estimates and should be used with caution.

COMMERCIAL FILTERS

Sediment Filters (Turbidex)

Turbidex is a unique natural clinoptilolite ore that has many outstanding advantages over common filter sands used for sediment reduction. Turbidex is very angular, rough surfaced and has microporous void spaces as small as 3 microns. This creates a surface area over 100 times greater than sand and can reduce suspended solids down to **5 microns** or less (sand filters down to about 40 microns). Turbidex prevents the rapid build up of head loss and binding associated with sand filters and allows longer periods between back washes. Because of its high porosity and hydrophilic nature, Turbidex can operate at much higher flow rates than conventional sediment filters.



Sediment Filters (Turbidex) Clack

Reference	Config	Valve	Vessel	Media	Max Service	Backwash	Item Name
			Size	Volume	Flow	Flow rate	
15407000103	C00001	Clack WS1 CI	8x40	0.5 Cuft	0.9 m³/hr	1.1 m³/hr	
15407000117	C00002	Clack WS1 TC	10x54	1 Cuft	1.5 m³/hr	1.9 m³/hr	
15407000117	C00001	Clack WS1 CI	10x54	1 Cuft	1.5 m³/hr	1.9 m³/hr	
15407000123	C00001	Clack WS1CI	12x52	1.5 Cuft	2.2 m³/hr	2.7 m³/hr	
15407000118	C00002	Clack WS1 TC	13x54	2 Cuft	2.5 m³/hr	3.1 m³/hr	
15407000118	C00001	Clack WS1 CI	13x54	2 Cuft	2.5 m³/hr	3.1 m³/hr	
15407000124	C00001	Clack WS1 CI	14x65	2.5 Cuft	3 m³/hr	3.6 m³/hr	
15407000119	C00001	Clack WS1CI	16x65	4 Cuft	3.7 m³/hr	4.8 m³/hr	
15407000120	C00001	Clack WS1 CI	18x65	5 Cuft	4.8 m³/hr	6 m³/hr	
15407000112	C00001	Clack WS1.5	18x65	5 Cuft	4.8 m³/hr	6 m³/hr	
15407000113	C00001	Clack WS15P CI	21x60	7 Cuft	6.6 m³/hr	8.2 m³/hr	
15407000121	C00001	Clack WS15 CI	24x69	8 Cuft	8.6 m³/hr	11 m³/hr	
15407000114	C00001	Clack WS2 CI	30x72	11 Cuft	13 m³/hr	17 m³/hr	
15407000110	C00001	Clack WS2 H	36x72	20 Cuft	19 m³/hr	24 m³/hr	
15407000125	C00004	Clack WS2 HF (Top)	42x78	25 Cuft	26 m³/hr	33 m³/hr	
15407000125	C00003	Clack WS2 HF SM	42x78	25 Cuft	26 m³/hr	33 m³/hr	
15407000126	C00001	Clack WS3 (Top)	48x82	33 Cuft	34 m³/hr	43 m³/hr	
15407000104	C00001	Clack WS3 (Top)	55x104	52 Cuft	40 m³/hr	50 m³/hr	
10440000359	C00001	2" Side mount kit					
10440000357	C00001	3" Side mount kit					

COMMERCIAL FILTERS

Sediment Filters (Turbidex)



Sediment Filters (Turbidex) Autotrol							
Reference	Config	Valve	Vessel	Media	Max Service	Backwash	Item Name
			Size	Volume	Flow	Flow rate	
15407000105	C00002	Autotrol 263	10x54	1 Cuft	1.5 m³/hr	1.9 m³/hr	
15407000106	C00001	Autotrol 263	12x52	1.5 Cuft	2.2 m³/hr	2.7 m³/hr	
15407000107	C00001	Autotrol 263	13x54	2 Cuft	2.5 m³/hr	3.1 m³/hr	
15407000108	C00001	Autotrol 263	14x65	2.5 Cuft	3 m³/hr	3.6 m³/hr	
15407000109	C00001	Autotrol 273	16x65	4 Cuft	3.7 m³/hr	4.8 m³/hr	
15407000122	C00001	Autotrol 273	18x65	5 Cuft	4.8 m³/hr	6 m³/hr	

COMMERCIAL FILTERS

Sediment Filters (AFM)



Sediment Filters (AFM)							
Reference	Config	Valve	Vessel	Media	Max Service	Backwash	Item Name
			Size	Volume	Flow	Flow rate	
15407000306	C00001	Clack WS1CI	10x54	50kg	1.5 m³/hr	2.2 m³/hr	
15407000301	C00001	Clack WS1CI	12x52	75kg	2.2 m³/hr	2.9 m³/hr	
15407000302	C00001	Clack WS1CI	13x54	100kg	2.5 m³/hr	3.2 m³/hr	
15407000304	C00001	Clack WS1CI	14x65	125kg	3 m³/hr	4.2 m³/hr	
15407000303	C00001	Clack WS1CI	16x65	150kg	3.7 m³/hr	5.5 m³/hr	
15407000307	C00001	Clack WS1CI	18x65	175kg	4.8 m³/hr	6.1 m³/hr	

COMMERCIAL FILTERS

Crystal Right Simplex Systems (Iron and Manganese removal)

Crystal Right works by an ion exchange process which reduces iron, manganese ammonia and hardness and can increase low pH all in a single process. The minimum pH requirement is 6. The regeneration process is exactly the same as that used in a water softener and requires regeneration with salt. There are two types of Crystal Right. CR100 is used where the pH is over 6 and when the pH is low often increases the pH. CR200 is used where the pH is 7 or above (has a higher capacity). Consult the specification sheet for water quality conditions.



CR100 Units pH 6 and above 1 cft bag=28 litres

Reference	Config	Valve	Vessel	Media	Max Flow	Backwash	Regen	Capacity @
			Size	Volume	Service	Flow	Salt	100ppm CaCO ₃
15407000162	C00001	Autotrol 255	10x44	1 Cuft	1.5m ³ /hr	1m ³ /hr	3.9 Kg	7.4m ³
15407000176	C00001	Clack WS1 CI	10x44	1 Cuft	1.5m ³ /hr	1m ³ /hr	3.9 Kg	7.4m ³
15407000163	C00001	Autotrol 255	10x54	1.5 Cuft	1.5m ³ /hr	1m ³ /hr	5 Kg	13.4m ³
15407000172	C00001	Clack WS1 CI	10x54	1.5 Cuft	1.5m ³ /hr	1m ³ /hr	5 Kg	13.4m ³
15407000133	C00001	Autotrol 268	12x52	2 Cuft	1.8m ³ /hr	1.4m ³ /hr	6.7 Kg	17.4m ³
15407000171	C00001	Clack WS1 CI	12x52	2 Cuft	1.8m ³ /hr	1.4m ³ /hr	6.7 Kg	17.4m ³
15407000130	C00001	Autotrol 268	13x54	2.5 Cuft	2m ³ /hr	1.7m ³ /hr	9 Kg	21.8m ³
15407000170	C00001	Clack WS1 CI	13x54	2.5 Cuft	2m ³ /hr	1.7m ³ /hr	9 Kg	21.8m ³
15407000154	C00001	Autotrol 268	14x65	3.5 Cuft	2.5m ³ /hr	1.9m ³ /hr	12 Kg	29.7m ³
15407000177	C00001	Clack WS1 CI	14x65	3.5 Cuft	2.5m ³ /hr	1.9m ³ /hr	12 Kg	29.7m ³
15407000156	C00001	Autotrol 278	16x65	5 Cuft	3m ³ /hr	2.5m ³ /hr	15 Kg	38m ³
15407000167	C00001	Clack WS1 CI	16x65	5 Cuft	3m ³ /hr	2.5m ³ /hr	15 Kg	38m ³
15407000158	C00001	Autotrol 278	18x65	6 Cuft	4m ³ /hr	3.2m ³ /hr	20 Kg	51m ³
15407000178	C00001	Clack WS1 CI	18x65	6 Cuft	4m ³ /hr	3.2m ³ /hr	20 Kg	51m ³
15407000285	C00001	Clack WS1.5 CI	21x60	7 Cuft	5.5m ³ /hr	4.4m ³ /hr	24 Kg	59m ³
15407000180	C00001	Clack WS2 CI	24x69	11 Cuft	7m ³ /hr	5.7m ³ /hr	37 Kg	93m ³
15407000287	C00001	Clack WS2 CI	30x72	19 Cuft	11m ³ /hr	8.9m ³ /hr	65 Kg	161m ³
15407000288	C00001	Clack WS2 CI	36x72	24 Cuft	15m ³ /hr	13m ³ /hr	82 Kg	203m ³

COMMERCIAL FILTERS

Crystal Right Simplex Systems (Iron and Manganese removal)



CR200 Units pH 7 and above 1 cft bag=28 litres

Reference	Config	Valve	Vessel	Media	Max Flow	Backwash	Regen	Capacity @
			Size	Volume	Service	Flow	Salt	100ppm CaCO ₃
15407000161	C00001	Autotrol 255	10x44	1 Cuft	1.5m ³ /hr	1m ³ /hr	3.9 Kg	12.4m ³
15407000181	C00001	Clack WS1 CI	10x44	1 Cuft	1.5m ³ /hr	1m ³ /hr	3.9 Kg	12.4m ³
15407000164	C00001	Autotrol 255	10x54	1.5 Cuft	1.5m ³ /hr	1m ³ /hr	5 Kg	20.7m ³
15407000174	C00001	Clack WS1 CI	10x54	1.5 Cuft	1.5m ³ /hr	1m ³ /hr	5 Kg	20.7m ³
15407000134	C00001	Autotrol 268	12x52	2 Cuft	1.8m ³ /hr	1.4m ³ /hr	6.7 Kg	26m ³
15407000182	C00001	Clack WS1 CI	12x52	2 Cuft	1.8m ³ /hr	1.4m ³ /hr	6.7 Kg	26m ³
15407000159	C00001	Autotrol 268	13x54	2.5 Cuft	2m ³ /hr	1.7m ³ /hr	9 Kg	31.2m ³
15407000183	C00001	Clack WS1 CI	13x54	2.5 Cuft	2m ³ /hr	1.7m ³ /hr	9 Kg	31.2m ³
15407000155	C00001	Autotrol 268	14x65	3.5 Cuft	2.5m ³ /hr	1.9m ³ /hr	12 Kg	39.5m ³
15407000184	C00002	Clack WS1 CI	14x65	3.5 Cuft	2.5m ³ /hr	1.9m ³ /hr	12 Kg	39.5m ³
15407000157	C00001	Autotrol 278	16x65	5 Cuft	3m ³ /hr	2.5m ³ /hr	15 Kg	50.8m ³
15407000185	C00001	Clack WS1 CI	16x65	5 Cuft	3m ³ /hr	2.5m ³ /hr	15 Kg	50.8m ³
15407000160	C00001	Autotrol 278	18x65	6 Cuft	4m ³ /hr	3.2m ³ /hr	20 Kg	67.8m ³
15407000168	C00001	Clack WS1 CI	18x65	6 Cuft	4m ³ /hr	3.2m ³ /hr	20 Kg	67.8m ³
15407000186	C00001	Clack WS2 CI	21x60	7 Cuft	5.5m ³ /hr	4.4m ³ /hr	24 Kg	79m ³
15407000305	C00001	Clack WS2 CI	24x69	11 Cuft	7m ³ /hr	5.7m ³ /hr	37 Kg	124m ³
15407000187	C00001	Clack WS2 CI	30x72	19 Cuft	11m ³ /hr	8.9m ³ /hr	65 Kg	214m ³
15407000188	C00001	Clack WS2 CI	36x72	24 Cuft	15m ³ /hr	9.6m ³ /hr	82 Kg	293m ³

COMMERCIAL FILTERS

Crystal Right Evolve Simplex Systems (Iron and Manganese removal)

The Evolve valve has a built in chlorine generator which on a regeneration produces chlorine to disinfect the media and stop smelly bacteria build up. The result is a system also reduces iron, manganese, hardness and ammonia. If KDF is added hydrogen sulphide can also be removed.



Crystal Right (Evolve)

Reference	Config	Valve	Vessel	Media	Max Flow	Backwash	Regen	Capacity @
			Size	Volume	Service	Flow	Salt	100ppm CaCO ₃
CR100 Evolve								
15407000141	C00001	Evolve	10x54	1.5 Cuft	1.5m ³ /hr	1m ³ /hr	5 Kg	13.4m ³
15407000135	C00001	Evolve	12x52	2 Cuft	1.8m ³ /hr	1.4m ³ /hr	6.7 Kg	17.4m ³
15407000136	C00001	Evolve	13x54	2.5 Cuft	2m ³ /hr	1.7m ³ /hr	9 Kg	21.8m ³
15407000131	C00001	Evolve	14x65	3.5 Cuft	2.5m ³ /hr	1.9m ³ /hr	12 Kg	29.7m ³
15407000283	C00001	Evolve	16x65	5 Cuft	3.2m ³ /hr	2.5m ³ /hr	15 Kg	38m ³
15407000284	C00001	Evolve	18x65	6 Cuft	4.0m ³ /hr	3.2m ³ /hr	20 Kg	51m ³
CR200 Evolve								
15407000140	C00001	Evolve	10x54	1.5 Cuft	1.5m ³ /hr	0.8m ³ /hr	5 Kg	20.7m ³
15407000153	C00001	Evolve	12x52	2 Cuft	1.8m ³ /hr	1.1m ³ /hr	6.7 Kg	26m ³
15407000137	C00001	Evolve	13x54	2.5 Cuft	2m ³ /hr	1.3m ³ /hr	9 Kg	31.2m ³
15407000138	C00001	Evolve	14x65	3.5 Cuft	2.5m ³ /hr	1.5m ³ /hr	12 Kg	39.5m ³

COMMERCIAL FILTERS

Crystal Right Duplex Systems (Iron and Manganese removal)



CR100 Duplex Units pH 6 and above

Reference	Config	Valve	Vessel	Media	Max Flow	Backwash	Regen	Capacity @
			Size	Volume	Service	Flow	Salt	100ppm CaCO ₃
15407000142	C00001	Autotrol 255	10x44	1 Cuft	1.5m ³ /hr	1m ³ /hr	3.9 Kg	7.4m ³
15407000189	C00002	Clack WS1 CI	10x44	1 Cuft	1.5m ³ /hr	1m ³ /hr	3.9 Kg	7.4m ³
15407000143	C00001	Autotrol 255	10x54	1.5 Cuft	1.5m ³ /hr	1m ³ /hr	5 Kg	13.4m ³
15407000190	C00001	Clack WS1 CI	10x54	1.5 Cuft	1.5m ³ /hr	1m ³ /hr	5 Kg	13.4m ³
15407000166	C00001	Autotrol 255	12x52	2 Cuft	1.8m ³ /hr	1.4m ³ /hr	6.7 Kg	17.4m ³
15407000289	C00001	Clack WS1 CI	12x52	2 Cuft	1.8m ³ /hr	1.4m ³ /hr	6.7 Kg	17.4m ³
15407000145	C00001	Autotrol 278	13x54	2.5 Cuft	2m ³ /hr	1.7m ³ /hr	9 Kg	21.8m ³
15407000191	C00001	Clack WS1 CI	13x54	2.5 Cuft	2m ³ /hr	1.7m ³ /hr	9 Kg	21.8m ³
15407000147	C00001	Autotrol 278	14x65	3.5 Cuft	2.5m ³ /hr	1.9m ³ /hr	12 Kg	29.7m ³
15407000192	C00001	Clack WS1 CI	14x65	3.5 Cuft	2.5m ³ /hr	1.9m ³ /hr	12 Kg	29.7m ³
15407000149	C00001	Autotrol 278	16x65	5 Cuft	3m ³ /hr	2.5m ³ /hr	15 Kg	38m ³
15407000193	C00001	Clack WS1 CI	16x65	5 Cuft	3m ³ /hr	2.5m ³ /hr	15 Kg	38m ³
15407000151	C00001	Autotrol 278	18x65	6 Cuft	4m ³ /hr	3.2m ³ /hr	20 Kg	51m ³
15407000194	C00001	Clack WS1 CI	18x65	6 Cuft	4m ³ /hr	3.2m ³ /hr	20 Kg	51m ³
15407000290	C00001	Clack WS2 CI	21x60	7 Cuft	5.5m ³ /hr	4.4m ³ /hr	24 Kg	59m ³
15407000291	C00001	Clack WS2 CI	24x69	11 Cuft	7m ³ /hr	5.7m ³ /hr	37 Kg	93m ³
15407000195	C00001	Clack WS2 CI	30x72	19 Cuft	11m ³ /hr	8.9m ³ /hr	65 Kg	161m ³
15407000292	C00001	Clack WS2 CI	36x72	24 Cuft	15m ³ /hr	13m ³ /hr	82 Kg	203m ³

COMMERCIAL FILTERS

Crystal Right Duplex Systems (Iron and Manganese removal)



CR200 Duplex Units pH 7 and above

Reference	Config	Valve	Vessel	Media	Max Flow	Backwash	Regen	Capacity @
			Size	Volume	Service	Flow	Salt	100ppm CaCO ₃
15407000286	C00001	Autotrol 255	10x44	1 Cuft	1.5m ³ /hr	0.7m ³ /hr	3.9 Kg	12.4m ³
15407000196	C00001	Clack WS1 CI	10x44	1 Cuft	1.5m ³ /hr	0.7m ³ /hr	3.9 Kg	12.4m ³
15407000144	C00001	Autotrol 255	10x54	1.5 Cuft	1.5m ³ /hr	0.8m ³ /hr	5 Kg	20.7m ³
15407000197	C00001	Clack WS1 CI	10x54	1.5 Cuft	1.5m ³ /hr	0.8m ³ /hr	5 Kg	20.7m ³
15407000169	C00001	Autotrol 255	12x52	2 Cuft	1.8m ³ /hr	1.1m ³ /hr	6.7 Kg	26m ³
15407000198	C00001	Clack WS1 CI	12x52	2 Cuft	1.8m ³ /hr	1.1m ³ /hr	6.7 Kg	26m ³
15407000146	C00001	Autotrol 278	13x54	2.5 Cuft	2m ³ /hr	1.3m ³ /hr	9 Kg	31.2m ³
15407000199	C00001	Clack WS1 CI	13x54	2.5 Cuft	2m ³ /hr	1.3m ³ /hr	9 Kg	31.2m ³
15407000148	C00001	Autotrol 278	14x65	3.5 Cuft	2.5m ³ /hr	1.5m ³ /hr	12 Kg	39.5m ³
15407000175	C00001	Clack WS1 CI	14x65	3.5 Cuft	2.5m ³ /hr	1.5m ³ /hr	12 Kg	39.5m ³
15407000150	C00001	Autotrol 278	16x65	5 Cuft	3m ³ /hr	1.9m ³ /hr	15 Kg	50.8m ³
15407000200	C00001	Clack WS1 CI	16x65	5 Cuft	3m ³ /hr	1.9m ³ /hr	15 Kg	50.8m ³
15407000152	C00001	Autotrol 278	18x65	6 Cuft	4m ³ /hr	2.4m ³ /hr	20 Kg	67.8m ³
15407000173	C00001	Clack WS1 CI	18x65	6 Cuft	4m ³ /hr	2.4m ³ /hr	20 Kg	67.8m ³
15407000293	C00001	Clack WS2 CI	21x60	7 Cuft	5.5m ³ /hr	3.3m ³ /hr	24 Kg	79m ³
15407000294	C00001	Clack WS2 CI	24x69	11 Cuft	7m ³ /hr	4.3m ³ /hr	37 Kg	124m ³
15407000295	C00001	Clack WS2 CI	30x72	19 Cuft	11m ³ /hr	6.7m ³ /hr	65 Kg	214m ³
15407000201	C00001	Clack WS2 CI	36x72	24 Cuft	15m ³ /hr	9.6m ³ /hr	82 Kg	293m ³

COMMERCIAL FILTERS

Ecomix / Aquamulti (Fe/ Mn Removal)

Ecomix and Aquamulti are multifunctional water filtration medias that consist of five ingredients (ion exchangers and adsorbents) as an effective one stop eliminator of the 5 main problems (hardness, iron, manganese, ammonia and organic colour). HOWEVER it can foul and high bicarbonate causes concretion.



Ecomix A Simplex / Aquamulti

Reference	Config	Valve	Vessel	Media	Max Flow	Salt Used	Capacity @
			Size	Volume	Service	Per Regen	300ppm CaCO ₃
15407000271	C00007	Clack WS1 CI	10x54	37 Litres	1.3m ³ /hr	3.9 Kg	7.4m ³
15407000272	C00001	Clack WS1 CI	12x52	50 Litres	1.8m ³ /hr	5 Kg	13.4m ³
15407000274	C00004	Clack WS1 CI	13x54	62 Litres	2.2m ³ /hr	5 Kg	13.4m ³
15407000273	C00001	Clack WS1 CI	14x65	75 Litres	2.5m ³ /hr	6.7 Kg	17.4m ³
15407000268	C00002	Clack WS1 CI	16x65	100 Litres	3.2m ³ /hr	10 Kg	17.4m ³
15407000269	C00002	Clack WS1 CI	18x65	125 Litres	4.0m ³ /hr	12 Kg	17.4m ³

COMMERCIAL FILTERS

Filox (Iron & Manganese Removal), Top Mount

Filox can be used for iron and manganese reduction by oxidation. Like Birm the pH needs to be controlled and there needs to be oxygen present -see data sheet. Filox can tolerate chlorine and has a higher flow rate than Birm and manganese dioxide. **HIGH FLOW RATES**



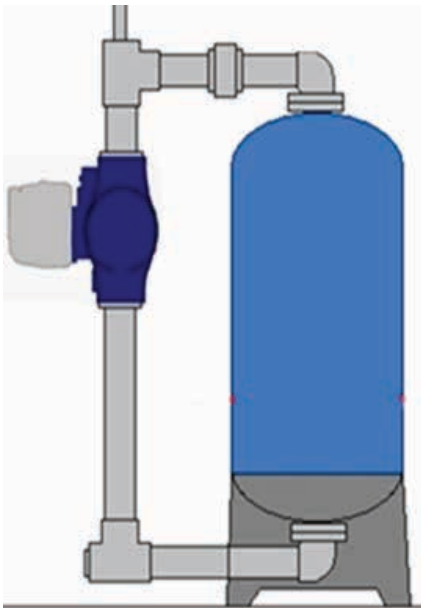
Filox (Iron & Manganese and H2S Removal)

Reference	Config	Valve	Vessel	Media	Maximum Service	Backwash
			Size	Volume	Flow	Flow
15407000261	C00003	Clack WS1 TC	10x54	1 Cuft	1.5m³/hr	2m³/hr
15407000247	C00001	Autotrol 263	10x54	1 Cuft	1.5m³/hr	2m³/hr
15407000261	C00001	Clack WS1 CI	10x54	1 Cuft	1.5m³/hr	2m³/hr
15407000248	C00001	Autotrol 263	12x52	1.5 Cuft	2m³/hr	2.5m³/hr
15407000262	C00001	Clack WS1 CI	12x52	1.5 Cuft	2m³/hr	2.5m³/hr
15407000263	C00003	Clack WS1 TC	13x54	2 Cuft	2.5m³/hr	3m³/hr
15407000251	C00001	Autotrol 263	13x54	2 Cuft	2.5m³/hr	3m³/hr
15407000263	C00001	Clack WS1 CI	13x54	2 Cuft	2.5m³/hr	3m³/hr
15407000249	C00001	Autotrol 263	14x65	3 Cuft	3m³/hr	3.3m³/hr
15407000252	C00001	Clack WS1 CI	14x65	3 Cuft	3m³/hr	3.3m³/hr
15407000265	C00001	Autotrol 263	16x65	4 Cuft	3.7m³/hr	4.6m³/hr
15407000260	C00001	Clack WS1 CI	16x65	4 Cuft	3.7m³/hr	4.6m³/hr
15407000253	C00001	Clack WS1.25 CI	16x65	4 Cuft	3.7m³/hr	4.6m³/hr
15407000266	C00001	Autotrol 273	18x65	5 Cuft	4.5m³/hr	5.7m³/hr
15407000250	C00001	Clack WS1.25 CI	18x65	5 Cuft	4.5m³/hr	5.7m³/hr
15407000254	C00001	Clack WS1.5 CI	21x60	6 Cuft	6.4m³/hr	7.9m³/hr
15407000264	C00001	Clack WS2 CI	21x60	6 Cuft	6.4m³/hr	7.9m³/hr
15407000259	C00002	Clack WS2 CI	24x69	8 Cuft	9m³/hr	10m³/hr
15407000258	C00001	Clack WS2 CI	30x72	11 Cuft	15m³/hr	17m³/hr
15407000257	C00001	Clack WS2H	36x72	16 Cuft	20m³/hr	23m³/hr
15407000256	C00004	Clack WS2HF TM	42x78	28 Cuft	28m³/hr	35m³/hr
15407000255	C00001	Clack WS3H TM	48x82	36 Cuft	38m³/hr	42m³/hr
15407000255	C00002	Clack WS3H SM	48x82	36 Cuft	38m³/hr	42m³/hr

COMMERCIAL FILTERS

Filox (Iron & Manganese Removal), Side Mount

Filox (Iron & Manganese and H2S Removal)						
Reference	Config	Valve	Vessel	Media	Maximum Service	Backwash
			Size	Volume	Flow	Flow
15407000246	C00002	Clack WS2QC SM	24x69	8 Cuft	9m³/hr	10m³/hr
15407000298	C00001	Clack WS2QC SM	30x72	11 Cuft	15m³/hr	17m³/hr
15407000256	C00005	Clack WS2HF SM	42x78	28 Cuft	28m³/hr	35m³/hr
15407000255	C00002	Clack WS3H SM	48x82	36 Cuft	38m³/hr	42m³/hr
10440000359	C00001	2" Side Mount Kit				
10440000357	C00001	3" Side Mount Kit				



Side Mount System WITH side mount kit

COMMERCIAL FILTERS

Birm (Iron & Manganese Removal)

Birm is a relatively inexpensive material which can be used for iron and manganese removal by oxidation. It requires a pH of 7 or more for Iron removal and pH 8 for manganese removal (it uses dissolved oxygen in the water to oxidise the metal). As it acts a catalyst it is not consumed so Birm doesn't require regenerating or topping up. Birm also has the advantage of acting as a filter, removing turbidity. If the pH of the water is too low pH correction may be required. Media life expectancy is 2 to 3 years.



