

Industrial Ultrafiltration Systems

Capacity: 10,000 to 1,000,000 GPD

UF

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Ultrafiltration is a pressure driven membrane separation process that removes suspended or particulate matter (including colloids & silt) from water. Ultrafiltration is more reliable than conventional multimedia filtration that removes approx. 10 micron or larger matter. Ultrafiltration also efficiently removes bacteria and most viruses.



Standard Features

- UF modules (PVC)
- Stainless steel backwash pump
- 150 um flushable screen
- Schedule 80 PVC piping
- Microprocessor control panel
- Motor starters
- NEMA 12 enclosure
- Differential pressure switch
- Liquid filled pressure gauges (panel mount)
- Electrically actuated valves
- Flow meter

Available Options

- Chemically Enhanced Backwash (CEB)
- Feed/backwash oxidizer (dosing system)
- Membrane cleaning skid (CIP)
- 380-415V/3Ph/50Hz power supply
- Online turbidity monitor
- Stainless steel multi-stage feed pump
- Feed pump VFD
- PLC + HMI
- Filtrate (backwash) tank (HDPE)
- Pressure Transducers
- Blower (for backwash)
- Duplex 2205 screen (versus SS 316)

Pure Aqua supplies a full line of standard and fully customizable Ultrafiltration systems, all of which are engineered using advanced 3D computer modeling and process design software.



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Ultrafiltration systems eliminate the need for clarifiers and multimedia filters. Standard design is based on a UF module with outside-in flow configuration which allows for less plugging, higher solids loading, higher flow area and easy cleaning.

Operation Specifications

- Power supply: 460V/3Ph/60Hz
- Turbidity < 50 max. 300 NTU
- TSS < 50 max. < 100 mg/L
- TOC < 10 max. < 40 mg/L
- COD max. < 60 mg/L
- pH 6-9 (2-11 cleaning)
- Temperature 25°C (max. 40°C)
- Cl2 0.5 ppm (2,000 cleaning)
- Backwash frequency 20-60 minutes

Applications

- RO pretreatment
- Drinking water treatment
- Process separation or recovery
- Tertiary wastewater or grey water treatment



Model #	Filtrate Surface or Grey Water Flux: 25 GFD		Filtrate Sea Water Flux: 35 GFD		Filtrate Ground Water Flux: 53 GFD		Number of UF Modules
	GPD	M ³ /D	GPD	M ³ /D	GPD	M ³ /D	
UF-10K-1	10,080	38	15,840	60	25,920	98	1
UF-20K-2	20,160	76	30,956	117	50,655	192	2
UF-40K-4	40,320	153	63,541	241	103,976	394	4
UF-60K-6	60,480	229	94,497	358	154,631	586	6
UF-80K-8	80,640	305	127,082	481	207,952	788	8
UF-100K-10	100,800	382	158,038	599	258,608	980	10
UF-120K-12	120,960	458	190,623	722	311,929	1,182	12
UF-161K-16	161,280	611	254,164	963	415,905	1,575	16
UF-201K-20	201,600	764	316,076	1,197	517,215	1,959	20
UF-262K-26	262,080	993	412,202	1,561	674,512	2,555	26
UF-302K-30	302,400	1,145	475,743	1,802	778,489	2,949	30
UF-403K-40	403,200	1,527	633,781	2,401	1,037,096	3,928	40

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