

## DairyRO® Series

### High performance Reverse Osmosis Membranes for the Dairy Industry

Hydranautics - A Nitto Group Company has 40+ years of reverse osmosis membrane manufacturing experience which is incorporated into every DairyRO® membrane and element. Automation employed for all our DairyRO® elements ensures straight and minimally sized glue lines, maximum membrane area and the highest possible glue line adhesion.

DairyRO® composite polyamide reverse osmosis elements are of the net-wrapped, high flow full-fit design and hot water sanitizable type. All membranes and elements are manufactured using highly controlled, ISO 9001-compliant processes, ensuring the highest quality, most consistent and reliable performance available. Hydranautics' has set a new industry-standard using robot-based automatic rolling machine, specifically designed by Hydranautics, for fabricating membrane modules of the highest quality. The result is a higher level of filtration and separation performance for our customers.

#### Key Features:

- All elements are automatically rolled on a proprietary, robotized machine.
- Elements meet FDA regulations CFR Title 21 and 3A Sanitary Standards for Cross-flow Membrane Modules, Number 45-01, Section C.
- 100% testing of membranes with 1500 ppm NaCl for flux and rejection compliance.
- Introducing two new membranes

**DairyRO-HF : Hydranautics' patented technology provides 20%+ more water flow.**

**DairyRO-HS : Hydranautics' patented technology allows heat sanitization at 85 degree C.**

#### Key Benefits:

- Superior glue-line adhesion and strength.
- Tighter rolling and caging.
- Greater structural reliability.
- All elements provide the highest rejection using Hydranautics' RO technology.
- Greater flow rates due to maximum effective membrane area.
- Hot water sanitizable membranes for efficient sanitization and cleaning operations.

#### Applications:

- Pre-concentration of milk or whey for reducing product transport costs.
- Lactose Production.
- Sweet/acid concentration.
- Concentration of UF permeate.
- Milk and juice concentration.



## Type:

Configuration	Sanitary (Full-Fit) Spiral Wound
Membrane Polymer	Composite Polyamide

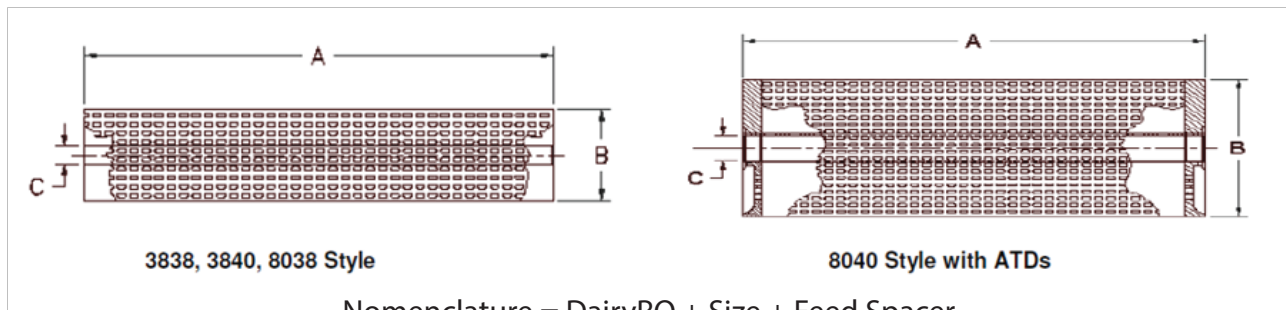
## Application Data:

Maximum Applied Pressure	800 psig (55.0 bar)
Maximum Chlorine Concentration	< 0.1 PPM
Maximum Operating Temperature	122°F (50°C)
Operating pH Range	2.0 - 11.0
Cleaning pH Range	1.0 - 11.0
Maximum Pressure Drop for a vessel	60 psi (4.1 bar)

## Product and Guidelines:

Model	Feed Spacer inches (cm)	Area ft <sup>2</sup> (m <sup>2</sup> )	Dimensions, inches (cm)			Max. Feed Flow, GPM (m <sup>3</sup> /hr)	Max. Pressure Drop per Element, psi (bar)
			A	B	C		
DairyRO® 3838 -30	0.030 (0.076)	80 (7.4)	38.00 (96.5)	3.78 (9.6)	0.83 (2.11)	30 (6.9)	15 (1.0)
DairyRO® 3838 -46	0.046 (0.117)	60 (5.6)	38.00 (96.5)	3.78 (9.6)	0.83 (2.11)	30 (6.9)	15 (1.0)
DairyRO® 3838 -65	0.065 (0.165)	50 (4.5)	38.00 (96.5)	3.78 (9.6)	0.83 (2.11)	30 (6.9)	15 (1.0)
DairyRO® 3840 -30	0.030 (0.076)	80 (7.4)	38.75 (98.4)	3.78 (9.6)	0.83 (2.11)	30 (6.9)	15 (1.0)
DairyRO® 3840 -46	0.046 (0.117)	60 (5.6)	38.75 (98.4)	3.78 (9.6)	0.83 (2.11)	30 (6.9)	15 (1.0)
DairyRO® 3840 -65	0.065 (0.165)	50 (4.5)	38.75 (98.4)	3.78 (9.6)	0.83 (2.11)	30 (6.9)	15 (1.0)
DairyRO® 6338 -30	0.030 (0.076)	200 (19)	38.00 (96.5)	6.36 (16.2)	1.138 (2.89)	70(15.8)	15 (1.0)
DairyRO® 6338 -46	0.046 (0.117)	150 (14)	38.00 (96.5)	6.36 (16.2)	1.138 (2.89)	70(15.8)	15 (1.0)
DairyRO® 8038 -30	0.030 (0.076)	360 (33)	38.00 (96.5)	7.90 (20.1)	1.125 (2.86)	80 (18.2)	13 (0.9)
DairyRO® 8038 -46	0.046 (0.117)	280 (26)	38.00 (96.5)	7.90 (20.1)	1.125 (2.86)	80 (18.2)	13 (0.9)
DairyRO® 8038 -65	0.065 (0.165)	215 (20)	38.00 (96.5)	7.90 (20.1)	1.125 (2.86)	80 (18.2)	13 (0.9)
Hydrapolish 8*	0.030 (0.076)	360 (33)	40.00 (106)	7.90 (20.1)	1.125 (2.86)	80 (18.2)	13 (0.9)

\* HF-HS elements are available in any of the above sizes excluding Hydrapolish. Hydrapolish 8 provided with one interconnector assembly, two anti-telescoping devices and one brine seal.



## Solutions You Need.

## Technologies You Trust!

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