Providing complete industrial wastewater treatment equipment, solutions, and control packages through in-house design, engineering, and professional project management. With over 100 years of combined experience, our team provides a full slate of services and engineer-to-order solutions to solve your most challenging problems.

Applications and Industries
- Heavy Manufacturing
- Automotive parts manufacturing
- Ground water remediation
- Food processing
- Algae removal
- Petroleum refinery
- Metal Plating
- Potable water

MULTI-MEDIA FILTERS
Multi-media filters (MMF) remove suspended solids from water. They are used as primary treatment for water with low suspended solids, or as a secondary treatment after a primary method of solids removal has been used (such as an inclined plate clarifier).

How does it work?
EPS multi-media filters utilize three filter cells and five different layers of media in order to remove different size solid particles from water. As the wastewater moves down through the media, the solids are trapped in the media bed, creating a polished effluent. The effluent exits the filter cells into the outlet header for discharge.

Using a header with actuated or manual valves enables three modes of operation: filtration, backwash, and recycle. Backwash mode flushes out trapped solids in the media bed. Recycle mode redirects the water flow back to the filter feed to allow the filtration system to remain under pressure, keeping the media ready to filter while providing additional water polishing.

After a full characterization of your waste stream and level of contaminants, EPS will utilize our experience to size the tanks and assist in selecting from available media to provide you with the lowest total solution cost. Typical loading for a unit is 5 gpm per square foot of surface area with higher rates possible.

Benefits of an EPS Multi-media Filter
- Compact designs for a small footprint
- Multi-media water filters handle much higher flow rates than single-media sand filters
- Multi-layered media allows more solids capture and a longer operating time in between backwashing
- Captures 90% or more of particles 20 microns and larger
- Significant bed depth solids storage minimizes the amount of backwashing necessary

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Standard Features and Available Options

EPS multi-media filter systems come skid mounted with three filter cells, pre-piped headers, pre-wired NEMA 4x control panels, and three modes of operation: filtration, backwash and recycle. Generally, the maximum influent concentration of solids allowed is 100 mg/l. EPS designs and builds multi-media filter skids for flow rates from 5 to 1,000 GPM. Each one has been factory tested and ready to connect via flanged fittings.

Available options and auxiliary equipment:
- Construction from FRP, polypropylene lined fiberglass, stainless steel, or epoxy-coated carbon steel
- Additional filter vessels piped in series or in parallel
- Influent equalization
- pH adjustment
- Flocculation
- Fats, oil, and grease handling
- Solids handling and dewatering
- Full system sampling and monitoring
- Custom control panels designed, programmed, and built in house

Our full line of services offered includes: Sample Analysis, Bench Scale Treatability Studies, Water Balance & Waste Characterization, and On-site Piloting

- Inclined Plate Clarifiers
- Oil Water Separators
- Air Flotation Systems
- Triple Cell Media Filters
- UF Systems
- Chemical Mixing/ Flocculation
- Multi-media Filtration
- Heavy Metals Adsorption
- UV, Ozone and Advanced Oxidation

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