Birm (Iron & Manganese Removal)

Reference	Config	Valve	Vessel	Media	Maximum Service	Backwash
			Size	Volume	Flow	Flow
15407000072	C00002	Clack WS1 TC	10x54	1.5 Cuft	0.6m³/hr	1.1m³/hr
15407000067	C00001	Autotrol 263	10x54	1.5 Cuft	0.6m³/hr	1.1m³/hr
15407000072	C00001	Clack WS1 CI	10x54	1.5 Cuft	0.6m³/hr	1.1m³/hr
15407000068	C00001	Autotrol 263	12x52	2 Cuft	0.9m³/hr	1.8m³/hr
15407000074	C00001	Clack WS1 CI	12x52	2 Cuft	0.9m³/hr	1.8m³/hr
15407000075	C00002	Clack WS1 TC	13x54	2.5 Cuft	1m³/hr	2m³/hr
15407000069	C00001	Autotrol 263	13x54	2.5 Cuft	1m³/hr	2m³/hr
15407000075	C00001	Clack WS1 CI	13x54	2.5 Cuft	1m³/hr	2m³/hr
15407000070	C00001	Autotrol 263	14x65	3 Cuft	1.2m³/hr	2.3m³/hr
15407000076	C00001	Clack WS1 CI	14x65	3 Cuft	1.2m³/hr	2.3m³/hr
15407000071	C00001	Autotrol 263	16x65	3.5 Cuft	1.6m³/hr	3.4m³/hr
15407000077	C00001	Clack WS1 CI	16x65	3.5 Cuft	1.6m³/hr	3.4m³/hr
15407000073	C00001	Autotrol 263	18x65	5 Cuft	2m³/hr	3.9m³/hr
15407000078	C00001	Clack WS1 CI	18x65	5 Cuft	2m³/hr	3.9m³/hr
15407000279	C00001	Clack WS1.5 CI	21x60	6.5 Cuft	2.7m³/hr	5.7m³/hr
15407000079	C00001	Clack WS1.5 CI	24x69	9 Cuft	3.6m³/hr	6.8m³/hr
15407000080	C00001	Clack WS2 CI	30x72	15 Cuft	5.6m³/hr	11.4m³/hr
15407000280	C00001	Clack WS2 CI	36x72	20 Cuft	8m³/hr	17.1m³/hr
15407000281	C00001	Clack WS2 H	42x78	28 Cuft	11m³/hr	22m³/hr
15407000281	C00002	Clack WS2 H	42x78	28 Cuft	11m³/hr	22m³/hr
15407000282	C00001	Clack WS3	48x82	36 Cuft	14m³/hr	28m³/hr
15407000282	C00002	Clack WS3	48x82	36 Cuft	14m³/hr	28m³/hr

COMMERCIAL FILTERS

Hydrogen Sulphide Filters (Rotten Eggs Smell)

Hydrogen sulphide (H₂S) is a gas which if dissolved in water smells like rotten eggs. The easiest way to remove the smell of small amounts is to aerate the water or pass it through carbon. In conventional carbon filters the carbon gets saturated and regularly needs replacing. In this novel system the H₂S is sprayed through a layer of air held in the top of the vessel oxidising the gas vastly improving the capacity of the carbon reducing the need and cost of replacement carbon.



Hydrogen Sulphide Filters (Rotten Eggs Smell)

Reference	Config	Valve	Vessel	Media	Maximum Service	Backwash
			Size	Volume	Flow	Flow
15407000066	C00001	Clack WS1 CI	10x54	15Kg	0.4m ³ /hr	0.7m ³ /hr
15407000219	C00001	Clack WS1 CI	13x54	25Kg	0.8m ³ /hr	1.2m ³ /hr
15407000230	C00001	Clack WS1 CI	14x65	50Kg	1m ³ /hr	1.4m ³ /hr
15407000310	C00001	Clack WS1 CI	16x65	75Kg	1.4m ³ /hr	1.7m ³ /hr

Accessories

Reference	Search Name	Item Name
10440000352	C00002	Air Draw kit 1"
10440000082		No Hardwater Bypass 1"
10440000024		Turbine 1"
10440000299		Manual Bypass 1"

COMMERCIAL FILTERS

Arsenic Reduction

PRIVATE WATER APPROVED PRODUCT (Regulation 31)

Arsenic is found naturally in many parts of the UK and Ireland and with the lowering of the European drinking water standards for arsenic its removal is vital. The contaminated water passes through robust granular Bayoxide media developed for Severn Trent Water. As the water travels through the media the arsenic is absorbed and removed to a level below the drinking water standard. This treatment is a very cost effective way of removing arsenic.

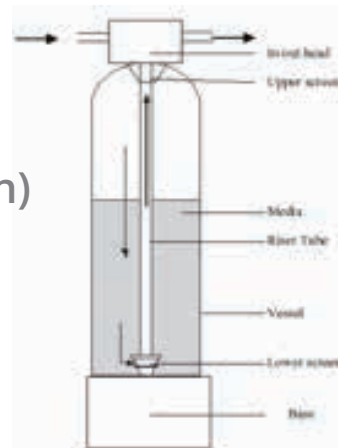


Arsenic Reduction							
Reference	Config	Valve	Vessel	Media	Maximum Service	Backwash	Volume Treated
			Size	Volume	Flow	Flow	at 25µg Arsenic
15407000209	C00003	Clack WS1 TC	10x44	15Kg	1m³/hr	1.1m³/hr	3000m³
15407000202	C00001	Autotrol 263	10x44	15Kg	1m³/hr	1.1m³/hr	3000m³
15407000209	C00001	Clack WS1 CI	10x44	15Kg	1m³/hr	1.1m³/hr	3000m³
15407000204	C00001	Autotrol 263	13x54	30Kg	1.7m³/hr	2m³/hr	6000m³
15407000208	C00001	Clack WS1 CI	13x54	30Kg	1.7m³/hr	2m³/hr	6000m³
15407000203	C00001	Autotrol 263	14x65	45Kg	2m³/hr	2.3m³/hr	9000m³
15407000207	C00001	Clack WS1 CI	14x65	45Kg	2m³/hr	2.3m³/hr	9000m³
15407000205	C00001	Autotrol 263	16x65	60Kg	2.6m³/hr	3.4m³/hr	12000m³
15407000210	C00001	Clack WS1 CI	16x65	60Kg	2.6m³/hr	3.4m³/hr	12000m³
15407000216	C00001	Autotrol 263	18x65	75Kg	3.4m³/hr	3.9m³/hr	15000m³
15407000211	C00001	Clack WS1 CI	18x65	75Kg	3.4m³/hr	3.9m³/hr	15000m³
15407000212	C00001	Clack WS1.5	21x60	105Kg	4.4m³/hr	5.7m³/hr	20000m³
15407000296	C00001	Clack WS1.5CI	24x69	150Kg	6m³/hr	6.8m³/hr	30000m³
15407000214	C00001	Clack WS2 CI	30x72	225Kg	9m³/hr	11.4m³/hr	46000m³
15407000215	C00001	Clack WS2 CI	36x72	300Kg	12m³/hr	17.1m³/hr	60000m³

COMMERCIAL FILTERS

Manual (empty) In/out systems (eg for pH or carbon)

Suitable for pH correction in the absence of iron or manganese and when regular servicing will be done for carbon systems and mixed bed polishing systems. Raw water flows through the media (needs to be bought separately) and then out to service. Backwash needs to be done with external valves or a manual backwash valve.



3/4" in/out system (Ports on opposite sides)

Reference	Config	Vessel	Volume	Item Name
Size				
15407000065	C00001	6x13	6 Litres	
	C00015	8x17	10 Litres	
	C00017	10x19	19 Litres	
	C00016	8x35	25 Litres	
	C00012	10x35	37 Litres	
	C00013	10x54	60 Litres	



3/4" in/out Quick Connect BSP male (ports on opposite sides)

Reference	Config	Vessel	Volume	Item Name
Size				
15407000057	C00001	8x35	25 Litres	
	C00004	8x35	37 Litres	



1" in/out system (Ports on same side)

Reference	Config	Vessel	Volume	Item Name
Size				
15407000064	C00013	8x35	25 Litres	
	C00002	9x35	31 Litres	
	C00016	10x35	37 Litres	
	C00011	10x54	60 Litres	
	C00006	12x52	84 Litres	
	C00007	13x54	100 Litres	
	C00010	14x65	125 Litres	



COMMERCIAL FILTERS

1" in/out system (ports on opposite side)

Reference	Config	Vessel	Volume	Item Name
Size				
15407000058	C00001	8x35	25 Litres	
	C00003	10x35	37 Litres	



1" in/out system (Ports on same side) with refill port on top

Reference	Config	Vessel	Volume	Item Name
Size				
15407000064	C00001	8x35	25 Litres	
	C00014	10x23	24 Litres	



1" manual backwash in/out system (In/outs on opposite side, backwash drain is 3/4" BSP female)

Reference	Config	Vessel	Volume	Item Name
Size				
15407000060	C00009	10x35	37 Litrs	
	C00001	10x54	60 Litres	
	C00003	12x52	84 Litres	2 way manual valve
	C00004	13x54	100 Litres	
	C00006	14x65	125 Litres	
	C00007	16x65	170 Litres	
	C00008	18x65	245 Litres	



1.5" in/out system (Ports on same side)

Reference	Config	Vessel	Volume	Item Name
Size				
15407000278	C00001	14x65	100 Litres	
	C00002	16x65	150 Litres	
	C00003	18x65	200 Litres	
	C00004	21x60	250 Litres	
	C00005	24x69	350 Litres	
	C00006	30x72	500 Litres	



COMMERCIAL FILTERS

Aeration Systems (Air Contact Assemblies)

Aeration systems are primarily used for mixing air with water, this aids the oxidation of certain components in the water. One of the most common uses is to oxidise soluble Iron and Manganese into insoluble hydroxides.

Aeration Systems (Air Contact Assemblies)

Reference	Config	Vessel	Item Name
		Size	
15407000002	C00009	10x44	
15407000002	C00007	10x54	
15407000002	C00002	12x48	
15407000002	C00003	13x54	
15407000002	C00004	14x65	
15407000002	C00005	16x65	
15407000002	C00006	18x65	



Aeration Systems (Air Draw Systems)

Used to add a pocket of air to filter systems like Filox. The air pocket formed sits above the media and as water cascades through it air is dissolved into the water helping oxidise iron and manganese. The kit can be fitted to most Clack 1" filter systems

Aeration Systems (Air Draw Systems)

Reference	Config	Item Name
10440000352	C00002	Air Draw Kit

Ozonation

In these systems Ozone is used instead of air in the draw systems. Ozone is a stronger oxidant than air so should mean oxidation happens faster. The Ozone generator converts the oxygen (O₂) in the air to Ozone (O₃) which is in turn sucked in and sits on top of the media. The kit can be fitted to Impression PLUS 1" filter systems.

Ozonation

Reference	Config	Item Name
10441000005		Ozone Generator



COMMERCIAL FILTERS

UltraFiltration Systems (Remove sub micron particles)

Ultra filtration systems can remove sub micron particles such as clays and colloids. They can also stop bacteria and can be used in conjunction with disinfection systems. This UF uses a multi port valve to backwash with the option of chlorine dosing to try and keep the UF module clean. UF is difficult because the filters can easily get blinded so it is important to get pre treatment correct.

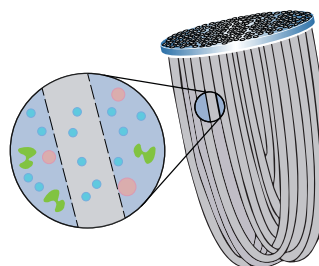


UltraFiltration Systems (Remove sub micron particles)

Reference	Config	filtration	max flow	Item Name
15407000308	C00001	0.02 micron	1.8 m ³ /hr	8x42 Ultra Filter System with chlorinator
14170000039	C00002	Drain connection kit 3/4" BSP		

Pallas ultra uses hollow fiber

Hollow fibre acts a physical barrier to remove bacteria. Its your complementary solution to UV and chlorine disinfection. Hollow fibre technology is made up of small hollow fibres 1mm in diameter with 0.02mm pores. The filtration is from the outside in minimizing the risk of deep clogging. Simple flushing with water and/or air together with a large membrane area allows a compact design.



Accessories

Reference	Config	filtration	max flow	Item Name
10199000001	Vessel with UF Filter			

COMMERCIAL FILTERS

pH (backwashing) Systems (To Increase the pH)

Water with a pH below 7 is acidic and corrosive. Raising the pH will neutralise the water, removing the metallic taste and pipe corrosion, and can also reduce any iron or manganese contamination. The backwashing head has the advantage of remixing the media and removing any debris or iron/manganese. By backwashing the units stops the media compressing and stops it going hard which can happen with in/out systems.



pH (backwashing) Systems (To Increase the pH)

Reference	Config	Valve	Vessel	Media	Maximum Service	Backwash
			Size	Volume	Flow	Flow
15407000088	C00005	Clack WS1 TC	10x54	50Kg	0.7m³/hr	1.1m³/hr
15407000082	C00001	Autotrol 263	10x54	50Kg	0.7m³/hr	1.1m³/hr
15407000088	C00007	Clack WS1 CI	10x54	50Kg	0.7m³/hr	1.1m³/hr
15407000083	C00001	Autotrol 263	12x52	62Kg	1.1m³/hr	1.8m³/hr
15407000089	C00001	Clack WS1 CI	12x52	62Kg	1.1m³/hr	1.8m³/hr
15407000084	C00001	Autotrol 263	13x54	100Kg	1.3m³/hr	2m³/hr
15407000090	C00003	Clack WS1 CI	13x54	100Kg	1.3m³/hr	2m³/hr
15407000085	C00001	Autotrol 263	14x65	125Kg	1.5m³/hr	2.3m³/hr
15407000091	C00001	Clack WS1 CI	14x65	125Kg	1.5m³/hr	2.3m³/hr
15407000086	C00001	Autotrol 263	16x65	150Kg	1.9m³/hr	3.4m³/hr
15407000092	C00001	Clack WS1 CI	16x65	150Kg	1.9m³/hr	3.4m³/hr
15407000087	C00001	Autotrol 263	18x65	225Kg	2.4m³/hr	3.9m³/hr
15407000093	C00001	Clack WS1 CI	18x65	225Kg	2.4m³/hr	3.9m³/hr
15407000081	C00001	Clack WS1.5P CI	21x60	250Kg	3.3m³/hr	5.7m³/hr
15407000095	C00001	Clack WS1.5 CI	24x69	400Kg	4.3m³/hr	6.8m³/hr
15407000096	C00001	Clack WS2 CI	30x72	650Kg	6.7m³/hr	11.4m³/hr
15407000097	C00001	Clack WS2 CI	36x72	925Kg	9.6m³/hr	17.1m³/hr

COMMERCIAL FILTERS

pH (backwashing) Systems (To Increase the pH)

Dome hole version for easy refilling without removing the valve

Reference	Config	Valve	Vessel	Media	Media Mix	Service	Backwash
Size						Flow	
15407000098	C00001	Autotrol 263	10x54	50Kg	Juraperle	0.7m³/hr	1.1m³
15407000098	C00002	Autotrol 263	10x54	50Kg	Juraperle / Corrosex	0.7m³/hr	1.1m³
15407000098	C00003	Autotrol 263	10x54	50Kg	pH / Auamandix / Sand	0.7m³/hr	1.1m³
15407000088	C00001	Clack WS1 CI	10 x 54	50Kg	Juraperle	0.7m³/hr	1.1m³
15407000088	C00002	Clack WS1 CI	10 x 54	50Kg	Juraperle / Corrosex	0.7m³/hr	1.1m³
15407000099	C00001	Autotrol 263	13x54	62Kg	Juraperle	1.3m³/hr	2.3m³
15407000099	C00002	Autotrol 263	13x54	62Kg	Juraperle / Corrosex	1.3m³/hr	2.3m³
15407000099	C00004	Autotrol 263	13x54	62Kg	pH / Auamandix / Sand	1.3m³/hr	2.3m³
15407000090	C00004	Clack WS1 CI	13x54	62Kg	Juraperle	1.3m³/hr	2.3m³
15407000090	C00005	Clack WS1 CI	13x54	62Kg	Juraperle / Corrosex	1.3m³/hr	2.3m³
15407000090	C00006	Clack WS1 CI	13x54	62Kg	pH / Auamandix / Sand	1.3m³/hr	2.3m³
10440000352	WS1 Air draw kit Adds a pocket of air to the top of the tank - for Clack 1" valves only!						



COMMERCIAL FILTERS

Nitrate Reduction

The legal limit for nitrates is 50mg/l. A nitrate reduction system is made up of a vessel filled with nitrate selective resin with a multi-port valve on the top. As the water passes through the resin the nitrate is trapped. Periodically this nitrate needs to be removed by regenerating with salt. As the nitrate levels vary from month to month a time based regeneration system is recommended. Smaller systems can be cabinet based, larger ones come with a separate brine tank to hold the salt.

Nitrate Simplex Units (Time controlled)

Reference	Config	Valve	Vessel Size	Media Volume	Max Flow Service	Regen Salt	Capacity @ 50 mg/l
15007000040	C00003	Autotrol 255	Teal	10 Ltrs	0.4 m³/hr	1.7 Kg	4m³
15007000070	C00007	Autotrol 255	Coral	10 Ltrs	0.4 m³/hr	1.7 Kg	4m³
15007000038	C00003	Autotrol 255	Teal	15 Ltrs	0.6m³/hr	2.5 Kg	6m³
15407000009	C00001	Autotrol 255	Swan	35 Ltrs	1.4m³/hr	6 Kg	14m³
15407000011	C00001	Clack WS1CI	Swan	35 Ltrs	1.4m³/hr	6 Kg	14m³
15407000012	C00001	Autotrol 255	10x54	42 Ltrs	1.7m³/hr	7 Kg	17m³
15407000026	C00001	Clack WS1CI	10x54	42 Ltrs	1.7m³/hr	7 Kg	17m³
15407000013	C00001	Autotrol 255	12x52	50 Ltrs	2m³/hr	8.5 Kg	20m³
15407000027	C00001	Clack WS1CI	12x52	50 Ltrs	2m³/hr	8.5 Kg	20m³
15407000014	C00001	Autotrol 268	13x54	75 Ltrs	3m³/hr	13 Kg	30m³
15407000028	C00001	Clack WS1CI	13x54	75 Ltrs	3m³/hr	13 Kg	30m³
15407000015	C00001	Autotrol 268	14x65	100 Ltrs	4m³/hr	17 Kg	40m³
15407000029	C00001	Clack WS1CI	14x65	100 Ltrs	4m³/hr	17 Kg	40m³
15407000016	C00001	Autotrol 268	16x65	150 Ltrs	6m³/hr	25 Kg	60m³
15407000030	C00001	Clack WS1CI	16x65	150 Ltrs	6m³/hr	25 Kg	60m³
15407000017	C00001	Autotrol 268	18x65	200 Ltrs	5.7m³/hr	34 Kg	80m³
15407000031	C00001	Clack WS1CI	18x65	200 Ltrs	6m³/hr	34 Kg	80m³
15407000024	C00001	Clack WS1.5CI	21x60	250 Ltrs	10m³/hr	42 Kg	100m³
15407000300	C00001	Clack WS1.5P CI	24x69	350 Ltrs	14m³/hr	60 Kg	140m³
15407000033	C00001	Clack WS2CI Metered	30x72	500 Ltrs	20m³/hr	85 Kg	200m³
15407000034	C00001	Clack WS2CI Metered	36x72	700 Ltrs	26m³/hr	119 Kg	280m³

COMMERCIAL FILTERS

Nitrate Reduction

Nitrate Duplex Units (meter controlled)

Reference	Config	Valve	Vessel	Media	Max Flow	Regen	Capacity @
			Size	Volume	Service	Salt	50 mg/l
15407000045	C00001	Autotrol 255	10x54	42L	1.7m³/hr	7 Kg	17m³
15407000052	C00001	Clack WS1CITT	10x54	42L	1.7m³/hr	7 Kg	17m³
15407000044	C00001	Autotrol 278	13x54	75L	3.2m³/hr	13 Kg	30m³
15407000053	C00001	Clack WS1CITT	13x54	75L	3.2m³/hr	13 Kg	30m³
15407000049	C00001	Clack WS1CITT	14x65	100L	4m³/hr	17 Kg	40m³
15407000050	C00001	Clack WS1CITT	16x65	150L	6m³/hr	25 Kg	60m³
15407000043	C00001	Autotrol 278	18x65	200L	5.7m³/hr	34 Kg	70m³
15407000048	C00001	Clack WS1CITT	18x65	200L	6.2m³/hr	34 Kg	70m³
15407000054	C00001	Clack WS2CI	21x60	250L	10m³/hr	42 Kg	100m³
15407000055	C00001	Clack WS2CI	24x69	350L	14m³/hr	60 Kg	140m³
15407000056	C00001	Clack WS2CI	30x72	500L	17m³/hr	85 Kg	200m³
15407000051	C00001	Clack WS2CI	36x72	700L	26m³/hr	119 Kg	280m³



COMMERCIAL FILTERS

Organic scavenger (Colour Removal - peaty waters)

Tannins & organic compounds in upland water give water a yellow tint. In highland areas where water runs off peat the water can be virtually brown. Organic scavenging systems use resin to hold these organics which are periodically backwashed away with brine.



Organic scavenger						
Reference	Config	Valve	Vessel	Media	Max Flow	Salt used
			Size	Volume	Service	
15407000309	C00001	Autotrol 255	Swan	25 Ltrs	0.35m³/hr	6.2 Kg
15407000025	C00001	Clack WS1CI	10x54	50 Ltrs	0.7m³/hr	12 Kg
15407000018	C00001	Autotrol 255	12x52	50 Ltrs	0.7m³/hr	12 Kg
15407000035	C00001	Clack WS1CI	12x52	50 Ltrs	0.7m³/hr	12 Kg
15407000021	C00001	Autotrol 255	13x54	75 Ltrs	1.1m³/hr	19 Kg
15407000036	C00001	Clack WS1CI	13x54	75 Ltrs	1.1m³/hr	19 Kg
15407000019	C00001	Autotrol 268	14x65	100 Ltrs	1.5m³/hr	25 Kg
15407000037	C00001	Clack WS1	14x65	100 Ltrs	1.5m³/hr	25 Kg
15407000020	C00001	Autotrol 268	16x65	150 Ltrs	2.1m³/hr	31 Kg
15407000038	C00001	Clack WS1CI	16x65	150 Ltrs	2.1m³/hr	31 Kg
15407000276	C00001	Autotrol 268	18x65	200 Ltrs	3m³/hr	50 Kg
15407000039	C00001	Clack WS1CI	18x65	200 Ltrs	3m³/hr	50 Kg
15407000040	C00001	Clack WS1.5CI	21x60	250 Ltrs	3.4m³/hr	62 Kg
15407000041	C00001	Clack WS2CI	24x69	375 Ltrs	5.6m³/hr	94 Kg
15407000042	C00001	Clack WS2CI	30x72	500 Ltrs	7.5m³/hr	125 Kg
15407000022	C00001	Clack WS2CI	36x72	700 Ltrs	10m³/hr	175 Kg

COMMERCIAL FILTERS

Carbon Filters (Chlorine, Colour and Organic Removal)

Granular Activated Carbon (GAC) filters are an excellent choice for removal of chlorine, taste, odour, or organics (bone charcoal will also reduce some heavy metals). Coconut, coal, bone or wood based are available. Flow is based on dechlorination and is about a 3 minute contact time. For colour/organics this time needs to be at least 10 minutes so the max flow rate is reduced.



