Nitto
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HYDRANAUTICS

Product Data Sheet

DairyNF®

Highly selective nanofiltration composite sanitary membranes are designed specifically for separation of divalent anions and / or organic molecules greater than 200 Daltons from monovalent salts and lower molecular weight organics. Applications include whey and milk concentration, de-salting (mineralizing) of whey and other streams, DP1 / DP2 sugar fractionation, and BOD / COD reduction applications where low-pressure operation and high salt passage are desired. Components conform to FDA regulation CFR Title 21 Part 177, 3-A sanitary standard 45-03 (except as noted), EC Reg. No. 1935/2004, and EU Reg. No. 10/2011. Products are Kosher and Halal certified.

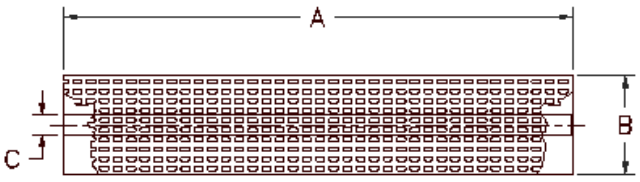
General Product Description

Configuration:	Sanitary (Full-Fit) Spiral Wound
Membrane Polymer:	Composite Polyamide
Molecular Weight Cut-off	150 – 250 daltons

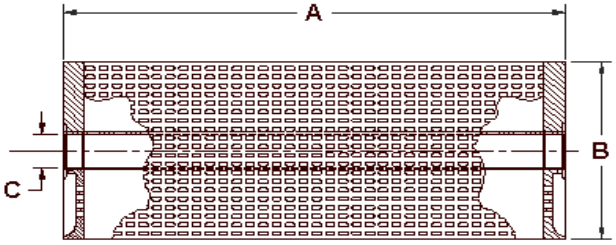
Packaging: Elements are enclosed in a sealed polyethylene bag and then packaged in a cardboard box. 8040 styles include interconnector assembly, anti-telescoping devices (ATDs), and brine seals. For Halal applications do not use the brine seal.

Model	Feed Spacer, inch (cm)	Area, ft^2 (m^2)	Dimensions, inch (cm)			Max. Feed Flow, GPM (m^3/hr)	Max. Pressure Drop per Element, psi (MPa)
			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 (0.10)
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 (0.10)
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 (0.10)
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 (0.10)
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 (0.09)
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 (0.09)
DairyNF 8040-30[t]	0.030 (0.076)	385 (36)	40.0 (101.6)	7.90 (20.1)	1.125 (2.86)	80 (18.2)	13 (0.09)
DairyNF 8040-46[t]	0.046 (0.117)	300 (28)	40.0 (101.6)	7.90 (20.1)	1.125 (2.86)	80 (18.2)	13 (0.09)

[t]Models with ATDs and internal interconnectors are not 3-A 45-03 compliant.



3838, 3840, 8038 Style



8040 Style with ATDs

Product Use and Restrictions^

Maximum Applied Pressure (DairyRO):	600 psig (4.1 MPa)
Maximum Chlorine Concentration:	< 0.1 PPM
Maximum Operating Temperature:	122°F (50°C)
Operating pH Range:	3.0 – 9.0^
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 (0.41 MPa)

^ The limitations shown here are for general use. For specified projects, operation at more conservative values may ensure the best performance and longest life of the membrane. See Hydranautics Technical Bulletins for more details.

To properly condition the membrane, a RO water flush and caustic clean in place must be performed prior to first use of new elements. Refer to TSB 218

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