

PUFS-E®

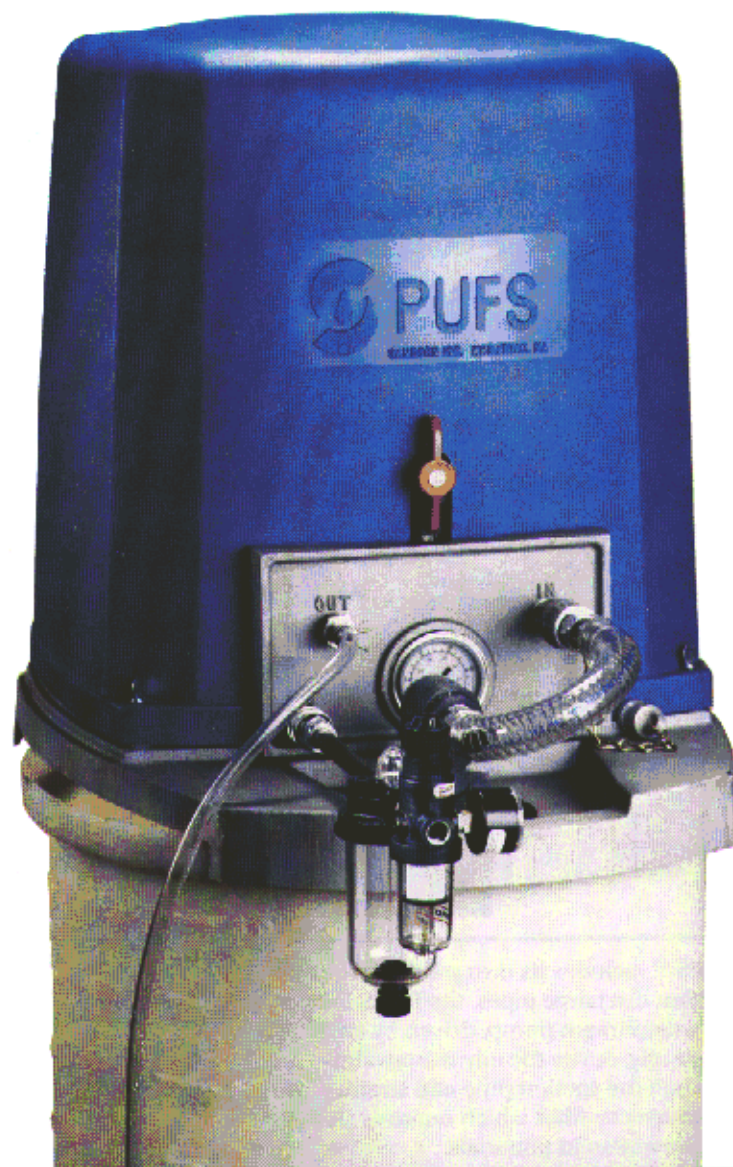
Ultrafiltration System

The Cost-Saving Solution To Small And Medium-Sized Shop's Oily Wastewater Disposal

PUFS-E Ultrafiltration System is a self-contained membrane system for the separation and reduction of oily wastewater. The PUFS-E eliminates up to 98% of the water in an oily wastewater mixture lowering cleanup and disposal costs for machining and grinding coolants, air compressor blow-down and oily wastewater from parts washers.

Operating on top of its own 55 gallon tank, the PUFS-E can process up to 50 gallons in twenty-four hours, separating oily wastewater into an oil-free "permeate" and an oily "concentrate."

With an engineering design based on proven technology, and over 10 years field experience, Sanborn's PUFS-E is simple to operate and maintain. The membrane unit is driven by a reliable, heavy-duty Wilden air diaphragm pump. The clean-in-place design allows for reduced handling, set-up and maintenance time while increasing employee safety.



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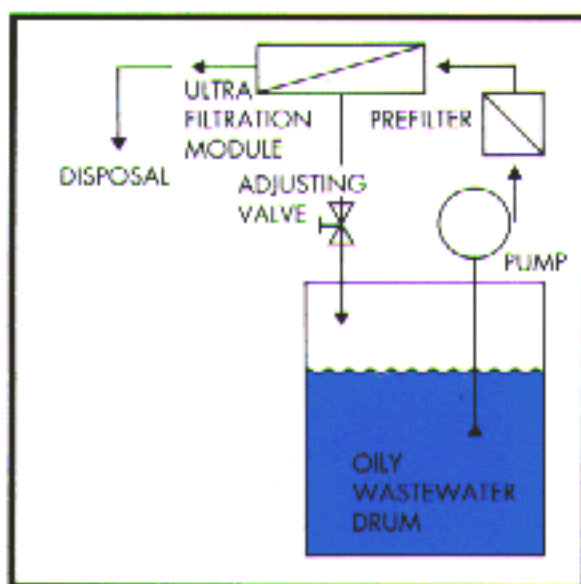
PUFS-E[®] Ultrafiltration System

PUFS-E is an ultrafiltration system specifically designed for use in small to medium-sized plants which produce 1,000 gallons or less of oily wastewater per month. PUFS-E operates on top of its own 55 gallon tank designed to allow the operator to visually inspect the process by observing the waste fluids in the tank.