Carbon Filters

Reference	Config	Valve	Vessel	Media	Max Dechlorination	Backwash
			Size	Volume	Flow	Flow
15407000234	C00003	Clack WS1TC	10x54	20 Kg	0.8m³/hr	0.7m³/hr
15407000224	C00001	Autotrol 263	10x54	20 Kg	0.8m³/hr	0.7m³/hr
15407000234	C00001	Clack WS1CI	10x54	20 Kg	0.8m³/hr	0.7m³/hr
15407000241	C00001	Autotrol 263	12x52	25 Kg	1.4m³/hr	0.9m³/hr
15407000235	C00001	Clack WS1CI	12x52	25 Kg	1.4m³/hr	0.9m³/hr
15407000220	C00001	Autotrol 263	13x54	35 Kg	2.1m³/hr	1.1m³/hr
15407000232	C00001	Clack WS1CI	13x54	35 Kg	2.1m³/hr	1.1m³/hr
15407000242	C00001	Autotrol 263	14x65	50 Kg	2.4m³/hr	1.3m³/hr
15407000236	C00001	Clack WS1CI	14x65	50 Kg	2.4m³/hr	1.3m³/hr
15407000062	C00001	Clack WS1CI	16x65	63 Kg	3.2m³/hr	1.7m³/hr
15407000221	C00001	Autotrol 263	18x65	85 Kg	4.0m³/hr	2.2m³/hr
15407000237	C00001	Clack WS1CI	18x65	85 Kg	4.0m³/hr	2.2m³/hr
15407000226	C00002	Clack WS1.5PCI	18x65	85 Kg	4.8m³/hr	2.2m³/hr
15407000238	C00003	Clack WS1CI	21x60	100Kg	5.4m³/hr	3.0m³/hr
15407000297	C00001	Clack WS1.5CI	21x60	100 Kg	5.4m³/hr	3.0m³/hr
15407000225	C00001	Clack WS1CI	24x69	150Kg	6.1m³/hr	3.8m³/hr
15407000227	C00003	Clack WS1.5PCI	24x69	150 Kg	6.1m³/hr	3.8m³/hr
15407000228	C00001	Clack WS1.5CI	30x72	200 Kg	8.9m³/hr	6.0m³/hr
15407000233	C00001	Clack WS2CI	36x72	300 Kg	14m³/hr	8.5m³/hr
15407000239	C00002	WS2CI	42x78	450 Kg	18m³/hr	12m³/hr
15407000217	C00001	WS2QC SM	36x72	300 Kg	14m³/hr	8.5m³/hr
15407000240	C00003	WS2QC	48x82	550 Kg	22m³/hr	18m³/hr
15407000223	C00002	WS2HF SM	63x86	950 Kg	37m³/hr	30m³/hr
10440000357	3" Side mount kit (needed for side mount systems)					

06

CHAPTER 06

COMMERCIAL RO

COMMERCIAL RO

Aqualine Budget RO

The budget RO consists off:

- Stainless steel frame
- An efficiency of 50%
- Min. salt rejection 95%
- Working pressure: 10 bar
- Voltage: 230V/50Hz
- Solenoid valve on the inlet
- 5 micron pre-filter
- Pressure switch water shortage
- Booster pump with adjustable output on the pump
- Manometer
- Membrane holder with PWG 4021ND membrane
- Conductivity meter on the Permeate
- Adjustable drain output
- Safety brine valve
- Controller with conductivity display
- Alarm panel



Aqualine Budget RO

Reference	Item Name	Permeate Flow l/h	Membranes
18232000013	Aqualine BT-125-3 Reverse Osmosis System	100	4021 x 1

ESLI RO

Pallas Alfa Series

Features

- FRP membrane vessels
- TFC Spiral wound membranes 4" diameter
- C00001 stainless steel
- 5 micron cartridge filter
- Low and high pressure pipings U-PVC
- Solenoid automatic valves
- Pressure adjustment valves in pump outlet & drain line
- Low and high pressure switches
- Permeate and concentrate flowmeters (rotameters)
- Recirculation flowmeters
- Product water conductivity meter
- Autoflush System
- RO electronic control card, alarm & position Indicators
- 220 V/50Hz/1ph (ALFA 140 - 240)
- 380 V/50Hz/3ph (ALFA 440 - 540 - 640)
- Antiscalant dosage system is not included

Advantages

- Pollet Water Group in-house manufacturing
- Compact and reliable water treatment system
- Easy to install, low maintenance
- Pure water with high recovery membranes
- AISI 304 Skid with FRP pressure vessels
- Grundfos pump
- Standard models available from stock
- Special models on request



Recommended Feed Water Limits

Feedwater TDS	0 - 1,000 ppm
Feedwater Pressure	2 - 5 bar
Feedwater pH Range	6 - 8
Silica (SiO ₂) tolerance	25 ppm max
Feedwater Temperature	min./max. 10/30 °c
Iron (Fe) tolerance	0.05 ppm (without ASC dosing) 0.2 ppm (with ASC dosing)

Pallas Alfa Series without membranes

Reference	Item Name	Permeate Flow l/h	Membranes Required - order separately	Recovery %	Pump Model
18232000004	Pallas Alfa 140	250	1 x LG BW 4040 UES	75	Grundfos CM 1-10 (single phase)
18232000002	Pallas Alfa 240	500	2 x LG BW 4040 UES	75	Grundfos CM 1-10 (single phase)
18232000003	Pallas Alfa 440	1000	4 x LG BW 4040 UES	75	Grundfos CM 3-14 (tri phase)
18232000015	Pallas Alfa 540	1250	5 x LG BW 4040 UES	75	Grundfos CM 3-14 (tri phase)
18232000016	Pallas Alfa 640	1500	6 x LG BW 4040 UES	75	Grundfos CM 3-14 (tri phase)
11061000009	LG BW 4040 UES		LG Membrane		
18232000018	Anti Scale dosing station for Alfa				

HERCO RO

Microprocessor controllers for RO Units



No longer available on new units, only as a spare part

No longer available on new units, only as a spare part

Type	RO 524	RO 1000	RO Digital	RO 5000
Display	2-digit	2 lines, 16 chars./line	4 lines, 20 chars./line	Graphic display
Conductivity measuring range	1 - 99 µS/cm	2 - 200 µS/cm	1 - 1000 µS/cm	2 - 200 µS/cm
Further conductivity ranges (µS/cm)	-	0.5 - 50, 20 - 2.000, 100 - 10.000	-	0.5 - 50, 20 - 20.000
Control voltage	24 VDC	230 V / 50 Hz	24 VDC	230 V / 50 Hz
Supply voltage	230 V/50 - 60 Hz ± 10%	230 V/50 - 60 Hz ± 10%	93 - 265 V / 50 - 60 Hz	230 V/50 - 60 Hz ± 10%
Dry run protection for RO pump	Yes	Yes	Yes	Yes
Connection for limitron	Yes	Yes	Yes	Yes
Forced stop RO	Yes	Yes	Yes	Yes
Operating signal	-	Adjustable	Adjustable	Adjustable
Centralised alarm	Yes	Yes	Yes	Yes
Automatic mode (e.g. tank level)	Yes	Yes	Yes	Yes
Permeate conductivity limit	Fixed	Adjustable	Adjustable	Adjustable
Flow rate limits	-	-	Adjustable	-
Pressure limits	-	-	Adjustable	-
Behaviour if the limit is exceeded	Fixed	Adjustable	Adjustable	Adjustable
Constant permeate rate possible	-	-	yes, if FU available	-
Alternating pump activation	-	-	-	Yes
Optional Ports (inputs)				

HERCO RO

Microprocessor controllers for RO Units



No longer available on new units, only as a spare part

No longer available on new units, only as a spare part

Type	RO 524	RO 1000	RO Digital	RO 5000
Concentrate flushing valve	Yes (as an alternative)	Yes	Yes	Yes
Permeate recirculation	Yes (as an alternative)	Yes	Yes	Yes
Double-staged RO unit	-	-	-	Yes
Analogue level switch	-	-	Yes	-
Feed water conductivity	-	-	-	Yes, 3 measuring ranges
Programmable digital inputs	-	2	3	1
Pre-alarm e.g. dosing tank empty	-	Yes	Yes	Yes
External fault, E.g.	-	Yes	Yes	Yes
Optional Ports (outputs)				
Permeate conductivity pre-warning	-	-	Yes	Yes
Analogue values	-	1	2	1
Permeate conductivity, e.g.	-	Yes	Yes	Yes
Permeate output e.g.	-	-	Yes	-
Programmable digital outputs	-	1	1	1
Operating signal, e.g.	-	Yes	Yes	Yes
Data logging	-	-	1.960 data sets (± 10 days)	1.145 data sets
Parameter setting	Configured	Adjustable	Adjustable	Adjustable
Firmware update	At the factory	Via update board	Via RS232	Via RS232
Profinet module	-	-	Optional	-

HERCO RO

Overview of the different RO units

BASIC DATA NEEDED TO SELECT A REVERSE OSMOSIS/EDI SYSTEM

1. Quality and source of the feed water to be demineralised (analysis, pre-treatment)
2. Permeate rate (per hour and per day on average)
3. Permeate quality (conductivity)
4. Controller type (μ P controllers RO 524, RO 1000, RO digital, others)
5. Type of pre-treatment, available equipment on site, primary pressure, permeate backpressure, installation site, transport to location, etc
6. Significance of the running costs (electric energy, wastewater)

Permeate l/h	Series	Controller	Comments
Softened tap water (free of chlorine)			
80 and 130	Budget	RO 524	Undersink device, space saving, budget
120 to 500	UO	RO 524	Particularly space-saving, delivery from stock
	Combi UO C Series Combi UO CD Series	RO 524	With pre-filter, backflow preventer, simplex softener for UO C/ duplex softener for UO CD, limitron hardness monitoring unit, ready for operation ("plug and flow")
120 to 500	UO-D	RO digital	Particularly space-saving, internally monitored, logging of operating parameters, freely programmable controller, optional Profinet module
	Combi UO-D C Series Combi UO-D CD Series	RO digital	With pre-filter, backflow preventer, simplex softener for UO-D C/ duplex softener for UO-D CD, limitron hardness monitoring unit, ready for operation ("plug and flow")
600 to 2.000	UO-D UO-D FU	RO digital	Internal monitoring, logging of operating parameters, freely programmable controller, FU version: Energy saving thanks to FU frequency converter
	Combi UO-D CD Series Combi UO-D FU CD Series	RO digital	With pre-filter, backflow preventer, duplex softener, limitron hardness monitoring unit, ready for operation ("plug and flow") FU version: Energy saving thanks to variable-speed drive (VSD = FU), "plug and flow"
50 to 1.200	UO-ED Z		Max Permeate Backpressure 7 bar, most hygienic design to prevent microbiological contamination CD series incl. pre-filter, backflow preventer, duplex softener, hardness monitoring unit, ready for operation ("plug and flow")
	Combi UO-ED Z CD	RO digital	Permeate staged, salt rejection rate > 99%
300 to 10.000	ND/P	RO 5000	Internal monitoring, logging of operating parameters, freely programmable controller, optional Profinet module
2.500 to 12.000	UO-D FU	RO Digital	Low-pressure membranes, freely programmable controller Energy saving thanks variable speed drive (VSD = FU)
3.000 to 15.000	UO-S7 KR/FU	PLC Siemens S7- 1200	Energy saving thanks to variable speed drive (VSD = FU)
200 to 1.700	UO-D P(FU)	RO digital (2x)	Permeate staged, typical permeate conductivity < 5 μ S/cm, energy-saving thanks to variable speed drive (VSD = FU) (from 750l/h)

HERCO RO

Overview of the different RO units

Permeate l/h	Series	Controller	Comments
Ultra-pure water			
150 to 20.000	UO-S7 UP	PLC Siemens S7-1200	RO + EDI, diluate < 0.2 µs/cm energy-saving thanks to variable-speed drive (VSD = FU, from 550 l/h)
150 to 2.200	EP	PLC Siemens S7-1200	Diluate < 0.2 µs/cm, permeate demineralisation
Tap water (free of chlorine, antiscalant dosing)			
1.650 to 30.000	UO-D AS/FU	RO digital	Incl. ARA, KSE, connection for Dosing AS-K Energy saving thanks to variable-speed drive (VSD = FU)
Brackish water			
250 to 13.500	UO-D BW/FU	RO Digital	For raw water < 5,000 mg/l TDS, incl. ARA, KSE, PKR, 2x connection for dosing point, energy-saving thanks to variable speed-drive (VSD = FU)

HERCO RO

Herco Budget RO

Undersink unit for desalination of softened drinking water according to drinking water regulations (free chlorine not detectable).

Drinking water can also be desalinated without pre-treatment. However, in this case the recovery rate is reduced. The decisive factor is the water analysis.



UO Budget 130
Controller: RO 524

Features

- Space saving undersink unit
- Especially good value
- Operating without water softening unit possible
- Recovery: 50%
- Salt rejection percentage: min. 95%
- Voltage: 230 V/50 Hz

Herco Budget RO

Reference	Item Name	Permeate Flow l/h	Membranes
18231000068	UO Budget 130 with conductivity meter	130	4021 x 1
18231000067	optional conductivity meter		
18231000102	Level Switch and cable (float type)		

*The units are designed for a maximum TDS of 1,000 mg/l, a water temperature of 15°C, a max. colloidal index of 3 and free permeate outlet. Under these conditions, the unit still reaches design permeate flow after 3 years of operation. The permeate recovery depends on the raw water quality and the type of pre-treatment.

HERCO RO

Compact Units - UO Series

For desalination of softened drinking water according to drinking water regulations (free chlorine not detectable). Compact system with a small footprint suitable for wall mounting or fixation on the floor.

Features

- Wall mounted or free standing
- Particularly space-saving (420 x 350 x 1300 mm)
- RO 524 controller
- Recovery from 75% to 80%
- Salt rejection percentage: min. 97%
- Working pressure: 12 bar
- Voltage: 230 V/50 Hz
- Analogue flow meters



UO 500
Controller: RO 524

Compact Units - UO Series

Reference	Search Name	Item Name	Permeate Flow l/h	Membranes
18231000027	381 921	UO 120	120	4021 x 1
18231000008	381 922	UO 300	300	4040 x 1
18231000003	381 923	UO 500	500	4040 x 2

ARA connections included

Possibility to use specific membranes to achieve a rejection rate of 98.5% (25% reduction of flow)

Options

Reference	Search Name	Item Name	Type RO
18231000031	370 038	Limitron 3/4"	UO 120 - 500
18231000125	383 764	Permeate recirculation PR 500/24	UO 120 - 500
18231000121	383 765	VSE Blending device	UO 120 - 500
18231000029	383 767	HR Modules UO(-D) 120 to 500 (C) (CD) & Budget	UO 120 - 500
18231000181	542 070	Profinet Interface UO-D 120-500 C/CD	UO 120 - 500

*The units are designed for a maximum TDS of 1,000 mg/l, a water temperature of 15°C, a max. colloidal index of 3 and free permeate outlet. Under these conditions, the unit still reaches design permeate flow after 3 years of operation. The permeate recovery depends on the raw water quality and the type of pre-treatment.

HERCO RO

Compact Units - UO-D Series

For desalination of softened drinking water according to drinking water regulations (free chlorine not detectable).

Compact unit suitable for wall mounting or fixation on the floor.

Features

- Wall mounted or free standing
- Particularly space-saving (420 x 350 x 1300 mm)
- RO Digital controller
- Recovery from 75% to 80%
- Salt rejection percentage: min. 97%
- Working pressure: 12 bar
- Voltage: 230 V/50 Hz
- Digital flow meters



UO-D 500
Controller: RO Digital

Compact Units - UO-D Series

Reference	Search Name	Item Name	Permeate Flow l/h	Membranes
18231000006	387 141	UO-D 120	120	4021 x 1
18231000013	387 142	UO-D 300	300	4040 x 1
18231000009	387 143	UO-D 500	500	4040 x 2

ARA connections included

Possibility to use specific membranes to achieve a rejection rate of 98.5% (25% reduction of flow)

Options

Reference	Search Name	Item Name	Type RO
18231000031	370 038	Limitron 3/4"	UO-D 120 - 500
18231000125	383 764	Permeate recirculation PR 500/24	UO-D 120 - 500
18231000121	383 765	VSE Blending device	UO-D 120 - 500
18231000029	383 767	HR Modules UO(-D) 120 to 500 (C) (CD) & Budget	UO-D 120 - 500
18231000181	542 070	Profinet Interface UO-D 120-500 C/CD	UO 120 - 500

*The units are designed for a maximum TDS of 1,000 mg/l, a water temperature of 15°C, a max. colloidal index of 3 and free permeate outlet. Under these conditions, the unit still reaches design permeate flow after 3 years of operation. The permeate recovery depends on the raw water quality and the type of pre-treatment.

HERCO RO

Compact Units - UO-D CD Series

Ready-to-connect system in compact design including pre-treatment for desalination of drinking water according to drinking water regulations (free chlorine not detectable).

Due to integrated water pre-treatment components as pre-filter, backflow preventer, duplex water softener and limitron hardness monitoring unit a piping on site is not necessary. Easiest on site-installation due to only 4 connections (drinking water, permeate, waste water and power socket).

Features

- Skid mounted, complete unit (760 x 1150 x 1550 mm)
- Duplex softener Clack CI Twin 2 x 30L mono resins
- RO 524 controller
- Recovery from 75% to 80%
- Salt rejection percentage: min. 97%
- Working pressure: 12 bar
- Voltage: 230 V/50 Hz
- Digital flow meters



UO-D 500 CD
Controller: RO Digital
Duplex water softener

Compact Units - UO-D CD Series

Reference	Search Name	Item Name	Permeate Flow l/h	Membranes
18231000049	420 221	UO-D 120 CD	120	4021 x 1
18231000050	420 222	UO-D 300 CD	300	4040 x 1
18231000046	420 223	UO-D 500 CD	500	4040 x 2

ARA connections and limitron included

Profinet interface on demand

Possibility to use specific membranes to achieve a rejection rate of 98.5% (25% reduction of flow)

Options

Reference	Search Name	Item Name	Type RO
18231000031	370 038	Limitron 3/4"	UO-D CD 120 - 500
18231000125	383 764	Permeate recirculation PR 500/24	UO-D CD 120 - 500
18231000121	383 765	VSE Blending device	UO-D CD 120 - 500
18231000029	383 767	HR Modules UO(-D) 120 to 500 (C) (CD) & Budget	UO-D CD 120 - 500
18231000181	542 070	Profinet Interface UO-D 120-500 C/CD	UO-D CD 120 - 500

*The units are designed for a maximum TDS of 1,000 mg/l, a water temperature of 15°C, a max. colloidal index of 3 and free permeate outlet. Under these conditions, the unit still reaches design permeate flow after 3 years of operation. The permeate recovery depends on the raw water quality and the type of pre-treatment.

HERCO RO

Vertical Frame Units - UO-D Series

For desalination of softened drinking water according to drinking water regulations (free chlorine not detectable).

Features

- Skid mounted, complete unit
- Particularly space-saving (650 x 810 x 1820 mm)
- RO Digital controller
- Recovery from 75% to 80%
- Salt rejection percentage: 97%
- Working pressure: 14 bar
- Voltage: 3 x 400V / 50 Hz
- Digital flow meters



UO-D 2000
Controller: RO Digital

Vertical Frame Units - UO-D Series

Reference	Search Name	Item Name	Permeate Flow l/h	Membranes
18231000032	387 151	UO-D 600	600	4040 x 2
18231000011	387 152	UO-D 900	900	4040 x 3
18231000014	387 153	UO-D 1200	1200	4040 x 4
18231000025	387 154	UO-D 1500	1500	4040 x 5
18231000004	387 155	UO-D 2000	2000	4040 x 6

ARA included

Options

Reference	Search Name	Item Name
18231000031	370 038	Limitron 3/4"
18231000019	370 069	Limitron 1"
18231000136	383 774	Concentrate flushing device (KSE)
18231000180	383 775	Permeate recirculation - UO 600-2000
18231000183	383 805	VSE Blending device for UO-D 600-1500l/h units
18231000182	383 776	VSE Blending device for UO-D 2000l/h units
18231000110	541 842	PROFINET-Interface
18231000002	383 777	HR Modules UO-D 600 to 2000 (CD) (FU)

*The units are designed for a maximum TDS of 1,000 mg/l, a water temperature of 15°C, a max. colloidal index of 3 and free permeate outlet. Under these conditions, the unit still reaches design permeate flow after 3 years of operation. The permeate recovery depends on the raw water quality and the type of pre-treatment.

HERCO RO

Standard Units - UO-D FU Series

Reverse osmosis units for desalination of softened water with a salinity of up to 1,000 mg/l. Each unit is equipped with a high-quality centrifugal pump with variable-speed drive (VSD = FU), which reduces energy consumption by 30 - 50 %. The RO digital microprocessor controller enables fully automatic operation with logging of all relevant operating data and freely adjustable limit values. The unit can be connected to the central control system via optional interfaces.



UO-D 4300 FU
Controller: RO digital

Features

- Complete unit skid mounted
- RO digital controller
- Recovery from 75% to 80%
- Salt rejection percentage: 97%
- Voltage: 3 x 380 - 500
- Optional: Profinet, Profibus, Modbus RTU/TCP and BACnet interfaces
- Optional: SPS (PLC Siemens S7-1200) instead of RO digital
- Optional: PP version instead of PVC

Standard Units - UO-D FU

Reference	Search Name	Item Name	Permeate Flow l/h	Membranes
4" Horizontal				
18231000059	387 195	UO-D 2500 FU	2500	4040 x 8
18231000060	387 196	UO-D 3000 FU	3000	4040 x 9
18231000061	387 197	UO-D 3500 FU	3500	4040 x 12
8" Horizontal				
18231000062	387 198	UO-D 4300 FU	4300	8040 x 3
18231000063	387 199	UO-D 5400 FU	5400	8040 x 4
18231000159	387 200	UO-D 7000 FU	7000	8040 x 5
18231000064	387 201	UO-D 8000 FU	8000	8040 x 6
18231000065	387 202	UO-D 10000 FU	10000	8040 x 8
18231000066	387 203	UO-D 12000 FU	12000	8040 x 9

VSE on request - PKR included

HERCO RO

High Efficiency units (90%) - KR/FU Series

Concentrate-staged reverse osmosis units with high recovery up to 90 % for desalination of softened water with a salinity of up to 1,000 mg/l. Energy savings of 30 - 50 % due to the design of the centrifugal pump with variable-speed drive (VSD = FU). The PLC Siemens S7-1200 allows visualization of the plant as well as optimal control and evaluation of the plant operation, optional data transfer via interfaces, remote access and subsequent control extensions are possible. Extension or adaptation of the controller possible (on request at extra cost).



UO-S7 5000 KR/FU
Controller: PLC Siemens S7 - 1200

Features

- ➔ Low water consumption thanks to high permeate recovery up to 90%
- ➔ Special membrane selection for optimal permeate quality
- ➔ Incl. concentrate flushing unit (KSE) & connection kit for cleaning unit (ARA)
- ➔ Optional: Profinet, Profibus, Modbus RTU/TCP and BACnet interfaces
- ➔ Optional: automatic concentrate rinsing with permeate (KVP)

Standard Units - UO-D FU

Reference	Search Name	Item Name	Permeate Flow l/h	Membranes
18231000151	381 822	UO-S7 3000 KR/FU	3000	4040 x 12
18231000152	381 832	UO-S7 3500 KR/FU	3500	4040 x 14
18231000153	381 842	UO-S7 4000 KR/FU	4000	4040 x 4 8040 x 3
18231000154	381 852	UO-S7 5000 KR/FU	5000	4040 x 4 8040 x 4
18231000155	381 862	UO-S7 6000 KR/FU	6000	4040 x 5 8040 x 5
18231000156	381 872	UO-S7 7000 KR/FU	7000	4040 x 6 8040 x 6
18231000055	381 882	UO-S7 8500 KR/FU	8500	4040 x 7 8040 x 7
18231000157	381 962	UO-S7 10000 KR/FU	10000	4040 x 9 8040 x 9
18231000158	381 972	UO-S7 12000 KR/FU	12000	4040 x 10 8040 x 10
18231000036	381 982	UO-S7 15000 KR/FU	15000	4040 x 12 8040 x 12

VSE on request - ARA and KSE included.

HERCO RO

Permeate staged units - P (FU) series

For desalination of softened drinking water according to drinking water regulations (free chlorine not detectable).
With 4" or 8" membrane housings.

Permeate-staged RO System with second permeate stage for treating the permeate of the first stage once again.
Thereby a very high quality of permeate is achieved.

Features

- ➔ Complete unit skid mounted
- ➔ RO Digital controller up to 1700 l/h, higher units are equipped with PLC Siemens S7-1200 and are on request
- ➔ Two-stage design ensures very good permeate quality (typical conductivity < 5 µS/cm)
- ➔ Incl. frequency converter (for 750l/h units and bigger)
- ➔ Incl. permeate constant control PKR (FU version)



UO-D 1250 P/FU
Controller: RO Digital

P (FU) Series

Reference	Search Name	Item Name	Permeate Flow l/h	Membranes
P series				
18231000023	387 190	UO-D 200 P	200	4040 x 1
18231000026	387 191	UO-D 400 P	400	4040 x 2
P/FU series				
18231000001	387 192	UO-D 750 P/FU	750	4040 x 3
18231000057	387 193	UO-D 1250 P/FU	1250	4040 x 5
18231000058	387 194	UO-D 1750 P/FU	1750	4040 x 6

HERCO RO

Ultra-Pure water - UP-S7 & UP-S7 FU series

The ultrapure water units produce a very high diluate quality with a typical conductivity of $< 0.2 \mu\text{S}/\text{cm}$ by combining reverse osmosis (RO) and electrodeionisation (EDI).

The unit are equipped with a high-quality centrifugal pump (from unit size 550 l/h on), which saves 30 - 50% energy with a variable-speed drive (VSD = FU).

The PLC Siemens S7-1200 enables visualisation of the unit as well as optimal control and evaluation of the unit operation. Optionally, data transfer via interfaces, remote access and subsequent expansion or adaptation of the control system are possible (on request at extra charge).



UP-S7 20000 FU
PLC Siemens S7-1200

Features

- High diluate quality due to a downstream EDI (typical EC $< 0.2 \mu\text{S}/\text{cm}$ or resistance $> 5\text{M}\Omega \times \text{cm}$)
- No chemicals required
- Ideal for the sectors pharma, power plant and microelectronics
- Easy to operate via a 7" display (4" for size 150/250)
- Optional: Profinet, Profibus, Modbus RTU/TCP and BACnet interfaces
- Optional: PP version instead of PVC

Advantages of RO units with VSD (FU)

- Energy saving of 30 – 50 % compared to RO units without VSD
- Payback period for VSD usually less than one year
- Permeate production constant independent of operating pressure (permeate constant control PKR)
- Protection of the unit due to soft start
- Particularly quiet operation

UP-S7 series

Reference	Search Name	Item Name	Permeate Flow l/h	Membranes
4" Vertical				
18231000024	425 083	UP-S7 150	150	4040 x 1
18231000012	425 093	UP-S7 250	250	4040 x 1

HERCO RO

Ultra-Pure water - UP-S7 & UP-S7 FU series

UP-S7 FU series				
Reference	Search Name	Item Name	Permeate Flow l/h	Membranes
4" Vertical				
18231000034	425 006	UP-S7 550 FU	550	4040 x 2
18231000035	425 016	UP-S7 800 FU	800	4040 x 3
18231000071	425 026	UP-S7 1100 FU	1100	4040 x 4
18231000160	425 036	UP-S7 1500 FU	1500	4040 x 6
18231000161	425 056	UP-S7 2200 FU	2200	4040 x 8
4" Horizontal				
18231000162	425 086	UP-S7 3000 FU	3000	4040 x 11
8" Horizontal				
18231000073	425 088	UP-S7 4100 FU	4100	8040 x 4
18231000074	425 090	UP-S7 6000 FU	6000	8040 x 5
18231000075	425 094	UP-S7 8200 FU	8200	8040 x 7
18231000163	425 096	UP-S7 12500 FU	12500	8040 x 11
18231000164	425 098	UP-S7 20000 FU	20000	8040 x 17

HERCO RO

Tap Water - UO-D AS/FU Series

Reverse osmosis units for the desalination of hardness-stabilised water with a salinity of up to 1,000 mg/l. Operated with dosing of antiscalant instead of upstream softening. Each unit is equipped with a high-quality centrifugal pump with variable-speed drive (VSD = FU), which reduces energy consumption by 30 - 50 % . The RO digital microprocessor controller enables fully automatic operation with logging of all relevant operating data and freely adjustable limit values. The unit can be connected to the central control system via optional interfaces.



