

MEMBRAY® Product Specifications

SERIES		NHP (NEW HIGH PERFORMANCE)			
Element Model & Specification	Model	TSP-50080 (Flat sheet)			
	Effective Membrane Area (m ²)	0.7			
	Nominal Pore Size (µm)	0.08			
	Dimensions (mm)	477 wide x 800 high x 1.8 thick			
	Material	Membrane	Polyvinylidene fluoride (PVDF) and Polyethylene terephthalate (PET) non-woven fiber		
Nozzle		Polyester (PE)			
Model		ECS035 (Cassette)	NHP210-300S (Module)	NHP210-600D (Module)	
Number of Membrane Elements		50	300	600	
Cassette structure		N/A	3 cassettes x 2 decks	3 cassettes x 4 decks	
Total Membrane Area	m ²	35	210	420	
	ft ²	376.7	2,260.4	4,520.8	
Dimensions* ¹	Width	mm	413 (w) x 484 (l) x 800 (h)	1,460 (w) x 565 (l) x 2,090 (h)	1,460 (w) x 565 (l) x 3,760 (h)
		inches	16.3 (w) x 19.1 (l) x 31.5 (h)	57.5 (w) x 22.2 (l) x 82.3 (h)	57.5 (w) x 22.2 (l) x 148 (h)
Weight (kg)	Module (dry)		N/A	230	395
	Aeration block (dry)		N/A	65	65
	Cassette / Element block (dry)		15	165	330
	Cassette / Element block (sludge clogging)* ²		45	340	690
Material	Frame		Stainless steel (SS)		
	Permeated Water Manifold		Polypropylene		
	Air diffuser		N/A	Polypropylene (SS optional)	
Connection* ³	Manifold		ANSI 1 ½ inch flange	N/A	
	Air Diffuser		N/A	ANSI 1 ½ inch flange	
Operating Range	Temperature		5–40 °C (41–104 °F)		
	pH* ⁴ of liquid		5–10		
	Mixed Liquor Suspended Solids (MLSS)		Not higher than 18,000 mg/L		
	Trans-membrane Pressure		Not higher than 20 kPa (200 mbar)		
	Cleaning chemical feed pressure		Not higher than 10 kPa (100 mbar)		
	Cleaning chemical and concentration		Sodium hypochlorite (effective chlorine concentration): 2,000–6,000 mg/L (pH around 12)		
			Oxalic acid: 0.5–1.0 wt%		
Citric acid: 1.0–3.0 wt%					
Scouring air flow rate* ⁵ (NL/min/Module)* ⁶		330–570	1,000–2,000	1,300–2,000	

*1 The total dimensions excluding the manifold(s) and riser pipe

*2 The weight assumed in the case of sludge clogging between elements

*3 UNI (ISO) flange is optional

*4 Except when chemical cleaning with designated chemical agents.

*5 The air supply equipment such as blower shall be designed based on the standard operating conditions.

*6 "NL" means air volume as being 0 degree C and 101.325 kPa (1 atm).

Specifications subject to change without notice.

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