

# Ceramic Membrane Crossflow Filtration System



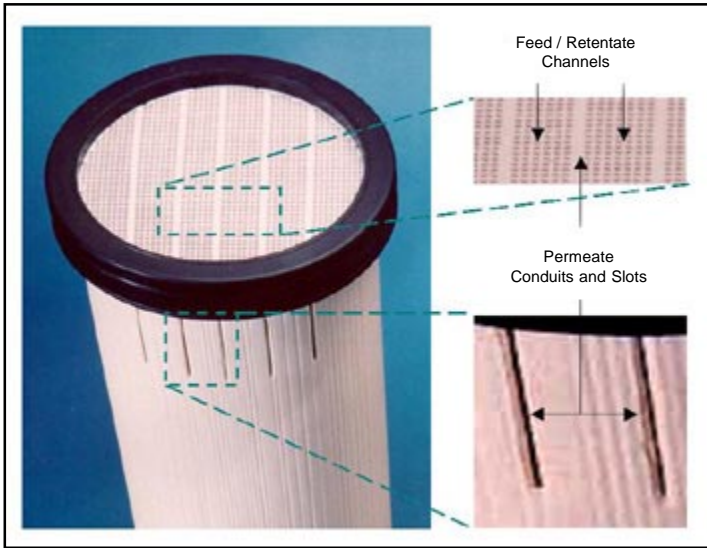
The Hilco ceramic membrane system is an ideal way to lower your oily-water waste disposal costs. The filtration system utilizes high-velocity fluid “crossflow” across the face of the membrane. The oil-free water passes through the ceramic membrane while the oily waste is concentrated in a process reservoir. Depending on the particular waste stream disposal, volumes can be reduced as much as 20x. The system is designed to accept three different micron-rated membranes (0.2  $\mu\text{m}$ , 0.01 $\mu\text{m}$ , and 0.005  $\mu\text{m}$ ) in order to meet all specific local discharge ordinances.

## Features and Benefits

- High Packing Density
- Broad PH Range of 2-13
- Resistant to Thermal Shock
- Back Flushable
- Immune to Chlorine Attack
- Durable Ceramic Extends Lifetime
- High Surface Area to Unit Volume
- Compact Design



*Nominal 50 gal/day capacity model shown*



## Membrane Filtration

1. Filter has 1800+ channels
2. Some channels are converted to permeate conduits
3. Permeate conduits allow the entire filter diameter to be effectively utilized
4. Patented membrane approach results in higher process flux

### Typical Results from a Wastewater Stream

Component	Feed (ppm)	Permeate (ppm)
Oils, Grease	136	1.0
Pb	0.79	0.09
Ni	0.15	0.01
Cu	1.49	0.36
Zn	5.9	0.37

### Specifications

**Filter Sizes:** 5.6" Diameter, 34" Long (120 ft<sup>2</sup> surface area)  
 1.05" Diameter, 12" Long (1.5 ft<sup>2</sup> surface area)

**Standard Membrane Pore Sizes (microns):** 0.2 µm, 0.01 µm, 0.005 µm

**Operating Parameters:** Maximum TMP of 60 psi  
 Maximum inlet pressure 85 psi  
 Maximum differential pressure 30 psi  
 Maximum backpulse pressure 100 psi  
 Immune to chlorine attack

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