UO-D 10000 AS/FU
Controller: RO Digital

Features

- Complete unit skid mounted
- RO Digital controller
- Recovery: 75%
- Salt rejection percentage: min. 97%
- Optional: Profinet, Profibus, Modbus RTU/TCP and BACnet interfaces
- Optional: SPS (PLC Siemens S7-1200) instead of RO digital
- Optional: PP version instead of PVC
- Voltage: 3 x 380 - 480 or 500V / 50 Hz
- Incl. concentrate rinsing
- Incl. connector kit for manual cleaning set
- Prepared for a dosing station with antiscalant

Tap Water - UO-D AS Series

Reference	Search Name	Item Name	Permeate Flow l/h	Membranes
18231000171	387 156	UO-D 450 AS/FU	450	4040 x 2
18231000172	387 157	UO-D 700 AS/FU	700	4040 x 3
18231000173	387 158	UO-D 900 AS/FU	900	4040 x 4
18231000093	387 159	UO-D 1250 AS/FU	1250	4040 x 5
4" membranes				
18231000165	387 160	UO-D 1650 AS/FU	1650	4040 x 6
18231000166	387 204	UO-D 2200 AS/FU	2200	4040 x 8
18231000168	387 206	UO-D 3100 AS/FU	3100	4040 x 12

VSE on request - ARA and KSE included

Options

Reference	Search Name	Item Name
18231000108	450 301	Dosing station integrated into system (anti-scale or pH)

*The RO devices are designed for a maximum TDS content of 1000 mg/l, water temperature of 15°C and maximum SDI of 3. The return will depend on the incoming water and the type of pretreatment.

HERCO RO

Anti Scale - UO-D AS Series

Anti Scale - UO-D AS Series

Reference	Search Name	Item Name	Permeate Flow l/h	Membranes
8" membranes				
18231000169	387 207	UO-D 3800 AS/FU	3800	8040 x 3
18231000083	387 208	UO-D 5000 AS/FU	5000	8040 x 4
18231000084	387 209	UO-D 6000 AS/FU	6000	8040 x 5
18231000085	387 210	UO-D 7000 AS/FU	7000	8040 x 6
18231000086	387 211	UO-D 8000 AS/FU	8000	8040 x 7
18231000087	387 212	UO-D 10000 AS/FU	10000	8040 x 9
18231000170	387 213	UO-D 12000 AS/FU	12000	8040 x 10
18231000088	387 214	UO-D 15000 AS/FU	15000	8040 x 12
18231000089	387 215	UO-D 18000 AS/FU	18000	8040 x 15
18231000090	387 216	UO-D 20000 AS/FU	20000	8040 x 17
18231000091	387 217	UO-D 25000 AS/FU	25000	8040 x 20
18231000092	387 218	UO-D 30000 AS/FU	30000	8040 x 25

VSE on request - ARA and KSE included
Frequency Inverter driven systems are available on request

HERCO RO

Brackish water - UO-D BW/FU

Brackish water reverse osmosis units for desalination of water with a salinity of up to 5,000 mg/l.

Operation with recovery of 50 - 75 % depending on salt content in the feed water and target desalination rate. Each unit is equipped with a high-quality centrifugal pump, energy savings of 30 - 65 % due to design with variable-speed drive (VSD = FU).

The RO digital control system enables fully automatic operation with logging of all relevant operating data.

The unit can be connected to the central control system via optional interfaces.



UO-D 1000 BW/FU
Controller: RO Digital

FEATURES

- Complete unit skid mounted
- RO Digital controller
- Permeate recovery 50-75 %, depends on feed water salinity & desired desalination rate
- Adapted materials for resistance to high salt content in the concentrate
- Space-saving design due to vertical pressure pipes (up to 1000l/h)
- Possibility to control & connect two dosing stations
- Incl. connection kit for MRA manual cleaning unit (ARA)
- Incl. concentrate flushing device (KSE)
- Optional: Profinet, Profibus, Modbus RTU/TCP and BACnet interfaces
- Optional: SPS (PLC Siemens S7-1200) instead of RO digital
- Optional: PP version instead of PVC

ADVANTAGES OF RO UNITS WITH VSD (FU)

- Energy saving of 30 – 50 % compared to RO units without VSD
- Payback period for VSD usually less than one year
- Permeate production constant independent of operating pressure (permeate constant control PKR)
- Protection of the unit due to soft start
- Particularly quiet operation

* The units are designed for a maximum TDS of 5,000 mg/l, a water temperature of 15 °C, a maximum colloidal index of 3 and free permeate outlet. Under these conditions, the units still reach design permeate flow after three years of operation. The permeate recovery depends on the raw water quality and the type of pre-treatment.

HERCO RO

Brackish water - UO-D BW/FU

Brackish water - UO-D BW/FU

Reference	Search Name	Item Name	Permeate Flow l/h	Membranes
4" Vertical				
18231000094	384 501	UO-D 250 BW/FU	250	4040 x 1
18231000095	384 511	UO-D 500 BW/FU	500	4040 x 2
18231000096	384 531	UO-D 1000 BW/FU	1000	4040 x 4
4" Horizontal				
18231000097	384 561	UO-D 2000 BW/FU	2000	4040 x 8
18231000098	384 581	UO-D 3000 BW/FU	3000	4040 x 12
8" Horizontal				
18231000099	384 601	UO-D 4500 BW/FU	4500	8040 x 4
18231000100	384 621	UO-D 6500 BW/FU	6500	8040 x 6
18231000101	384 641	UO-D 10000 BW/FU	10000	8040 x 9
18231000174	385 661	UO-D 13500 BW/FU	13500	8040 x 12

OPTIONS

Brackish water - UO-D BW/FU: options

Reference	Search Name	Item Name	Type RO
18231000131	384 720	Permeate Flushing Unit KVP 100 BW	UO-D 250 - 1000 BW/FU
18231000177	384 721	Permeate Flushing Unit KVP 200 BW	UO-D 2000 - 3000 BW/FU
18231000178	384 722	Permeate Flushing Unit KVP 300 BW	UO-D 4500 - 6500 BW/FU
18231000179	384 723	Permeate Flushing Unit KVP 500 BW	UO-D 10000 BW/FU
18231000184	800 002	PLC Siemens S7-1200 for UO-D FU, UO-D AS/FU & UO-D BW/FU	
18231000110	541 842	PROFINET-Interface	

HERCO RO

Sea water - SW series

Through desalination with reverse osmosis, seawater can be purified from a TDS of approx. 45,000 mg/l to a TDS of approx. 500 mg/l (drinking water quality). These units are distinguished by their particularly high corrosion resistance and durability. By using systems for energy recovery, the energy requirement of the reverse osmosis is minimised.

FEATURES

- ➔ Salt content (TDS) up to 45,000 mg/l in raw water
- ➔ Permeate quality < 500 mg/l TDS
- ➔ Approx. 33 % permeate yield
- ➔ Frame made of stainless steel, seawater-resistant coating
- ➔ Components in corrosion-resistant design (PVC or duplex stainless steel)
- ➔ Options KVP and Energy recovery system Turbocharger (alternatively iSave etc.) available on request



UO 9000 SW
Controller: RO Digital

Reference	Item Name	€
All UO-D SW units are available upon request		

OPTIONS FOR HERCO RO

Options for Reverse-Osmosis Units

Level (Float) Switches			
Reference	Search Name	Item Name	Type RO
18231000102		Simple single float switch	
10599000005	A95A3M	Float switch - length 3m	
10599000018	A95B10M	Float switch - length 10m	
Hardness Monitoring			
11731000002	370 037	Limitent 3/4"	
11731000004	370 067	Limitent 1"	
11731000006	370 043	Limitent 1 1/4"	
11731000007	370 068	Limitent 1 1/2"	
11731000001	370 055	Limitent 2"	
18231000031	370 038	Limitron 3/4"	
18231000019	370 069	Limitron 1"	
18231000020	370 044	Limitron 1 1/4"	
18231000017	370 070	Limitron 1 1/2"	
18231000007	370 063	Limitron 2"	
11731000005	370 031	Replacement sensor	
Cleaning Sets (CIP)			
18231000139	382 026	Cleaning set MRA - Vessel size 100L	UO 50 - 1500
18231000140	382 095	Cleaning set MRA - Vessel size 200L	UO 1650 - 3500
18231000141	382 332	Cleaning set MRA - Vessel size 300L	UO 3800 - 9500
18231000142	382 407	Cleaning set MRA - Vessel size 500L	UO 10000 - 17000
18231000143	382 809	Cleaning set MRA - Vessel size 1000L	UO 18000 - 30000
18231000138	383 178	9KW Heater for cleaning units above	

HERCO UF

Ultra-Filtration Units

Standard units for the ultrafiltration of raw water. Flow rate depends on raw water quality.

Ultrafilters typically take out colour and large atoms and particles above 0.001 micron. They can be used as prefiltration for RO's or as part of a treatment system. The UF systems have a self cleaning sequence built in when permeate water is pushed back through the system to keep it clean.

Ultra-Filtration Units

Reference	Search Name	Item Name
18231000078	UF 1D6	Production 3750 litres /hour
18231000079	UF 2D6	Production 7500 litres /hour
18231000080	UF 4D6	Production 15000 litres /hour
18231000081	UF 6D6	Production 22500 litres /hour
18231000082	UF 8D6	Production 30000 litres /hour

Larger units on request

Trial units can be arranged

CEB - Chemical Enhanced Backwash for UF

Reference	Search Name	Item Name
18231000175	428-129	Dosing pump with suction device CEB 20 For sizes up to 6D6
18231000176		Dosing pump with suction device CEB 50 For 8D6



MEMBRANE HOUSINGS

PWG Membrane Housings

PWG membrane housings are engineered for use in Reverse Osmosis systems for a variety of applications with pressures up to 1,200 PSI. The pressure vessels are designed to accommodate any standard made 2.5" , 4" and 8".



Application

- Reverse Osmosis
- Industrial Water Treatment
- Commercial Water Treatment
- Applications with pressures up to 1200 PSI

Benefits

- Designed to provide a long-term, trouble-free operation with minimal downtime
- Accurate temperature flow curing process
- UV resistant polyurethane exterior paint finish
- Designed for small and large applications
- Large stock, quick delivery
- Certified quality control

PWG Membrane Housings

Reference	Search Name	Item Name	Diameter Inch	Length	Pressure PSI	Port Position
11170000001		4040 EP (1)	4	40"	300	EP

PWG Membrane Housings

Reference	Search Name	Item Name	Diameter Inch	Length	Pressure PSI	Port Position
11147000001	2521	Stainless steel membrane housing	2.5"	21"	200 psi	end
11147000002	2540	Stainless steel membrane housing	2.5"	40"	200 psi	end
11147000003	4021	Stainless steel membrane housing	4.0"	21"	200 psi	end
11147000004	4040	Stainless steel membrane housing	4.0"	40"	200 psi	end
11199000003		O Ring for 4" housing				
11199000002		End Cap for 4" housing				



MEMBRANES

LG Membranes

LG Chem's NanoH2O™ seawater RO membranes, incorporated with innovative Thin Film Nanocomposite (TFN) technology, reduce the cost of desalination while delivering superior water quality. Our seawater RO membranes provide industry leading salt rejection and produce 20% more flow than membranes manufactured with conventional technologies.



LG Sea Water Membranes

Reference	Search Name	Item Name	Permeate Flow gpd	(m ³ /d)	Stabilized Salt Rejection %	Minimal Salt Rejection %	Feed Spacer mm
11061000020		LG SW 400 SR ¹	6000	22.7	99.85	99.7	34
11061000021		LG SW 440 SR ¹	6600	25	99.85	99.7	28
11061000023		LG SW 400 GR ¹	7500	28.4	99.85	99.7	34
11061000024		LG SW 440 GR ¹	8250	31.2	99.85	99.7	28
11061000012		LG SW 400 R ¹	9000	34.1	99.85	99.7	34
11061000017		LG SW 440 R ¹	9900	37.5	99.85	99.7	28
11061000031		LG SW 400 ES ¹	13700	51.9	99.8	99.6	34
11061000026		LG SW 440 ES ¹	15070	57	99.8	99.6	28

Test Conditions 32,000 ppm NaCl at 25°C (77°F), 800 psi (55 bar), pH 8, recovery 8%

Permeate flows for individual elements may vary +/- 15%

¹ Check stock availability as this is not part of our standard range

MEMBRANES

LG Membranes

LG Chem's NanoH2O™ brackish water RO membranes serve various municipal and industrial applications and have been operating in the major utilities around the world.

LG BWRO membranes, all incorporated with innovative Thin Film Nanocomposite (TFN) technology, are offered in industry standard configurations and can easily fit into existing and new RO plants.



LG Membranes							
Reference	Search Name	Item Name	Permeate Flow gpd (m³/d)		Stabilized Salt Rejection %	Minimal Salt Rejection %	Feed Spacer mm
2,5" Spiral Wound membranes							
A	11061000015	LG BW 2540 UES	750	2.8	99.0	98.0	28
4" Spiral Wound membranes							
B	11061000007	LG BW4021 ES	1000	3.8	99.5	99.2	28
B	11061000008	LG BW4040 ES	2500	9.5	99.5	99.2	28
A	11061000009	LG BW 4040 UES¹	2700	10.2	99	98	28
A	11061000002	LG BW CW 4040 SF	2900	11	99	98	28
C	11061000003	LG BW 4040 R	2500	9.5	99.6	99.3	28
8" Spiral Wound membranes							
B	11061000004	LG BW 400 R Dura	10500	39.8	99.7	99.6	34
B	11061000010	LG BW 400 ES L	10500	39.7	99.6	99.5	34
B	11061000032	LG BW 440 ES L	11550	43.7	99.6	99.5	34
C	11061000019	LG BW 400 AFR¹	10500	39.7	99.6	99.5	34
C	11061000004	LG BW 400 R Dura	10500	39.7	99.6	99.5	34
C	11061000029	LG BW 400 R G2⁴	11500	43.7	99.78	99.65	34
C	11061000018	LG BW 440 R²	11550	43.7	99.6	99.5	28
C	11061000028	LG BW 440 R G2⁴	12650	47.9	99.78	99.65	28

Test Conditions A: 500 ppm NaCl at 25°C (77°F), 100 psi (6.9 bar), pH 7, recovery 15%

B: 2,000 ppm NaCl at 25°C (77°F), 150 psi (10.3 bar), pH 7, recovery 15%

C: 2,000 ppm NaCl at 25°C (77°F), 225 psi (15.5 bar), pH 7, recovery 15%

Permeate flows for individual elements may vary ± 15%

¹ Check stock availability as this is not part of our standard range

² This version gives lower pressure drop with anti fouling effect and provides a better cleanability

³ This version gives higher durability in severe conditions

⁴ This version is only available for large projects (100+) requiring higher performance in rejection

MEMBRANES

PWG Membranes

Based on our extensive knowledge and experience in distribution, we have selected a limited range of pure water membranes. Our object is to offer you high quality products at a competitive price, while promising excellent availability. If you need any other membranes contact our sales team and we will do our best to fulfil your needs.



LOW PRESSURE MEMBRANE

Standard pressure: 300 PSI

Higher pressures available on request

PWG Membranes

Reference	Search Name	Item Name	Permeate Flow l/h	Nominal Salt Rejection %
11062000003		2521ND	58	99
11062000004		2540ND	126	99.1
11062000006		4021ND	181	99
11062000007		4040ND	410	99.3
11062000010		4040HF	520	99.3
11062000008		4040HR	331	99.5
11062000016		8040ND	1890	99.3
11062000017		8040HR	1654	99.6

HIGH PRESSURE MEMBRANE

Standard pressure: 600 PSI (BW), 1000 PSI (SW)

PWG Membranes

Reference	Search Name	Item Name	Permeate Flow l/h	Nominal Salt Rejection %
11062000005		2540BW	102	99.4
11062000018		4040BW	362	99.5
11062000009		4040SW	268	99.6
11062000019		8040SW	1425	99.8
11062000015		8040BW	1733	99.5

MEMBRANES



Hydranautics

ESPA - ENERGY SAVING POLYAMIDE MEMBRANES

The High productivity Membrane. Energy Saving PolyAmide (ESPA) reverse osmosis (RO) membranes for a wide range of water treatment applications.

ESPA - Energy Saving Polyamide Membranes

Reference	Search Name	Item Name	Permeate Flow m ³ / day*	Nominal Salt Rejection %
11060000012		ESPA1-4040	9,8	99,3
11060000002		ESPA2 LD-4040	7,6	99,4
11060000017		ESPA1-8040	45,4	99
11060000006		ESPA2-LD 8040	37,9	99,5
11060000010		ESNA14040Nano LF2-LD	10,5	86

07

CHAPTER 07

VESSELS & DISTRIBUTION SYSTEMS

VESSELS & DISTRIBUTION SYSTEMS

Vessels

Features

- Manufactured from 100% white plastic material
- Long cycle life and low maintenance cost
- Light weight
- Easy installation and handling
- Comply to all drinkable water requirements
- Temperature Min 1C - Max 50C
- Pressure Min 0 bar - Max 10 bar



2.5" Threaded

Reference	Alternative Part numbers	Item Name	Total Height* mm	Volume L	Weight Kg
10143000103		06x13 Polyglass pressure vessel 2.5" with base	344	4,6	1
10143000002		06x18 Polyglass pressure vessel 2.5" with base	477	6,9	
10147000013	10143000023	07x35 Polyglass pressure vessel 2.5" with base	891	20,4	
10147000058		07x35 Polyglass pressure vessel 2.5" without base	887	20,4	
10147000004	10143000099	08x17 Polyglass pressure vessel 2.5" with base	432	11	
10143000090		08x17 Polyglass pressure vessel 2.5" without base	420	11	
10147000017	10143000024	08x35 Polyglass pressure vessel 2.5" with base	891	25,7	
10147000016	10143000051	08x35 Polyglass pressure vessel 2.5" without base	887	25,7	
10147000065	10143000078	08x44 Polyglass pressure vessel 2.5" with base	1126	33,6	
10147000047	10143000011	09x35 Polyglass pressure vessel 2.5" with base	905	31,3	
10147000059	10143000095	09x35 Polyglass pressure vessel 2.5" without base	887	31,3	
10147000052	10143000016	10x35 Polyglass pressure vessel 2.5" with base	891	38,9	
10147000062	10143000062	10x35 Polyglass pressure vessel 2.5" without base	887	38,9	
10147000050	10143000094	10x44 Polyglass pressure vessel 2.5" with base	1118	48	
10147000053	10143000029	10x54 Polyglass pressure vessel 2.5" with base	1378	60,7	
10147000023	10143000043	12x48 Polyglass pressure vessel 2.5" with base	1230	75,6	
10147000029	10143000107	12x52 Polyglass pressure vessel 2.5" with base	1338	84	
10147000063	10143000007	13x54 Polyglass pressure vessel 2.5" with base	1384	103	

VESSELS & DISTRIBUTION SYSTEMS

Vessels

2.5" Threaded with Dome Hole

Reference	Config	Item Name	Max Height mm	Volume L	Weight Kg
10149000009		10x54 Polyglass pressure vessel 2.5" with Dome hole 1.25"	1391	60	21,23
10149000002		13x54 Polyglass pressure vessel 2.5" with Dome hole 1.25"	1404	103	13,85

4" Threaded Top

Reference	Config	Item Name	Max Height mm	Volume L	Weight Kg
10143000082		14x65 Threaded composite pressure vessel 4" top only	1660	140	
10143000044		16x49 Threaded composite pressure vessel 4" top only	1278	128	
10143000012		16x65 Threaded composite pressure vessel 4" top only	1650	170	
10143000025		18x65 Threaded composite pressure vessel 4" top only	1746	250	
10143000063		21x36 Threaded composite pressure vessel 4" top only	1040	164	
10143000022		21x60 Threaded composite pressure vessel 4" top only	1640	309	
10143000031		24x69 Threaded composite pressure vessel 4" top only	1890	436	

4" Threaded Top & Bottom

Reference	Config	Item Name	Max Height mm	Volume L	Weight Kg
10143000028		14x65 Threaded composite pressure vessel 4" top - 4" bottom standard	2043	147.2	22
10143000083		16x65 Threaded composite pressure vessel 4" top - 4" bottom standard	2047	194.5	24
10143000053		18x65 Threaded composite pressure vessel 4" top - 4" bottom standard	1903	245	33
10143000110		21x36 Threaded composite pressure vessel 4" top - 4" bottom standard	1191	164	21
10143000079		21x60 Threaded composite pressure vessel 4" top - 4" bottom standard	1792	310	35
10143000080		24x69 Threaded composite pressure vessel 4" top - 4" bottom standard	2012	435	43
10143000048		30x72 Threaded composite pressure vessel 4" top - 4" bottom standard	2060	712	84
10143000093		36x72 Threaded composite pressure vessel 4" top - 4" bottom standard	2157	1072	99

VESSELS & DISTRIBUTION SYSTEMS

Structural Vessels

6" Flanged Top

Reference	Config	Item Name	Max Height mm	Volume L	Weight Kg
10143000057		30x78 Flanged composite pressure vessel 6" top only	2073	710	82
10143000008		36x78 Flanged composite pressure vessel 6" top only	2149	1020	104
10143000020		42x78 Flanged composite pressure vessel 6" top only	2090	1360	169
10143000059		48x82 Flanged composite pressure vessel 6" top only	2133	1840	194

6" Flanged Top & Bottom

Reference	Config	Item Name	Max Height mm	Volume L	Weight Kg
10143000019		30x78 Flanged composite pressure vessel 6" top - 6" bottom	2300	710	85
10143000081		36x78 Flanged composite pressure vessel 6" top - 6" bottom	2350	1020	101
10143000005		42x78 Flanged composite pressure vessel 6" top - 6" bottom	2422	1360	133
10143000066		48x82 Flanged composite pressure vessel 6" top - 6" bottom	2465	1840	178
10143000018		55x104 Flanged composite pressure vessel 6" top - 6" bottom	2681	2619	284
10143000111		63 x 86 Flanged composite pressure vessel 6" top - 6" bottom	2746	3137	258

Material: Polyethylene innerliner, glass-epoxy Laminate
Colour: RAL5015

VESSELS & DISTRIBUTION SYSTEMS

Vinylester Vessels

Features

- For commercial & industrial water treatment and storage
- Polyster construction
- Unlike steel vessels they absolutely will not and cannot rust
- Max. temperature: 65°C

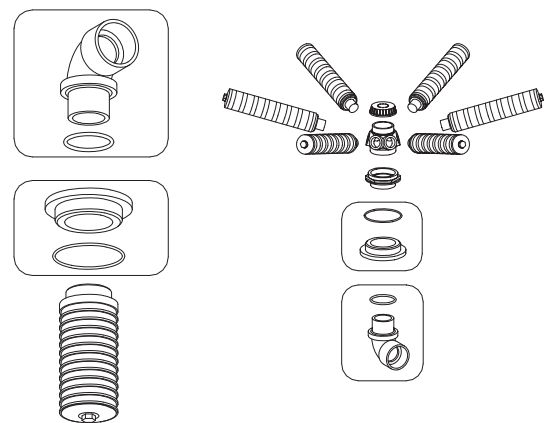


Vinylester Vessels

Reference	Item Name	Total Height* mm	Volume L
10143000034	08x17 2,5" Vinylester without base	208 x 420	12.1
10143000021	10x19 2,5" Vinylester with base	257 x 485	20
10143000115	10x19 4" Top, 2,5" Bottom Vinylester with extended base	257 x 485	19.1
10143000003	10x35 2,5" Vinylester with base	257 x 905	40.1
10143000097	10x54 2,5" Vinylester with base	257 x 1387	63.8
10143000087	13x54 2,5" Vinylester with base	334 x 1375	105.5

VESSELS & DISTRIBUTION SYSTEMS

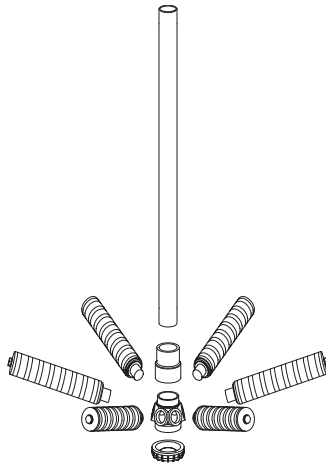
Distribution Systems



4" Threaded Top & Bottom to 60mm Glue Connection with Elbow		
Reference	Item Name	Slot Size mm
10243000075	Top distributor 4" with 60 mm elbow for vessel 14" - 36" (0.2 mm)	0.2
10243000081	Bottom distributor 4" with 60 mm elbow for vessel 14" - 16" - 18" (0.2 mm)	0.2
10243000083	Bottom distributor 4" with 60 mm elbow for vessel 21" - 24" (0.2 mm)	0.2
10243000085	Bottom distributor 4" with 60 mm elbow for vessel 30" (0.2 mm)	0.2
10243000087	Bottom distributor 4" with 60 mm elbow for vessel 36" (0.2 mm)	0.2
10243000076	Top distributor 4" with 60 mm elbow for vessel 14" - 36" (0,5 mm)	0.5
10243000082	Bottom distributor 4" with 60 mm elbow for vessel 14" - 16" - 18" (0,5 mm)	0.5
10243000084	Bottom distributor 4" with 60 mm elbow for vessel 21" - 24" (0.5 mm)	0.5
10243000086	Bottom distributor 4" with 60 mm elbow for vessel 30" (0.5 mm)	0.5
10243000088	Bottom distributor 4" with 60 mm elbow for vessel 36" (0.5 mm)	0.5

