

AWC Water Systems offers packaged water treatment plants based on direct filtration (DF) technology. The DF plants use a combination of hydraulic or mechanical flocculation and rapid rate filtration to provide superior quality to potable water. They are ideal for stable ground or surface waters where turbidity levels seldom exceed 10 NTU.

Our DF plants are custom-designed to meet our clients' needs. They can treat capacities up to 1,500 gpm (8,100 m³/d) per train (multiple trains can be combined for higher flows) and reliably achieve less than 0.1 NTU turbidity and 2-log protection against Giardia and Cryptosporidium.



HOW THE DF PROCESS WORKS

FLASH MIXING

A coagulant added to the raw water precipitates dissolved contaminants & encourages suspended particles to form "flocs".

- Multi-chemical injection ports for coagulant, polymer, pH adjustment, etc. provides process flexibility
- Optional static or powered mixers

FLOCCULATION

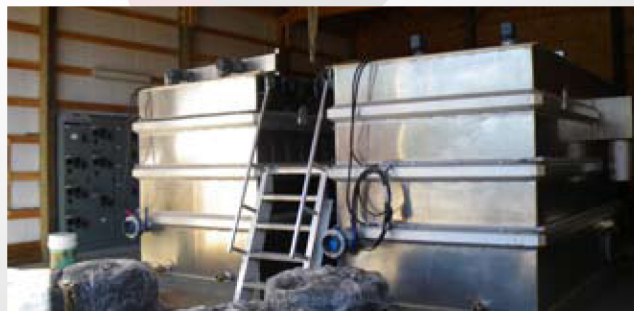
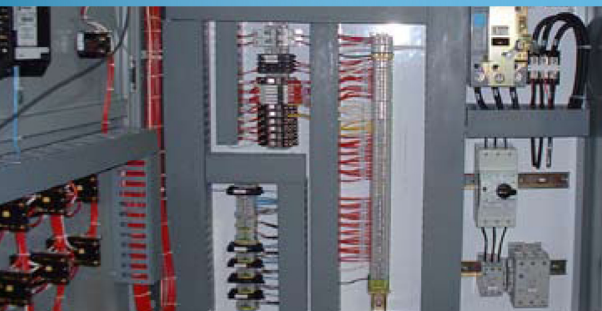
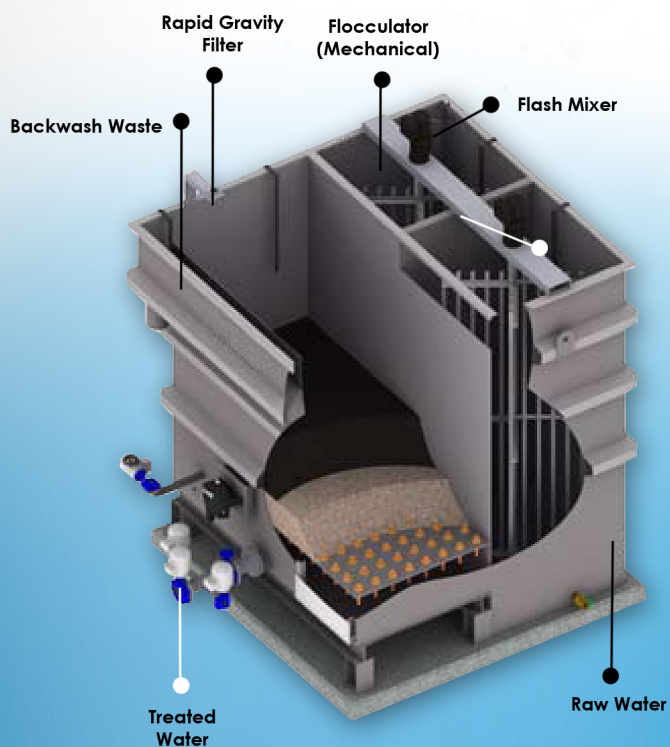
Gentle agitation in the flocculation zone encourages growth of the flocs which are then removed by the filter.

- Multi-stage hydraulic or mechanical flocculation
- Carefully designed to minimize short-circuiting

FILTRATION

Flocculated water passes to the high-rate filter for final polishing and the filter is periodically cleaned by water or air/water backwashing.

