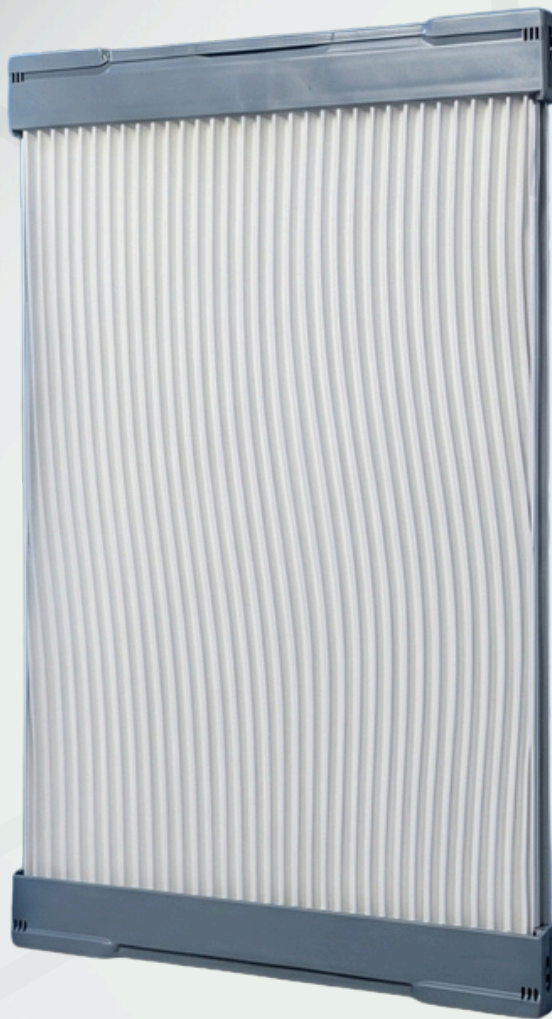




**AQUEOUS**  
PRECISION IN PURIFICATION

# Aqueous FS-HY Series

**Hybrid flat sheet MBR Membranes**



## 1. Product Overview

Aqueous Italia Hybrid Corrugated Flat Sheet Membranes are ultrafiltration/ micro filtration membranes engineered for submerged MBR applications. The membranes employ a corrugated, edge-potted flat sheet architecture, combining the high flux potential of hollow fibres with the mechanical robustness and cleanability of flat sheets.

## 2. Membrane Grades

Product Code	Filtration Grade	Nominal Pore Size	Construction
FS-HY-MF	Microfiltration	~0.1 $\mu\text{m}$	Monolithic cast flat sheet
FS-HY-UF	Ultrafiltration	~0.02 $\mu\text{m}$	Monolithic cast flat sheet

Pore size and filtration grade selectable without changing membrane geometry or cassette architecture.

### Key Advantages

- Increased effective membrane area due to corrugation
- Enhanced turbulence and surface shear during aeration
- Uniform scouring with no fibre shielding or entanglement
- High resistance to vibration, abrasion, and hydraulic shocks
- Stable operation at elevated MLSS concentrations
- Lower aeration demand compared to conventional flat sheets

Parameter	Value
Typical operating flux	15–30 L/m <sup>2</sup> ·h
Filtration mode	Suction or gravity-assisted
Operating temperature	5–40 °C
Operating pH range	2–12
Backwash flux	15–30 L/m <sup>2</sup> ·h
Cleaning chemicals	NaOCl, organic acids
CIP frequency	Variable, feed dependent

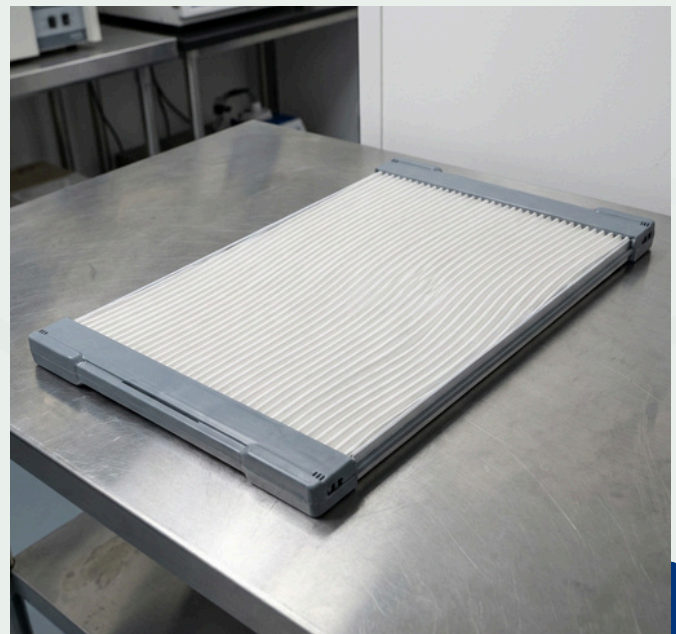
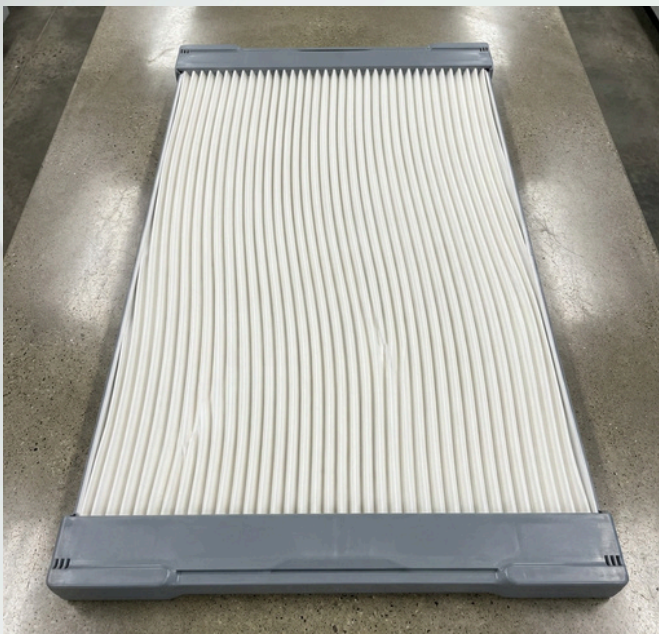
### 3. Membrane Element formats

Variant	Active Area Range	Corrugation	Supply Mode
FS-HY-S	5–7 m <sup>2</sup>	Standard	Membrane element
FS-HY-S	9–11 m <sup>2</sup>	Standard	Membrane element
FS-HY-S	~15 m <sup>2</sup>	Enhanced	Membrane element

Aqueous Italia membranes are supplied as standalone filtration elements, enabling full flexibility in cassette, tank, and system design while ensuring predictable membrane performance and lifecycle cost control.

### 4. Applications

- Municipal MBR systems
- Industrial wastewater recycling
- Decentralised & packaged MBR plants
- Retrofit of conventional ASP to MBR
- Water reuse & tertiary treatment





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