

PermaFlux™ V10XL Module

Tubular Membranes Reinvented

Description and Use

- PermaFlux™ is a state-of-the-art **pressurized crossflow membrane** technology
- Able to concentrate **suspended solids** and **oil and grease** to extremely high levels without risk of sludging
- Most energy efficient crossflow membrane on the market
- Fully back-washable modules
- No aeration needed

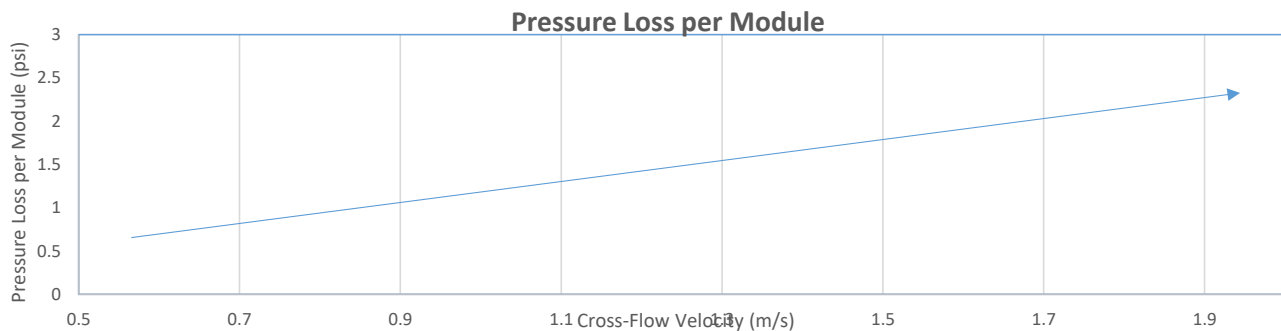


Standard Applications

The PermaFlux™ module is best suited for numerous applications including (but not limited to):

- Industrial/Oily Wastewater
- Landfill & Remediation
- Municipal Sludge Thickening
- Agriculture Waste Treatment
- Algae Thickening
- Metal Fabrication and Machining
- Food and Beverage Waste
- Pharmaceuticals & Chemicals
- Mining
- Anaerobic Digestate Liquid/Solid Separation

UF quality permeate can be stored and re-used for non-potable applications (rinsing/washing, cooling towers, boilers, irrigation, etc).



*Graph data based on water at 68 °F (20 °C) and a viscosity up to 10 cP

PermaFlux is a trademark of Thetis Environmental that may or may not be registered in one or more countries.

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PRODUCT PROPERTIES

Model	PermaFlux™ V10XL
Active Surface Area	35.8 m ² (385 ft ²)
Membrane Configuration	34 filtration filaments in parallel
Membrane Material	PVDF
Housing Material	PVC
Flow Path	Outside-in
Membrane Pore Size	0.04 µm
Molecular Weight Cut-Off	100 kDalton



MODULE SPECIFICATIONS

Length	3,048 mm (120")
Housing Diameter	273 mm (10.75")
Permeate Connections	Custom coupling with 1 1/2" male NPT
Maximum Dry Shipping Weight	84 kg (185 lb)
Maximum Weight of Wet Module	104 kg (229 lb)

MEMBRANE AND SYSTEM PROPERTIES

- **Patented** closed loop batch filtration system reduces maintenance and energy consumption by up to 90% compared to other membrane technologies
- Expected **energy consumption of 0.35 - 2.5 kWh/m³** permeate produced
- Typical **installed power of 0.1 hp/m² membrane** (expected use of installed power is 30%)

OPERATING PARAMETERS

Trans-Membrane Pressure (TMP) Range	PERMEATION: <207 kPa (30 psig) BACKWASH: <138 kPa (20 psig)
Permeate Flow Range	21.8 - 360 m ³ /day (4 - 66 GPM)
Temperature Range	5 - 60°C (41 - 140°F)
Operating pH Range	2 - 12
Cross Flow Velocity Range*	0.5 - 2 m/s

*Cross flow velocity refers to the speed the water is traveling within the proprietary closed loop module configuration

CLEANING LIMITS

Maximum Cleaning Temperature	45°C (113°F)
Cleaning pH Range	1.9 - 12 (<35°C); 1.9 - 11.5 (>35°C)
Chemical Concentration During Clean	200 - 2,000 ppm

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