



Water & Process Solutions

LENNTECH

info@lennotech.com Tel. +31-152-610-900

www.lennotech.com Fax. +31-152-616-289

DOW IntegraPac™ Ultrafiltration Skid With IP-51

The DOW IntegraPac™ skid from Dow Water & Process Solutions is a pre-engineered, standardized skid design consisting of DOW™ Ultrafiltration modules, auxiliary parts and piping. It significantly streamlines design, assembly and installation, resulting in lower skid costs, reduced engineering design costs, easy assembly, smaller footprint and shortened delivery schedule. Features include:

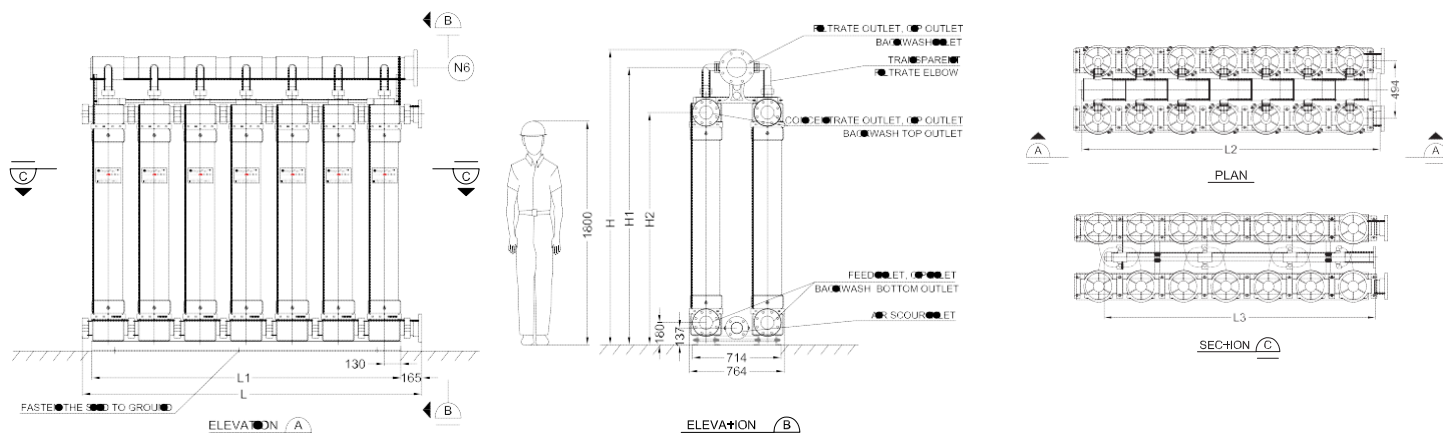


- Modular and scalable for design across a wide range of flow rates
- Materials of construction selected for corrosion resistance and chemical compatibility
- Shipped unassembled to lower transportation cost and prevent damage in transit
- Individual end caps with built-in interconnectivity allow modules to be connected directly, and eliminate ancillary piping, manifolding and connections
- Standardized and pre-fabricated components and parts eliminate measuring, cutting, gluing and welding
- Compact design and footprint saves space
- Easily accessible for physical inspection or replacement at end of life
- Operator-friendly transparent filtrate elbow designed and located for easy visual integrity inspection
- High pressure rating to enable direct feed to reverse osmosis feed pumps

Skid Configurations with IP-51 Modules

No. of Modules	IntegraPac™ Skid	Membrane Area		Flow @65 lmh (38 gfd)		Length (L)		Width		Height (H)		Weight, dry (incl. modules)		Weight, filled (incl. modules)		Hold-Up Volume	
		m ²	ft ²	m ³ /hr	gpm	mm	ft.	mm	ft.	mm	ft.	kg	lbs.	kg	lbs.	m ³	US gal
6	IP-51-06	306	3294	20	88	1241	4.1	764	2.51	2375	7.79	418	922	738	1627	0.29	77.7
8	IP-51-08	408	4392	27	117	1604	5.3	764	2.51	2375	7.79	540	1190	966	2130	0.39	103.6
10	IP-51-10	510	5490	33	146	1967	6.5	764	2.51	2375	7.79	661	1457	1194	2632	0.49	129.4
12	IP-51-12	612	6588	40	175	2330	7.6	764	2.51	2375	7.79	783	1726	1422	3135	0.59	155.3
14	IP-51-14	714	7686	46	204	2693	8.8	764	2.51	2375	7.79	909	2004	1655	3649	0.69	181.2
16	IP-51-16	816	8784	53	234	3056	10.0	764	2.51	2375	7.79	1041	2295	1893	4173	0.78	207.1
18	IP-51-18	918	9882	60	263	3419	11.2	764	2.51	2375	7.79	1167	2573	2126	4687	0.88	233.0
20	IP-51-20	1020	10980	66	292	3782	12.4	764	2.51	2375	7.79	1294	2853	2359	5201	0.98	258.9
22	IP-51-22	1122	12078	73	321	4145	13.6	764	2.51	2375	7.79	1420	3131	2592	5714	1.08	284.8

Example: 2 x 7 IntegraPac IP-51-14 Arrangement



Operating Parameters

	SI Units	US Units
Filtrate Flux @25°C	50-115 l/m ² /hr	29-68 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)	2,000 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 DOW IntegraPac™ skid, 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 DOW IntegraPac™ ultrafiltration system to remove storage solution prior to start-up. Remove residual air from the system prior to start-up. Manually start the equipment. Target a permeate 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 technical 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.

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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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