Product Data Sheet

IntegraPac™ Ultrafiltration Skid

With IP-51XP or IPD-51XP

Description

The IntegraPac™ skid from DuPont Water Solutions is a pre-engineered, standardized skid design consisting of DuPont's ultrafiltration modules with XP fiber, 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
- Uses high permeability XP fiber helping to improve operating efficiencies and productivity
- Materials of construction selected for corrosion resistance and chemical compatibility
- Shipped unassembled to lower transportation cost and help prevent damage in transit
- Direct coupling of modules eliminates ancillary piping, saving costs and reducing footprint
- IPD skid tested and certified by NSF International under NSF/ANSI 61 and 419 ensuring safe use in drinking water applications
- Standardized and pre-fabricated components eliminates 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

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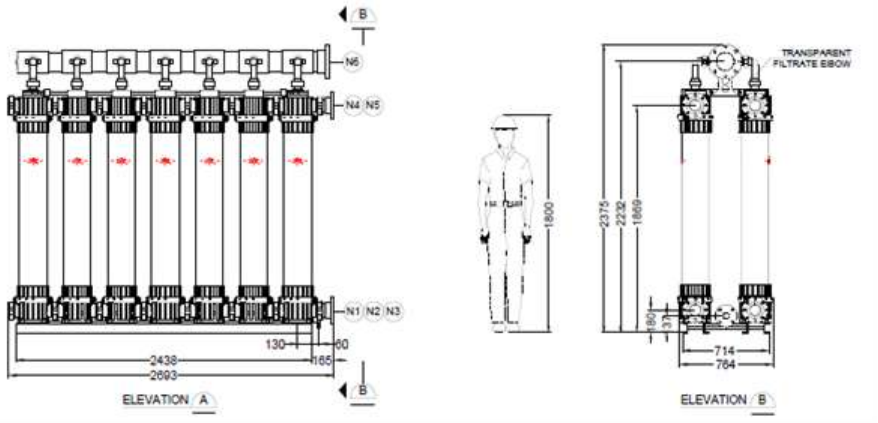
Typical Properties

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

Dimensions

Example: 2x7
IntegraPac™ IP & IPD-51XP-14 Arrangement



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Suggested Operating Conditions

	SI Units	US Units
Filtrate Flux (25ºC)	40-110 l / m^2 /hr	24-65 gfd
Temperature	1- 40ºC	34º-104ºF
Maximum Inlet Module Pressure (20ºC)	6.25 bar	90.65 psi
Maximum Inlet Module Pressure (40ºC)	4.75 bar	68.89 psi
Maximum Operating TMP	2.1 bar	30.5 psi
Maximum Operating Air Scour Flow	12 Nm^3/hr	7.1 scfm
Maximum Backwash Pressure	2.5 bar	36 psi
Operating pH	2-11	
Maximum NaOCl	2000 mg/L	
Maximum Particle Size	300 µm	
Flow Configuration	Outside in, dead end flow	
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 Ultrafiltration Technical Manual (Form No. 45-D00874-en).

Operation 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. Depending on the application, filtrate obtained from initial operations should be discarded.

Please refer to the Ultrafiltration Technical Manual (Form No. 45-D00874-en).

General Information

- If operating limits and guidelines given in this bulletin are not strictly followed, the limited warranty will be null and void.
- To control biological growth during extended system shutdowns, it is recommended that storage solution be injected into the membrane modules.

Please refer to the Ultrafiltration Technical Manual (Form No. 45-D00874-en) and Technical Service Bulletins.

Product Stewardship

DuPont has a fundamental concern for all who make, distribute, and use its products, and for the environment in which we live. This concern is the basis for our product stewardship philosophy by which we assess the safety, health, and environmental information on our products and then take appropriate steps to protect employee and public health and our environment. The success of our product stewardship program rests with each and every individual involved with DuPont products—from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

Customer Notice

DuPont strongly encourages its customers to review both their manufacturing processes and their applications of DuPont products from the standpoint of human health and environmental quality to ensure that DuPont products are not used in ways for which they are not intended or tested. DuPont personnel are available to answer your questions and to provide reasonable technical support. DuPont product literature, including safety data sheets, should be consulted prior to use of DuPont products. Current safety data sheets are available from DuPont.

Please be aware of the following:

- The use of this product in and of itself 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.

Regulatory Note

NSF/ANSI 61 and 419 certified drinking water modules require specific conditioning procedures prior to producing potable water. Please refer to the Ultrafiltration Technical Manual (Form No. 45-D00874-en) flushing section for specific procedures. Drinking water modules may be subjected to additional regulatory restrictions in some countries. Please check local regulatory guidelines and application status before use and sales.

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