

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.

Key Features:

- All elements are automatically rolled on a proprietary, robotized machine
- All components conform to FDA regulation CFR Title 21, "3A Sanitary Standards for Crossflow Membrane Modules, Number 45-02", EC Reg. No. 1935/2004, and EU Reg. No. 10/2011
- 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

Key Benefits:

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

Applications:

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



Type:

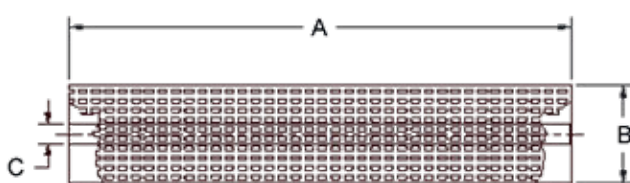
Configuration	Sanitary (full-fit) spiral wound
Outerwrap	Polypropylene net wrap
Membrane polymer	Composite polyamide
Molecular weight cut-off	150 – 250 Daltons

Application Data:

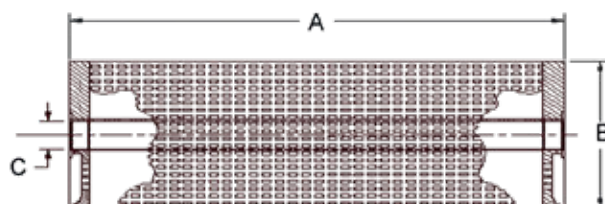
Maximum applied pressure	600 psig (41 bar)
Maximum chlorine concentration	< 0.1 ppm
Maximum operating temperature	122 °F (50 °C)
Operating pH range	3 – 9
Cleaning pH Range (ambient temperature)	1.8 – 11.0
Cleaning pH range (max. temp. 122 °F / 50 °C)	1.8 – 10.5
Maximum pressure drop for a vessel	60 psi (4 bar)

Products and Guidelines:

Sizes	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 (9.6)	0.83 (2.11)	30 (6.8)	15 (1.0)
DairyNF™3838-46	0.046 (0.117)	63 (5.9)	38.0 (96.5)	3.78 (9.6)	0.83 (2.11)	30 (6.8)	15 (1.0)
DairyNF™3840-30	0.030 (0.076)	80 (7.4)	38.75 (98.4)	3.78 (9.6)	0.83 (2.11)	30 (6.8)	15 (1.0)
DairyNF™3840-46	0.046 (0.117)	63 (5.9)	38.75 (98.4)	3.78 (9.6)	0.83 (2.11)	30 (6.8)	15 (1.0)
DairyNF™8038-30	0.030 (0.076)	385 (36)	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)	300 (28)	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)	385 (36)	40.0 (101.6)	7.90 (20.1)	1.125 (2.86)	80 (18.2)	13 (0.9)
DairyNF™8040-46	0.046 (0.117)	300 (28)	40.0 (101.6)	7.90 (20.1)	1.125 (2.86)	80 (18.2)	13 (0.9)



3838, 3840, 8038 Style



8040 Style with ATDs

Nomenclature = DairyNF™ + Size + Feed Spacer

Solutions You Need.

Technologies You Trust!

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