Aqualogic® Inc.

Since 1966

The sensible solution to water pollution

MicroMagic

Membrane Filtration System

MicroMagic-100

Microfiltration Benefits

- ***Improved Cleaner Performance***
- ***Improved Process Consistency***
- ***Greatly Extended Cleaner Life***
- ***Reduced Oil Dragout***
- ***Reduced Waste Volume***
- ***Reduced Waste Treatment Costs***
- ***Lower Sludge Volume***
- ***Component of 0-Discharge System***

System Operation

Aqualogic's MicroMagic filtration systems allow the user of cleaning baths to extend the life of their cleaning solutions up to ten times the unfiltered life. The Micro-Magic system uses microfiltration to remove emulsified oils and spent surfactants, allowing cleaner salts and active surfactants to pass, returning purified cleaner to the process tank. Through continuous purification of the cleaner, the bath is maintained at highly effective levels, providing consistent product quality. Bath life of subsequent process solutions is also extended due to the reduction of the drag-in of emulsified oils.

Microfiltration employs a membrane with a larger pore size than Ultrafiltration, which has been used to purify oily water. The larger pore size of microfiltration will reject most oils and spent surfactants that are tied up with the oil while allowing virgin surfactants and detergent builders to pass through for reuse.

Microfiltration has been shown to be particularly effective in reducing the loading on waste treatment systems. Lower dump volumes of detergents reduce chemical use and sludge generation. Reduced oil loading improves solids settling and sludge filterability.

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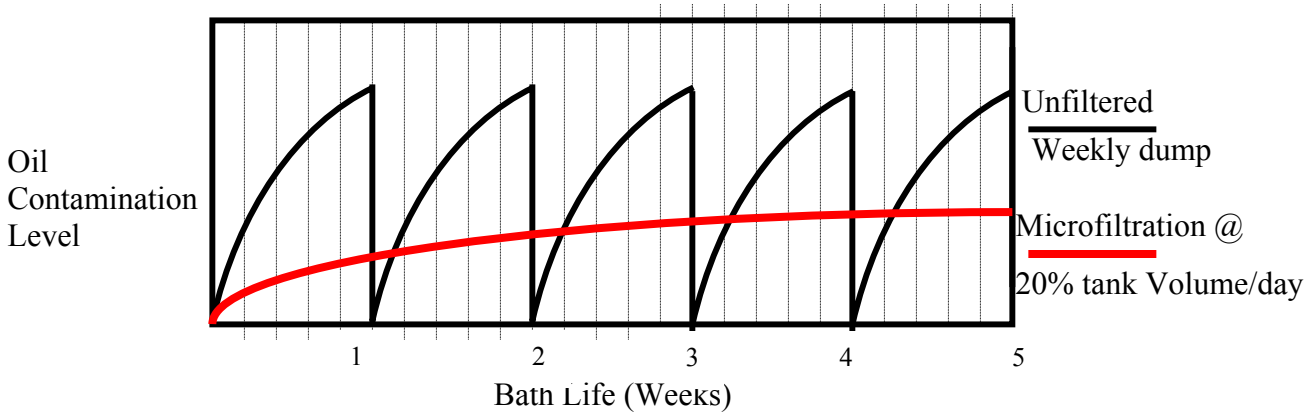
Bath Life: Microfiltered vs.Unfiltered



System Description

The system consists of a floor mounted module with a holding tank for concentrating contaminants. All components are corrosion resistant: polypropylene, CPVC and stainless steel. Once the contaminants in the tank reach saturation, servicing is by pumping out or draining through the bottom threaded fitting. Available options permit customization to the application, and the system compliments Aqualogic's ion-exchange and evaporation waste reduction systems for "zero-discharge".

The pump and electrical controls require 115V, 20 amperes, single phase power allowing mobility when used for multiple cleaner tanks in different locations. A low level switch prevents the pump from running dry.

Membrane Construction

The standard membrane is of graphite construction capable of operation in high or low pH solutions at elevated temperatures. The membrane is typically cleaned using a virgin solution of the existing cleaner at normal concentration or stronger for heavy fouling. Strong acids may be used for cleaning, including nitric and hydrofluoric in cases of extreme silicate fowling. Inadvertent introduction of solvents into the membrane will not affect the membrane. The graphite construction allows for a service life of up to five years.

Systems are sized to process the tank volume within the time period of the former dump cycle. Typical tank size is given for reference.

Model	Capacity	Cleaning Tank size (ref.)
MicroMagic - 100	100 GPD	100-600 gal
MicroMagic - 325	325 GPD	200-1200 gal
MicroMagic - 800	800 GPD	800-3000 gal

Dimensions: 36" long x 36" deep x 78" high

Options Available:

Transfer pump with level controls	Bag filtration
Packed coalescer	Electric Heat