XtremeUF-P (XUF-P)

Polymeric Ultrafiltration

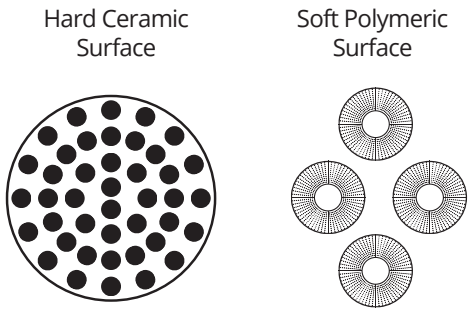
- Standardized, modular and repeatable ultrafiltration units with leading polymeric membranes
- Intelligent automated controls that monitor performance, self-diagnose, and initiate corrective action
- Filter total suspended solids (TSS) from 0.05 to 2 µm and concentrations <500 mg/L to non-detect levels. Ideal for upstream NF or RO
- Dead-end or cross-flow configurations with built-in mechanical cleans, including backflushes, proprietary combinations that defer chemical cleans and automation to reduce operator intervention
- Highly scalable & expandable by adding modular blocks

3D render of XtremeUF-P plant

When to Choose Polymeric or Ceramic UF?

Ultrafiltration (UF) is widely used to filter out suspended solids, microbes, oils and grease that have a particle size of >0.01 micron (µm). Ceramic and polymeric membranes are suited for different applications, as shown below.

Parameter	Typical Polymeric UF Limits	XtremeUF-P 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)	5-80	0-85†
Transmembrane Pressure (psi)	20-30	45-145



Simplified cross section of UF membrane types *(not to scale)*

* 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

XtremeUF maintains performance with no downtime using built-in redundancy and automated mechanical cleans while running.

Post Filtration Solids Management

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

Low-Cost Install and Fast Start-Up

Factory built and commissioned modules with all equipment onboard a single skid for easy, low-cost, rapid installation at site.

Controlled Production and Supply Chain

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

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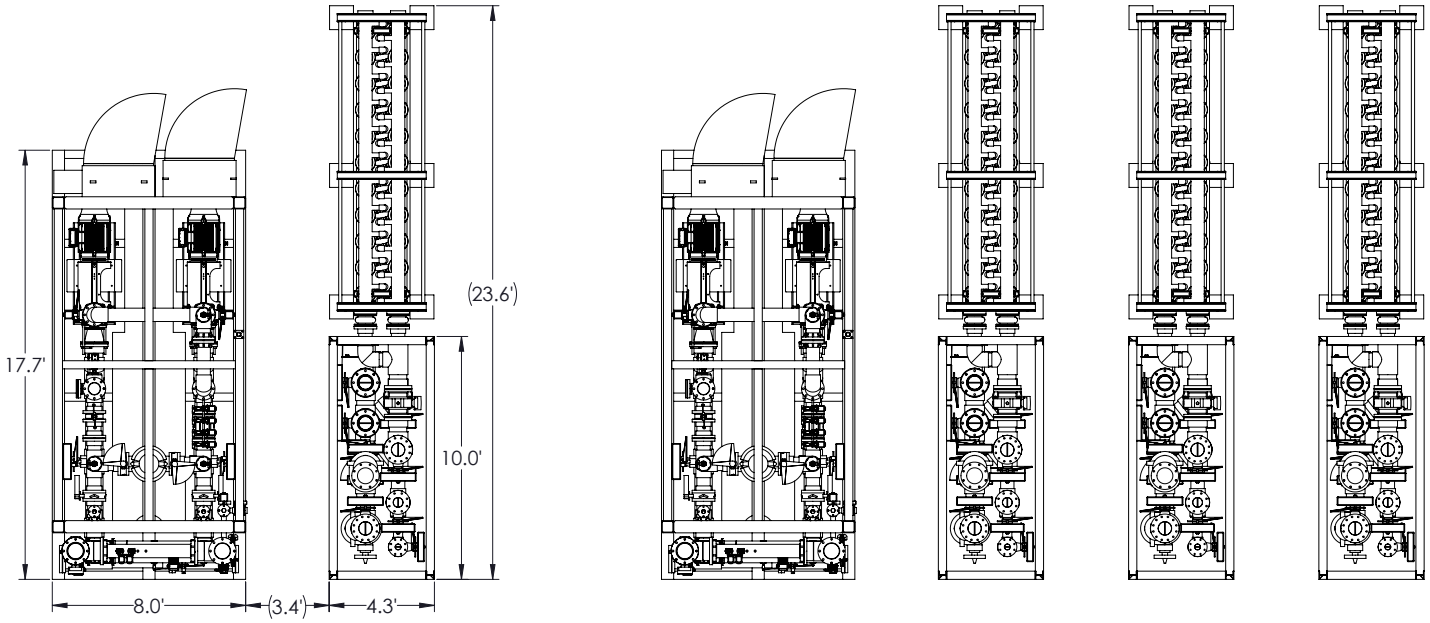
Sizing and Integration

XtremeUF-P grows with your capacity needs. XUF-P models and respective capacity are below. Additional capacity needs can be met by adding and integrating units. Saltworks uses Tier 1 polymeric ultrafiltration membranes known for rugged design and long service life. Two temperature range options are available: 1.) Standard: 10–40 °C, or 2.) High-temp: 10–80 °C. Polymeric UF membranes are not recommended for cold water applications below 5°C due to high risk of failure. See XUF-C (ceramic) for low temperature applications.

Specifications	XtremeUF-P
Inlet Water	Any; contact Saltworks
Peak Capacity (m^3/day)	Varies
Nominal Capacity (m^3/day)	Varies
Skid Weight (tonne)	Varies
Skid Dimensions (feet)	*L-24 x W-16 x H-10
Filtration Pore Size (µm)	0.01, 0.05, 0.1, 0.5 and 1.2

* Reference skid dimensions only, size will vary depending on capacity.

XtremeUF-P Model	Capacity (m^3/day)
XUF-P1000	0 - 1,000
XUF-P3000	1,000 - 3,000
XUF-P5000	3,500 - 5,000



Wireframe drawings depicting XUF-P capacity scaling by adding and integrating units

Automation and Self-Cleaning

Saltworks' XtremeUF systems include fully automated self-cleaning features designed to protect membrane health, preserve plant capacity, and maximize uptime. The system continuously monitors flux and initiates corrective action early, reducing the risk of fouling and performance degradation.

Automated flux monitoring and corrective action with multi-level mechanical cleaning sequence built in, including crossflow acceleration, backwash, and optional air scour—eliminating the need for chemical cleans in most cases. All automation and instrumentation are included, with an intuitive human-machine interface for easy operation, remote control, and seamless integration into plant-wide systems.

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