



Baleen
INTERNATIONAL INC.

Evaluating Baleen Filter Performance

	Typical Issues with Conventional Systems and Methods	How the Baleen Filter Compares
Filter Capabilities and Efficiencies	<ul style="list-style-type: none"> Settling (clarifier) and flotation (DAFF) methods are time-volume reliant and require maintenance-intensive processes for handling resultant sludge. Due to 'dead-end' (being offline for regular backwash) limitations, biological or chemical means are required to consume or aggregate suspended matter. This demands significant energy and consumables to facilitate biodegradation/separation prior to settling and/or flotation of resultant sludge. Above methods rely on retention time, and therefore have limitations when exposed to variable flow or influent composition. 	<ul style="list-style-type: none"> Removes near 100% of visible matter from influent streams without downtime Collects screenings in a less hydrated, dewatered natural-wet consistency. Enables separation of visible-inert matter as a first screening step, to realise ongoing chemical savings when removing sub-visible/colloidal matter during secondary screening. Efficiently handles high flow rates and variable pollutant loadings inline. Complements conventional methods by way of influent pre-treatment, sludge de-watering or effluent polishing.
Capital and Operating Cost	<ul style="list-style-type: none"> Biological treatments require aeration during operation, involving much upfront capital expenditure and substantial ongoing operating costs. Capital payback is generally not possible 	<ul style="list-style-type: none"> Comparatively inexpensive and have minimal operating and maintenance considerations. Users typically experience payback within 12 months.
Environmental Regulatory Compliance	<ul style="list-style-type: none"> Conventional methods used like settling ponds will become outdated as controls relating to wastewater quality become more stringent and reliant on advanced filtration technologies. 	<ul style="list-style-type: none"> Efficient separation of contaminants and enabling collection of by-products or improved sludge practices, thereby meeting enhanced environmental regulations.

Smart, Safe, Sustainable



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Energy Requirements	<ul style="list-style-type: none"> Conventional approaches to effluent management can require up to 240 kWh per ML of water treated to operate a sustainable biological system. 	<ul style="list-style-type: none"> Requires about 4% (10 kWh per ML) to operate, meaning major energy cost savings and a smaller carbon footprint. Will also enhance a biological system's performance (refer above).
Efficient Land Use	<ul style="list-style-type: none"> Clarification and biological methods require significant amounts of land to accommodate required volumes (for residence purposes). 	<ul style="list-style-type: none"> Units are very small and compact, enabling far more efficient use of space available. Large-scale applications can leverage from Baleen's modular-stackable design.
Odour and Water Quality	<ul style="list-style-type: none"> Odour and water-loss (due to evaporation) are a common concern. 	<ul style="list-style-type: none"> Inline capability for immediate sludge recovery without water loss or further degradation of water quality.
By-Product Recovery	<ul style="list-style-type: none"> Not normally an option. 	<ul style="list-style-type: none"> Allows for spadeable recovery of by-products for value-added purposes.

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