

Industrial Nanofiltration Systems

Capacity: 200,000 to 900,000 GPD

NF-500
SERIES

Pure Aqua's nanofiltration is a membrane filtration process used most often with low total dissolved solids water such as surface water and fresh groundwater, with the purpose of softening (polyvalent cation removal) and removal of disinfection by-product precursors such as natural organic matter and synthetic organic matter. Nanofiltration is also becoming more widely used in food processing applications such as dairy, for simultaneous concentration and partial (monovalent ion) demineralization.



NF-900K-18780

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

Standard Features

- Powder coated carbon steel frame
- 8" TFC spiral wound membranes
- Stainless steel multi-stage pump with TEFC motor
- FRP membrane housing
- 5 micron cartridge prefilter
- 460V/3Ph/60Hz power requirement
- PLC based control panel
- Programmable time delay and set points
- Status indicators
- Motor starter
- NEMA 12 enclosure
- Low pressure switch
- High pressure switch
- Liquid filled pressure gauges
- Permeate conductivity monitor
- Permeate & concentrate flow meters

Available Options

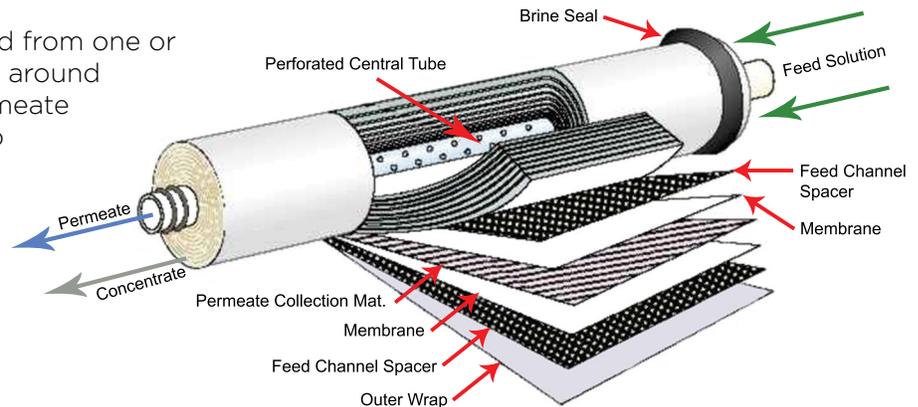
- Remote monitor/control option
- Feed water conductivity monitor
- Membrane cleaning skid
- Automatic hourly flush
- Feed/Permeate blending
- Export crating
- 220V or 380-415V/3Ph/50 or 60 Hz
- Product tank level switch
- Feed pH controller with sensor
- Feed ORP controller with sensor
- Water and hour meters
- Chemical dosing systems
- Media and Iron prefiltration systems
- Ozonation and UV sterilization systems
- Water softeners
- Post RO systems
- Containerized NF systems

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The spiral membrane is constructed from one or more membrane envelopes wound around a perforated central tube. The permeate passes through the membrane into the envelope and spirals inward to the central tube for collection. The layers of the membrane envelope are detailed in the diagram to the right.



Operation Specifications

- Max. feed water temperature: 42°C
- Feed water pressure: 20 to 50 psi
- Operating pressure: 80 to 125 psi
- Hydrogen Sulfide must be removed
- Turbidity should be removed
- Max. Iron content: 0.05 ppm
- Feed water TDS: 0-1,000 ppm
- Equipment upgrade for higher TDS values
- Hardness over 1 GPG requires antiscalant dosing
- pH tolerance range: 3-11
- Max. Silica Tolerance: 60 ppm @ 60% recovery
- Operate at higher TDS by lowering recovery

Model #	Permeate Flow Rate		Quantity of Membranes	Motor at 1,000 ppm		Approx. Weight (lbs)	Dimensions L"xW"xH"
	GPD	M ³ /D		60 Hz (hp)			
NF-200K-4780	200,000	758	28	25	4,500	350x72x80	
NF-225K-5680	225,000	852	30	25	4,500	300x72x80	
NF-270K-6680	270,000	1,023	36	25	4,900	300x72x80	
NF-320K-7680	320,000	1,212	42	30	5,200	300x72x90	
NF-360K-8680	360,000	1,364	48	30	5,750	300x72x90	
NF-410K-9680	410,000	1,553	54	40	6,250	300x72x90	
NF-450K-10680	450,000	1,705	60	40	7,500	300x72x90	
NF-500K-11680	500,000	1,894	66	50	8,500	300x72x80	
NF-550K-11780	550,000	2,083	77	50	8,750	350x72x90	
NF-600K-13780	600,000	2,273	91	60	9,250	350x84x92	
NF-700K-14780	700,000	2,652	98	60	9,650	350x84x94	
NF-800K-16780	800,000	3,030	112	75	10,200	350x84x96	
NF-900K-18780	900,000	3,409	126	75	10,650	350x84x98	

Note: The above information to be confirmed after providing detailed water analysis. Nanofiltration systems are the same as RO systems, must have a good pretreatment and antiscalant dosing systems.

Pure Aqua also supplies: Custom Engineered Solutions, Multimedia Pretreatment, Activated Carbon Pretreatment, Water Conditioning, Chemical Dosing Systems, Ultraviolet (UV) Sterilizers and Ozonation Systems.

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