Small water purifiers
Water treatment plants
Professional treatment of water

Overview

Bioliff can offer a range of small domestic water purifiers to provide safe drinking water at home or at work. These small and economical purifiers are the best way to safeguard your family and friends, and to save money and the environment by avoiding the need to buy plastic water bottles.

The below range of options will cover most needs wether you require an RO system to remove dissolved solids from borehole water, or a UV unit to simply ensure your council water is safe to consume.

Under Sink UV Purifier

A five stage under sink water purifier for municipal sources with possible bacterial contamination. Specifications include:

- Output is 110L/hr, Chlorine Level <0.2ppm, Water Temperature 40 -38 C, Inlet Pressure 1- 3bar
- Three stage sediment and carbon cartridge pre-treatment
- Mineralising media cartridge
- UV steralisation
- Sink mounted output tap

Under Sink RO Purifier

A six stage water treatment purifier for under sink installation that includes:

- Outputs of 200L/day and 400L/day are available, Chlorine Level<0.2ppm,TDS 0 <250ppm, Water Temperature 5-45 C, Inlet Water Pressure 1-3bar
- Three stage sediment and carbon cartridge pre-treatment
- Compact reverse osmosis purification
- Ultra violet sterilizer and carbon filter post treatment
- 10L steel storage tank
- Sink mounted output tap

Counter Top RO Purifier

An elegant five stage water purifier for counter top mounting that uses reverse osmosis technology and provides totally pure water. Specification includes:

- Output is 350L/day, Chlorine Level<0.2ppm,TDS<250ppm, Water Temperature 5- 0 45 C, Inlet Pressure 1-3bar
- Three stage sediment and carbon pre-treatment
- Revers Osmosis purification using Hidrotek/Filmtec membranes
- Carbon cartridge filter post-treatment
- In-built booster pump and 10L automatic filling storage tank
- Suitable for counter top mounting

Counter Top RO Water Dispenser

An integrated water dispenser that provides four stage water purification fand heated and cooled output. Features include:

- Combined output is 10L/hr, Chlorine level<0.2ppm, TDS <800ppm, Water Temperature 0 5-45 C, Water Pressure 1-5bar
- Three stage sediment and carbon cartridge pre-treatment
- Reverse Osmosis purification
- Inbuilt booster pump and storage tank
- 550W heater to provide hot water on demand
- 68W cooler to provide cold water at temperature 5 -10 C
- Cartridge change reminder with alarm function and user friendly interface

UV water purifiers
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Overview

Treatment by Ultra Violet light is a proven and highly effective method of eliminating harmful bacteria from drinking water supplies. The process has many advantages including no chemical additions to the water, negligible operating costs and security being both inherently safe and impossible to overdose. It works on the principal that UV light at a specific wavelength is lethal to infectious micro-organisms as it destroys their ability to reproduce and thus renders them harmless. The process protects against most types of bacteria including legionella, salmonella, faecal coliform, e-coli, influenza, hepatitis and dysentery bacilli and is one of the safest and easiest ways to provide pure, sanitised drinking water.

Pure water is an essential requirement for healthy living and there is ever increasing awareness of the dangers from contaminated supply. UV Purifiers provide all the benefits of the UV treatment process in effective, economical treatment units that can be relied on for years of trouble free operation. Whenever there is a requirement for clean, pure water there is no other better solution than a UV Purifier.

Specifications

Using this effective technology DAYLIFF UV Purifiers have been carefully designed to incorporate all the benefits of the process into reliable and effective treatment packages particularly applicable for smaller commercial, institutional and domestic applications. Design dosage at the rated flows is approximately 30,000µWsec/cm , a rate of 16,000µWsec/cm^2 being sufficient to destroy most common forms of bacteria.

Three standard sizes 500l/hr, 1000l/hr and 2700l/hr are available, though larger capacities can be accommodated by simply incorporating a number of units in parallel. UV units are available either as stand alone items or board mounted, together with a cartridge pre-filter and a control unit that indicates power 'on' and lamp 'on'. Particular features include:-

- AISI 304 stainless steel treatment chamber with an effective sleeve sealing arrangement that is simple to disassemble for sleeve and lamp cleaning and maintenance.
- High purity quartz lamp sleeve.
- High efficiency 254nm wavelength UV mercury vapour quartz lamps.

