



High Performance Ultrafiltration Systems with HTI's SepraMem™ Membrane

HTI has pioneered unique versions of High Performance Ultrafiltration membranes targeted at separating oily wastewaters in industrial and food manufacturing applications. HTI's SepraMem UF family of membrane products available in spiral wound cartridges, are your ultimate solution to difficult oily wastewater applications.

Many industries and processes produce oil containing waste streams that are difficult to treat using conventional methods. Cutting fluids, wash down water and food processing waste contain high concentrations of emulsified oils and fats. Regulations typically require aggressive filtration or treatment before discharge and traditional waste treatment solutions are ineffective or prohibitively expensive.

When used to separate emulsified oils and fats from wastewater streams HTI's SepraMem UF technology:

- Resist high solids fouling
- Substantially improves water quality
- Provides an energy efficient solution
- Eliminates the use of dangerous chemicals and compounds, thereby reducing environmental impact

In High Performance Ultrafiltration, hydrostatic pressure forces the high concentration emulsified oil solution against a specialized semipermeable membrane that separates the oil from the water and removes suspended solids. HTI's SepraMem UF technology is widely applicable for filtration or concentration of difficult commercial and industrial waste streams.

HTI's innovative SepraMem family of Ultrafiltration products provides the complete solution for your oil/water separation wastewater problems. With SepraMem membranes, HTI engineers have created a unique and proprietary cellulose ester flat sheet membrane that is extremely oleophobic while at the same time highly hydrophilic. In short the SepraMem membrane hates oil, but loves water. In some applications, the SepraMem membrane has concentrated emulsions to as high as 30% oil.

The technology is ideally suited for emulsified oils generated from metalworking, hydraulics and aqueous parts washing. In most cases the alternative is expensive evaporation or hauling and disposal. A few examples of the many applications for HTI's SepraMem are:

- Oil and gas E&P produced water
- Emulsified oily wastewaters
- Colloidal silica concentration
- Wastewaters from food processing
- Wash waters from metal chip processing
- Metal working fluids
- Industrial laundry
- Pretreatment to reverse osmosis
- Alkali wash recycle

HTI manufactures a complete line of SepraMem equipment that can handle all of your separation needs from 250 to 40,000 gallons per day.



SepraMem™ 30/400

Filter Elements:	SepraMem™ UF08400IL
System Flow Rate:	2 to 28 gpm permeate
System Pressure:	60 psig
System Temperature:	140°
Fluid:	Various metalworking fluids, machine lubricants and soap on scrap chips.
Influent Design Range:	0.5 to 4.0% oils
Avg. Effluent Design:	80 - 97% water removal

The SepraMem 30/400 is just one example of the many configurations available. With HTI SepraMem equipment available in a wide range of capacities, designs, and control systems, your SepraMem dealer can work with you to configure and price an installation that is customized to meet your exact needs and budget.



SepraMem - Ultrafiltration Spiral Wound Modules are available in a wide array of sizes and configurations to meet you needs, and other custom order sizes and configurations are available upon request.

		Size (Dia." X Length")	Membrane Area (m ²)	Molecular Weight Cut-Off (MWCO)	Clean Water Flux (LMH/bar)	Max Feed Pressure (bar)	Operating pH Range	Cleaning pH Range	Maximum Operating Temperature (C°)
8040UF-FS	Fine Spacer (9 leaves)	8 X 40	16	50,000	15	7	2.0 - 9.0	2.0 - 10.5	60
8040UF-OS	Open Spacer Oil (6 leaves)	8 X 40	10.5	50,000	15	7	2.0 - 9.0	2.0 - 10.5	60
4040UF-FS	Fine Spacer (2 leaves)	4 X 40	3.5	50,000	15	7	2.0 - 9.0	2.0 - 10.5	60
4040UF-OS	Open Spacer Oil (1 leaf)	4 X 40	1.75	50,000	15	7	2.0 - 9.0	2.0 - 10.5	60



AnyWater AnyWhere®

HTI Authorized Distributor

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