

Commercial Nanofiltration Systems

Capacity: 13,000 to 32,000 GPD

NF-300

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.



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
- 4" TFC spiral wound membranes
- Stainless steel multi-stage pump with TEFC motor
- FRP membrane housings
- 5 micron cartridge prefilter
- 460V/3ph/60Hz power requirement
- Microprocessor based control panel
- Programmable time delay and set points
- LCD screen
- Motor starter
- NEMA 12 enclosure
- Low pressure switch
- High pressure switch
- Liquid filled pressure gauges
- Permeate conductivity monitor
- Permeate & concentrate flow meters

Available Options

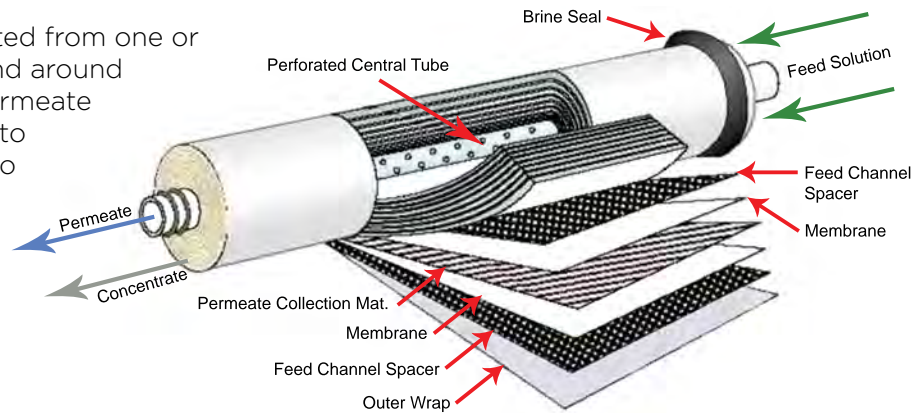
- Feed water conductivity monitor
- Membrane cleaning skid
- Automatic hourly flush
- Feed/Permeate blending
- Export crating
- 220V or 380-415V/3ph/50 or 60Hz
- Product tank level switch
- Feed pH monitor with sensor
- Feed ORP monitor with sensor
- Water and hour meters
- Chemical dosing systems
- Media prefiltration systems
- Ozonation and UV sterilization systems
- Water softeners
- Post RO systems
- Skid mounted with pre or post treatment
- 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 150 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
- 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 4" Membranes	Motor Rating at 1,000 ppm 60Hz (hp)	Approx. Weight (lbs)	Dimensions L"xW"xH"
	GPD	M ³ /D				
NF-13K-3340	13,000	50	9	3	750	136x43x60
NF-15K-5240	15,000	57	10	3	850	96x43x60
NF-18K-4340	18,000	68	12	3	875	136x43x60
NF-22K-5340	22,000	85	15	3	900	136x43x60
NF-24K-8240	24,000	91	16	3	950	96x43x68
NF-27K-6340	27,000	102	18	3	990	136x43x68
NF-32K-7340	32,000	121	21	5	1,025	136x43x68

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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