

DairyNF™ Series

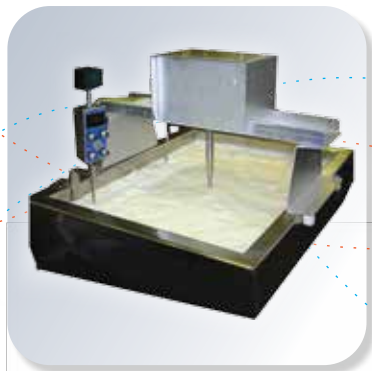
High Flux, High Protein Rejection 150-250 Dalton Nanofiltration Membrane Elements

Hydranautics' membrane technology experience and innovation are at the core of every DairyNF™ series membrane. Specifically designed for the separation of divalent anions and/or organic molecules greater than 200 Daltons from monovalent salts and lower molecular weight organics, DairyNF™ membranes deliver exceptional performance and value.

Superior membrane technology is the key to Hydranautics' innovative DairyNF™ (Process Nanofiltration) elements. All DairyNF™ membranes are manufactured using highly controlled, ISO 9001-compliant processes, ensuring the highest quality and most consistent, reliable performance available. Hydranautics has set a new industry-standard for the rolling of full-fit membrane modules: Hand-rolling of elements has been eliminated by the use of proprietary, robot-based automatic rolling machines, specifically designed by Hydranautics for fabricating membrane modules of the highest quality. The result is a higher level of filtration and separations performance for our customers.

Applications:

- Whey and milk concentration
- De-salting (de-mineralization) of whey and other streams
- DP1/DP2 sugar fractionation
- Recovery of hydrolyzed proteins and enzymes



Key Features:

- All elements are automatically rolled on a proprietary robotized machine
- Elements meet FDA regulations CFR Title 21 and 3A Sanitary Standards for Crossflow Membrane Modules, Number 45-01, Section C
- USDA-accepted – sizes 3838, 3840, 8038 and 8040
- 100% testing of membrane rolls with 2000 ppm MgSO₄ for flux and rejection compliance
- 100% testing of elements for rejection and flow compliance

Benefits from Auto Rolling:

- Superior glue-line adhesion and strength
- Tighter rolling and caging
- Greater flow rates due to maximum effective membrane area
- Greater structural reliability



Type:

Configuration Sanitary (Full-Fit) Spiral Wound
Outerwrap polypropylene Net-wrap
Membrane Polymer Composite Polyamide
Molecular Weight Cut-off 150-250 daltons

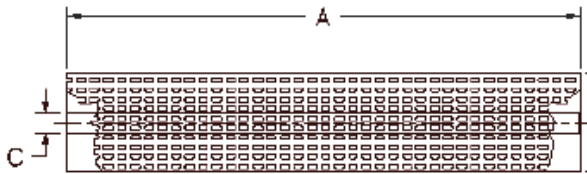
Applications Data:

Maximum Applied Pressure, psig (bar) 600 psig (41 bar)
Maximum Chlorine Concentration, PPM at pH>10 < 0.1 ppm
Maximum Operating Temperature, °F (°C) 122° (50°)
Operating pH Range 3.0 - 9.0
Cleaning pH Range 1.0 - 11.5
Maximum Pressure Drop for a Vessel, psi 60 (4 bar)

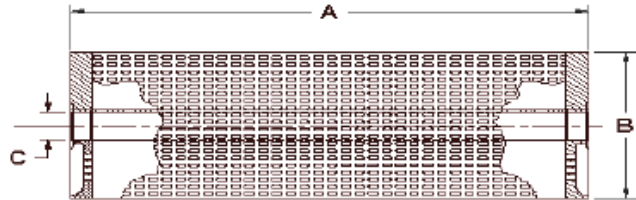
Product and Guidelines:

Size	Feed Spacer, inches (cm)	Area, ft ² (m ²)	Dimensions, inches (cm)			Max. Feed Flow, GPM (m ³ /hr)	Max. Pressure Drop per Element, psi (bar)
			A	B	C		
DairyNF™ 3838-30	0.030 (0.076)	80 (7.4)	38.0 (96.5)	3.78 (9.60)	0.83 (2.11)	30 (6.9)	15 (1.0)
DairyNF™ 3838-46	0.046 (0.117)	60 (5.6)	38.0 (96.5)	3.78 (9.60)	0.83 (2.11)	30 (6.9)	15 (1.0)
DairyNF™ 3840-30	0.030 (0.076)	80 (7.4)	38.75 (96.5)	3.78 (9.60)	0.83 (2.11)	30 (6.9)	15 (1.0)
DairyNF™ 3840-46	0.046 (0.117)	60 (5.6)	38.75 (96.5)	3.78 (9.60)	0.83 (2.11)	30 (6.9)	15 (1.0)
DairyNF™ 8038-30	0.030 (0.076)	360 (32)	38.0 (96.5)	7.90 (20.1)	1.125 (2.86)	80 (18.2)	13 (0.9)
DairyNF™ 8038-46	0.046 (0.117)	280 (26)	38.0 (96.5)	7.90 (20.1)	1.125 (2.86)	80 (18.2)	13 (0.9)
DairyNF™ 8040-30	0.030 (0.076)	360 (33)	40.0 (106)	7.90 (20.1)	1.125 (2.86)	80 (18.2)	13 (0.9)
DairyNF™ 8040-46	0.046 (0.117)	280 (26)	40.0 (106)	7.90 (20.1)	1.125 (2.86)	80 (18.2)	13 (0.9)

3838, 8038 Style



8040 Style with ATDs



Nomenclature = DairyNF + Size + Feed Spacer

**Solutions You Need.
Technologies you Trust!**

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