

# **Membrane Filtration**

**Fuel and Oil Filtration**

**Cleaner and Coolant  
Recycling**

**Water Treatment**

# Filtration

## Fuel & Oil



*FSI has developed innovative technologies to remove debris and free water from fossil fuels and hydrocarbon based solvents. FSI's patented fuel filtration systems are specially designed to handle high levels of free water and emulsified water (up to 5%) in fuel, even when surfactant additives are present. The typical water content in the filtered fuel is less than 3 ppm. FSI's engineered fuel filtration systems offer solutions from the refinery to refueling stations, from storage facilities to distribution systems.*



### **Common Applications Include:**

- ✓ Diesel fuel, gasoline, and lubrication oil filtration
- ✓ Aviation fuel filtration including commercial jet fuels and military JP-4, JP-5, and JP-8 with additives
- ✓ Hydrocarbon based solvent recycling

### **Major Industries Served:**

- ▶ Transportation
- ▶ Military
- ▶ Utilities
- ▶ Petrochemical
- ▶ Industrial plants
- ▶ OEMs

### **Features Include:**

- ▶ Membrane filtration
- ▶ Surfactant resistant
- ▶ Portable and easy to use
- ▶ Qualified for the highest API standard
- ▶ Long service life filter cartridge
- ▶ Handles high levels of water and debris

# Fluid Recycling Cleaner & Coolant



*FSI's microfiltration and ultrafiltration systems, combined with the properties of proprietary membrane filters, are specially designed to recycle aqueous cleaners and coolants on-line, reducing waste costs by simultaneously removing and concentrating the oil and dirt from the process fluid sump. These systems eliminate the down time resulting from frequent cleaner or coolant replacement and significantly reduce the volume of fluid used. More importantly, recycling improves the quality and consistency of finished parts.*

### **Common Applications:**

- ▶ Alkaline cleaner recycling
- ▶ Coolant recycling
- ▶ Solvent recycling
- ▶ Oily waste treatment
- ▶ Bilge water recycling
- ▶ Pigment separation



### **Major features include:**

- ✓ Superior membranes compatible with most hydrocarbons, free oils, acids, caustics, and a broad class of polar organic solvents
- ✓ Super hydrophilic membrane to resist fouling
- ✓ Self-cleaning capability
- ✓ Fully automated and easy to use
- ✓ Reduce wastewater volume by 90-98%
- ✓ Pays for itself in months

# Water Treatment

## Wastewater



### Common Applications:

- ▶ Industrial oily wastewater
- ▶ Food process wastewater
- ▶ Rinse & washdown water
- ▶ Bilge water



*FSI offers microfiltration and ultrafiltration systems for wastewater treatment. Suspended solids, free oil and emulsified oil in process fluids are concentrated by FSI's super hydrophilic membrane filters, which produce an effluent (filtrate) that can meet or exceed all government sewer requirements for oil & grease levels or can be recycled for maximum savings. The filtrate from FSI's shipboard filtration system meets the discharge effluent quality requirements set by the Uniform National Discharge Standard (UNDS).*



### Available Features Include:

- ✓ Wide chemical compatibility
- ✓ Fouling resistant
- ✓ Long service life
- ✓ Modular design
- ✓ High capacity
- ✓ High efficiency
- ✓ Fully automatic for unattended use
- ✓ Customize to meet specific requirements

# Water Purification

## Drinking Water & RO



*FSI has developed a self-contained Reverse Osmosis Water Purification Unit (ROWPU). With a special prefiltration system originally developed for Navy coastal RO desalination systems, FSI's ROWPU can process various challenging water sources including seawater, brackish water, and freshwater.*



### ROWPU Features Include:

- ▶ Patented low maintenance prefiltration system
- ▶ High reliability
- ▶ Compact footprint
- ▶ Rugged design
- ▶ Corrosive resistant construction material

### Major Applications Include:

- ✓ Beach resort and construction site potable water
- ✓ Army field potable water
- ✓ Navy and commercial shipboard RO desalination systems
- ✓ Boiler feed and power generator water
- ✓ Water for beverage manufacturing
- ✓ Water for general rinse and humidification



# Quality...



*Filtration Solutions, Inc. is a technology driven company specializing in membrane filtration. Our filtration systems feature the latest membrane separation developments. FSI combines state of the art technology with innovative experimentation in an effort to develop top of the line filters and filtration systems. Our high-tech approach combined with an expansive knowledge of the filtration industry allows FSI to be a leader in new filtration technology.*

# Innovation...

*FSI's task oriented research and development team utilizes the latest equipment and experimentation approaches to devise practical solutions to meet customers specific needs. Our commitment to cutting-edge innovation has led to the invention and development of several patented breakthrough filtration technologies in areas such as fouling reduction, filtrate quality enhancement, and process cost reduction.*



# ...Solutions



*At FSI, we want to work with you to provide the best solution for your application. We offer both in-house and field process fluid sampling to help our customers with product selection and system design. FSI has the engineering and integration expertise you can count on to implement the best solution. And we back our solutions, and your organization, with the highest level of support in the industry.*

*Currently, FSI offers quality engineered filters and filtration systems in the following areas: fuel filtration and separation, reverse osmosis water purification, and solvent and wastewater treatment and recycling.*

Call Us Toll Free: (877) 286-6880



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