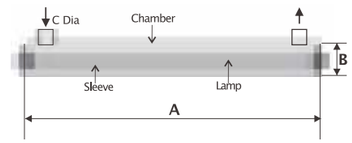
RAW WATER QUALITY

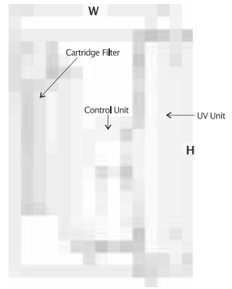
The effectiveness of UV treatment is determined by the clarity of the incoming water as suspended particles and discolouration can shield the micro organisms from the UV light. It is therefore of the greatest importance that the incoming supply is adequately pre-treated to ensure effective treatment, the following criteria being required:

clarity <5NTU, suspended solids <10ppm, magnesium <0.05ppm, iron<0.3ppm and pH 6.5-9.5.

LAMP LIFE

UV lamps lose approx 6% intensity every 1000hrs operation so to maintain effective dosage lamps must be changed after a maximum of 8000hrs operation (approximately one year of continuous usage). Dayliff UV Purifiers are specified to provide a safe dosage at up to 60% intensity levels.





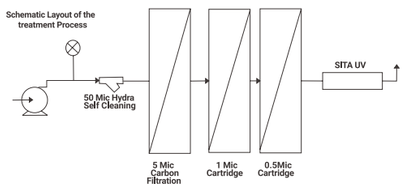
Model	Lamp Power (watts)	Max Flow Rate (lit/hr)	Dimensions (mm)					Weight (kg)
			A	B	C Dia	H	W	
UV500	16	500	330	65	1"	500	500	6
UV1000	25	1000	550	65	1"	700	500	7
UV2700	55	2700	910	65	1"	1000	500	17

PW pure water
Water treatment plants
Professional treatment of water

Overview

Dayliff Pure Water treatment plants are specially designed for the production of totally pure water from the majority of natural or municipal sources, typical applications being bottled water production, institutional, commercial food processing facilities and manufacturing facilities requiring pure water in the production process. They eliminate most conditions of impurity including sediment, unappetizing taste or odour, and bacteriological contamination, the treated water output being to the highest consumption standards.

Schematic layout of the Treatment Process



Operating principle

1st Stage - Filtration: Raw water is passed through a 50 mic self-cleaning filter screen to remove sludge and large particles.

2nd Stage - Carbon: The process water is passed through a 5 mic Carbon Block filter for the removal of trace chlorine, organic chemicals, insecticides, pesticides and herbicides as well as unpleasant taste and odours.

3rd & 4th Stage - Micro Filtration: The process water is passed in series through two progressively finer polypropylene yarn element filter cartridges of 1 and 0.5 micron mesh sizes to remove most suspended solids.

5th Stage Ultra Violet (UV) Disinfection: The final step is the treatment process is disinfection using an Ultra Violet sterilizer. Ultra-Violet kills all known bacteria and provides totally disinfected water.

Specifications

Pre-Filter: Manually operated self-cleaning Hydra filter with 50 micron pleated plastic net cartridge. The filter incorporates high efficiency of self-cleaning operation, by means of a counter-current which maximises particle removal from the filter cartridge. The cleaning operation with back-wash is simply operated by the opening of the discharge valve at the filter base.

Carbon: Fibredyne Modified Carbon Block CFB-Plus20BB 5 mic cartridge. This is made out of modified moulded block which creates a unique filter media by attaching powdered activated carbon onto a cellulose-free synthetic fibre matrix. The result is a single cartridge that combines the benefits of both a sediment filter and a carbon filtration.

UV Unit: Sita UV made out of stainless Steel 304, characterized by compactness and ease in installation/servicing. The UV is supplied with a control unit with LCD display, which indicates working hour of the lamp, lamp faults, the irradiance and the temperature. The UV gives a dose of 300 J/m≤.

Booster Pump: DAYLIFF DDG 1000 pump close coupled to a 0.8kW electric motor pressure controlled by Brio pump controller to operate on demand.

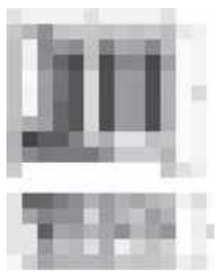
Monitoring Equipment: A flow meter and pressure gauge are provided.