VESSELS & DISTRIBUTION SYSTEMS

Distribution Systems



4" Threaded Top for Top Mounted Valve with Riser Tube 50mm

Reference	Item Name	Slot Size mm
10240000013	Clack Top Distributor 50mm	
10243000008	Riser tube with threaded lateral system 50 mm for 14" - 16" - 18" vessels	0.25
10243000040	Riser tube with threaded lateral system 50 mm for 21" and 24" vessels	0.25
10243000061	Riser tube with threaded lateral system 50 mm for 30" vessels	0.25
10243000038	Riser tube with threaded lateral system 50 mm for 36" vessels	0.25

4" Threaded Top for Top Mounted Valve with Riser Tube 63mm

Reference	Item Name	Slot Size mm
10243000065	Riser tube with threaded lateral system 63 mm for 30" vessels	0.25
10243000054	Riser tube with threaded lateral system 63 mm for 36" vessels	0.25

4" Threaded Top for Autotrol Magnum Valve with Riser Tube 1" 1/2

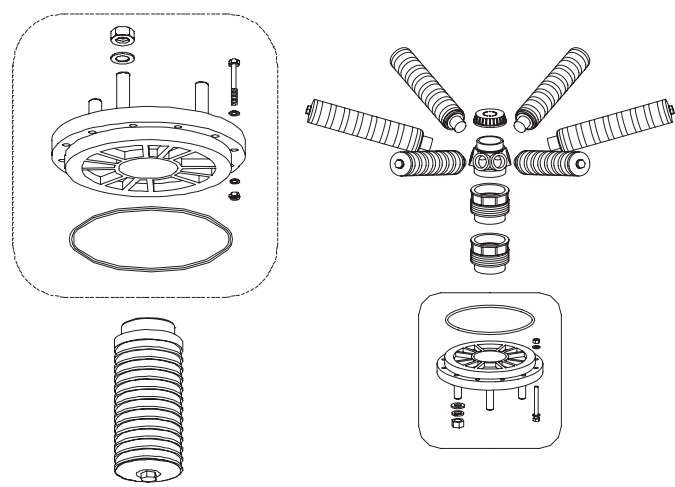
Reference	Item Name	Slot Size mm
10243000047	Riser tube with threaded lateral system 1 1/2" (magnum) for 14" - 16" - 18" vessels	0.25
10243000044	Riser tube with threaded lateral system 1 1/2" (magnum) for 21" and 24" vessels	0.25
10243000037	Riser tube with threaded lateral system 1 1/2" (magnum) for 30" vessels	0.25
10243000067	Riser tube with threaded lateral system 1 1/2" (magnum) for 36" vessels	0.25

6" Flanged Top for top Mounted Valve with Riser tube 90mm

Reference	Item Name	Slot Size mm
10243000004	Riser tube 90 mm + lateral bottom distributor for 6" top vessels 30" 0,2 mm	0.2
10243000010	Riser tube 90 mm + lateral bottom distributor for 6" top vessels 36" 0,2 mm	0.2
10243000026	Riser tube 90 mm + lateral bottom distributor for 6" top vessels 42" 0,2 mm	0.2
10243000032	Riser tube 90 mm + lateral bottom distributor for 6" top vessels 48" 0,2 mm	0.2

VESSELS & DISTRIBUTION SYSTEMS

Distribution Systems

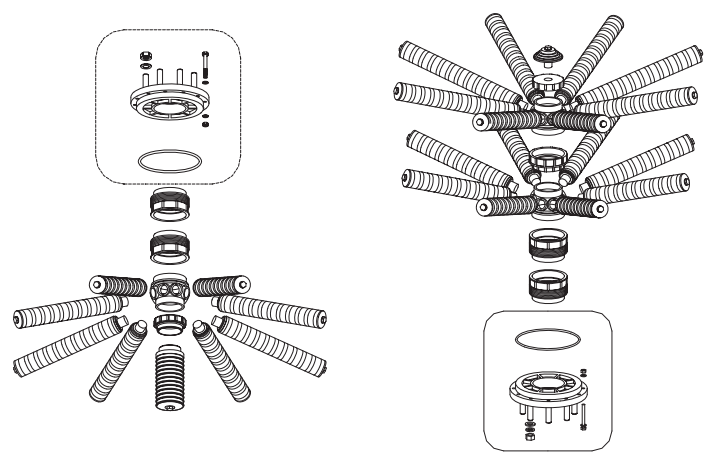


6" Flanged Top & Bottom to DN65 Flange

Reference	Item Name	Slot Size mm
10243000011	Top distributor 6" flange to DN65 flange for vessel 14"-36"	0.2
10243000007	Bottom distributor 6" flange to DN65 flange for vessel 14"-16"-18"	0.2
10243000059	Bottom distributor 6" flange to DN65 flange for vessel 21"-24"	0.2
10243000046	Bottom distributor 6" flange to DN65 flange for vessel 30"	0.2
10243000002	Bottom distributor 6" flange to DN65 flange for vessel 36"	0.2
10243000012	Top distributor 6" flange to DN65 flange for vessel 14"-36"	0.5
10243000092	Bottom distributor 6" flange to DN65 flange for vessel 21"-24"	0.5
10243000055	Bottom distributor 6" flange to DN65 flange for vessel 30"	0.5
10243000056	Bottom distributor 6" flange to DN65 flange for vessel 36"	0.5

VESSELS & DISTRIBUTION SYSTEMS

Distribution Systems



6" Flanged Top & Bottom to DN80 Flange

Reference	Item Name	Slot Size mm
10243000035	Top distributor 6" flange to DN80 flange for vessel 42"	0.2
10243000051	Top distributor 6" flange to DN80 flange for vessel 48"	0.2
10243000034	Top distributor 6" flange to DN80 flange for vessel 55"	0.2
10243000023	Top distributor 6" flange to DN80 flange for vessel 63"	0.2
10243000022	Top distributor 6" flange to DN80 flange for vessel 42"	0.5
10243000006	Top distributor 6" flange to DN80 flange for vessel 48"	0.5
10243000033	Top distributor 6" flange to DN80 flange for vessel 55"	0.5
10243000093	Top distributor 6" flange to DN80 flange for vessel 63"	0.5
10243000024	Bottom distributor 6" flange to DN80 flange for vessel 42"	0.2
10243000005	Bottom distributor 6" flange to DN80 flange for vessel 48"	0.2
10243000030	Bottom distributor 6" flange to DN80 flange for vessel 55"	0.2
10243000009	Bottom distributor 6" flange to DN80 flange for vessel 63"	0.2
10243000013	Bottom distributor 6" flange to DN80 flange for vessel 42"	0.5
10243000057	Bottom distributor 6" flange to DN80 flange for vessel 48"	0.5
10243000028	Bottom distributor 6" flange to DN80 flange for vessel 55"	0.5
10243000094	Bottom distributor 6" flange to DN80 flange for vessel 63"	0.5

VESSELS & DISTRIBUTION SYSTEMS

Distribution Systems

Top Mount Distribution Accessories (13/16" up to 63mm)

Reference	Item Name
Riser tube with/without bottom screen attached	
10244000018	Riser tube 13/16" x 1m
10244000019	Riser tube 1 13/16" x 2m
10299000003	Riser tube and screen glued 13/16" x 1m (Heavy Duty)
10299000003	Riser tube and screen glued 13/16" x 1m (Standard)
10299000004	Riser tube and screen glued 13/16" x 2m (Heavy Duty)
10299000004	Riser tube and screen glued 13/16" x 2m (Standard)
10244000020	Riser tube 1.05" X 35" used on 3/4 + 1" Autotrol valves
10244000021	Riser tube 1.05" X 65"
10299000005	Riser tube and screen glued 1.05" x 35" (Heavy Duty)
10299000005	Riser tube and screen glued 1.05" x 35" (Standard)
10299000006	Riser tube and screen glued 1.05" x 65" (Heavy Duty)
10299000006	Riser tube and screen glued 1.05" x 65" (Standard)
14170000060	32mm Riser Tube (1M)
10299000007	Riser tube and screen glued 32mm 1.7m
22102000005	50mm Riser tube (1M)
Upper Screens	
10240000002	Upper screen 13/16" bayonet used on 3/4" in/out head
10240000001	Upper screen 1.05" bay, cream com softener, 1" in/out
10299000010	Upper screen 1.05" bayonet, black, domestic softener
10240000025	Upper Screen 1.05" bay, fine mesh for mono/LF resin
10240000009	32mm Upper Screen D1203-03
10240000013	Top Distributor 50mm Type Stack
10240000028	Top Stack Dist Clack/Fleck 2" - 63mm
Lower Screens	
10240000018	Lower screen 13/16" heavy duty used on 3/4" in/out
10299000009	Lower screen 1.05" black domestic softener, 1" in/out

VESSELS & DISTRIBUTION SYSTEMS

Distribution Systems

Top Mount Distribution Accessories (13/16" up to 63mm)

Reference	Item Name
10240000006	Lower screen (932) 1.05" medium duty, softener
10240000019	Lower screen 1.05" heavy duty com softener/filter
10240000026	Lower Screen 1.05" fine mesh for mono/LF resin
10240000007	1.05" Spider Hub
10240000014	14-16" 1.05 Spider laterals (8 needed)
10240000012	932 Bottom Distributor Basket 32mm
10240000003	970 Bottom Stack Distributor 50mm
15507000013	Assembly Kit 268/278 (screens, 65" x 1,05" Riser, air check)
Riser pipe holder	
10240000004	Riser Pipe Hold down Clamp 1"

➔ Ideal for holding the riser tube in place when removing the head of a filter system when checking or changing the media. It can be fitted in any system with a 1" riser tube - please ask if you would like one fitted when buying a complete system.



Riser with glue bottom screen



Upper screen



Lower screen



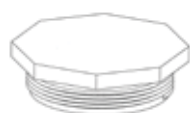
Riser pipe holder

VESSELS & DISTRIBUTION SYSTEMS

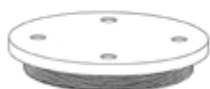
Adaptors and closures

Top Mount Distribution

Reference	Config	Item Name
10143000116		Closure 2.5" PVC (hreaded)
10143000065		Closure 4 inch PVC (threaded)
10143000060		Closure 6 inch PVC (threaded)
10143000069		6" Flanged closure
10143000046		Adaptor 4" by 2½" PVC (threaded)
10143000036		Adaptor 6" threaded by 4" PVC threaded
10143000006		6" to 4" Flanged reducer to 4-8UN
10147000006		Adaptor 4" to 2 1/2" PVC (threaded) 0116 "vessels only"
10143000133		O ring, 2" distribution elbow
10143000047		O ring, 4" (4 " by 2.5" adaptor)
10143000132		O ring, flat seal,4" used on 0201103926
10143000085		O ring, flanged system, 6"
10143000138		Wrench for hexagonal 4" Closure



2½" & 4" closure



6" threaded closure



6" flanged closure



4" to 2½" threaded
adaptor



6" to 4" flanged adaptor

VESSELS & DISTRIBUTION SYSTEMS

Adaptors and closures

Miscellaneous			
Reference	Config	Item Name	Riser
10143000071		Vacuum breaker (stops vacuum on large vessels)	
10173000008		3/4" Mazzei (add air to the system)	
10173000010		1" Mazzei (add air to the system)	
10199000002		1" PVC Check Valve with 5lb spring	
10199000003		Honeywell EA122 Air valve (on Aeration systems)	
10140000001		Funnel 2-1/2 x 10 Plastic (blue)	
10140000003		Funnel 4" & 6" MT Openings (black)	



Vacuum Breaker



Mazzei



PVC Check Valve



Air Vent



Funnel



Funnel

VESSELS & DISTRIBUTION SYSTEMS

Adaptors and closures

In/out heads

Reference	Config	Item Name
15407000001	C00001	3/4" male Quick Release In/out Head and screen (requires 1.05" riser)
15407000001	C00002	1" male Quick Release In/out Head and screen (requires 1.05" riser)
15407000275		3/4" female 2 port plastic In/out head and screen 890 In/Out opp sides (requires 13/16" riser)
15407000299		3/4" fem 3 port plastic In/out head & screen 890c In/Out opp sides (requires 13/16" riser)
15407000004	C00002	3/4" Clack 2 port plastic in/out and screen 1.05 riser
10440000233		1" female 2 port plastic In/out head and screen 9001 In/Out opp sides (requires 1.05" riser)
15407000004	C00001	1" Clack 2 port plastic in/out and screen 1.05 riser
15407000005	C00001	1" 2 port plastic head + refill port c/w screen (3/4" options available)
10440000299		Bypass for 1" in/out heads 1191 & 1190FP (require 1.05" riser)
10348000003		1" port manual filter valve (backwash or service position)
10348000031		3/4" port manual filter valve (backwash or service position) (require 1.05" riser)
15407000278	C00007	Clack 1.5" in/out head (50mm riser)



3/4 and 1" 2 port plastic (890/9001)



3/4", 1", 1.5" 2 port plastic Clack



Clack Bypass



Manual filter



Quick Release In/out Head

VESSELS & DISTRIBUTION SYSTEMS

Pressure Vessels: WellMate

Features

- ➔ Replaceable air cell assures easier field servicing
- ➔ Greater drawdown than comparably sized steel tanks yields greater efficiency
- ➔ Extended labor warranty option is available to homeowners
- ➔ Won't rust in corrosive environments, particularly important in coastal regions
- ➔ Quicker and less costly to install, usually requiring only one person and fewer man-hours
- ➔ Wider pressure setting differential provides greater flexibility



8.6 bar					
Reference	Item Name	Volume L	Height mm	Connections	Working Pressure bar
10171000006	Well Mate - 55 L	55	660	1"	8.6
10171000002	Well Mate - 75 L	75	810	1"	8.6
10171000008	Well Mate - 112 L	112	1120	1"	8.6
10171000005	Well Mate - 153 L	153	1450	1"	8.6
10171000004	Well Mate - 178 L	178	1050	1 1/4"	8.6
10171000003	Well Mate - 235 L	235	1050	1 1/4"	8.6
10171000007	Well Mate - 328 L	328	1400	1 1/4"	8.6
10171000001	Well Mate - 453 L	453	1890	1 1/4"	8.6

VESSELS & DISTRIBUTION SYSTEMS

Pressure Vessels: AquaSky

The Pallas Pressure Storage tank is an essential part of a pressurized water system that provides water pressure at a set level. The tank stores supplemental water between the diaphragm and the liner, and the pressurized air chamber is able to create a supply circle. This process reduces the number of times the motor needs to start in order for the system pressure to remain at the set level. These vessels use Nitrogen gas rather than air because Nitrogen is less affected by temperature.



Specifications

Shell	Cold Rolled Carbon Steel
System Connection	304 Stainless Steel Connector
Coating	Triple Grade Paint
Diaphragm	Heavy-duty butyl rubber
Liner material	FDA grade polypropylene
Factory pre-charge	2 bar
Max. working temperature	93° C
Max. working pressure	10 bar
Warranty	5 years

Pressure Vessels: AquaSky

Reference	Model number	Total tank volume Liter	Diameter cm	Height (Base Including) cm	Nett weight Kg	Connection
Stand Models Without Base						
10172000001	APT-8	8	20.3	30.4	1.9	1" BSP
10172000002	APT-24	24	29.0	41.5	3.9	1" BSP
Stand Models With Base						
10172000003	APT-60	60	39.0	59.2	9.7	1" BSP
10172000012	APT-80	80	39.0	77.0	13.1	1" BSP
10172000004	APT-100	100	43.0	76.5	13.3	1" BSP
10172000005	APT-120	120	39.0	114.8	20.1	1" BSP
10172000006	APT-160	160	55.0	93.1	24.5	1-14" BSP
10172000007	APT-200	200	55.0	106.6	27.6	1-14" BSP
10172000008	APT-300	300	55.0	146.3	41.1	1-14" BSP
10172000009	APT-450	450	65.0	141.0	56.5	1-14" BSP

08

CHAPTER 08

VALVES

AUTOTROL VALVES

Autotrol 255 Logix

255 Logix is a non-corrosive, UV-resistant valve with fiber-reinforced polymer valve body for superior strength and durability. Designed with double backwash for reduced hardness leakage, its capabilities accommodate softener tanks up to 14" and filter up to 10" in diameter. Moreover, a time-tested flapper provides a frictionless sealing for longer service life and the programming, stored in memory, will not be lost due to power outages.



Valve Specifications	
Service flow rate	3.5 m³/hr
Backwash flow rate	1.4 m³/hr
Operating pressure	1.5 to 8.2 bar
Water temperature	2°C to 38°C
Tank thread	2.5 inch
In/out	1/2 inch, 3/4 inch, 1 inch
Drain Line	1/2 inch (manifold dependent)
Brine line	3/8 inch
Riser tube diameter	1.05 inch



740/760



742/762

Logix 700 series timers have an LCD display and easily programmed. Used on softeners or filters.	
740 Time clock	Great for residential or small commercial applications. Regenerates on a time basis.
760 Meter	Measures the flow rate and regenerates on demand. Residential applications.
742 Time clock	Enhanced features, fully programmable cycle times. Regenerates on a time basis.
762 Meter	Fully programmable features for the most demanding applications. Regenerates on flow demand.

Please ask if you require a full valve spares catalogue or look at www.kennetwater.co.uk
 These are normally fitted to domestic softeners and filters. Please order other size injectors & DLFC's separately.

AUTOTROL VALVES

Autotrol 255 Logix

Valves

Reference	Config	Item Name
10345000004	C00002	Autotrol 255-740 Logix elect. chrono No Manifold UK transfo - Standard Cover
10345000015	C00002	Autotrol 255-742 Logix elect. chrono, no manifold UK transfo - Symbol frontplate - Standard cover
10345000006	C00002	Autotrol 255-760 Logix elect. volume UK transfo - Symbol frontplate - Standard Cover, Male Manifold 3/4"
10345000011	C00002	Autotrol 255-762 Logix elect. volume UK transfo - English frontplate (Hidden check salt led) - Slim line cover - Male Manifold 3/4"

All Autotrol valves are equipped with a transformer

Accessories for Autotrol 255-Logix valve

Reference	Config.	Item Name
10445000221		Male plastic piping boss 3/4" BSP
10445000223		Male plastic piping boss 3/4" BSP + int turbine
10445000012		Bypass manifold 3/4" male (no connections supplied (P3 or P4))
10445000115		3/4" Male brass pipe adaptor P3
10445000116		1" Male brass pipe adaptor P4
10445000036		Meter adapter kit (needed if using the bypass with a metered valve)
10445000173		Kit Mixing Logix, Not Mounted
10445000137		Micro Switch Kit Top Mount 5A (Whole cycle)
10445000147		Micro Switch Kit Front Mount (Single cycle)
10445000105	C00001	255 Logix Service Kit
10445000106	C00001	255 400 Series Service Kit
10445000063		Valve disc set 255
10445000007		Intestage O Ring Set
10445000078		Manifold O Ring set
10445000148		Transformer (Plug in)
10445000119		Transformer (In-Line)



manifold



bypass and tails (sold separately)

AUTOTROL VALVES

Autotrol Performa 263/268/278 Logix

Performa Logix is a non-corrosive, UV resistant valve with fiber reinforced polymer valve body for superior strength and durability. Designed for single or multiple tank systems, its backwash capabilities accommodate softener tanks up to 14" (268) and 18" (278) and filters up to 18" in diameter. Moreover, a time tested flapper provides frictionless sealing for longer service life and the programming, stored in memory will not be lost due to power outages.



Valve Specifications

Service flow rate	5.7 m³/hr
Backwash flow rate	4.5 m³/hr
Operating pressure	1.5 to 8.2 bar
Water temperature	2°C to 38°C
Tank thread	2.5 inch
In/out	3/4 inch, 1 inch
Brine line	3/8 inch
Riser tube diameter	1.05 inch

Valves

Reference	Config	Search Name	Item Name
10345000016	C00002	263-740F Logix	Autotrol Performa 263-740 Filter
10345000021	C00001	263-742F Logix	Autotrol Performa 263-742F Logix elect. chrono
10345000007	C00002	268-740 Logix	Autotrol 268 Logix Performa Valve with 740 El. Time Clock
10345000020	C00002	268-742 Logix	Autotrol Performa 268-742 Logix elect. chrono
10345000003	C00002	268-760 Logix	Autotrol 268 Logix Performa Valve with 760 El. volume
10345000001	C00002	268-762 Logix	Autotrol Performa 268-762 Logix elect. volume
10345000005	C00002	278-762 Logix	Autotrol Performa CV Valve 278-762 Logix - Metered
10345000010	C00002	278-742 Logix	Autotrol Performa CV Valve 278-742 Logix - Timed

Accessories for Autotrol Performa 263/268/278 Logix

Reference	Config.	Item Name
10445000116		1" Male brass pipe adaptor P4
10445000114		1" PVC pipe adaptor kit
10445000065		1256 Bypass kit (does not include connections)
10445000137		Micro Switch Kit Top Mount 5A (whole cycle)
10445000107	C00001	263/268/278 Logix service kit
10445000110		263/268/278 400 series service kit
10445000019		Valve disc set 263/268/278

AUTOTROL VALVES

Autotrol Magnum 298IT

Magnum control valve is one of the most versatile valves on the market. It features an all-electronic control platform with 24-hour super-capacitor backup, which makes the battery unnecessary. Moreover, the cartridge-style assembly ensures an easy installation and cleaning of injectors and refill.



Valve Specifications	
Service flow rate	17.3 m³/hr
Backwash flow rate	20.2 m³/hr
Operating pressure	1.8 to 6.9 bar
Water temperature	2°C to 38°C
Type of valve	293: Filter 298: Softener
Tank thread	4 inch
In/out	2 inch
Brine line	3/4 inch
Riser tube diameter	1.5 inch

Valves			
Reference	Config	Search Name	Item Name
10345000022	C00001	Magnum IT-742	Autotrol Magnum IT (2") - 742 elect. chrono Time Filter UK
10345000022	C00002	Magnum IT-742	Autotrol Magnum IT (2") - 742 elect. chrono Time Softener UK
10345000012	C00002	Magnum IT-762	Autotrol Magnum IT (2") - 762 elect. volume Meter Filter UK
10345000012	C00003	Magnum IT-762	Autotrol Magnum IT (2") - 762 elect. volume Meter Softener UK

Accessories for Autotrol Magnum 298IT		
Reference	Config.	Item Name
10445000194		2" PVC Adaptor set (2" inlet, outlet & 1-1/2" drain)
10445000117		2" Metal BSP set (2" inlet, outlet & 1-1/2" drain)
10445000198		Valve disc set
10445000148		Transformer (Plug in)
10445000119		Transformer (in-Line)

AUTOTROL VALVES

Duplex



Valves

Reference	Config	Search Name	Item Name
10345000014	C00002	255-764	Autotrol Logix 255/764 Duplex (interconn pipework needed)
10345000009	C00002	278-764	Autotrol Performa 278/764 Duplex (interconn pipework needed)
10345000023	C00001	298-764	Autotrol Magnum IT 298/764 Duplex

Options

Reference	Search Name	Item Name
10445000184	1035640	Deluxe interconnecting Kit 255 Duplex
14170000049	021.252.04	1" PVC P/T Nipple (2 required)
10445000130	1231291	Deluxe interconnecting Kit 278 Twin
10445000194	1040784	Magnum 2" PVC adapter kit
10445000148		Transformer (Plug in)
10445000119		Transformer (in-Line)

Options & accessories

Timers

Reference	Config	Search Name	Item Name
10445000122		1242152	Logix 740 chrono
10445000024		1242153	Logix 760 volume
10445000123		1242155	Logix 742 chrono
10445000011		1242154	Logix 762 volume
10445000014		3022346	Logix 764

CLACK VALVES

Clack TC - CI



Advantages

- More informative 4 digit LCD Display with Status Indicators
- Solid state microprocessor with easy access front panel settings
- Backwash and brining ability to 21" diameter tanks
- Three modes to initiate regeneration: time clock delayed, Pressure Differential delayed, Pressure Differential Immediate
- Front panel display for time of day, days until next regeneration
- Days between regeneration feature: 1-99 days standard; 7-day optional
- Double backwash feature offers optimum regeneration, cleaning ability and efficiency
- 10 selectable pre-programmed regeneration cycles
- Coin Cell Lithium battery back-up with a 8 hour carry over
- Auto detection of 50/60 Hz line frequency, with automatic 12/24 hour time keeping formats
- Level VI 15-volt output DC power supply provides safe and easy installation
- Post treated water regenerant refill
- Reliable and proven DC drive



Advantages

- Solid state microprocessor with easy access front panel settings
- Four methods to initiate regeneration; meter immediate, meter delayed, time clock delayed or pressure differential
- Program in ppm, French degrees, German degrees, or cubic meters
- Fully programmable regeneration cycle sequence (maximum 9)
- Programmable regeneration cycle times
- Days override feature; 1 – 28 days available
- Backwash and brining ability to 21" diameter tanks
- Downflow/upflow regeneration
- Stores system configuration and operation data in nonvolatile memory
- Coin Cell Lithium battery back-up with a 24 hour carry over
- Level VI 15-volt output DC power supply provides safe and easy installation
- Control valve design provides optimum service and backwash rates
- Pre or Post treated water regenerant refill
- Mixing valve option available
- Low salt alarm
- 24-hour clock
- Reliable and proven DC drive
- 2 free programmable relay contacts

* shown with optional bypass

CLACK VALVES

WS1 & WS1.25

Clack's automatic valve is a state of the art control head designed for residential and commercial applications requiring flow rates of up to 6.1m³/hr (1") 7.7m³/hr (1.25"). It has the capability of servicing up to 21" diameter tanks.

The valve acts as a primary center that directs and regulates all cycles of water softening or filtration. It can be set to perform regeneration or simple backwash and rinse.

