



WRS – 4 Membrane Filtration System The Right Technology for Wastewater Treatment and Coolant Recycling

Reduces Waste Volume by >90%

The WRS filtration system, based on advanced membrane technology, is designed to treat oily wastewater, recycle machine coolant and industrial process fluids. The system produces clean water that is typically suitable for reuse or discharge, while concentrating organic and inorganic contaminants down to less than 10% of the original waste volume. For coolant recycling application, the system removes suspended solids, emulsified and free tramp oils, and bacteria while maintaining properties of the recovered coolants for maximum savings.

Pays for Itself in Weeks!

The WRS System's ability to reduce waste volumes by more than 90% yields an equivalent savings in the volume of waste being hauled or processed in-house with expensive chemical treatment. Typical payback can be achieved in less than 6 months, and with the System's low annual operating costs, users can achieve meaningful savings from the very first day of operation.

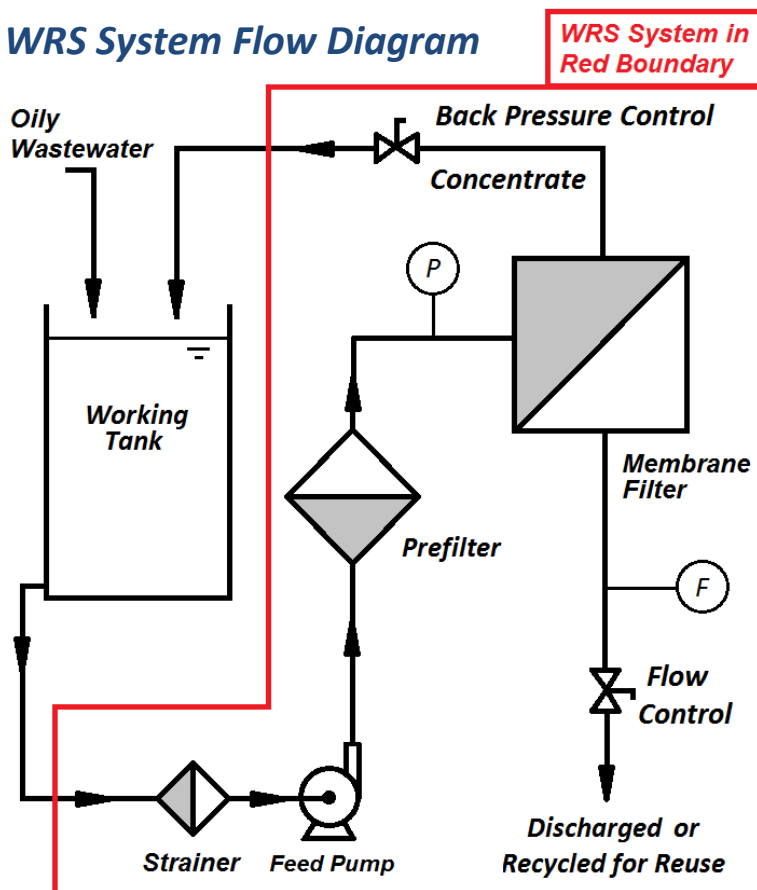
The Hydrophilic Membrane Difference

The WRS System's proprietary membrane will not pass, adsorb or be physically changed by "free" or emulsified oils. Where other membrane materials readily foul in the presence of oils, FSI's membrane filters will continue to perform consistently month after month through all of your process fluctuations.



Major System Components:	Operating Parameters:	
Stainless Steel Mobile Frame	Permeate Rate (Average)	4 gph
Feed In-line Bronze Y-Strainer (20 Mesh)	Maxi Operating Conditions	50 psi; 125°F
On-board Prefilter (10 or 50 Microns)	Feed Pressure	2-35 psi
Continuous Duty Positive Displacement Pump	Feed Flow	2 - 3 gpm
Back Pressure Control Valve	pH Range	3-11
Pressure Gauge for Feed Monitoring	Electrical Supply	120 V; 10 Amp
Flow Meter with Output Control Valve	Dimensions (W x D x H)	16" x 10" x 20"
Hoses (EPDM or Buna-N)	Dry Weight	40 Lbs
Hydrophilic Fouling-resistant Membrane Filter	Motor Horsepower	Fractional
Membrane Part Number:	Options:	
HP-3510 (Hollow Fiber) or	Manual and Automated Working Tanks	
SHP-2012 (Spiral-wound)	Transfer Pumps for Sumps and Tanks	

WRS System Flow Diagram



Membrane Maintenance is Easy

Since all WRS filter cartridges are designed to resist fouling, periodic cleaning with a simple detergent is all that is necessary to maintain optimal performance. The unit is run, after adding detergent to water, with the system hoses in a 5-gallon pail. The cleaning process is for approximately half an hour to one hour. The used cleaning solutions in the pail can then be processed with the next batch of wastewater. Adjust the frequency based on experience, as all wastes are different. Some users clean after every batch, while others clean weekly. By cleaning the membrane, the service life is extended. Properly maintained membranes should last 6 to 12 months in most applications.

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