Mounting: All components are mounted on a stainless steel frame. All necessary fittings including stainless steel piping, stainless steel valves, electric wiring and switches are provided from the raw water inlet and no other items are necessary for installation other than a 5Amp single phase power supply. Filling station is provided as an option.

APPLICATION

Dayliff Pure Water treatment Plants are designed to purify sweet, low conductivity, soft and neutral raw waters as is typically provided from low turbidity natural and semi-treated municipal sources. They do not treat for dissolved trace elements, including salinity , or change hardness levels or pH. Prior analysis of the raw water to assess its suitability to this treatment process is important as there are some conditions for which it will not provide WHO standard potable water.

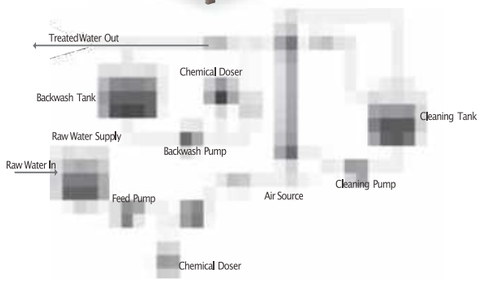
Model		PW500	PW1000	PW2000
Flow		0.5m³/hr	1m³/hr	2m³/hr
Atlas 50 micron pleated hydra cartridge		1	1	1
10" 1mic wound sediment cartridge		1		
20" 1mic wound sediment cartridge			1	
20" 1mic jumbo sediment cartridge				1
CFB-PLUS20 modified carbon block 5 Micron 20"		1		
CFB-PLUS20BB modified carbon block 5 Micron 20" big blue			1	2
Pump		DAYLIFF DDG1000 0.8kW Pump		
Dimensions (mm)	L	1120	1120	1120
	W	480	480	480
	H	950	950	950



DUF
Ultrafiltration water treatment plants
Professional treatment of water

Overview

Ultra Filtration (UF) is a highly effective treatment process that clarifies turbid and polluted water to a high quality potable condition. The UF models use a large number of small pore capillaries with an outside-in flow configuration and with pore sizes of about 0.02 micron will remove particles and high molecular weight substances, colloidal materials and organic and inorganic polymeric particles. It is therefore particularly suitable for the treatment of polluted surface waters from dams, rivers, reservoirs etc as well as waste water recovery. The process will not remove dissolved solids including sodium, calcium and chlorides and so is less suited to the treatment of ground water with high salt levels.



Specifications

Systems are frame mounted and supplied as complete units with all necessary accessories and controls for simple integration with the flow process. They offer the following features:

- High efficiency DuPont ultra filtration membranes.
- Fully automated plant operation including normal filtration cycle, 2 backwash cycles, rinse and forward flush cycles as well as providing various alarms in case of system malfunction. The various cycles are controlled by an integral PLC controller.
- High efficiency Dayliff, Davey or Pedrollo feed, backwash and cleaning pumps
- Integrated cleaning, air scour and backwash systems and two chemical dosers for chlorine and a cleaning agent
- System monitoring instruments including inlet and outlet flow meters and pressure gauges.
- 150 micron pre-filter.
- Skid mounted for simple installation.

Operating Parameters

Operating Pressure: Ranges between 0.5 bar and 3 bar depending on raw water quality

Operating PH Range: 5-10

Raw Water Quality: up to 110mg/l TSS (300 NTU). A raw water analysis should be provided to establish the extent of pre-treatment necessary.

Normal Rejection: 95%-98%

Water Temperature: 5-35 C, Design Temperature 25C

Minimum Inlet Pressure: 3bar

Recovery Range: 70% -98% depending on raw water quality

** System recovery is entirely dependent on water quality; higher TDS or silt content will reduce the maximum possible recovery rate

Ultra filtration is a full flow recovery process and contaminants are removed by air scouring and back washing, periodically with a chemical cleaning agent, the process being fully automated using solenoid valves. The heart of the system is the pressurized UF module and various system sizes can be provided by combining modules in parallel.

