Industrial Nanofiltration Systems

Capacity: 25,200 to 155,700 GPD

NF-400 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-155K-4680

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
- Microprocessor 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
- 220V or 380-415V/3ph/50 or 60Hz
- Product tank level switch
- Feed pH controller with sensor
- Feed ORP controller with sensor
- Flow totalizer
- Chemical dosing systems
- Media and iron prefiltration systems
- UV sterilization systems
- Water softeners
- Post RO systems
- Containerized NF systems

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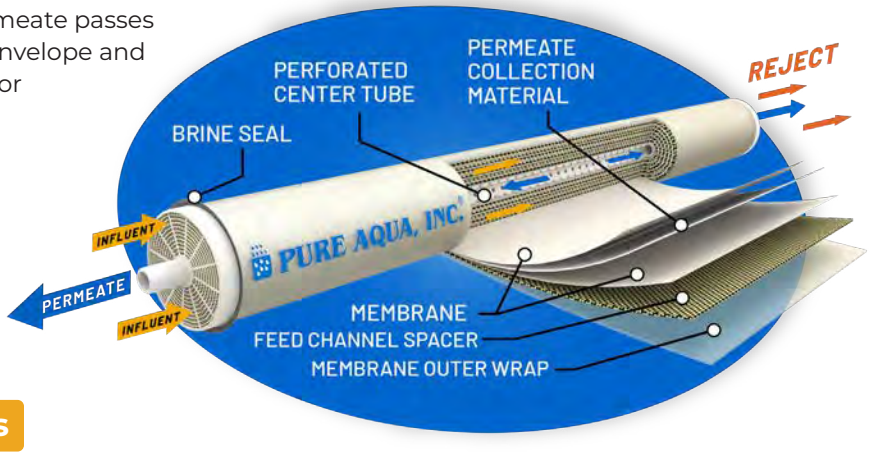
The spiral membrane is constructed from one or more membrane envelopes wound around a perforated central tube. The permeate passes through the membrane into the envelope and spirals inward to the central tube for collection.

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
- H_2S 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 8" Membranes	Motor Rating at 1,000 ppm 60Hz (hp)	Approx. Weight (lbs)	Dimensions L"xW"xH"
	GPD	M^3/D				
NF-25K-1480	25,200	95	4	5	2,300	190x43x61
NF-32K-1580	32,400	123	5	5	2,350	230x43x61
NF-38K-1680	38,700	146	6	5	2,400	270x43x61
NF-51K-2480	51,300	194	8	5	2,500	190x43x63
NF-64K-2580	64,800	245	10	10	2,600	230x43x65
NF-78K-3480	78,300	296	12	10	2,700	190x43x75
NF-97K-3580	97,200	368	15	10	3,200	230x43x75
NF-117K-3680	117,000	443	18	15	3,500	270x53x77
NF-129K-4580	129, 600	491	20	15	4,200	230x53x87
NF-155K-4680	155,700	589	24	15	4,550	270x53x88

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