The valve comes in different program versions and is controlled by a solid state microprocessor with front panel setting and screen display.



Valve Specifications 1"

Service flow rate @ 1 bar drop	6.1 m ³ /hr
Backwash @ 1.7 bar drop	6.1 m ³ /hr
Operating pressure	1.5 to 8.5 bar
Water temperature	4°C to 43°C
Tank thread	2.5 inch
In/out	1 inch BSP
Brine line	3/8 inch
Riser tube diameter	1.05 inch

Valve Specifications 1.25"

Service flow rate @ 1 bar drop	7.7 m ³ /hr
Backwash @ 1.7 bar drop	7.3 m ³ /hr
Operating pressure	1.5 to 8.5 bar
Water temperature	4°C to 43°C
Tank thread	2.5 inch
In/out	1 inch BSP
Brine line	3/8 inch
Riser tube diameter	32 mm

CLACK VALVES



WS1 TC

Reference	Config	Item Name
10340000046	C00003	WS1TC - Time - Down Flow Assembled UK transfo
10340000048	C00002	WS1TC Filter - Time - Assembled UK transfo



WS1 CI

Reference	Config	Item Name
10340000018	C00002	WS1CI - Time - Down Flow Assembled UK transfo
10340000080	C00003	WS1CI - Vol - Down Flow Assembled UK transfo
10340000029	C00005	WS1CI Filter - Timer - Back - Assembled UK transfo



WS1.25

Reference	Config	Search Name	Item Name
10340000007	C00002	V125CIDME-08*	WS1.25CI - Vol - Down Flow Assembled UK transfo
10340000056	C00003	V125CIBTZ-08*	WS1.25CI Filter - Time - Assembled UK transfo

CLACK VALVES

Accessories WS1 & WS1.25

Reference	Config.	Item Name
10440000005		Motorised alternating valve (MAV) M-M - to fit with vertical adaptors
10440000138		Motorised alternating valve (MAV) M-F - used without vertical adaptors
10440000280		Vertical adaptor assy (pair) can be used to duplex up to 13" vessels
10440000082		No Hard Water Bypass
10440000064		Blending valve (External)
10440000299		Manual bypass
10440000098		Auxiliary micro switch
10440000027		Service Wrench
10440000100		Stack puller (1" only)
10440000095		Non return valve insert (Used in the inlet only)
10440000380		Transformer (Plug in)
10440000387		Transformer (In Line)
10440000348	C00001	Separate Source Mav kit 1" connections
10440000345	C00001	1" Service kit (Filter or Softener)
10440000346	C00001	1.25 & 1.5" Service kit (Filter or Softener)
10440000341	C00001	1" NHWB service kit
10440000273		3/4" Plastic Male BSPT Connections
10440000248		1" Plastic Male BSPT Connections
10440000097		1.25" Plastic Male BSPT Connections
10440000039		1.5" Female solvent Plastic Connections
10440000024		1" Meter assembly (Turbine)
10440000197		DP cable (start an ext regen)
10440000312		Relay Switch PCB (12v to volt free)
10440000352	C00002	Air Draw kit



Manual bypass



Separate Source Mav Kit



Vertical adaptors



Relay switch PCB

CLACK VALVES

WS1.5P

The commercial/industrial line of control valves was also developed with direct input from customers and incorporate many of the features proven in the residential line of valves. Our WS1.5P valve provides flow rates up to 13.6 m³/hr.

All Clack valves incorporate patented* "stack technology" and feature state-of-the-art electronics and programming software.



Valve Specifications

Service flow rate @ 1 bar drop	13.6 m ³ /hr
Backwash @ 1.7 bar drop	9.8 m ³ /hr (Brass version 11.3 m ³ /hr)
Operating pressure	1.5 to 8.5 bar
Water temperature	4°C to 43°C
Tank thread	4 inch 8 UN
In/out	1.5" BSP Male
Brine line	3/4 inch
Riser tube diameter	50 mm

WS1.5P

Reference	Config	Search Name	Item Name
10340000025	C00002		WS1.5 Noryl Filter Valve
10340000005	C00003		WS1.5 Noryl Softener Valve Time
10340000033	C00003		WS1.5 Noryl Softener Valve Metered
10440000017			WS1.5P Motorized Alternating Valve (requires connections)
10440000304			WS1.5P No Hard Water Bypass (requires connections)
10440000188			WS1.5P Meter Assembly (connects direct to the valve)
10440000228			WS1.P Meter Assembly (nota attached to valve)
10440000098			Auxiliary Micro Switch
10440000346	C00001		Service kit for 1.25" & 1.5"
10440000241			NHWP connections
10440000350	C00001		Separate Source Kit 1.5"
10440000349	C00001		Air Draw Kit 1.5"
10440000077			1.5" BSP fittings for plastic valve

CLACK VALVES

WS2

The commercial/industrial line of control valves was also developed with direct input from customers and incorporate many of the features proven in the residential line of valves.

Our WS2 valve provides flow rates up to 26.1 m³/hr,

All WS2 valves are available with threaded connection or QuickConnect. QC allows to be use with flanges, side mounted solutions,...



Valve Specifications	WS2	WS2QC
Service flow rate @ 1 bar drop	26 m ³ /hr	28 m ³ /hr
Backwash @ 1.7 bar drop	18 m ³ /hr	19 m ³ /hr
Operating pressure	1.5 to 8.5 bar	1.5 to 8.5 bar
Water temperature	4°C to 43°C	4°C to 43°C
Tank thread	4 inch 8 UN	4" Thread or 6" flange
In/out	2 inch F BSP	2 inch F BSP
Brine line	3/8" but fittings incl. for 1/2" or 3/4"	3/8" but fittings incl. for 1/2" or 3/4"
Riser tube diameter	50 mm	63 mm

WS2 CI

Reference	Config	Search Name	Item Name
10340000038	C00002	V2CIDMD-05*	WS2CI - Vol - Down Flow Assembled UK transfo
10340000023	C00002	V2CIDMD-18*	WS2CI QC - Vol - Down Flow Assembled UK transfo
10340000072	C00002	V2CIBTZ-05*	WS2CI Filter - Time - Assembled UK transfo

Options and Accessories

Reference	Config.	Item Name
10440000066		Motorized Alternating Valve 2" Female BSP
10440000170		No Raw Water Bypass 2" female BSP
10440000130		2" Meter Assembly with 15' cable 2" BSP Female/Male
10440000296		Auxiliary Micro Switch
10440000234		1.5" SS External DLFC 1.5" Male/Female (No flow controls)
10440000344	C00001	Separate Source Kit
10440000347	C00001	WS2 Service Kit (Regenerating)
10440000347	C00002	WS2 Service Kit (Backwashing)
10440000355	C00002	Duplex fitting kit plastic tales
10440000342	C00001	Air draw kit 2"
10440000341	C00002	MAV service Kit 2"

CLACK VALVES

WS2H, WS2HF and WS3

The commercial/industrial line of control valves was also developed with direct input from customers and incorporate many of the features proven in the residential line of valves.

The WS2H valve provides flow rates up to 28.4 m³/hr, while the WS3 provides flow rates up to 56.8 m³/hr.

All Clack valves incorporate patented* “stack technology” and feature state-of-the-art electronics and programming software.



Valve Specification WS2H (Internal Turbine included)

Service flow rate @ 1 bar drop	28.4 m ³ /hr
Backwash @ 1.7 bar drop	28.4 m ³ /hr
Operating pressure	1.4 to 8.6 bar
Water temperature	4°C to 43°C
Tank thread	4 inch 8 UN, 6 inch flange or Side mount
In/out	2 inch F BSP
Riser tube diameter	63 OD mm

Valve Specifications WS2HF

Service flow rate @ 1 bar drop	37 m ³ /hr
Backwash @ 1.7 bar drop	39.0 m ³ /hr
Operating pressure	1.5 to 8.5 bar
Water temperature	4°C to 43°C
Tank thread	4 inch 8 UN, 6 inch flange or Side mount
In/out	2 inch F BSP
Riser tube diameter	63 OD mm

Valve Specifications WS3

Service flow rate @ 1 bar drop	56.8 m ³ /hr
Backwash @ 1.7 bar drop	50.0 m ³ /hr
Operating pressure	1.5 to 8.5 bar
Water temperature	4°C to 43°C
Tank thread	Side mount or 6" flange
In/out	3 inch F BSP
Brine line	1 inch
Riser tube diameter	90 OD mm

CLACK VALVES



WS2H and WS2HF

Reference	Config	Search Name	Item Name
10340000041	C00002	V2HDMD-05*	WS2H - Vol - Down Flow Assembled - 30" UK transfo
10340000027	C00002	V2HBMZ-05*	WS2H Filter - BW Vol - Assembled UK transfo
10340000168		VHF2DTF-05	WS2HF Vol Softener Time
10340000180		VHF2BTZ-05	WS2HF Vol Filter Time



WS3

Reference	Config	Search Name	Item Name
10340000127		V3BTZ-05	Clack WS3 Filter - BW
10340000099		V3DTH-05	Clack WS3 - Time - Down Flow

WS2H Options and Accessories

Reference	Config.	Item Name
10440000066		Motorized Alternating Valve 2" Female BSP
10440000170		No Raw Water Bypass 2" Male/Female BSP
10440000130		2" Meter Assembly with 15' cable 2" BSP Female/Male
10440000234		1.5" SS External DLFC 1.5" Male/Female (No flow controls)
10440000205		2" SS External DLFC housing - Groove lock to 2" BSP Female
10440000284		4" Base Adaptor (to use with 4" threaded vessels)
10440000079		Side mount adaptor (to use with Top & Bottom hole vessels 2" BSP)
10440000264		6" Flange adaptor (to use with 6" flanged vessels)

WS3 Options and Accessories

Reference	Config.	Item Name
10440000013		Motorized Alternting Valve 3" Female BSP
10440000272		No Raw Water Bypass 3" Male/Female BSP
10440000289		3" Meter Assembly with 15' cable 3" BSP Male/Female
10440000216		3" DLFC Housing 3" Male/Female (No flow controls)
10440000246		6" Flange adaptor (for use with 6" flanged vessels)
10440000217		3" Side mount adaptor (for use with top & bottom hole flanged vessels 3" BSP)

CLACK VALVES

Twin



Valve Specifications WS1TT

Service flow rate @ 1 bar drop	6.1 m³/hr
Backwash @ 1.7 bar drop	3.4 m³/hr
Operating pressure	1.5 to 8.5 bar
Water temperature	4°C to 43°C
Tank thread	2.5 inch
In/out	1 inch BSP
Brine line	3/8 inch
Riser tube diameter	1.05 inch

Twin

Reference	Config	Item Name
10340000094		Clack TT CI valve, metered, DF no interconnection pipe
10440000053		Interconnection pipe up to 12"
10440000154		Interconnecting kit for 13" to 21" vessels
10440000280		Vertical adaptor assy (pair) can be used to duplex up to 13" vessels
10440000064		Blending valve (External)
10440000299		Manual bypass
10440000098		Auxiliary micro switch
10440000027		Service Wrench
10440000100		Stack puller (1" only)
10440000095		Non return valve insert (Used in the inlet only)
10440000380		Transformer (Plug in)
10440000387		Transformer (In Line)
10440000345	C00002	1" Service kit (Filter or Softener)
10440000273		3/4" Plastic Male BSPT Connections
10440000248		1" Plastic Male BSPT Connections
10440000097		1.25" Plastic Male BSPT Connections
10440000039		1.5" Female solvent Plastic Connections

CLACK VALVES

System Controller

Duplex water softeners consist of two vessels filled with softening resin.

In normal use one vessel is online (duty) while the other is off line (standby). You can choose a classic duplex system with one valve that operates both vessels or two simplex softeners with an alternating valve or an external controller.

If two is not sufficient, you'll need a multiplex. The Clack System Controller can operate up to 6 units.



Features

- System Controller may operate 2 - 6 units
- Clack 1", 1.25" or 2" control valves may be used
- No plug-in AC adapters required on individual valves, all connected valves will be powered by the System Controller (except for Impression Pro, TotalCare Pro & Evolve Pro)
- System diagnostic and programming information for spreadsheet presentation may be uploaded to a standard USB drive
- Two fused Single Pole Double Throw (SPDT) relay outputs are provided
- Single demand-based meter is provided
- Coin cell lithium battery backup for time of day
- Solid state microprocessor with user-friendly front panel programming
- Front panel displays for time of day, day of week, days until next regeneration, current system flow rate and total system volume used (Totalizer)
- Front panel LED status indicators for online, standby and regeneration
- Ethernet connection
- Modbus protocol, in function of building management systems
- Circuit board has been modified to have Molex connectors for easy cable connecting

HOW TO ORDER?

- Necessary components for a Clack Multiplex system.
- 1 x System Controller
- 1 to 6 Clack valves (1" to 2" only)
- 1 to 6 No Hard Water Bypass (one for each valve)
- 1 to 6 Communication cables 8' or 36'
- 1 to 6 Power cables 15' or 36'

System Controller

Reference	Config	Item Name
10440000340	C00001	2 Valve System controller kit
10440000340	C00002	3 Valve System controller kit
10440000340	C00003	4 Valve System controller kit
10440000340	C00004	5 Valve System controller kit
10440000340	C00005	6 Valve System controller kit

Note: Kits available with controller, comms and power cables pn 10440000340

09

CHAPTER 09

MEDIA, CABINETS & TANKS

MEDIA, CABINETS & TANKS

Ion Exchange Resins

Water softening ion-exchange resins are used to replace the magnesium and calcium ions found in hard water. The resin can be regenerated by washing it with salt (NaCl). The calcium and magnesium ions migrate off the resin, being replaced by sodium ions from the solution until a new equilibrium is reached.

Softening Resin

Reference	Config	Item Name	Packaging	Price per Litre
10761000001		Pure Resin PC002	25L	
10763000007		Purolite C100E Softening Resin	25L	
10762000001		Indion 222 NaF	25L	
10763000008		Purolite PFC100E fine mesh resin (Low Fouling Resin)	25L	
10760000001		Sunresin Low Fouling Resin	25L	

Strong Acid Cation (Demin)

Reference	Config	Item Name	Packaging	Price per Litre
10763000010		Purolite C100H cation resin	25L	

Weak Acid Cation (Dealk)

Reference	Config	Item Name	Packaging	Price per Litre
10763000021		Purolite C107E Dealkalisation Resin	25L	



MEDIA, CABINETS & TANKS

Ion Exchange Resins

Strong Base Anion (Tannins/Organics/Nitrate/Demin)

Reference	Config	Item Name	Packaging	Price per Litre
10763000009		Purolite A200 Anion Resin (demin)	25L	
10763000017		Purolite A400 Anion Resin (demin)	25L	
10763000002		Purolite A502PS Anion Resin (organics)	25L	
10763000016		Purolite A850S Anion Resin (demin with organics)	25L	
10763000004		Purolite A860S Anion Resin (tannins & organics)	25L	
10763000003		Purolite A520E Nitrate Selective Resin	25L	
10762000003		NSSR Nitrate Selective Resin	25L	
10761000003		PA202 Pure Nitrate Selective Resin		

Weak Basic Anion

Reference	Config	Item Name	Packaging	Price per Litre
10763000022		Purolite A100 Anion Resin	25L	

MIXED BED RESIN

Mixed bed resins contain both cation and anion resins so most minerals are held within the resin and pure water is produced. Typically mixed bed resins can produce water of 1 to 5 uS/cm while the purer versions can get to 0.5uS/cm.

Mixed Bed Resin

Reference	Config	Item Name	Packaging	Price per Litre
10762000002		Indion MB115 Mixed Bed Resin	25L	
10763000001		Purolite MB 400 Mixed Bed Resin Mixture	25L	
10763000012		Purolite NRW3240 Nuclear Grade Mixed Bed Resin	25L	
10761000002		Pure PMB 101-3 Mixed Bed Resin		

Inert Resin

Reference	Config	Item Name	Packaging	Price per Litre
10763000020		Purolite IP4 Inert Resin	25L	

MEDIA, CABINETS & TANKS

Iron Removal & Neutralisation

JURAPERLE & COROSEX - pH CORRECTION

Juraperle is a filter fine granulation medium on the basis of fossil limestone structures. It is applied for increase the pH of poor water, and possibly iron removal. During filtration, the free CO₂ is converted to bicarbonate and calcium is dissolved respectively. By this, the pH and hardness rate is raised. In addition, the iron is also filtered. Because calcium is dissolved, the product must be filled regularly. Corosex is a stronger mineral than Juraperle. It will boosts the pH higher.

Service Flow	12 m/hr
Backwash Rate	24 m/hr
Bed Depth	18 - 30 Inch
Density	1.6 kg / liter
Freeboard	30 %



Juraperle & Corosex - pH correction

Reference	Config	Item Name	Packaging	Price per pack
10872000004		Juraperle 1.2 - 1.8 mm (CaCO ₃)	25kg	
10872000003		Corosex (MnO) very strong pH media	25kg	
10872000005		Calcite (CaCO ₂)	25kg	

ECOMIX (IRON & MANGANESE AND H₂S REMOVAL)

Ecomix and multifunctional water filtration media consisting of a mixture of ingredients. In certain instances they can reduce iron and manganese. It is an effective one step elimination of the 5 main problems (hardness, iron, manganese, organic, ammonia) in domestic and industrial applications.

Ecomix (iron & manganese and H₂S removal)

Reference	Config	Item Name	Packaging	Price per pack
10871000015		Ecomix A	25L	
10871000006		Ecomix C	25L	

MEDIA, CABINETS & TANKS

Iron Removal & Neutralisation

FILOX-R - IRON/MANGANESE REMOVAL MEDIA

Filox-R can be used for iron and manganese and hydrogen sulphide removal by oxidation. It requires a pH of 7 or more for iron removal and 8 for manganese content. It is heavy, and needs a high backwash flow rate to remove the oxidised iron and manganese but gives a high service flow rate and out lasts Birm.

Service Flow	28 m/hr
Backwash Rate	36 m/hr
pH Range	6,8 - 9,0
Density	2 kg / liter
Freeboard	30 - 50 %

The use of oxidising agents is recommended. Highly reducing waters may cause premature exhaustion ORP over 170mV indicates Filox-R can be used.



Filox (iron & manganese and H₂S removal)

Reference	Config	Item Name	Packaging	Price per pack
10871000004		Filox R Iron/Manganese media	1/2 cuft	

Other Filter Media for iron and manganese removal

Used for iron and manganese removal by catalytic oxidation. It is a robust natural mineral conforming to British Standard BS EN 13752. It requires a pH of 7 or more for iron removal and 8 for manganese removal. Aquamandix is a cost effective filter media which can be mixed with sand where the Aquamandix catalyses the metals and then the less expensive sand filters out the precipitate. It can also be mixed with pH media to and increase the pH all in one system.

Service Flow	12 m/hr
Backwash Rate	24 m/hr
pH Range	6,8 - 9,5
Density	2 kg / liter
Freeboard	30 - 50 %



Other Filter Media for iron and manganese removal

Reference	Config	Item Name	Packaging	Price per pack
10871000005		Birm	1 cuFt	
10871000003		Aqua-Mandix	25kg	
10871000009		Greensand Plus 20Kg	1/2 cuFt	
10871000018		Stirox	1/2 cuFt	
10871000022		Pyrolox	1/2 cuFt	
10871000021		Pyrolox Advantage 19Kg	1/2 cuFt	

MEDIA, CABINETS & TANKS

Iron Removal & Neutralisation

CRYSTAL RIGHT - IRON AND HARDNESS REMOVAL

Crystal Right is a synthetic zeolite but without impurities and with predefined grain sizes developed for the treatment of well water.

Thanks to its unique crystal structure Crystal-Right remove hardness, iron and manganese and increases the pH.

The Pollet Water Group is the exclusive distributor of Crystal Right in Europe.

Advantages

- Removes at the same time iron, manganese and hardness by ion exchange
- Removes manganese, difficult to remove by classic oxidation
- Absorption of NH₃
- Increases the pH (absorption H⁺)
- Excellent filtration of non-dissolved particles
- A regeneration needs 30% less NaCl than when using classic softeners resins
- Chlorine has no negative impact on Crystal Right and is strongly advised when regenerating to counterattack the proliferation of bacteria.
- No specific requirements for pumps as the backwash flow is lower than the service flow
- Delivered in convenient bags of 22,7kg (28,3L)
- When used appropriately, Crystal Right has a lifetime of 10 year



TERMS OF USE

Crystal right is used for the treatment of non-oxidized iron and manganese (water originating from wells and boreholes.)

CR 100 CR200: Minimum hardness (50 mg/l), TDS>80 mg/l,
pH for CR100 is 6 to 10 and pH for CR200 pH is 7 to 10. Max iron and manganese : 15mg/l

Capacity CR100: 30g/L resin; CR200: 40g/L resin.

For the removal of NH₃, CR100 is to be used.

Crystal Right cannot be rinsed with classic resin cleaners, CR Clear Out is to be used.

Other Filter Media for iron and manganese removal

Reference	Config	Item Name	Packaging	Price per pack
10871000012		Crystal-Right Medium CR100 (CFT)	1 cuft *	
10871000011		Crystal-Right Medium CR200 (CFT)	1 cuft *	

FOR CR UNITS

CR Clear

Reference	Config	Item Name	Packaging
10980000005		CR Clear Out (5 L)	5L

MEDIA, CABINETS & TANKS

Filtration

SAND/GRAVEL

Sediment filters are needed when the water supply is cloudy or turbid. The easiest way to remove the particles is by passing the water through a media where the particles get stuck and allowing clear water to flow through. The particles can be periodically 'backwashed' away to drain. Filter AG and Turbidex filter down to a smaller particle size than sand which can lead to savings over traditional filter materials. Typically sand filters to 40um, Filter AG 20um and Turbidex 5um.

Bed Depth	18 - 30 Inch
Service Flow	12 m/hr (Sand), 28m/hr Turbidex
Backwash Rate	24 m/hr (Sand), 36m/hr Turbidex
Density	1.6 kg / liter
Freeboard	30 %



Sand/Gravel

Reference	Config	Item Name	Packaging	Price per pack
10870000006		Filtration sand 0.4 - 0.8 mm	25 kg	
10870000014		Filtration sand 0.5 - 1.0 mm	25 kg	
10870000003		Filtration sand 0.8 - 1.25 mm	25 kg	
10870000005		Gravel 1.7 - 2.5 mm	25 kg	
10870000002		Gravel 2.0 - 3.15 mm	25 kg	
10870000001		Gravel 3.15 - 5.6 mm	25 kg	
10870000004		Gravel 5.0 - 8.0 mm	25 kg	
10870000009		Filter AG	1 cuft *	
10870000010		Turbidex	1 cuft *	
10870000007		AFM ng Grade 1 Activated Glass Media	25 kg	

ANTHRACITE

Hydro-anthracite is a selective, hard and a naturally occurring coal. This product is used in closed systems of filtration, counter-current rinse for the treatment of drinking water, process, pool or waste water. It forms a top layer to improve the fineness of the filter.

Sand/Gravel

Reference	Config	Item Name	Packaging	Price per pack
10870000017		Hydro-anthracite N (0.8 - 1.6 mm)	Bags of 25 kg	

MEDIA, CABINETS & TANKS

Filtration

ACTIVATED CARBON

Granular Activated Carbon filters are an excellent choice for removal of chlorine, taste and odour, or organics in water. There are many different variations but most are either coconut, coal or wood based. Natural charcoal can reduce colour and heavy metals such as lead but flow rates need to be very slow.

