



ACHIEVING A NEW LEVEL OF PERFORMANCE IN MEMBRANE TECHNOLOGY

Highest Flux

Withstands the Harshesht Environments

Quick & Easy Cleaning for Full Recovery

Longest Life of Any Membrane



**Ideally suited for
Sludge Thickening,
High Rate MBR, Tertiary
Treatment and Wet Weather
Overflow Applications**

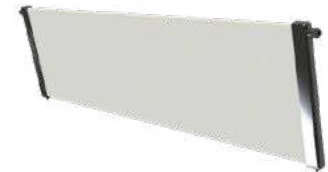
SILICON CARBIDE FLAT PLATE MEMBRANES

KEY HIGHLIGHTS

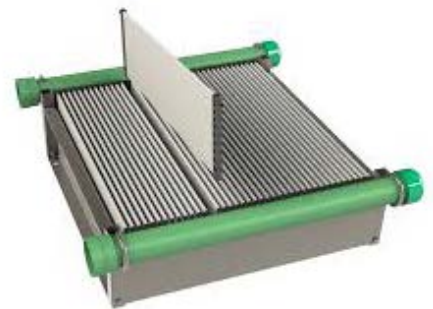
- 0.1 μm pore size
- Completely hydrophilic
- High chemical and temperature tolerance
- Submerged design
- Resistant to damage from debris, grit, and coarse material
- Easily re-wetted after drying

WHAT'S SO SPECIAL ABOUT SILICON CARBIDE?

Silicon Carbide's natural properties effortlessly attracts water while repelling foulants. This results in extremely high sustainable fluxes and the ability to operate reliably in high solids and oils, as well as under other difficult conditions that polymeric membranes have shied away from. Silicon carbide is also one of the hardest materials in the world and forms membrane plates that are solid as a brick and able to withstand the broadest range of temperature, pH, chemicals, and pressures. SiC membranes have achieved a new level of performance in some of the most demanding applications.



PLATE



MODULE

HOW IT'S MADE



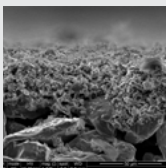
SiC POWDER

Silicon Carbide mixed into paste and extruded



SUBSTRATE

Extrusion fired at 2,000 °C to bind SiC grains



MEMBRANE LAYER

Membrane layer applied to substrate



SiC PLATE

0.1 micron SiC flat plate membrane



STACK

POTENTIAL APPLICATIONS



HIGH RATE MBR

SiC allows for operation at high MLSS, increasing MBR capacity within the same footprint



SLUDGE THICKENING

SiC expands the operating window for MBT, easier to recover from dewatering



TERTIARY TREATMENT

High flux, low footprint design with lower energy consumption than hollow fibers



WET WEATHER OVERFLOWS

CSO, SSO MBR peak flow, CAS peak flow. SiC can be completely dried, allowing for intermittent storm use



WITHSTANDS THE HARSHTEST ENVIRONMENTS

THE OVIVO DIFFERENCE

200+ YEARS OF HERITAGE • 100% FOCUSED ON WATER

OPERATING LIMITS/CAPABILITIES

Operating Parameter	Units	Silicon Carbide
TSS	mg/l	< 45,000
Oil & Grease	mg/l	< 500
Free Oil	mg/l	< 500
pH	-	1 - 14
Temperature	°C	1 - 80
Backwash Pressure	psi	< 30
Chlorine Tolerance	wt%	1.0



CSO Results
(Raw Sewage)



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