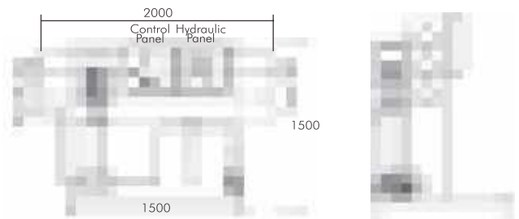
Model	DUF005G	DUF010G	DUF020D	DUF040D	DUF060D	DUF100D	DUF120D	DUF160D	DUF200D	DUF250D	DUF300D
Flow	0.5m³/hr	1m³/hr	2m³/hr	4m³/hr	6m³/hr	10m³/hr	12m³/hr	16m³/hr	20m³/hr	25m³/hr	30m³/hr
Module No.	2	4	1	1	2	2	3	3	4	5	6
Module Type	Dizzer P4040-4	Dizzer P4040-4	IP-51	IP-77	IP-51	IP-77	IP-77	IP-77	IP-77	IP-77	IP-77
Feed Pump	DDG 1000	DDG 1000	DDS 750	DDS 750	DF6210	DF6210	DF6210	SPP 300M	SPP 300M	DIN20-03	DIN32-02
Backwash Pump	DDG 1000	DDG 1000	DDS 750	QP3	QP3	SPP 300M	SPP 300M	SPP 300M	SPP 300M	DPX 3000	DPX 3000
Cleaning Pump	Feed/CIP	Feed/CIP	Feed/CIP	Feed/CIP	SPP 075M	SPP 075M	SPP 075M	SPP 075M	SPP 075M	DPX 1500	DPX 1500
Dosing Pump	AML200	AML200	AML200	AML200	AML200	AML200	AML200	AML200	AML200	AML200	AML200
Air Blower	N/A	N/A	HP-200	HP-200	HP-200	HP-200	HP 200	HP 200	HP 200	HP 200	HP 200
L (mm)	1500	1500	2000	2000	2500	2500	3000	3000	3000	3000	3000
W (mm)	1000	1000	1500	1500	2000	2000	2500	2500	2500	2500	2500
H (mm)	1800	1800	2500	2900	2900	2900	2900	2900	2900	2900	2900
Weight (kg)	130	170	260	440	540	625	700	750	850	950	1000

DRO4 - small medium RO
Water treatment plants
Professional treatment of water

Overview

Reverse Osmosis is a proven technology to remove dissolved solids in water. At the heart of the system is the membrane, though the effectiveness of treatment relies on the correct matching of all components to provide an efficient treatment process, DAYLIFF plants being carefully engineered to provide reliability with the highest treated water quality.

DAYLIFF DRO4 plants are highly efficient, easy to operate and simple to maintain and offer the ideal solution for small and medium scale Reverse Osmosis requirements.



Front Elevation

Side Elevation

All dimensions in mm

Specifications

Systems are frame mounted with all components conveniently accessible and are designed to provide low energy consumption and long life. Standard models are suitable for low (up to 2000ppm) and medium (up to 5000ppm) brackish water applications though systems for treating higher salinity levels and sea water are available to special order. All offer the following features:

- High efficiency DuPont Filmtec RO membranes housed in strong, corrosion proof FRP pressure vessels.
- High treatment performance with up to 98% salts rejection
- High pressure in line multi stage stainless steel feed pump
- System monitoring accessories including inlet and outlet flow meters, pressure gauges and conductivity meter
- Electronic controller for fully automated plant operation including startup, periodic flush cycle and shut down as well as providing various system alarms
- Sediment removal and Carbon cartridge pre-filters
- Skid mounted for simple installation
- Corrosion resistant stainless steel high pressure and plastic low pressure pipes and pipe fittings.

Operating Parameters

Operating Pressure: Ranges between 12 bar and 20 bar depending on raw water quality

Raw Water Quality: TDS level of up to 2,000ppm for the Low Brackish Water and up to 5,000ppm for the Medium Brackish Water Plant, Chloride level should be less than 350ppm, no chlorine, total hardness <200ppm and no suspended solids. A raw water analysis should be provided to establish the extent of pre-treatment necessary.

Normal Rejection: 95%-98%

Water Temperature: 5-35 C, Design Temperature 25C

Minimum Inlet Pressure: 3bar

Recovery Range: 50% -75% depending on raw water quality

** System recovery is entirely dependent on water quality; higher TDS or silt content will reduce the maximum possible recovery rate

