

ADVANCED PRIMARY TREATMENT

BLUE WATER'S

Eco MAT™



Blue Water Technologies, Inc. is the industry leader in delivering wastewater solutions in both municipal and industrial applications. Blue Water is committed to developing processes to satisfy the challenging needs of customers around the world. As an integral piece to wastewater treatment processes Blue Water provides the most advanced primary treatment and solids recovery option available, Blue Water's Eco MAT™ rotating belt filter (RBF).

Blue Water's Eco MAT™ RBF is the result of decades of process improvement and Blue Water's design enhancements from years of experience designing plants, delivering equipment, and performing aftermarket service. Blue Water integrates proprietary control systems and ancillary equipment designed to complement the Eco MAT RBF, providing a solution that saves our customer's time, space and money.

Industrial screening applications are equally appropriate for RBF treatment. The Eco MAT is being used in solids mitigation systems overcoming a wide range of challenges in industrial facilities.



Blue Water's Eco MAT™ installed in Valparaiso, IN.

Applications

Blue Water's Eco MAT™ Rotating Belt Filter can be effectively used for:

- Primary Wastewater Treatment
- Grit Removal
- Membrane Pretreatment
- Enhanced Nitrification
- Secondary System Augmentation
- Sludge & Scum Thickening
- Agriculture
- Meat Processing
- Pulp & Paper Industry
- Dairy Processing
- Aquaculture
- Tanneries
- Textiles

- Superior nitrification and BNR
- 30-80% TSS and 20-40% BOD reduction
- Fully automated, self-cleaning
- Patent-pending cleaning system
- 1/10 footprint of conventional clarification
- 1/5 life-cycle cost of conventional clarification
- Integrated dewatering options
- 20-40% solids dewatered in screenings

Engineers around the world have found the Eco MAT RBF to be an efficient and economical solution to a variety of wastewater challenges due to its small footprint and its flexibility to be arranged in multiple configurations. Engineers have maximized the use of existing infrastructure while expanding plant capacities by installing Blue Water's Eco MAT™ RBF and thus reallocating the capacity of conventional clarifiers to the secondary system. In new and existing municipal wastewater plants the Eco MAT RBF replaces conventional primary clarification. These filters can be integrated to expand primary clarification, relieve solids and BOD loading to the secondary system, enhance nitrification, or provide treatment for combined sewer overflow (CSO).



RBF Primary Treatment is Footprint Friendly



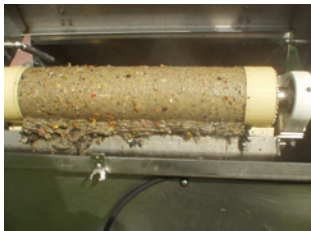
Blue Water's Eco MAT™ (RBF) Capacities & Dimensions

Model	Capacity* (gpm)	Capacity* (MGD)	Length (in)	Unit Width (in)	Unit Width & Dewatering (in)	Height (in)	Water Depth (in)	Belt Mesh Width (in)
EM-1	70	0.10	49	36	36	34	12	8
EM-3	350	0.50	63	42	62	54	16	15
EM-7	550	0.80	75	48	67	61	24	22
EM-10	700	1.0	95	58	89	72	24	30
EM-15	1200	1.7	130	58	89	87	35	30
EM-30	2400	3.4	130	87	125	87	35	60
EM-30D	2400	3.4	130	108	140	87	35	30 (2x)
EM-30C	2400	3.4	120	83	N/Ap	82	35	60

*Hydraulic capacity for RBFs is dependent on solids content and desired removal performance. These loadings reflect 50% TSS removal in typical municipal wastewaters. Base models include an internal bypass overflow. Each model can be delivered with separate connections for diversion of overflow.

How It Works

Blue Water's Eco MAT™ RBF removes solids through the use of a continuous-loop fine mesh belt screen. As the screen moves it acts like a conveyor and carries solids out of the incoming wastewater. A patent-pending cleaning system discharges the solids from the belt screen and deposits them into the screenings hopper, virtually eliminating any solids carry-over. Periodic hot-water flushes further clean the belt screen by removing oil and grease that may accumulate over time. An optional screw press dewateres the collected screenings between 20-40% dry solids while screened wastewater continuously passes through the unit.



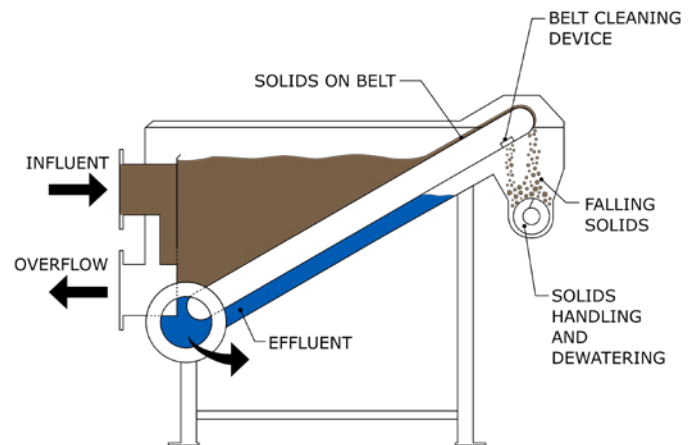
The solids drop into a hopper and the screen is cleaned as it moves past the rollers. Optional hot water wash cleans oil and grease.



Dewatering screens pass paint filter test. Generally suitable for land filling.

The Eco MAT RBF removes between 30-80% TSS and 20-40% BOD from wastewater and the unique design allows for removal of organic and inorganic solids as fine as 15-30 micron. Blue Water's Eco MAT™ RBF units are compact, completely enclosed low-maintenance solutions for wastewater. The integral odor containment of the design allows for indoor installation in a clean environment. Blue Water offers additional equipment for conveyance, dewatering, and bio-solids reuse as applications require.

Blue Water supplies standard equipment ranging in sizes suitable for small communities to large cities. There is no limitation in flow capacity designs. Blue Water's Eco MAT™ RBF is available in eight (8) unique models that can be customized for varying capacities and redundancy, facilitating treatment in excess of 3 MGD (11,400 m³/day) in a single unit. Blue Water also provides the duplex unit designs for redundancy, as well as cartridge units for channel mounting that can be more economical for plants treating 20 to 100+ MGD.



Blue Water's Eco MAT™ RBF Operation Diagram