Service Flow	12 m/hr
Backwash Rate	20 m/hr
Density	0.5 kg / liter (Coconut) 0.7 kg / liter (Natural)
Freeboard	20 - 30 %



Activated Carbon

Reference	Config	Item Name	Packaging	Price per pack
10873000010		Activated Carbon Coconut, 207C 12x30 mesh	25kg	
10873000004		Activated Carbon Coconut Aquasorb 12x40	25kg	
10873000007		Activated Charcoal (heavy metals / colour removal)	25kg	
10873000008		Catalytic carbon (H2S removal)	25kg	
10873000009		Acid Washed Carbon	25kg	

ARSENIC REMOVAL MEDIA

Arsenic is found in water in many parts of Europe. The legal limit for arsenic has recently been reduced to 10ug/l. The arsenic can be removed with a specially formulated filter media called Bayoxide. The bayoxide is a medium in the form of granules / crystals. When water passes through the medium at the wellhead, arsenic is adsorbed and eliminated, allowing to reach a level lower to the drinking water standard. This media is the same media used by many municipal water companies.

pH Range	6,8 - 9,5
Service Flow	20 m/hr
Backwash Rate	15 m/hr
Density	0.5 kg / liter
Freeboard	30 %



Arsenic Removal Media

Reference	Config	Item Name	Packaging	Price per pack
10874000001		Bayoxide E33	20kg / 40L	

MEDIA, CABINETS & TANKS

Cleaning Products

FOR SOFTENERS

Resin Clean			
Reference	Config	Item Name	Packaging
10980000002		Resin Clean Concentrated 1 L	1L
10980000001		Resin Clean Concentrated 5 L	5L

Salt			
Reference	Config	Item Name	Packaging
10875000001		Salt - Water Softener tablets	25 kg
10875000002		Salt - Water Softener tablets	10 kg



MEDIA, CABINETS & TANKS

Cabinets

SWAN

- ➔ Cabinet cover that allows using a large number of valves
- ➔ Specific window to see major electronic displays
- ➔ Cover that is strongly fixed on the bottom part of the cabinet
- ➔ Solid cabinet cover that will not be damaged during transport
- ➔ ABS cover and PE cabinet are fully recyclable
- ➔ Personalisation and different colours available on demand



Swan			
Reference	Config	Item Name	w x h x d mm
10501000004	C00001	Swan 35 cabinet - white with blue hood Will take 8x35, 9x35 or 10x35 vessel	1190 x 325 x 520
10599000008		Overflow set 3/8" x 1/2" (for all cabs)	
10500000007		Swan Smoked window	
10500000063		Swan Blue Cover	

The Swan cabinets are available in different colours

MEDIA, CABINETS & TANKS

Cabinets & Brine Tanks

BRINE TANKS



Square / Rectangular Brine Tanks (with Lids)

Reference	Config	Item Name	I x w x h mm
10542000004		Square White Brine Tank, Black Cover 35 L	310 x 310 x 440
10542000034		Square White Brine Tank, Black Cover 75 L	310 x 310 x 890
10540000029		Rectangular Blue Brine Tank, 125L	390 x 440 x 840

Round Brine Tanks (with Lids)

Reference	Config	Item Name	Diameter x Height mm
10560000010		Round Blue Brine Tank, Blue Cover 200 L	670 x 830
10560000009		Round Blue Brine Tank, Blue Cover 300 L	760 x 1010
10560000013		Round Blue Brine Tank, Blue Cover 400 L	870 x 930
10560000011		Round Blue Brine Tank, Blue Cover 500 L	870 x 1240
10560000014		Round Blue Brine Tank, Blue Cover 750 L	1000 x 1110
10560000012		Round Blue Brine Tank, Blue Cover 1000 L	1070 x 1290
10560000016		Round Blue Brine Tank, Blue Cover 1750 L	1260 x 1500

MEDIA, CABINETS & TANKS

Cabinets & Brine Tanks

DOSING TANKS (& LIDS) AND BUNDS



Dosing Tanks (& Lids) and Bunds			
Reference	Config	Item Name	Diameter x Height x Weight
10674000001		Dosing tank - 50 L	425 mm x 500 mm, 3.5 Kg
10674000002		Dosing tank - 100 L	500 mm x 680 mm, 7.5 Kg
10674000003		Dosing tank - 200 L	655 mm x 795 mm, 11 Kg
10674000004		Dosing tank - 300 L	655 mm x 1030 mm, 17 Kg
10674000005		Dosing tank - 500 L	800 mm x 1160 mm, 21 Kg
10674000006		Dosing tank - 1000 L	1065 mm x 1355 mm, 35 Kg
10674000007		Bund - 50 L	680 mm x 290 mm, 2.7 Kg
10674000008		Bund - 100 L	810 mm x 350 mm, 4 Kg
10674000009		Bund - 200 L	975 mm x 400 mm, 6 Kg
10674000010		Bund - 300 L	940 mm x 630 mm, 5.8 Kg
10674000011		Bund - 500 L	1130 mm x 685 mm, 11 Kg
10674000012		Bund - 1000 L	1825 mm x 560 mm, 15 Kg

Manufactured in UV stabilised MDPE, natural colour

MEDIA, CABINETS & TANKS

Cabinets & Brine Tanks

ACCESSORIES

Airchecks

Reference	Config	Item Name
10542000054		Air Check 500A 915 mm 36"
10542000006		Air Check 500 Hot Water (1600 EC)
10599000050	C00001	Brine tube 3/8" with gauze, no air check

Safety brine valves

Reference	Config	Item Name
10542000011		Safety brine valve Schurz - BV 44 3/8"
10542000024	SBV2310	Brine valve 318 with safety brine valve 3/8"
10540000028		Safety brine valve Clack 484 - 3/4" brine tube +riser new version of 454



BV 44



SBV2310



484



Air Check 500A



Air Check 500 Hot



brine tube 3/8 (no air check)

MEDIA, CABINETS & TANKS

Cabinets & Brine Tanks

ACCESSORIES

Brine Well-Overflow-Cap

Reference	Config	Item Name
10501000005		Brine well-over-flowcap-cap diameter 100 mm for brine tank type 300 (96cm)

Brine Well-Overflow-Cap - 125 mm

Reference	Config	Item Name
10501000006		Brine well-over-flowcap-cap diameter 125 mm for brine tank type 750
10501000007		Brine well-over-flowcap-cap diameter 125 mm for brine tank type 1750

Other Accessories

Reference	Config	Item Name
10599000058		Cover for Brine Well 100 mm
10599000027		Blue Cover for Brine Well 125mm

LOW LEVEL SALT ALARM

The salt alarm ONLY fits on an Impression Plus (Clack variation valve). It measures the brine concentration as it flows up the brine line ie the brine MUST not only be in the brine tank but also actually get to the softener. If not an alarm is displayed on the valve (and relay if programmed).

- Alarms on Low Salt
- Creates Salt Sales
- Dual Alarm Indication
- Proven Technology
- Low Cost
- Customer Confidence
- Remote Monitoring Alarm Contact



Blue

Reference	Config	Item Name
10441000019		Low salt Alarm For Impression Plus

10

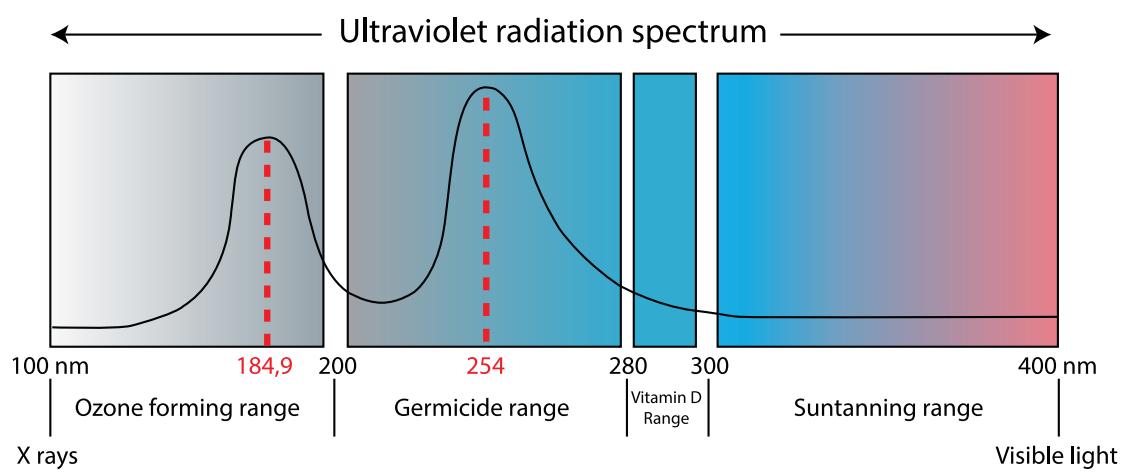
CHAPTER 10

ULTRAVIOLET SYSTEMS

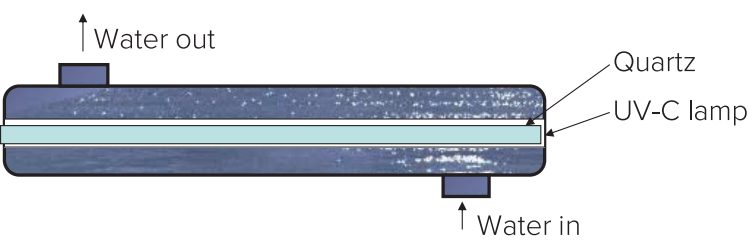
ULTRAVIOLET SYSTEMS

How Does Uv-Disinfection work?

The effect of UV light on bacteria, viruses, spores and moulds has been known to science for many years. Ultraviolet energy at 254nm wavelength is radiated by special lamps. The shortwave ultraviolet energy is lethal to micro-organisms. The ultraviolet rays penetrate the cell membranes and destroy the DNA inside the cell, effectively destroying the organism and it's ability to reproduce. Ultraviolet disinfection is extremely fast, it requires no chemicals or additives and cannot be overdosed. No chemical residuals are left in the treated water.



Inside the stainless steel chamber runs a sleeve made of a special quartz glass transparent to UV rays and a UV lamp inside this. The sleeve is sealed into the chamber at each end creating a water jacket around the lamp. Water to be treated enters the chamber at one end and exits at the opposite end. As the water passes through the chamber it is exposed to the ultraviolet rays and micro-organisms are killed.



A typical UV is designed to produce 30 to 40 mJ/cm² of energy. Below is a list of micro organisms and the dose required to kill.

Microrganism	99.99% reduction (Log 4)
Cryptosporidium parvum	7,9
Giardia lamblia (cisti)	<10
Vibrio cholerae	2,9
Shigella dysenteriae	3
Shigella sonnei	8,2
Escherichia coli O157:H7	5,6
Salmonella typhi	8,2
Salmonella typhimurium	9
Salmonella enteritidis	10
Legionella pneumophila	9,4
Virus epatite	16-30
Polovirus tipo	21-30
Coxsackie virus B5	30
Rotavirus SA11	31-36
Aeromonas hydrophila	5
Campylobacter jejuni	4,6
Staphylococcus aureus	10,4
Yersinia enterocolitica	4,6
Clostridium perfringens	200

ULTRAVIOLET SYSTEMS

Timer Overview



LCD

- LCD Display
- Hours run meter
- Alarm LED
- Alarm relay (free) NO/NC
- Alarm relay (230V) NO/NC



LCD PLUS

- Same features as the LCD
- End of lamp alarm
- UV transmission or temperature display
- High temperature shut down



TOUCH SCREEN

- SITA Touch-Screen (65000 colours)
- Multi language display
- Hour meters (system and lamp life)
- 6 digital outputs
- Remote access with App or WebGate



AL

- LED displays green when lamp is on and red when lamp is off



AL2

- LED Display
- Days run display
- Buzzer

ULTRAVIOLET SYSTEMS

AL Domestic Range

The AL range of UV's are no nonsense WRAS approved small UV's giving up to 85 l/min. The units come with a simple power supply and green LED (working), red LED (failure). All chambers are 304 stainless steel. (316 optional).



AL 2 Range - days run indicator and lamp failure/end of life audible alarm

Reference	Config	Item Name	Watt	Max Flow Rate at 30mj	Conn.	Length mm
16552000123		UV405 AL2	1 x 30	20 l/min	3/4" M	524
16552000124		UV 405 C AL2	1 x 35	30 l/min	3/4" M	674
16552000126		UV 412 AL2	1 x 40	45 l/min	1" M	925
16552000127		UV 440 AL2	1 x 40	60 l/min	1.5" M	880
16552000128		UV 460 AL2	1 x 80	85 l/min	1" M	925

Life Span Lamps: 9000 hours

AL Range - simple power supply with lamp failure LED

Reference	Config	Item Name	Watt	Max Flow Rate at 30mj	Connections	Length mm
16552000114		UV 107 AL	1 x 12	5 l/min	1/8" F	267
16552000115		UV 403 AL	1 x 16	10 l/min	1/2" M	394
16552000117		UV 405 AL	1 x 30	20 l/min	3/4" M	524
16552000118		UV 405 C AL	1 x 35	30 l/min	3/4" M	674
16552000119		UV 412 AL	1 x 40	45 l/min	1" M	925
16552000121		UV 440 AL	1 x 40	60 l/min	1.5" M	880
16552000122		UV 480 AL	1 x 80	85 l/min	1.5" M	880

Life Span Lamps: 9000 hours

Service Kits

Reference	Config	Item Name
16552000067	C00001	Lamp, Quartz and seals for 412, 440, 450 (2 needed for 450)

ULTRAVIOLET SYSTEMS

AL Domestic Range

Spare Parts Sita (AL Range)

Reference	Config	Item Name
16552000003		Pallas UV Lamp 12 W for UV 107
16552000001		Pallas UV Lamp 16 W for UV 403
16552000004		Pallas UV Lamp 30 W for UV 405
16552000022		Pallas UV Lamp 35W for UV 405C
16552000006		Pallas UV Lamp 40W for UV 412/440/450/700/750/800
16552000156		Quartz Tube for UV107
16552000020		Quartz Tube for UV403
16552000012		Quartz Tube for UV405
16552000002		Quartz sleeve for UV 405C
16552000024		Quartz Tube for UV412 - series 40/80
16552000025		O-Ring For Quartz Sleeve
16552000027		Power Supply UV405/412AL + Lead
16552000150		AL2 Power Supply 412-440
16552000207		AL2 replacement board
16552000013		Spring in quartz sleeve
16552000067	C00001	Service Kit 412 and 440

ULTRAVIOLET SYSTEMS

SS Range

The SS range of high quality ultra violet systems have a 316L stainless steel housing and come with a separate type A control box as standard containing the lamp drive circuits certified to IP40.
UV Dose is 30 mJ/cm², flow rates rated for 98% transmission



SS-I Range

HF electronic PSU with running meter, lamp indicator led, failure alarm. Max. pressure = 10 bar

Reference	Config	Item Name	Max Flow Rate at 30mJ	Conn.	Length mm
16566000001		SS-i15	9.5 l/min	3/4"	455
16566000002		SS-i30	23 l/min	3/4"	915
16566000003		SS-i55	37 l/min	3/4"	1220
16566000004		SS-i75	60 l/min	1"	1220
16566000006		SS-i1575	152 l/min	1.5"	1220

Spare Parts

Reference	Config	Item Name
16566000010		UV Replacement 15 Watt Lamp for SS spares
16566000011		UV Replacement 30 Watt Lamp for SS Spares
16566000012		UV Replacement 55 Watt Lamp for SS Spares
16566000013		UV Replacement 75 Watt Lamp for SS Spares
16566000017		UV Quartz Sleeve 15 Watt for SS Spares
16566000018		UV Quartz Sleeve 30/55 Watt for SS Spares
16566000019		UV Quartz Sleeve 75 Watt for SS Spares
16566000028		UV Seal Kit For SS Spares Inc 2 O-Rings & 2 Backing Washers

ULTRAVIOLET SYSTEMS

Sita Industrial Range



All products are made in Italy to ISO 9001 quality Standards. Sita units are WRAS approved. The standard LCD range consists out of a 304 stainless steel chamber (316 optional), and a control panel with an LCD display, an hours run meter and alarm contacts. The PLUS version has a UV intensity meter (or temperature meter) and a high temperature shut down.



→ 4-20 mA outlet

→ Ö- Norm/ DVGW approved sensor

Sita Industrial Range

Reference	Config	Item Name	Watt	Max Flow Rate at 30mj	Conn.	Length mm
16552000129		UV- type 405 LCD	1 x 30	1.1 m³/h	3/4"	524
16552000130		UV- type 405 LCD PLUS	1 x 30	1.1 m³/h	3/4"	524
16552000132		UV- type 412 LCD	1 x 40	2.7 m³/h	1"	925
16552000133		UV- type 412 LCD PLUS	1 x 40	2.7 m³/h	1"	925
16552000136		UV- type 440 LCD	1 x 40	3.6 m³/h	1 1/2"	880
16552000137		UV- type 440 LCD PLUS	1 x 40	3.6 m³/h	1 1/2"	880
16552000138		UV- type 450 LCD	2 x 40	4.5 m³/h	1 1/2"	925
16552000139		UV- type 480 LCD	1 x 80	5.1 m³/h	1 1/2"	880
16552000140		UV- type 480 LCD PLUS	1 x 80	5.1 m³/h	1 1/2"	880
16552000141		UV- type 550 LCD	2 x 40	8 m³/h	1 1/2"	985
16552000142		UV- type 550 LCD PLUS	2 x 40	8 m³/h	1 1/2"	985
16552000145		UV- type 80/2 LCD	2 x 80	16 m³/h	1 1/2"	985
16552000146		UV- type 80/2 LCD PLUS	2 x 80	16 m³/h	1 1/2"	985

Life Span Lamps: 9000 hours

ULTRAVIOLET SYSTEMS

Sita Industrial Range



	LCD	LCD Plus
Electrical Power	230V-50/60 Hz	
Protection	IP 55	
LCD Display	X	X
Hours run meter	X	X
Alarm LED	X	X
Alarm relay (free) NO/NC	X	X
Alarm relay (230V) NO/NC	X	X
End of lamp alarm		X
UV transmission or temperature display		X
High temperature shut down		X

UV LCD SERIES	405 LCD	412 LCD	440 LCD	450 LCD	480 LCD	550 LCD	80/2 LCD
Max flow (m³/hr)	1.1	2.7	3.6	4.5	5.1	6.6	12
Watts	1 x 30	1 x 40	1 x 40	2 x 40	1 x 80	2 x 40	2 x 80
Connectors In / Out	3/4" M	1" M	1 1/2" M	1" M	1 1/2" M	1 1/2" M	1 1/2" M
Max Pressure (bar)	9 bar						
Air Temperature (°C)	2" to 40°						
Chamber length (mm)	524 mm	925 mm	880 mm	925 mm	880 mm	985 mm	985 mm
Electrical Panel (mm)	215 x 215 x 90						

Spare Parts

Reference	Config	Item Name
16552000004		Pallas UV Lamp 30 W for UV 405
16552000006		Pallas UV Lamp 40W for UV 412/440/450/700/750/800 (white end)
16552000014		Pallas UV Lamp 80W for Rack series (green end)
16552000012		Quartz sleeve for UV 405 (500mm)
16552000024		Quartz sleeve for UV LCD /Rack series 40/80 (900mm)
16552000025		028061 O-Ring for quartz
16552000067	C00001	Service Kit 412 and 440
16552000170		Control panel 440 LCD
16552000017		Control Panel 480 LCD

ULTRAVIOLET SYSTEMS

Sita LCD Rack Range



The UV RACK LCD series features a low pressure 80W lamp as well as a control panel with microprocessor. These are ideal for private water, industrial, beverage and food industries.

All products are made in Italy to ISO 9001 quality standards. Sita units are WRAS approved. The standard LCD range consist of a 304 stainless steel chamber (316 optional), and a control panel with an LCD display, a hours run meter and alarm contracts. The PLUS version has an UV intensity meter (or temperature meter) and a high temperature shut down. Manual and automatic wipe options are available.



Sita LCD Rack Range

Reference	Config	Item Name	Watt	Max Flow Rate 40mj	Conn.
16552000008		UV-Type 80/3 Rack LCD	3 x 80	20 m³/h	2"
16552000072		UV-Type 80/3 Rack LCD Plus	3 x 80	20 m³/h	2"
16552000023		UV-Type 80/4 Rack LCD	4 x 80	30 m³/h	DN 80
16552000042		UV-Type 80/4 Rack LCD Plus	4 x 80	30 m³/h	DN 80
16552000010		UV-Type 80/5 Rack LCD	5 x 80	40 m³/h	DN 80
16552000009		UV-Type 80/5 Rack LCD Plus	5 x 80	40 m³/h	DN 80

Life Span Lamps: 9000 hours

Spare Parts

Reference	Config	Item Name
16552000014		Pallas UV Lamp 80 W for UV 80 series (green end)
16552000024		Quartz Tube for UV412 - 40/80
16552000025		O-Ring For Quartz Sleeve

ULTRAVIOLET SYSTEMS

AM series



The AM series features an extremely powerful 200W amalgam lamp. This series is unique by the fact that you can handle a high flow with a small number of lamps. It's unique L-shape one can install the AM both horizontally and vertically. These are ideal for private water, industrial, beverage and food industries.

- Stainless steel 304 or 316
- L shape configuration
- Baffle plates to increase dose
- Plus models with UV/temperature sensor
- IP 65 lamp connection
- 200W High power amalgam lamp
 - Options available
- Manual, automatic or chemical cleaning
- 4/20 mA remote on/off
- Datalog software, GSM alarm box



Sita AM Range

Reference	Config	Item Name	Watt	Max Flow Rate 40mj	Conn.
16552000068		UV AM 24	1 x 200	24 m³/h	2" M
16552000091		UV AM 24 Plus	1 x 200	24 m³/h	2" M
16552000069		UV AM 50	2 x 200	50 m³/h	DN80
16552000092		UV AM 50 Plus	2 x 200	50 m³/h	DN 80
16552000070		UV AM 60	2 x 200	60 m³/h	DN80
16552000088		UV AM 60 Plus	2 x 200	60 m³/h	DN 80
16552000090		UV AM 60 SS 316L	2 x 200	60 m³/h	DN 80
16552000093		UV AM 60 Plus SS 316L	2 x 200	60 m³/h	DN 80
16552000094		UV AM 96 Plus TC SS 316L 3-200W	3 x 200	96 m³/h	DN 100
16552000100		UV AM 125 Plus TC SS 316L 4-200W	4 x 200	125 m³/h	DN 150
16552000101		UV AM 160 Plus TC SS 316L 4-200W	4 x 200	160 m³/h	DN 150

Spare Parts

Reference	Config	Item Name
16552000005		Lamp 200W for AM series
16552000007		Quartz Tube for AM series
16552000019		O-ring for quartz SL AM series (2 required)

ULTRAVIOLET SYSTEMS

Sita 400 TC series

Industrial range in 316 stainless steel. Uses 400W low pressure amalgam lamps which have higher life span and efficiency than standard low pressure lamps. Features new touch screen control.



Sita 400 TC series

Reference	Config	Item Name	Watt	Max Flow Rate 40mj	Conn.
16552000191		UV400/1 TC 316L	1 x 400	50 m³/h	DN80
16552000192		UV400/2 TC 316L	2 x 400	100 m³/h	DN100
16552000193		UV400/3 TC 316L	3 x 400	150 m³/h	DN150
16552000194		UV400/4 TC 316L	4 x 400	250 m³/h	DN200
16552000195		UV400/5 TC 316L	5 x 400	300 m³/h	DN200
16552000196		UV400/6 TC 316L	6 x 400	420 m³/h	DN250
16552000197		UV400/8 TC 316L	8 x 400	600 m³/h	DN250
16552000198		UV400/10 TC 316L	10 x 400	830 m³/h	DN300
16552000201		UV400/12 TC 316L	12 x 400	980 m³/h	DN350

Life Span Lamps: 16000 hours
Automatic wiper (RA) available on demand

ULTRAVIOLET SYSTEMS

Sita SMP Medium Pressure Range

S.I.T.A. Medium Pressure (SMP) UV system emits an UV-C irradiation between 200 and 600 nm. These waves length cause an alteration of some chemical links present among nucleotides so that the information contained and conveyed by DNA of every organism present in the water change. These alterations lead to the cellular death and so to the bacteriological elimination.



- touch screen
- manual wipe as standard
- auto wipe
- lamp save
- 316 options available

Sita SMP

Reference	Config	Item Name	Watt	Max Flow Rate	Conn.
16552000199		SMP 6 TC XL PR	1 x 600	33 m³/h	2" 1/2
16552000106		SMP 10 TC XL PR	1 x 1000	55 m³/h	DN 100
16552000200		SMP 20 TC XL PR	1 x 2000	120 m³/h	DN 150
16552000202		SMP 25 TC XL PR	1 x 2500	170 m³/h	DN 150
16552000107		SMP 35 TC XL PR	1 x 3500	333 m³/h	DN 200
16552000108		SMP 50 TC XL PR	2 x 2500	350 m³/h	DN 200
16552000203		SMP 70 TC XL PR	2 x 3500	500 m³/h	DN 250
16552000204		SMP 105 TC XL PR	3 x 3500	750 m³/h	DN 300
16552000205		SMP 140 TC XL PR	4 x 3500	1200 m³/h	DN 400

Life Span Lamps: 6000 hours

ULTRAVIOLET SYSTEMS

Seawater and other corrosive liquids

UV series realized in high density polyethylene UV chambers. The UV chamber made with this material guarantee a long life with aggressive water, sea water, and thermal water. Excellent disinfection guaranteed by high UV-C outputs lamps. Vertical and horizontal mounting and easy maintenance. Designed for corrosive environments and seawater applications.



Flow rate	Max 110 m³/hr *
UV reactor material	High density Polyethylene (HDPE)
UV-C dose	>40mj/cm²
Lamps	Low pressure high efficiency and amalgam lamps (14.000 hrs)

Max pressure	6 bar
Transmittance	98% - 1 cm / T: 20°C
Certification	CE, NVI
Max temperature	35°C

*Larger systems are available on request.

PE Series

Reference	Config	Item Name	Max Flow Rate	Conn.
16552000078		UV-system PE 3	3.5 m³/h	1.5"
16552000079		UV-system PE 5	5 m³/h	1.5"
16552000081		UV-system PE 8	8 m³/h	2.5"
16552000082		UV-system PE 15	15 m³/h	2.5"
16552000083		UV-system PE 22	22 m³/h	DN 65
16552000084		UV-system PE 35	35 m³/h	DN 80
16552000085		UV-system PE 45	45 m³/h	DN 100
16552000086		UV-system PE 60	60 m³/h	DN 100
16552000190		UV-system PE 110	110 m³/h	DN 150

Life Span Lamps: 14000 hours

ULTRAVIOLET SYSTEMS

Sita IT Onorm Certified systems

Sita IT validated series is biodosimetrically tested according to Austrian O-Norm 5873-1. The systems fulfil the EPA requirements contained in the Ultra violet Guidance Manual. Special mixing plates inside the stainless steel 316L UV reactor guarantee a correct distribution of the water.



IT SERIES	4 IT	10 IT	40 IT	80 IT	120 IT	200 IT	400 IT
Max.Flow (m³/hr)	3.72	13.98	42.4	72.24	127.15	200.85	322.70
Power Watts	44	222	533	888	1333	1800	2700
Lamps	1	1	6	2	3	4	6
Connectors	1"	2"	DN 100	DN 100	DN 150	DN 200	DN 250
Electric Panel (mm)	215x215x90	300x400x200	400x500x250	400x500x250	400x750x250	400x750x250	600x800x300

UV IT

Reference	Config	Item Name	Watt	Max Flow Rate	Conn.
16552000095		Validated 4IT UV System	1 x 44	3.72 m³/h	1"
16552000087		Validated 10IT UV System	1 x 222	13.98 m³/h	2"
16552000096		Validated 40IT UV System	6 x 533	42.4 m³/h	DN 100
16552000089		Validated 80IT UV System	2 x 888	72.24 m³/h	DN 100
16552000097		Validated 120IT UV System	3 x 1333	127.15 m³/h	DN 150
16552000098		Validated 200IT UV System	4 x 1800	200.85 m³/h	DN 200
16552000099		Validated 400IT UV System	6 x 2700	322.70 m³/h	DN 250

Life Span Lamps: 14000 hours

ULTRAVIOLET SYSTEMS

Sita Spare Parts (misc)

Sita Spare Parts		
Reference	Config	Item Name
16552000187		Nylon Sleeve Bolt
16552000162		Stainless Sleeve Bolt for Hot Water systems
16552000025		O-Ring For Quartz Sleeve
16552000013		Lamp-Stand Spring
16552000210		PVC Contact Cover
16552000184		Connector lamp + 3m cable + connector printboard
16552000165		Contact Cover Kit 400 Series - 3m
16552000164		Contact Cover Kit AM Series
16552000208		Contact Cover Kit for SMP DS
16552000209		Drain Valve 1/2" F/F (LCD series)
26699000006		Vent Valve 1/8" (LCD series)

ULTRAVIOLET SYSTEMS

MioLED Point of Use disinfection

A LED UV system which can be fitted in a new system or replace an existing single tap UV. The systems use a powerful UV LED which destroys bacteria and cysts.