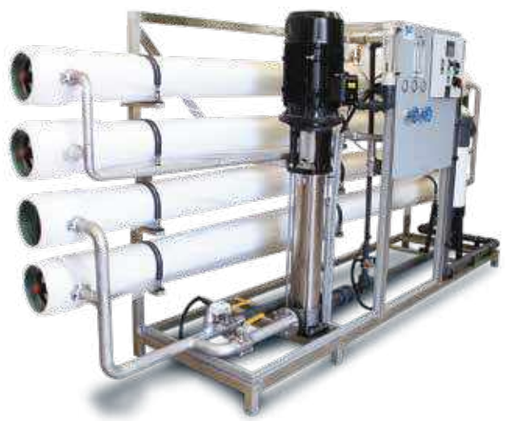
		DRO4/0.5	DRO4/1	DRO4/2	DRO4/3	DRO4/4	DRO4/5	DRO4/6	DRO4/8	DRO4/10
Flow (m^3/hr)	Permeate	0.25	0.5	1	1.5	2	2.5	3	4	5
	Feed	0.7	1	2	2.5	3.3	4.2	5	6.7	8.3
Membranes	Quantity	1	2	4	6	8	10	12	16	20
	Stages	1	1-1	1-1-1-1	1-1-1	2-1-1	3-2	3-2-1	5-3	6-4
High Pressure Pump (2000ppm TDS)	kW	1.5	1.5	2.2	2.2	3	4	4	4	5.5
High Pressure Pump (5000ppm TDS)	kW	2.2	2.2	3.0	3.0	5.5	5.5	5.5	7.5	7.5
Dimensions, mm	L	1800			2700					
	W	860								
	H	1375								
Weight	Kgs	100	156	169	230	243	256	270	297	324

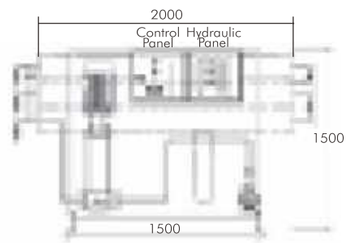
DRO8 - large RO
Water treatment plants
Professional treatment of water

Overview

Reverse Osmosis is a proven technology to remove dissolved solids in water. At the heart of the system is the membrane, though the effectiveness of treatment relies on the correct matching of all components to provide an efficient treatment process, DAYLIFF plants being carefully engineered to provide reliability with the highest treated water quality.

DAYLIFF DRO4 plants are highly efficient, easy to operate and simple to maintain and offer the ideal solution for small and medium scale Reverse Osmosis requirements.





Front Elevation

Side Elevation

All dimensions in mm

Specifications

Systems are frame mounted with all components conveniently accessible and are designed to provide low energy consumption and long life. Standard models are suitable for low (up to 2000ppm) and medium (up to 5000ppm) brackish water applications though systems for treating higher salinity levels and sea water are available to special order. All offer the following features:

- High efficiency DuPont Filmtec RO membranes housed in strong, corrosion proof FRP pressure vessels.
- High treatment performance with up to 98% salts rejection
- High pressure in line multi stage stainless steel feed pump
- System monitoring accessories including inlet and outlet flow meters, pressure gauges and conductivity meter
- Electronic controller for fully automated plant operation including startup, periodic flush cycle and shut down as well as providing various system alarms
- Sediment removal and Carbon cartridge pre-filters
- Skid mounted for simple installation
- Corrosion resistant stainless steel high pressure and plastic low pressure pipes and pipe fittings.

Operating Parameters

Operating Pressure: Ranges between 12 bar and 20 bar depending on raw water quality

Raw Water Quality: TDS level of up to 2,000ppm for the Low Brackish Water and up to 5,000ppm for the Medium Brackish Water Plant, Chloride level should be less than 350ppm, no chlorine, total hardness <200ppm and no suspended solids. A raw water analysis should be provided to establish the extent of pre-treatment necessary.

Normal Rejection: 95%-98%

Water Temperature: 5-35 C, Design Temperature 25C

Minimum Inlet Pressure: 3bar

Recovery Range: 50% -75% depending on raw water quality

** System recovery is entirely dependent on water quality; higher TDS or silt content will reduce the maximum possible recovery rate

		DRO8/2	DRO8/3	DRO8/4	DRO8/5
Flow (m^3/hr)	Permeate	8	12	16	20
	Feed	12	18	23	29
Membrane	Quantity	8	12	16	20
	Stages	1–1	2–1	2–2	3–2
High Pressure Pump (2000ppm TDS)	kW	7.5	11	15	18.5
High Pressure Pump (5000ppm TDS)	kW	11	18.5	18.5	30
Dimensions (mm)	L	5000			
	W	1100			
	H	1800			