

XtremeUF

Robust Ceramic Ultrafiltration

- Remove suspended solids and organics from the most challenging slurries and wastewaters
- Engineered, compact 1,700 m³/day package with self-cleaning controls
- High tolerance to a wide range of input waters, turbidity, oils, grease, chemicals, pH and temperature
- Corrosion-resistant construction materials for high salinity
- Quality, widely available ceramic membranes from a variety of reputable suppliers, offering client control over maintainence
- Built-in redundancy and intelligent automation maintain performance



A section of an XtremeUF plant

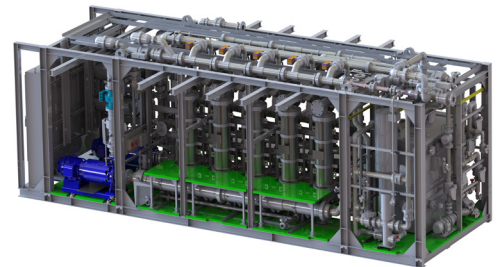
Polymeric or Ceramic?

Ultrafiltration (UF) is widely used to filter out suspended solids, microbes, oils and grease that have a particle size of >0.01 micron (µm). Both ceramic and polymeric membranes have unique applications, as shown in the table below.

Parameter	Typical Polymeric UF Limits	XtremeUF Limits
Total Suspended Solids, TSS (mg/L)	500	10,000
Maximum Particle Size (µm)	300	1,000
pH, Continuous	3-9	1-12
pH, Temporary	2-11	0-14
Total Organic Carbon, TOC* (mg/L)	40	1,000
Chemical Oxygen Demand (mg/L)	60	N/A
Oil and Grease (mg/L)	2	1,000
Temperature (°C)	40	85 [†]
Transmembrane Pressure (psi)	20-30	45-145

* Guideline only; actual limit will depend on nature of organic chemical species.

† Limit of CPVC piping. Membrane temperature limit is 300 °C. Enquire with Saltworks for temperature de-rates. UF vessels de-rated to 60 °C for ASME-rated units, or alternative higher-cost ASME vessels can be fitted.



Automated Self-Cleaning With No Capacity Loss

Even with the toughest wastewaters, XtremeUF maintains performance with no downtime using built-in redundancy and automated clean-in-place (CIP) while running.

Low-Cost Install and Fast Start-Up

Built from pre-assembled and factory-tested modules with all equipment onboard a single skid for easy, low-cost installation at site.

Zero Liquid Discharge (ZLD) Filtration

Options available for comprehensive solids management, including an integrated solid slurry management system that produces solid cake.

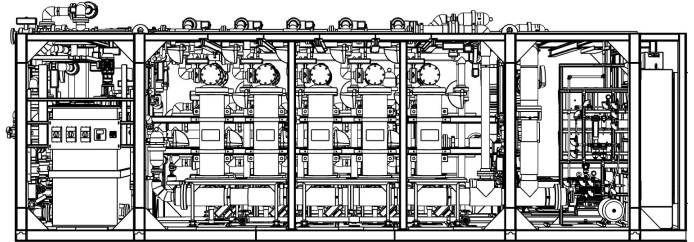
Controlled Production and Supply Chain

Saltworks factory-builds systems at our quality-controlled production facility, with in-house supply chain and engineering.

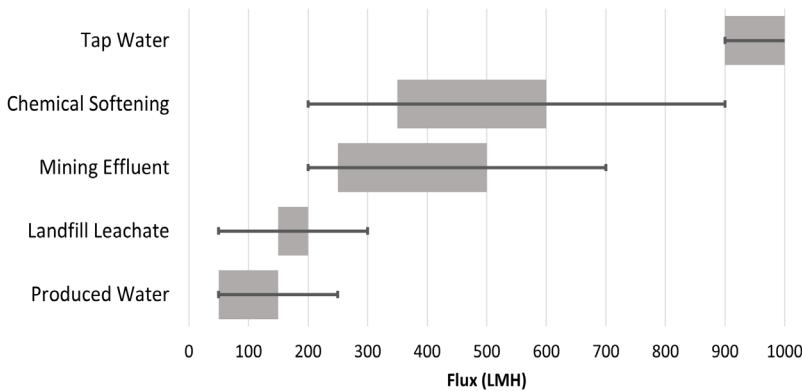
Sizing

Capacity varies with inlet water quality. The table below is based on wastewater with a flux of 400-560 LMH (litres per m² per hour) or 235-329 GFD (gallons per ft² per day). The flux ranges in the chart below show how flux varies for different wastewaters. Pilot and full-scale plants are available. Contact us to discuss your project needs.

Specifications	XtremeUF
Inlet Water	Any; contact Saltworks
Peak Capacity (m³/day)	1,700
Nominal Capacity (m³/day)	968-1,360
Skid Weight (tonne)	10
Skid Dimensions (feet)	L-32 x W-10 x H-10
Filtration Pore Size (µm)	0.01, 0.05, 0.1, 0.5 and 1.2

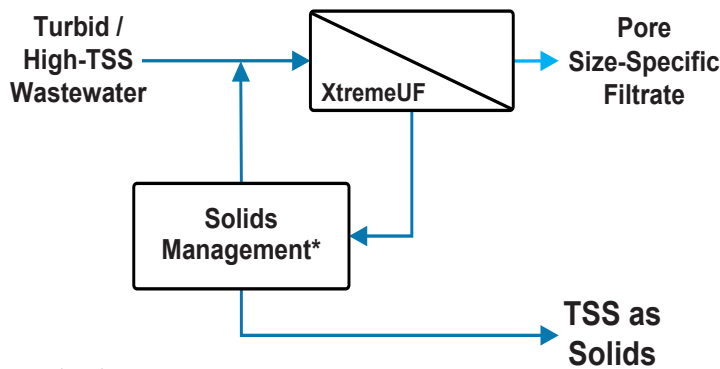
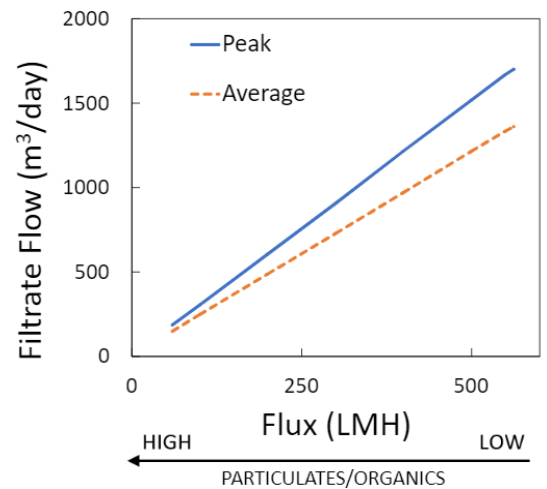


Flux Ranges for Industrial Wastewater



XtremeUF flux ranges for tap water and various industrial wastewaters

XtremeUF Filtrate Flow Performance



* Filter Press, Centrifuge, etc.

Process flow diagram of an XtremeUF system with solids management

XtremeUF Energy Performance