Driven by a heavy-duty, aluminum Wilden air pump, the PUFS-E will reduce disposable waste volume by as much as 98% by separating oily wastewater into a clean liquid permeate containing no solids, oil or grease and the by-product concentrate of the remaining soil. The PUFS-E will usually produce an effluent that is suitable for sewer disposal. The remaining concentrate and solids, which typically represent only 2% of the original wastewater volume, are drained from the bottom of the process tank.

How PUFS-E Works

PUFS-E is simple to operate. The unit can be installed in minutes and requires no flocculating chemicals or intensive training.



PUFS-E includes its own process tank and suction/discharge pipes. The PUFS-E heavy-duty diaphragm pump, driven by an 80 psi air supply, draws the oily wastewater through the suction pipe and strainer into a cartridge pre-filter which removes sludge and coarse solid materials.



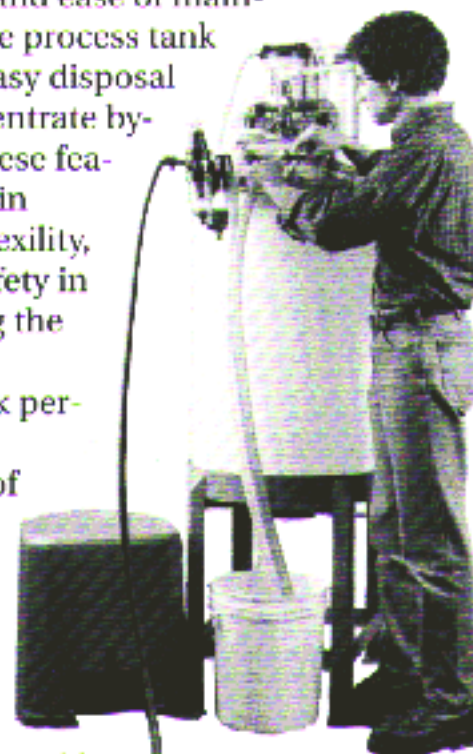
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The wastewater then flows into the membrane module. The pressure-driven feed stream creates separate streams across the porous membrane, where high-process velocities prevent the membrane from caking or plugging up. Smaller water molecules pass through the membrane becoming permeate. Larger oil and grease molecules become the concentrate and return to the process tank. At the end of the cycling process, the concentrated waste is removed from the tank.

Composition of the permeate and local regulations may require the permeate to be further purified for sewer disposal.

Ease of Operation and Maintenance

The PUFS-E design, including clean-in-place features, provides high process disposal rates and ease of maintenance. The process tank allows for easy disposal of the concentrate by-product. These features result in increased flexibility, ease and safety in maintaining the system. The process tank permits visual inspection of the settling of solids before the operation, resulting in reduced prefiltration and longer membrane life. These improvements increase process and maintenance efficiency meeting the needs of today's plant operations.

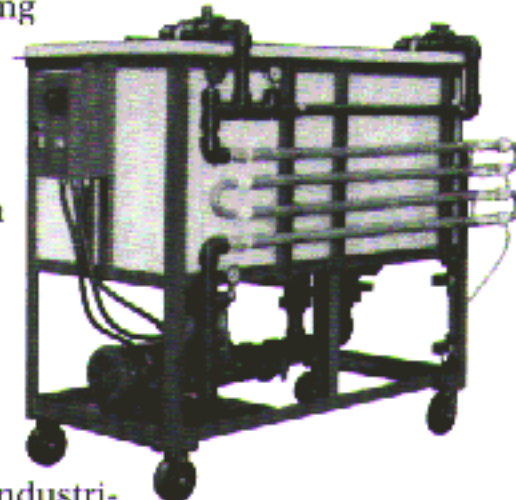


PUFS-E Specifications

Process Rate: Up to 50 gallons in 24 hours
Dimensions: 26" dia/26" Ht.
Weight: 75 lbs.
Air: 80 psi, 5 scfm
pH Range: 4-9
Maximum initial oil concentration of 10% will produce an 80% volume reduction. Oil concentration cannot exceed 50% to operate

The Model UF-250T Ultrafiltration System

For applications where oily wastewater and manufacturing oily waste volumes are up to 250 gallons per day, Sanborn offers the Model 250T ultrafiltration system. The UF-250T is a heavy-duty industrial system, with a 180 gallon process tank and a built-in cleaning system. The unit operates on three-phase electrical power and is complete with controls and safety devices. Applications include metalworking coolants, manufacturing oily wastes —



such as metalworking parts and floor washings — vibratory finishing wastes, latex, printing inks, chemical emulsions, textile chemicals and food processing wastes.

Quality Technical Service & Support

- **MANUFACTURING CAPABILITY:** Manufacturing facilities are located in Medway, Massachusetts. Here, engineering, purchasing, production, and quality-control groups combine to ensure state-of-the-art technology, quality workmanship, reliable performance, and on-time delivery.
- **PARTS AND SERVICE CAPABILITY:** Sanborn's Service Engineering Department maintains a complete parts inventory to minimize downtime. On-site inspection, installation assistance, operator training, field repair and maintenance recommendations are all part of the service Sanborn Technologies offers.
- **APPLICATION CAPABILITY:** A team of experienced applications engineers brings the knowledge gained in a wide variety of successful installations to bear on your particular needs and constraints.
- **LABORATORY CAPABILITY:** Specialized laboratory facilities are utilized by Sanborn Technologies to assist customers in solving fluid-management and disposal problems.