This technology can be used anywhere you have a point of use water drinking water tap : in houses, in offices, in restaurants, in sport’s centres, in exhibition halls, in shopping centres, in caravans, in boats and many more places.

- ➔ LED technology
- ➔ Energy and maintenance saving
- ➔ Switches on only when needed
- ➔ Small size
- ➔ Easy installation
- ➔ Plasma formation which leaves the unit creating airflow and increasing kills without the need of a noisy fan



ASR					
Reference	Config	Item Name	Max Flow Rate	Conns	Length
16552000206		MioLED UV system	2.5 l/min	3/8" push fit	26cm

*tap and fittings sold separately

11

CHAPTER 11

CONVERSIONS FACTORS

CONVERSIONS & USEFUL DATA

More information including data sheets @ www.kennetwater.co.uk

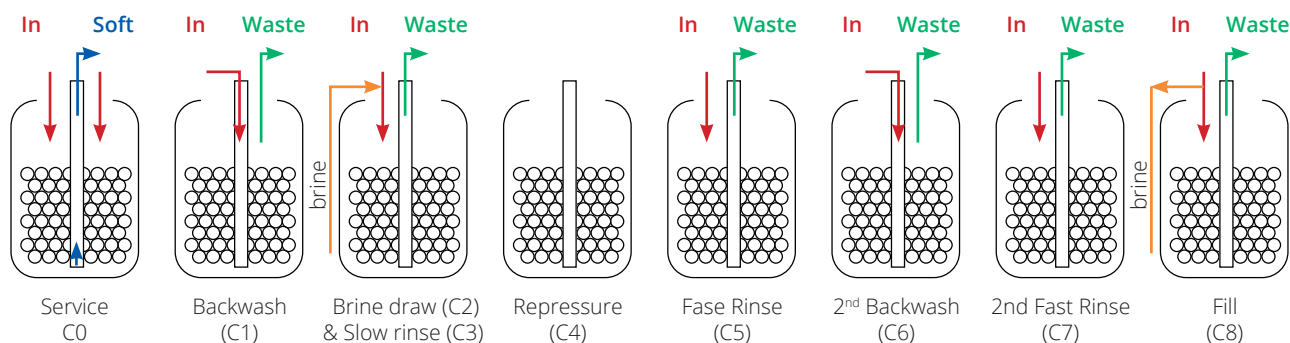
Volumes	Weights	Mesh	Hardness
1 UK gallon = 4.54 litres 1 US gallon = 3.8 litres 1 cubic foot (cuft) = 28.4 litres	1 g (gram) = 1000 mg (milligram) 1000µg (microgram) = 1 mg 1 mg approx 1 part per million	8 = 2.3 mm 10 = 2 mm 12 = 1.68 mm 20 = 0.84 mm 40 = 0.42 mm	1 mg/l CaCO_3 = 0.1 °1FH (French hardness) 0.0560 °dH (German degrees) 0.0584 US grains per gallon 0.0701 °Clarck (Clark degrees)
			1 °FH = 10 mg/l CaCO_3 1 °dH = 17.85 mg/l CaCO_3 1 gpg = 17.12 mg/l CaCO_3 1 °C = 14.25 mg/l CaCO_3

Water Softeners

What is hard water?

Calcium and magnesium salts (hardness) drop out of pipes especially in hot water. They stick to the surfaces forming lime scale. This blocks pipes and acts as insulation meaning boilers are inefficient and increasing heating bills. Softening water removes the hardness making the water feel silky, reducing heating bills and reducing the need for detergents.

How does a softener work?



CONVERSIONS & USEFUL DATA

Softening resin (typical values)

1 litre of resin can remove 50g hardness (CaCO_3)

1 litre of resin requires 140g salt for regeneration

1 Kg of salt uses just under 3 litres of water to make a saturated brine solution

Eg 25 litre softener in London when the hardness is 300mg/l (0.3g)

→ Capacity of water between regenerations: $25 \text{ l} \times 50\text{g} = 1250\text{g} / 0.3\text{g} = 4166 \text{ litres}$

→ Salt usage per regeneration: $25 \text{ l} \times 140\text{g} = 3500\text{g} = 3.5 \text{ Kg}$

→ Amount of brine in brine tank: $3 \times \text{salt} = 10.5 \text{ litres}$

How to size a softener

On average 160 litres of water is used per person per day. This normally occurs in two peak periods, one in the morning and one in the evening. A family of four typically uses 700 litres of water per day but may use 300 litres in an hour in the morning. Larger households, farms, stables and irrigations systems all use more water.

When sizing a system the average flow and the peak flow rate need to be taken into account. Try and size a system to run for 3 days without regenerating or a duplex for 12 hours.

The average flow rate is normally 40 times the litres of resin (40BV) although peak flows are often higher.

CONVERSIONS & USEFUL DATA

Ultraviolet

A typical UV is designed to produce 30 to 40 mJ/cm² of energy. The average dose required to deactivate micro organisms is listed below (ref Sita, Italy)

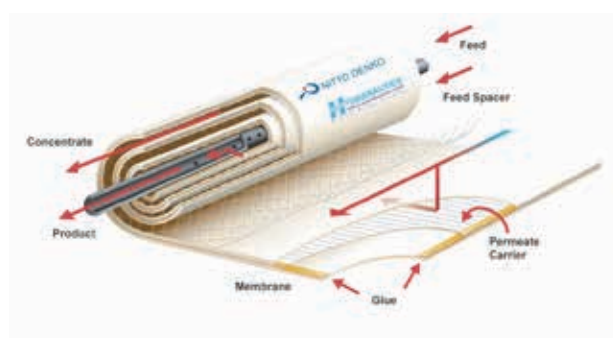
Microrganism	90% reduction (Log 1)	99% reduction (Log 2)	99,9% reduction (Log 3)	99,99% reduction (Log 4)
Cryptosporidium parvum	3	4	6.4	7.9
Giardia lamblia (cisti)		< 5	< 10	< 10
Giardia muris (cisti)	1.2	4.7		
Vibrio cholerae	0.8	1.4	2.2	2.9
Shigella dysenteriae	0.5	1.2	2	3
Shigella sonnei	3.2	4.9	6.5	8.2
Escherichia coli O157:H7	1.5	2.8	4.1	5.6
Salmonella typhi	1.8	4.8	6.4	8.2
Salmonella typhimurium	2	3.5	5	9
Salmonella enteritidis	5	7	9	10
Legionella pneumophila	3.1	5	6.9	9.4
Virus epatite		8.2-14	12-22	16-30
Poliovirus tipo		8.7-14	14-23	21-30
Coxsackie virus B5		14	22	30
Rotavirus SA11	7.1-9.1	15-19	23-26	31-36
Aeromonas hydrophila	1.1	2.6	3.9	5
Campylobacter jejuni	1.6	3.4	4	4.6
Salmonella anatum	7.5	12	15	
Staphylococcus aureus	3.9	5.4	6.5	10.4
Yersinia enterocolitica	1.7	2.8	3.7	4.6

Reverse Osmosis

In reverse osmosis systems water is pushed up against a membrane with tiny holes (typically at 10 to 12 bar pressure). Water molecules get through while minerals such as sodium can not get through. Typically 97% of minerals are removed. On domestic systems the permeate flow is low at 25% while on industrial systems 75% recovery is more common.

Temperature affects based on a design temperature of 15°C

Design Temp =15 °C	% output
0 ie 15 °C	100%
-2	92%
-4	84%
-5	80%
-7	74%
-10	67%

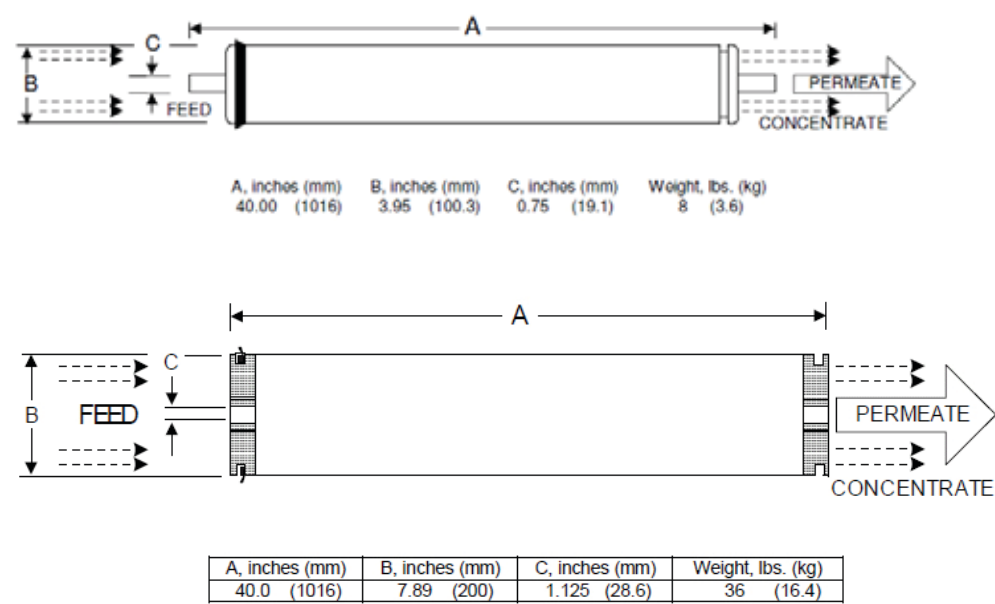


Ie a 1000l/hr system running at 10 °C will give about 80% or 800 l/hr.

CONVERSIONS & USEFUL DATA

Membranes

4040 (4" by 40")



Disinfection of Storage Tanks by Sodium Hypochlorite (shock treatment 35 mg/l chlorine)

Using sodium hypochlorite at 14% (= 140,000 mg/l)

250 mls of 14% hypochlorite in a 1 m³ tank gives 35 mg/l chlorine

2.5 litres of 14% hypochlorite in a 10 m³ tank gives 35 mg/l chlorine

For more info & datasheets, go to kennetwater.co.uk

FIND US



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www.kennetwater.co.uk - sales@kennetwater.co.uk



CARRIAGE CHARGES FROM MARCH 2024

FIRST CLASS POST

SMALL PACKET D160mm x L450mm x W350mm	Up to 1Kg	£5.20
	Up to 2Kg	£7.70

CARRIERS

EXPRESS BAG 350mm x 450mm	Up to 5Kg	£12.50
	Pre 10.30am	£29.99
	Pre 12pm	£26.00

The following are restricted to 30Kg per package and 1M in length

Next Day Service	Up to 20 Kg	£18.00
	Per Kg after	£0.45

Timed deliveries up to 10Kg	Pre 10:30 am	£41.50
	Per Kg after	£1.05
	Pre 12 Noon	£28.00
	Per Kg after	£0.90

Channel Islands & Isle of Man	Up to 10Kg	£42.00
	Per Kg after	£1.15

Scottish Islands	2-5 Day Service	Up to 10Kg	£40.00
		Per Kg after	£1.13

Scottish Highlands	2 Day Service	Up to 10Kg	£28.00
		Per Kg after	£1.13

Packages over 1M long will incur a non-conveyorable surcharge
Volumetric Weight will also include a surcharge, priced per consignment

Per package £14.00

PALLETISED FREIGHT

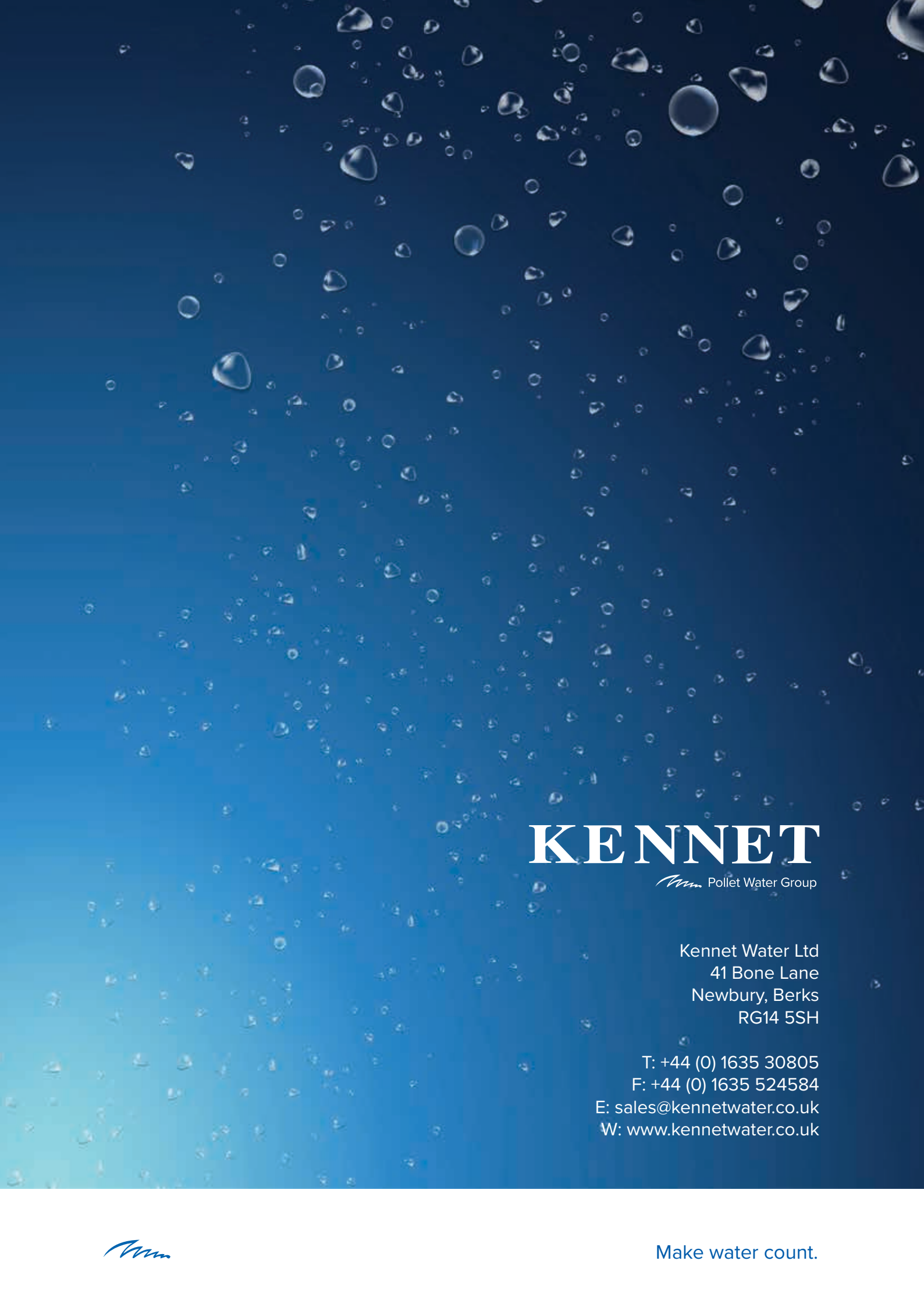
Zone 1	AL, BA, B, BB, BD, BL, BS, CB, CF, CH, CM, CO, CV, CW, DE, DL, DN, DY, FY, GL, HD, HG, HP, HR, HU, HX, IP, L, LE, LN, LS, LU, M, MK, NG, NN, NP, NR, OL, OX, PE, PR, RG, S, SG, SK, SL, SN, SP, SR, SS, ST, TA, TF, TS, WA, WD, WF, WN, WR, WS, WV, YO	Full Pallet	£74
		½ Pallet	£66
Zone 2	BH, BN, BR, CA, CR, CT, DA, DT, EN, GU, HA, IG, KT, ME, NE, PO, RH, RM, SM, SO (Not IOW), TN, TW, UB,	Full Pallet	£83
		½ Pallet	£78
Zone 3	DG, E, EX, KA, LL, N, NW, PA, PL, SA, SE, SY, TQ	Full Pallet	£101
		½ Pallet	£91
Zone 4	EC, EH, FK, G, KY, LA, LD, ML, SW, TD, TR, W, WC,	Full Pallet	£107
		½ Pallet	£97
Zone 5	DD, PH (not all zones)	Full Pallet	£118
		½ Pallet	£98
Zone 6	AB	Full Pallet	£125

CONDITIONS OF SALE

1. In these conditions the "company" means Kennet Water Ltd, and 'the Customer' means any person(s) or Company buying Goods from the Company. 'Goods' means any equipment, installation services or other chattels, whether or not intended to become affixed to reality, sold under the Contract. The "Contract" means the Contract for the sale and purchase of the Goods. The "Conditions" mean the standard terms and conditions incorporated by the Company.
2. Unless expressly agreed otherwise in writing, any Contract for the sale or supply of Goods by the Company shall be subject to these Conditions, to the exclusion of the terms and conditions of the customer. No employee or agent of the Company has authority to vary or waive any of these Conditions, except a Director doing so in writing.
3. The Customer shall not be entitled to rely for any purpose on any representation made by the Company or any of its servants or agents to the Customer or any of his servants or agents otherwise than as expressly referred to in the contractual document(s) unless he shall prior to the conclusion of the Contract have notified the Company in writing that he intends to rely thereon in entering the Contract and the Company confirms its acceptance.
4. No tender, quotation or other offer by the Company shall remain open for acceptance beyond a period of thirty days from the despatch or other communication thereof to the Customer.
5. (a) The Customer shall have the Goods upon delivery. Any defective material, incorrect or short delivery must be notified to the Company by the Customer within seven (7) days of delivery otherwise the Company will accept no responsibility. In cases of non-delivery any claims must be received by the Company within twenty (20) days of the Customer having been notified of despatch.
(b) In the event of any fault appearing in the 'Goods' within a year of delivery, the Company shall (if the said fault has been immediately notified to it by the Customer and the 'Goods' are (as the Company may direct) returned to it or made available for collection or inspection in situ) examine the same and in its opinion any faults found are due to any fault of its own design or manufacture or other workmanship it shall replace or (at its option) repair the same free of charge and shall refund to the Customer any cost of carriage incurred by him returning them. If it finds no faults for which it is responsible as aforesaid the costs of such carriage or collection or inspection and of any work shall be chargeable to the Customer. In the case of 'Contracts for the supply of goods outside the UK' such costs of carriage or collection or inspection shall in any event be borne by the Customer. In the case of faulty 'Goods' or parts not manufactured by the Company, the Customer shall be entitled, as far as possible, to the benefit of any guarantees given by the manufacturers; the Company will on request notify the Customer of the terms of any such guarantees.
(c) Subject as expressly provided in these conditions, and except where the Goods are sold to a person dealing as a consumer (within the meaning of the Unfair Contract Terms Act 1977) all warranties, conditions or other terms by statute or common law are excluded to the fullest permitted by the law. The Customer is advised to insure accordingly.
6. (a) Unless otherwise expressly agreed in writing delivery shall be ex the Company's works.
(b) Unless the Company expressly agrees a fixed delivery date in writing all delivery dates quoted or agreed are estimates only and shall not be binding on the Company. Time of delivery shall not be of the essence.
7. The Company shall not be liable for any breach of any obligation to the Customer under the "Contract" where the same is wholly or mainly due to circumstances outside the reasonable control of the Company.
8. (a) The Company accepts liability under the Contract for death or personal injury resulting from its negligence.
(b) The Company accepts liability for loss of or damage to the tangible property of the customer up to a limit of the lesser of £100,000 or to the value of the Goods supplied under the Contract. The Customer is advised to insure accordingly.
(c) Except as stated above, the Company shall not be liable to the Customer by reason of any representation or any implied condition or warranty or any duty at common law or under the express terms of the Contract for any indirect or consequential loss or damage (whether for loss of profit or otherwise) costs, or expenses (whether caused by the negligence of the Company, its employees, agents or otherwise) which arise out of or in connection with the supply of the Goods or their use or re-sale by the Customer.
9. (a) Risk shall pass to the Customer (which, in the case of delivery by carrier other than the Company's own transport shall be deemed to be effected by the posting of the Goods or their delivery to the carrier, as the case may be).
(b) (i) The Goods shall remain the sole and absolute property of the Company as legal and equitable owner until such time as the Customer shall have paid the Company all sums due under the Contract together with all sums due under any other Contract with the Company.
(ii) The Customer acknowledges that he is in possession of the Goods solely as bailee and in a fiduciary capacity for the Company until such time as the property in them passes.
(iii) Until such a time as the Customer becomes the owner of the goods, he will store them on his premises separately from his own Goods or those of any other person and in a manner which makes them readily identifiable as the Goods of the Company. The Company may require the Customer to return at any time before the passing of the title. If the Customer fails to return the Goods, the Company shall be entitled to enter any vehicle or premises where the Goods are (or are believed to be) and repossess the same.
(iv) The Customer's right possession of the Goods shall cease upon the happening of any of the events specified in Condition 13 whether or not the Company terminates the Contract.
(v) Subject to the terms hereof, the Customer is licensed by the Company to process the Goods in such fashion as he may wish and/or incorporate them in or with any other product or products subject to the express condition that the new product or products or any other chattel whatsoever containing any part of the Goods shall be separately stored and marked so as to be identifiable as being made from or with Goods the property of the Company.
(vi) If Goods the property of the Company are admixed with Goods the property of the Customer or are processed with or incorporated therein, the product thereof shall become and/or shall be deemed to be the sole and exclusive property of the Company. If the property of the Company is incorporated therein, the product thereof shall become or shall be deemed to be owned in common with that other person.
(vii) Subject to the terms hereof the Customer may sell on the Company's Goods or any product produced from or with the Company's Goods subject to the express condition that such sale shall be subject to an effective retention of title clause and to the Customer paying the entire proceeds of such sale into a separate account, to be held in trust for the company and not mingled with other monies or paid into any overdrawn bank account, so that the proceeds shall at all times be identifiable as the Companies monies.
(viii) If the Customer does not receive the proceeds of such sale, he will if called upon to do so by the Company, within seven days thereof assign to the Company all rights against the person or persons to whom he has supplied the Goods or any product or chattel made from or with the Company's Goods.

10. (a) 'Account Customer' is one designated as such by the Company.
 (b) Account customers will be invoiced when the Goods are delivered and payment will be due at the end of the month following the month date of the invoice. Non-account customers must make payment for Goods (in cleared funds) on or before collection or delivery.
 (c) If the Customer fails to make any payment on the due date then, without prejudice to its rights or remedies, the Company may cancel the Contract or suspend deliveries under it, appropriate any payments made by the Customer in such manner as the Company thinks fit and charge the Customer interest (before and after Judgement) on the amount unpaid at 3% over the base rate of KBC Bank plc, from time to time applicable.
11. Where between the date of the tender, quotation or other offer by the Company and the date of delivery the price to the Company of any of the Goods sold under the Contract or of any part or component thereof or any material used in the manufacture thereof is increased, the Company shall be entitled to increase the Contractual price of such Goods by no more than the amount of such increase. If the resulting increase is greater than 10% of the total price of the Goods in question the Company shall give the Customer notice of the increase in writing and the Customer shall be entitled by counter-notice, given within seven days of such to cancel the Contract in respect of such goods without liability.
12. (a) This clause applies if - (i) The Customer makes any voluntary arrangements with its creditors or becomes subject to an administration order or (being an individual or firm) becomes bankrupt or (being a Company) goes into liquidation (otherwise than for the purposes of amalgamation or reconstruction to a solvent Company); or (ii) an encumbrance takes possession or a receiver is appointed, of any of the property or assets of the Customer, or (iii) the Customer ceases or threatens to cease to carry on business; or (iv) the Company reasonably apprehends that any of the events mentioned above is about to occur in relation to the Customer and notifies the customer accordingly.
 (b) If this clause applies then, without prejudice to any other right or remedy available to it, the Company shall be entitled to cancel the Contract or suspend any further delivery under the Contract without any liability to the customer, and if the Goods have been delivered but not paid for the price shall become immediately due and payable notwithstanding any previous agreement or arrangement to the contrary.
13. No order which has been accepted by the company may be cancelled by the Customer. However, the Company may, in its discretion, accept cancellation if the Customer indemnifies the Company in full against all loss (including loss of profit), costs (including labour and materials used), damages, charges and expenses (including any due to its own suppliers) incurred by the Company as a result of cancellation and pays a handling charge of 20% of the price of the Goods.
14. It is the Customer's responsibility to see that the Goods comply with any local regulations or bye-laws.
15. Notice is hereby given to the Customer that the instructions for use, cautionary notices and other technical notices and information are supplied to the Customer with the Goods.
16. Any variation agreed between the Parties as to the Goods to be sold must be in writing and shall be deemed to be an amendment to the Contract and shall not constitute a new Contract.
17. English law is the proper law of the Contract and all disputes arising in connection with it are subject to the jurisdiction of the English Courts.
18. (a) If any provision of these Conditions is held by a competent authority to be invalid or unenforceable in whole or part it shall be deemed deleted, but the validity of the remainder of that provision and all other provisions shall not be affected.
 (b) No waiver by the Company of any breach of this Contract by the Customer shall be considered as a waiver of any subsequent breach of the same or any other provision.
19. We will make a search with a credit reference agency, which will keep a record of that search and will share that information with other businesses. We may also make enquiries about the principal directors with a credit reference agency.
20. All prices exclude VAT & carriage. A minimum order cost of £10 (pre VAT and carriage) will apply to all orders

NOTHING IN THESE CONDITIONS AFFECT THE STATUTORY RIGHTS OF THE PURCHASER



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Make water count.