



DOW IntegraPac™ Ultrafiltration Module

IP-51 and IP-77



The DOW IntegraPac™ Ultrafiltration modules are made from high strength, hollow fiber membranes engineered to reduce design and fabrication requirements with features and benefits including:

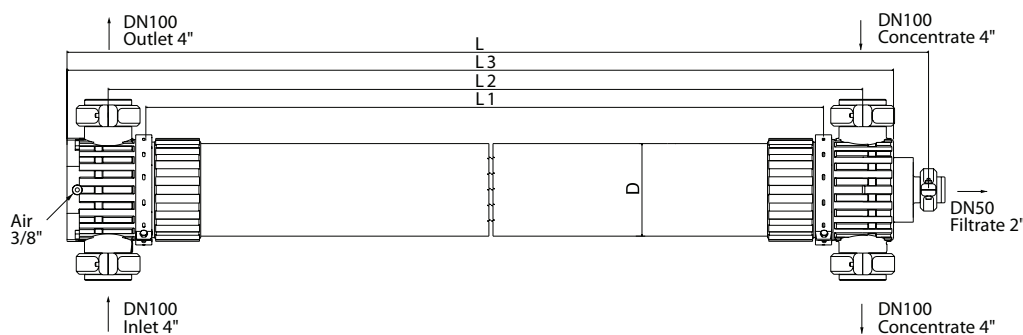
- 0.03 micron pore size for removal of bacteria, viruses and particulates, a 6 log removal of bacteria, a 2.5 log removal on viruses, and a <2.5 SDI guarantee with proper operation
- PVDF fibers which offer strength, chemical and fouling resistance; which allows for extended membrane life and consistent long-term performance
- Outside-in flow configuration allows higher TSS feed waters, while maintaining reliable system performance and producing high quality filtrate
- Innovative end-caps enable direct coupling of modules, eliminating the need for piping manifolds

These modules are an ideal choice for systems requiring a small footprint. The IP-77 module offers a high effective membrane area, which contributes to a more economical membrane system design. The IP-51 module is shorter in height and is suitable for applications where there is a head space constraint.

DOW IntegraPac™ Ultrafiltration modules can be used for a wide variety of treatment applications, such as groundwater, surface water, seawater, industrial wastewaters and municipal wastewater polishing.

DOW IntegraPac™ Ultrafiltration Module Specifications

Model	Type	Part Number	Membrane Area		Weight (empty/water filled)		Hold-Up Volume	
			m ²	ft ²	kg	lbs	liters	gallons
IP-51	Industrial	11007493	51	549	53/102	117/225	49	13
IP-77	Industrial	11002186	77	829	66/119	146/262	53	14



Model	Units	Length				Diameter	Width	
		L	L1	L2	L3		W1	W2
IP-51	SI (mm)	1952	1500	1689	1864	225	360	342
	US (inch)	76.9	59.1	66.5	73.4	8.9	14.2	13.5
IP-77	SI (mm)	2452	2000	2189	2364	225	360	342
	US (inch)	96.5	78.7	86.2	93.1	8.9	14.2	13.5



Operating Parameters

	SI Units	US Units
IP-51 Filtrate Flux @25°C	50-115 l/m ² /hr	29 - 68 gfd
IP-77 Filtrate Flux @25°C	60-140 l/m ² /hr	35 - 82 gfd
pH, Operating	2-11	2-11
pH, Cleaning	2-12	2-12
Temperature	1-40°C	34 - 104°F
Max. Inlet Module Pressure (@20°C)	6.25 bar	93.75 psi
Max. Operating TMP	2.1 bar	30 psi
Max. Operating Air Scour Flow	12 Nm ³ /hr	7.1 scfm
Max. Backwash Pressure	2.5 bar	36 psi
NaOCl (max)	2000 mg/L	
TSS (max)	100 mg/L	
Turbidity (max)	300 NTU	
Particle Size (max)	300 µm	
Flow Configuration	Outside-in	
Expected Filtrate Turbidity	≤0.1 NTU	
Expected Filtrate SDI	≤2.5	

Important Information

Proper start-up of an ultrafiltration system is essential to prepare the membranes for operating service and to prevent membrane damage. Following the proper start-up sequence also helps ensure that system operating parameters conform to design specifications so that system water quality and productivity goals can be achieved. Before initiating system start-up procedures, membrane pretreatment, installation of the membrane modules, instrument calibration and other system checks should be completed. Please refer to the product technical manual.

Operational Guidelines

Avoid any abrupt pressure variations during start-up, shutdown, cleaning or other sequences to prevent possible membrane damage. Flush the ultrafiltration system to remove shipping solution prior to start-up. Remove residual air from the system prior to start-up. Manually start the equipment. Target a filtrate flow of 60% of design during initial operations. Depending on the application, filtrate obtained from initial operations should be discarded. Please refer to the product manual.

General Information

If operating limits and guidelines given in this bulletin are not strictly followed, the limited warranty will be null and void.

To prevent biological growth during extended system shutdowns, it is recommended that storage solution be injected into the membrane modules. Please refer to the product technical manual.

Regulatory Note

Please check local regulatory guidelines and application status before use and sale.

For more information about DOW IntegraPac™ ultrafiltration, call the Dow Water & Process Solutions business:

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Warning: The use of this product does not necessarily guarantee the removal of cysts and pathogens from water. Effective cyst and pathogen reduction is dependent on the complete system design and on the operation and maintenance of the system.

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