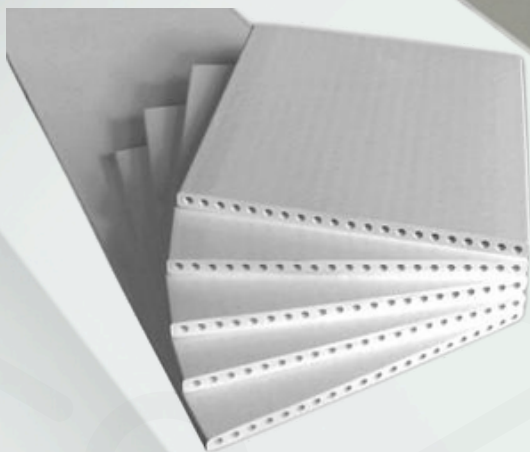




AQUEOUS
PRECISION IN PURIFICATION

CERAMIC FLAT SHEET MEMBRANE

Water and Wastewater Treatment



Experience the advanced water treatment solutions of Acquoso – the Italian innovation behind Aqueous technology.

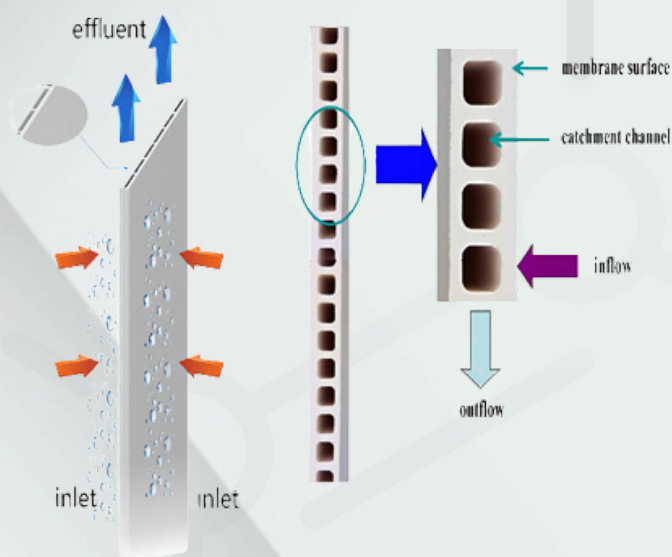
The Aqueous ceramic membrane flat sheet module is a groundbreaking membrane separation system designed for both micro filtration and ultrafiltration stages. Manufactured using high-purity ceramic fine powder through advanced recrystallisation and sintering techniques, these membranes offer a range of superior performance features.

This advanced technology enables filtration accuracy down to 20 nm, making it ideal for applications that require high precision.

Performance Features

- **Reduced Footprint** : Optimised design reduces the required filter area, saving on capital costs.
- **Extreme Temperature Resistance** : Capable of operating at high temperatures, even near boiling point.
- **Low Fouling Potential** : The membrane's design reduces fouling, leading to greater durability and lower maintenance costs.
- **Easy Handling** : The system allows for easy addition or removal of modules to meet changing capacity requirements.

Working Principle



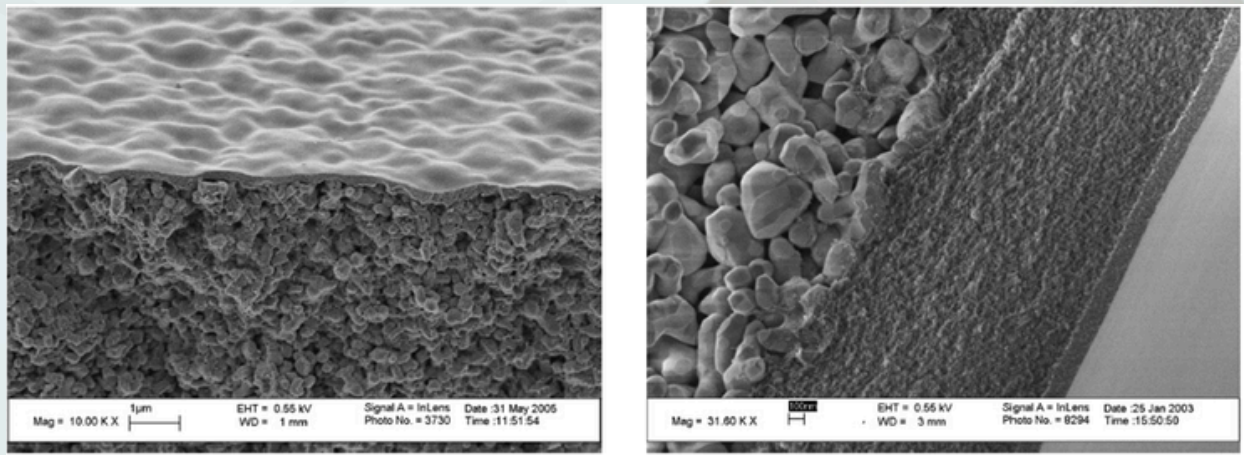
Out-to-In Filtration : The membrane's outer surface acts as a barrier for suspended solids, which form a cake layer, while clean water passes through and is collected.

In-to-Out Backwash : During backwash, the flow is reversed to remove the cake layer in seconds. Air-scouring enhances the backwash process, ensuring thorough cleaning with minimal water usage.

Membrane Technical Specifications

Model	CFS-175	CFS-175-D	CFS-175-SC
Membrane structure	Unsymmetrical		
Type	Plate		
Filtration way	Negative pressure suction filtration		
Membrane Materials	Al ₂ O ₃	Al ₂ O ₃	SiC
Membrane area, m ²	0.175		
Length(L), mm	620	620	620
Width(W), mm	145	150	145
Thickness(T), mm	6	12	6
Pore Size, um	0.1	0.1	0.1
Pure Water Flux, L/(m ² .h.bar) @ 25 0C	≥1600	≥2000	≥2000
Designed Flux (River), LMH	80-120	80-150	80-150
Designed Flux (Sewage), LMH	60-80	70-90	70-90
Designed Flux (Industrial), LMH	30-60	40-70	40-70
Working Pressure, Mpa	-0.01 to -0.02		
Backwash Pressure, Mpa	0.15		
Operating pH	1-13		
Operating Temperature, °C	1-75°C		
Module MOC	SS-304 / SS-316 / ABS /Glass fiber-reinforced blend of PPS		
Sealing Material	Viton / EPDM / NBR		
Membrane Tower	1-10 Number of membrane modules (customizable)		

SEM cross-section micrograph of a ceramic filtration membrane sheet



Applications

Wastewater Treatment: Effectively removes suspended solids and impurities

Pharmaceutical Industry: Purifies and separates liquids with unmatched accuracy.

Oil and Gas: Facilitates better separation in extreme harsh conditions

Food and Beverage: Provides superior filtration to eliminate bacteria, viruses, and other contaminants.



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