## HIGH-CAPACITY ULTRAFILTRATION SYSTEMS

UF 3000 • UF 4000 • UF 5000 • UF 6000



SANBORN's High-Capacity Ultrafiltration (UF) Systems employ wide-channel (half-inch) tubular membrane technology to separate water from suspended solids and emulsified oils, and reduce wastes by as much as 98 percent without the use of chemical additives.

These economical SANBORN UF Systems are designed to handle waste volumes of up to 6000 gallons per day (GPD), and feature simple, continuous operation with minimal operator involvement to reduce labor costs. Since ultrafiltration usually produces a directly sewerable effluent, waste-disposal charges can be substantially lowered.

Each SANBORN Ultrafiltration System is shipped pre-piped and pre-wired for easy installation. Once installed, the unit requires minimal energy for continuous functioning with extremely low operating costs. In addition, SANBORN's Service Engineering Department and Laboratory facilities are available to solve specific fluid problems, assist in installation, train operators, and provide maintenance recommendations.



# Typical applications for SANBORN Ultrafiltration Systems include waste minimization of:

- Aqueous Parts Washer Solutions
- Metalworking Coolants
- Vibratory, Burnishing, and Deburring Wastes
- Mop Water
- Food Processing Wastes
- Air Compressor Blowdown
- Printing Press Washwater

UF 3000: features 24 Tubular membrane modules and a 3000 GPD processing capacity.

UF 4000: With 32 membrane modules, this model can process up to 4000 GPD.

UF 5000: With 40 membrane modules provide a processing capacity of 5000 GPD.

UF 6000: SANBORN's 48-membrane-module unit offers a processing capacity of 6000 GPD.

### **ULTRAFILTRATION SYSTEMS**



Cutaway of Tubing Shows Wide-Channel Tubular Membranes.

### **FEATURES**

- High-tech polymeric membrane is highly insensitive to chemical and concentration changes in the waste feed stream.
- Half-inch tubular membrane allows processing of high-solids waste.
- System operates in batch or continuous mode.
- Skid-mounted units install easily in the plant.

### **BENEFITS**

DIRECT COST SAVINGS

- Reduced waste volume saves on disposal costs.
- Simple operation saves on labor costs
- · Extremely low operating costs.

### ENVIRONMENTAL BENEFITS

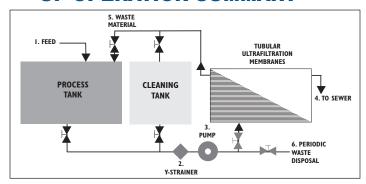
- Positive membrane barrier ensures consistent effluent quality.
- Lower waste volumes reduce environmental liability.
- Low-pressure, non-chemical system is safe to operate.

### VALUABLE TIME SAVINGS

- Unattended operation and limited maintenance saves man-hours.
- Less storing, monitoring, and hauling away of wastewater.

# Typical High Capacity UF System Tubular Membranes TOP VIEW Cleaning Tank Pressure Gauge(s) Temperature Gauge System Drain FRONT VIEW Centrifugal Feed Pump

### **UF OPERATION SUMMARY**



- 1. Wastewater enters the process tank.
- Wastewater passes through a strainer that protects the pump.
- The liquid is continuously pressure driven across the semipermeable UF membrane where emulsion dewatering occurs.
- 4. Clean water is continuously discharged from the system.
- 5. Waste material rejected by membranes is recycled back to the process tank.
- Concentrated waste is periodically removed for disposal.

### **GENERAL SPECIFICATIONS**

MODEL	3000	4000	5000	6000	
Volume Processed (GPD)	3000	4000	5000	6000	
Process Tank (gals.) -optional	3000	4000	5000	6000	
Cleaning Tank (gals.)	250	250	250	250	
Number of Modules	24	32	40	48	
Pump (GPM)	300	400	500	600	
Motor (HP)	20	30	40	50	
Amp Draw @460 V	27	40	52	65	
Length	132 in.	132 in.	132 in.	132 in.	
Width	76 in.	76 in.	76 in.	76 in.	
Height	72 in.	72 in.	72 in.	72 in.	
Weight	2000 lbs.	2400 lbs.	2800 lbs.	3200 lbs.	
Operating Conditions	pH Range 2-12	Temperature 50 - 125 deg F			



23 Walpole Park South Walpole, MA 02081-2558 USA Telephone (508) 660-9150 Fax: (508) 660-9151 E-mail sales@sanborntechnologies.com