

XtremeUF

Robust Ceramic Ultrafiltration

- Remove suspended solids and organics from the most challenging slurries and wastewaters
- Engineered, compact 900 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 broad supply chain, not linking you to a single membrane supplier
- Built-in redundancy and intelligent automation maintain performance



Membrane vessels in an XtremeUF plant

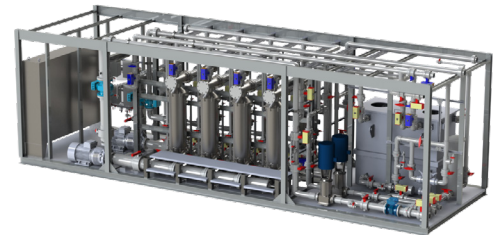
Polymeric or Ceramic?

Ultrafiltration (UF) is widely used to filter out suspended solids, microbes, oils and grease that have a particle size of >0.01 micron (µm). Our XtremeUF ceramic membrane system does not compete with polymeric membrane systems. Each technology has its own fit, as shown in the table below.

Parameter	Typical Polymeric UF Limits	XtremeUF Limits
Total Suspended Solids, TSS (mg/L)	100	100,000
Maximum Particle Size (µm)	300	1,000
pH, Continuous	3–9	1–12
pH, Temporary	2–11	0–14
Turbidity (NTU)	300	N/A
Total Organic Carbon, TOC* (mg/L)	40	1,000
Chemical Oxygen Demand, COD (mg/L)	60	N/A
Oil and Grease (mg/L)	2	1,000
Temperature (°C)	40	85 [†]

* 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.

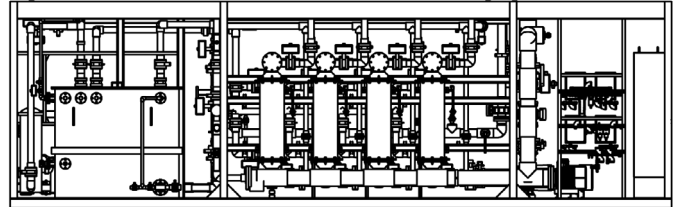
Tightly Controlled Production and Supply Chain

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 280 LMH (litres per m² per hour) or 165 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 with your project needs.

Specifications	XtremeUF-900
Inlet Water	Any; contact Saltworks
Rated Filtrate Capacity (m ³ /day)	900
Nominal Power (kW)	50
Skid Weight (tonne)	10
Skid Dimensions (feet)	L32 x W10 x H10
Filtration Pore Size (µm)	0.01, 0.05, 0.1, 0.5 and 1.2



Flux Ranges for Industrial Wastewaters

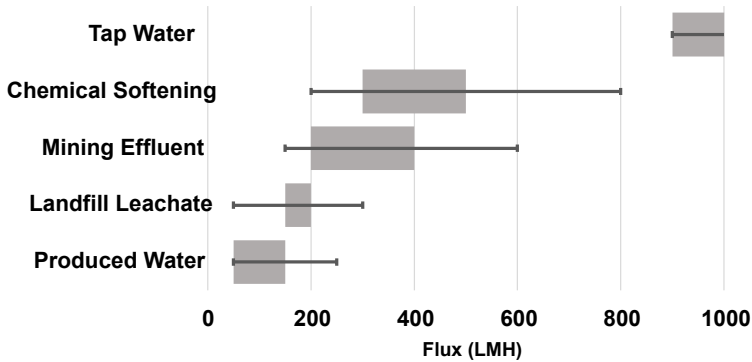
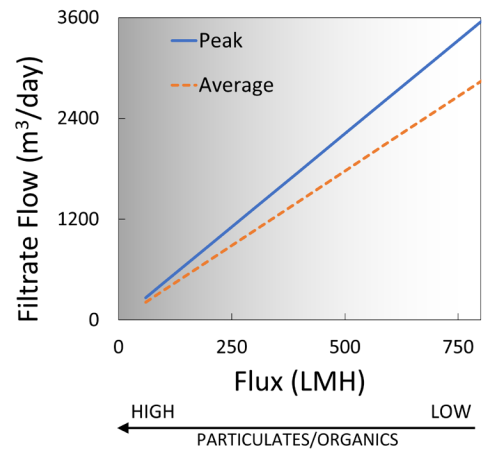
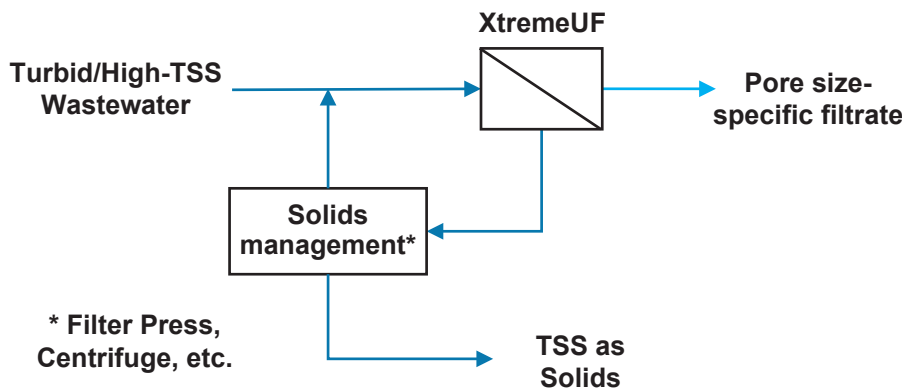
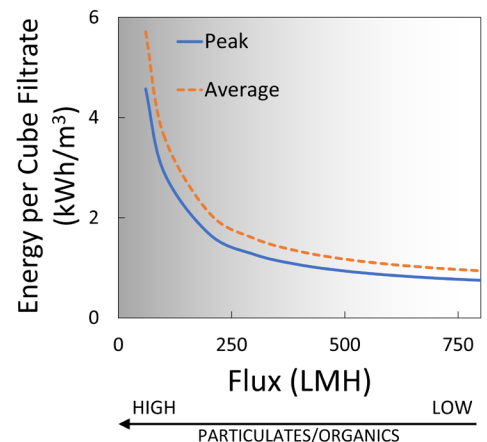


Chart of XtremeUF flux ranges for tap water and a selection of different industrial wastewaters

XtremeUF Filtrate Flow Performance



XtremeUF Energy Performance



Process flow diagram showing an XtremeUF system with solids management in a treatment chain