

# ULTRAFILTERS (UF)

Ultrafiltration (UF) is a continuous filtration process used to separate emulsified oils and suspended solids from wastewater. A porous tubular membrane allows the water (permeate) to pass while larger contaminants such as oils and colloids are retained and concentrated. The membrane surface avoids any build-up since the high velocity of the incoming water produces a scouring effect. Ultrafilters can provide absolute treatment to a wide variety of waste streams.



## HOW IT WORKS

In general, ultrafiltration is a pressure driven process that performs separation via a semipermeable membrane. The waste stream is pumped into the train of membranes. As the waste stream passes through the inside of the membrane, water and small solutes move radially outward through the membrane and toward the shell of the tube. This is called the "permeate." The larger particles, such as oils, are unable to pass through the membrane and form the "concentrate." The concentrate is recycled over and over to remove as much water as possible. The permeate can be discharged whereas the concentrate must be further treated or disposed.

## APPLICATIONS

- Automotive parts manufacturing
- Metals plating and finishing
- Metals manufacturing
- Ground water remediation
- Chemical processing
- E-coating
- Industrial laundries
- Coolant recycling and recovery

## FEATURES & BENEFITS

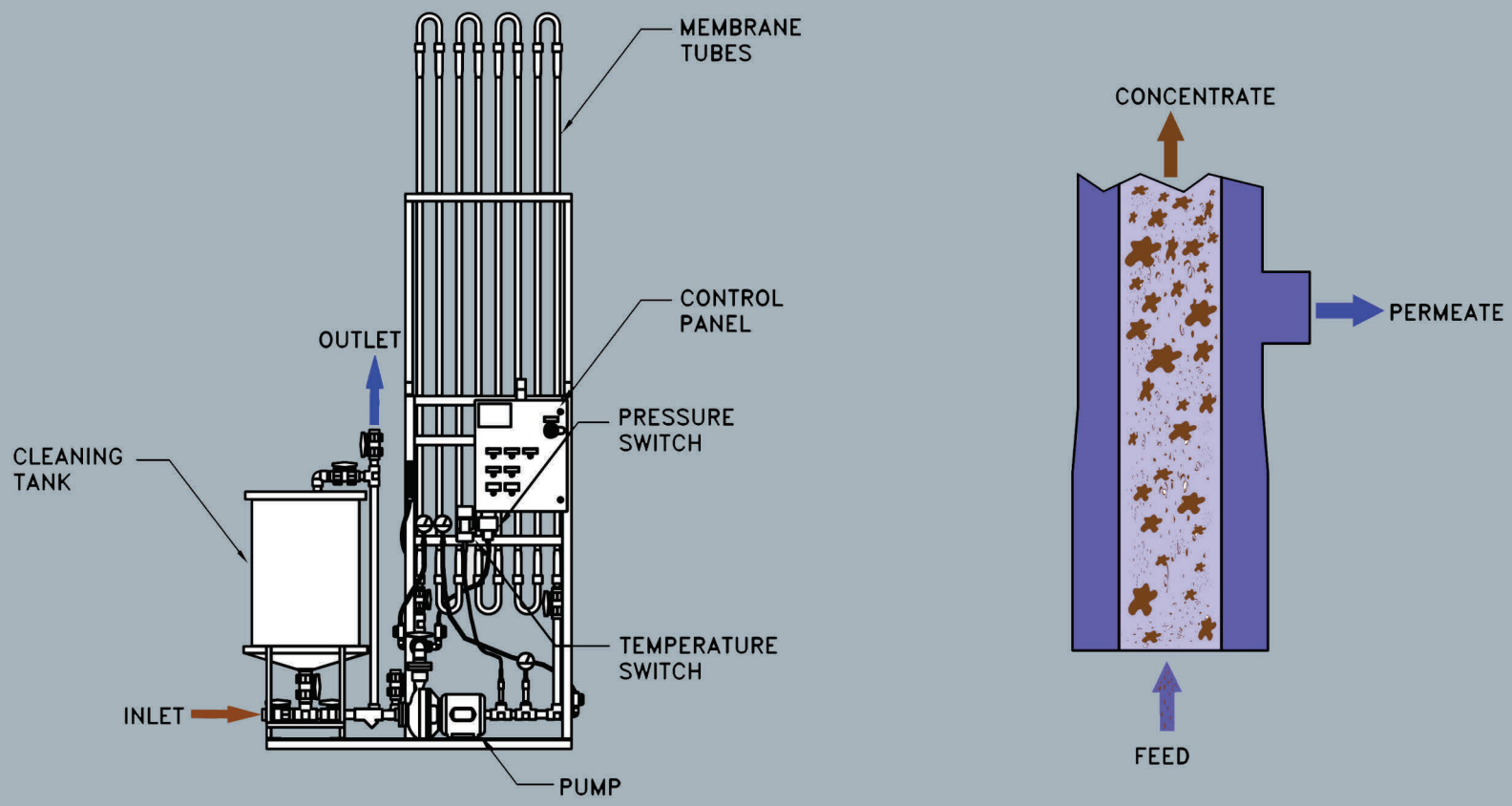
- Removal of oil and suspended solids down to 1 ppm
- Skid mounted units are very easy to install
- Operating temperatures up to 140 F
- Operating pH range of 2 to 12.5
- Semi-automatic design requires little to no operator attention
- Cleaning is done with mild detergent and not harsh chemicals
- Vertical and horizontal designs available
- EPS Wastewater can provide the entire wastewater treatment system around the UF unit
- Flow ranges from 5 - 200 GPM



Our mission is to deliver wastewater treatment equipment and solutions that effectively and economically address the needs of our customers.

## OUR FULL LINE OF TECHNOLOGIES INCLUDE:

- Inclined Plate Clarifiers (IPC)
- Multi-Media Filters (MMF)
- Ultrafilters (UF)
- pH Adjustment Systems
- Pump Skids
- Control Panels
- Dissolved Air Flotation (DAF)
- Oil / Water Separators (OWS)
- Batch Treatment Systems
- Skid Mounted Equipment
- Filter Presses
- Flash Mix and Flocculation



## SIZING CHART \*for low flow systems

Model	Design flow rate (GPD)	Tubes per pass	Number of passes	Recirculation flow rate (GPM)	Recirculation pump (HP)
UF4	264	4	1	30	2
UF8	528	8	1	30	5
UF16	1056	16	1	60	5
UF32	2112	8	4	120	7.5
UF78	5148	13	6	180	15

UF tubes are 10' long and provide 2.2 ft<sup>2</sup> of filtration area per tube

