

FilterClear®



A BLUEWATER BIO TECHNOLOGY

High Performance Multimedia Filtration

Main Applications

- Desalination reverse osmosis pre-treatment
- Tertiary sewage filtration for reuse or compliance
- Industrial process, cooling, wastewater, reuse
- Potable water from surface or borehole
- Rainwater and greywater treatment
- Phosphorus removal in combination with dosing



FilterClear Pre-filtration for Desalination
RO 4,800 m³/h Saudi Arabia.



FilterClear is a multimedia downflow depth filter providing excellent suspended solids removal and low back-wash volume.

Key Advantages

Proprietary stratified **FilterClear™** media of up to four layers, specially developed and applied over 10 years for exceptional performance

- High loading rate (25-50 m³/m²/h, i.e. 2-5x flow rate of competing technologies)
- High solids retention (low pressure drop and long backwash interval)
- High quality filtrate in a single step (SDI <3; NTU <0.1; BOD concentration <6mg/l)
- Low CAPEX (2-5x less media, fewer vessels)
- Low OPEX (no chemical use, low electricity consumption)
- Low backwash volume (<6% of filtrate, small backwash tanks, better yield, less waste)
- Small footprint (2-5x smaller filter area, smaller plant)
- Low O&M (simple, reliable, easy to maintain)
- Modular systems up to 1200m³/h per vessel

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FilterClear is a pressure multimedia filter technology capable of separating suspended solids from a wide range of waters with a comparatively high performance, even at high loading velocities.

FilterClear plants are currently installed at over 40 sites, treating waters such as secondary effluent at wastewater treatment plants, cooling waters at industrial sites and seawater at desalination plants. Throughput ranges from 5 m³/hr up to 5000 m³/hr. Commercial applications include pharmaceuticals, food and beverage, cooling water and RO pre-treatment for various industries, distilleries and communal buildings including flats, offices, hospitals and hotels.



FilterClear technology competes cost-effectively with other multimedia filters, continuous filters, deep bed filters, disc filters and micro screens. It has a strong track record in conventional filtration applications and can replace ultrafiltration membranes upstream of RO membranes.

Proprietary Stratified Media of up to Four Layers



Comparison of Design Criteria

Parameter	Unit	FilterClear	Other
Maximum loading velocity	m/h	>25	6 - 15
Run times	days	1 - 2	0.5 - 1
Backwash volume	% of throughput	1 - 6	4 - 8
Maximum solids held in bed	kg/m ³	8 - 10	4 - 8

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