



Ultrafiltration Systems

Envirogen Ultrafiltration Systems feature a modular design to accommodate your clean water flow requirements. Ideal for use in potable or process water applications even with incoming water turbidity as high as 250 NTU. The core of the membrane technology is the hollow-fiber, inside-out filtration process that delivers a robust solution. The modules are orientated vertically and can be configured as either dead-end or partial cross-flow processes.

Features & Benefits

Feature	Benefit
Membrane flows from inside to out	More effective cleaning; longer life; no exterior abrasion of fibers
Single (not multi) bore fibers	High collapse pressure; 100% Integrity testing; Each fiber is individually repairable
Modular system	Sized to meet your flow requirements; Scalable

Membrane Characteristics

- Hydrophilic membrane
- 0.02µm (20 nm) pore size
- Chlorine Resistance 250,000 ppm hours @ pH ≥10
- Blend of polyvinylpyrrolidone and polyethersulfone
- Asymmetric/microporous Structure
- High performance and resistant to fouling
- Typical permeate quality SDI <3, Turbidity <0.1 NTU
- Membrane filtration provides 99.9999% (LOG 6) reduction of bacteria (*Pseudomonas diminuta*) and 99.99% (LOG 4) reduction of virus (MS2 colifages) by mechanical means.

Operating Conditions

Max. system pressure	300kPa/ 43psi/ 3bar
Max. transmembrane pressure	300kPa/ 43psi/ 3bar
Max. backflush pressure	300kPa/ 43psi/ 3bar
Temp. range	0-40°C / 32-104°F
PH range	2-12

Membrane Cleaning

Sodium Hypochlorite - Typical 200 ppm, at ≤ 40 °C at ≥ pH 10 - Maximum 500 ppm - 250.000 ppm hours cumulative; ≥ pH 10

Chlorine Dioxide - Typical 1 ppm, at ≤ 40 °C - Maximum 2 ppm - 90.000 ppm hours cumulative; pH 11

Hydrogen Peroxide - Typical 200 ppm, at ≤ 40 °C - Maximum 500 ppm - 350.000 ppm hours cumulative

Note: The above figures for oxidant contact represent the membrane resistance to each individual oxidizing agent. The total combined exposure for Sodium Hypochlorite and Chlorine Dioxide will be calculated as follows: Combined exposure (NaOCl + ClO₂) = 2.6 x Exposure to ClO₂ (in ppm hours) + Exposure to NaOCl (in ppm hours) < 250.000 ppm hours

System Characteristics

- Polyvinylchloride (PVC) housings and piping.
- 8.7" X 60" modules (vertically orientated)
- Feed pump and backwash pumps included
- Additional system options are available such as CIP packages, air assist backwash, pH adjustment, cross flow versus dead end configurations.



Ordering Guide

Banks	Product	Series (Area per module)	Number of Modules per Bank
2, 3, 4	UF	20	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
		40	1, 2
		55	1, 2, 3, 4, 5
		64	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12

System Specifications – 0.8 mm Hollow Fiber

Model Name	# Modules per Bank	Area per Module (M ²)	Target Flow (GPM)	Flow (GPD)	Min (GPM)	Max (GPM)
UF401	1	40	18	25,363	9	26
UF551	1	55	24	34,875	12	36
UF641	1	64	28	40,581	14	42
UF402	2	40	35	50,727	18	53
UF552	2	55	48	69,749	24	73
UF642	2	64	56	81,162	28	85
UF553	3	55	73	104,624	36	109
UF643	3	64	85	121,744	42	127
UF554	4	55	97	139,498	48	145
UF644	4	64	113	162,325	56	169
UF555	5	55	121	174,373	61	182
UF645	5	64	141	202,906	70	211
UF646	6	64	169	243,487	85	254
UF647	7	64	197	284,069	99	296
UF648	8	64	225	324,650	113	338
UF649	9	64	254	365,231	127	380
UF6410	10	64	282	405,812	141	423
UF6411	11	64	310	446,394	155	465
UF6412	12	64	338	486,975	169	507

Note: the above systems include two (2) Banks of modules. Additional Banks can be added to increase flow rating.

System Specifications – 1.5 mm Hollow Fiber

Model Name	# Modules per bank	Area per Module (M ²)	Target Flow GPM	Flow (GPD)	Min (GPM)	Max (GPM)
UF201	1	20	9	12,682	4	13
UF202	2	20	18	25,363	9	26
UF203	3	20	26	38,045	13	40
UF204	4	20	35	50,727	18	53
UF205	5	20	44	63,408	22	66
UF206	6	20	53	76,090	26	79
UF207	7	20	62	88,771	31	92
UF208	8	20	70	101,453	35	106
UF209	9	20	79	114,135	40	119
UF2010	10	20	88	126,816	44	132
UF2011	11	20	97	139,498	48	145
UF2012	12	20	106	152,180	53	159

Replacement modules and ongoing service plans are available.

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North American Headquarters

Envirogen Technologies, Inc.
 2627 Chestnut Ridge, Suite 260
 Kingwood, TX 77339
 Tel: +1 877.312.8950
[E:info@envirogen.com](mailto:info@envirogen.com)
www.envirogen.com