- Mono, dual and multi-media options
- Air scour/water backwash option for reduced water consumption and improved cleaning
- Optional water backwash with surface wash
- Nozzle and plenum-type underdrain



PLANT FEATURES

QUALITY TANK CONSTRUCTION

constructs its tanks out of highly corrosion-resistant marine-grade, 5086 aluminum alloy. This construction eliminates the need for corrosion-protection coatings and prevents premature failures, which can occur with poor surface preparation or coating failures. Sacrificial anodes are used to further increase protection against corrosion. All fasteners in contact with the aluminum are 316 stainless steel to minimize galvanic corrosion. Stainless steel tanks are also available upon request.

Our process equipment components can also be supplied for installation into site-constructed concrete tanks or retrofitted into existing tannage. In these circumstances, AWC can provide tank dimensions and other civil criteria.

ELECTRICAL SYSTEMS AND CONTROL PANELS

AWC designs, builds, programs and commissions fully integrated automated control and electrical systems. Our systems feature:

- Integrated UL and CSA approved MCC's and control panels
- Fully automatic operation with advanced instruments and controls
- Remote monitoring, control and SCADA options
- Industrial quality PLC's with simple plug-in, pre-programmed modules for reduced training and technical support

CHEMICAL SYSTEMS

We offer a full range of chemical mixing and dosing systems, including solution tanks, mixers, dosing pumps and safety equipment.

TYPICAL PLANT DIMENSIONS

Each plant is custom-designed to meet the needs of each application. Higher flows can be achieved with multiple trains. Dimensions are approximate.

CAPACITY (gpm) (m3/d)		15 MINUTES FLOCCULATION FILTER RATE (3.6 gpm/ft2) (9m/hr)			20 MINUTES FLOCCULATION FILTER RATE (5.0 gpm/ft2) (12m/hr)			20 MINUTES FLOCCULATION FILTER RATE (3.6 gpm/ft2) (9m/hr)		
		(ft) W (mm)	(ft) H (mm)	(ft) L (mm)	(ft) W (mm)	(ft) H (mm)	(ft) L (mm)	(ft) W (mm)	(ft) H (mm)	(ft) L (mm)
50	250	4'0" 1220	6'9" 2060	6'3" 1900	4'0" 1220	6'9" 2060	8'0" 3581	4'6" 1370	6'9" 2060	9'0" 2740
100	500	5'0" 1520	6'9" 2060	10'0" 3050	5'0" 1520	6'9" 2060	12'9" 4953	5'0" 1830	6'9" 2060	14'3" 4340
200	1000	6'0" 1830	6'9" 2060	16'6" 5030	6'0" 1830	6'9" 2060	21'3" 7010	6'0" 2440	6'9" 2360	23'9" 7240
400	2000	8'0" 2440	7'9" 2360	23'0" 7010	8'0" 3050	7'9" 2900	28'6" 9754	8'0" 3050	7'9" 2300	32'3" 9830
600	3000	8'0" 2440	9'6" 2900	32'0" 9750	8'0" 2440	9'6" 2360	37'6" 11507	8'0" 3660	9'6" 3350	43'3" 13180
800	4000	10'0" 3050	9'6" 2900	34'0" 10360	10'0" 2440	9'6" 2900	40'0" 14630			
1000	5000	10'0" 3050	9'6" 2900	38'0" 11580						
MULTIPLE TRAINS AVAILABLE										
IMPERIAL / METRIC DIMENSIONAL TABLE										

IMPERIAL / METRIC
DIMENSIONAL TABLE

ADVANTAGES OF AWC DF PLANTS

CORROSION-RESISTANT

Our plants are fabricated with marine-grade aluminum alloys and stainless steel to provide superior resistance to chemicals and corrosion, resulting in longer life.

COST-EFFECTIVE

Our packaged DF plants are pre-assembled and pre-tested in our controlled facility, often saving 50% or more over in-situ construction.

They can also be integrated into pre-engineered building systems for increased savings and reduced schedule. Their small footprint also reduces building costs.

SIMPLICITY

The DF plants are quiet, simple and easy-to-operate with minimal operator input.

They are also supplied complete with chemical dosing, water quality monitoring systems, automatic controls and monitoring systems customized to meet local needs.



ABOUT AWC WATER SYSTEMS

AWC Water specializes in providing innovative packaged and modular water and wastewater treatment solutions for municipal and industrial applications. With more than 500 plants delivered around the world, we offer unmatched expertise and a reputation for delivering reliable, high quality water and wastewater solutions.

Contact AWC today to discuss your project needs.



AWC WATER SOLUTIONS LTD.
Tel. 604-638-0760 Fax. 604-638-0795
Website. <http://www.awcwater.com>
Email. info@awcwater.com