

Datasheet : Nanofiltration system

General description

The nanofiltration system incorporates technology that reduces total dissolved solids (TDS) concentration by approximately 80%, depending on the feed water quality. To maximize water production through its membranes, it is equipped with a self-contained pressurization unit operating at a pressure of 4.1 to 6.2 bar (60 to 90 psi). Monitoring and control systems allow for adjustment of the operating pressure. A solenoid valve at the inlet controls the water supply, closing when the target production setpoint is reached or in case of a malfunction. A safety pressure switch protects the pump against cavitation caused by a pressure drop. System start-up and shutdown are controlled by a high-level detector, a pressure switch, or an external contact. The unit signals operating status and faults via an audible alarm and indicator lights.

Pump design

The unit features a quiet 0.75 HP stainless steel multistage centrifugal pump

Membrane and housing

The system uses a TFC - nanofiltration membrane inside a housing. Each membrane and housing is rated and tested to withstand an operating pressure of 300 psi (20.6 bar). The housing is mounted in a vertical configuration.

Setting and control pannel

The system incorporates a wastewater recovery device and includes internal adjustment of the recirculated flow rate. A valve is used to control the wastewater flow rate. During the shutdown phase, the membrane feed side is drained with a minimum of 5 volumes of treated water. Each time the reverse osmosis unit is completely shut down, the PureRince rinsing cycle is automatically activated

Frame

The system is assembled on a corrosion-resistant stainless steel frame. The unit's weight will not exceed 160 lbs in operation.

PNF_{2K}



Manufactured by



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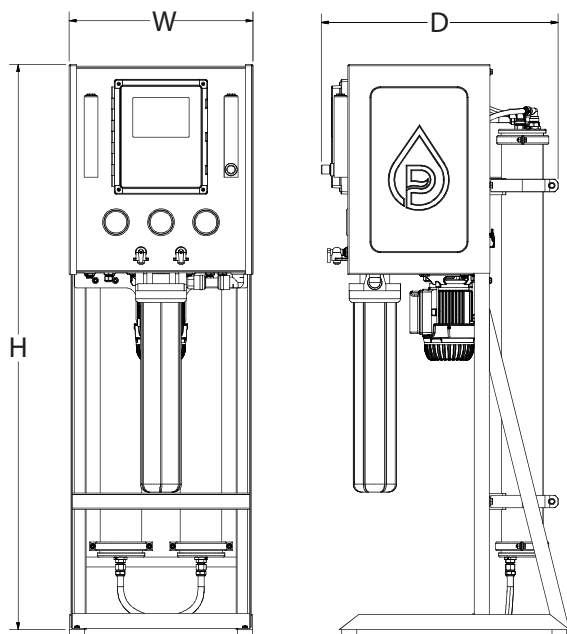
SERIE ATMOSPHER

DATASHEET

PNF-2K		
Membrane type	Nanofiltration TFC (1x)	
Membrane dimensions	4 x 40 [po] - (8,1 m ²) / membrane	
Production	5,87 lpm [1,55 gpm]	
Reject	3,14 lpm [0,83 gpm]	
Weight shipping/operation	68/77 Kg (150/160 lb)	
Power supply	120 VAC/11 A / 60 Hz	
Electronic board	Inlet signals (Dry contacts)	Pressure fault (Pressure switch) Pretreat state signal Tank full
	Output relays :	Pump relay 120/240 VAC, 2 HP max Inlet valve relay 120/240 VAC, 5A max Rinse valve relay 120/240 VAC, 5A max
	Amperage	12 A max total load

Measures are based on raw water at à 25°C, TDS lower than 2000 mg/l and SDI < 3

Water supply	
Inlet pressure	20-50 psi (1.7 – 3.4 bar)
Operating pressure	60-90 psi (4.1 – 6.2 bar)
Temperature	4 – 30
pH	2 – 11 SU
Chlorine (Max.)	Non detectable
Hardness (Max.)	103 mg/l (6 gpg)
Iron (Max.)	0.3 mg/l
Silica	10.0 mg/l
Total dissolved solids (Max.)	3 000 mg/l
Hydraulic connections	Feed : ¾" NPTF
	Rinse : ¾" quick connect
	Production : ¾" quick connect
	Drain : ¾" quick connect



PRODUCTION FLOWS PNF-2K		
STD / TDS	2000 mg/l	
25 °C		2232 gal/j
		8448 L/j
15 °C		1728 gal/j
		6540 L/j
5 °C		1252 gal/j
		4739 L/j

DIMENSIONS	
PNF-2K	
W	467 mm / 18,375 po
D	600 mm / 23,625 po
H	1454 mm / 57,25 po