

# UNISOL Food & Dairy NF Elements

## Sanitary NF Spiral Wound Elements

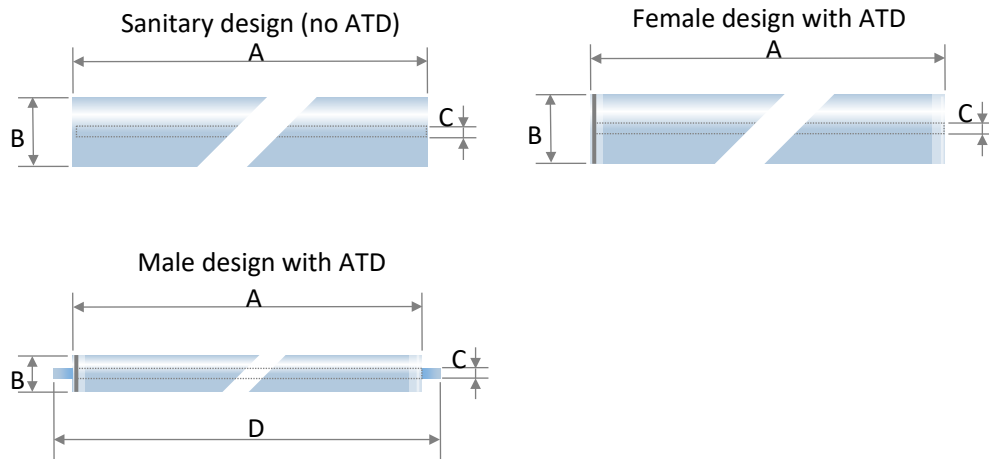
### SN NFDL Series

<b>Description</b>	UNISOL sanitary nanofiltration (NF) membrane elements are used by food and dairy processors for a variety of desalting, purification and other separations. All NFDL elements contain an improved nanofiltration membrane sheet designed to reject organics with a MWCO more than 400 Daltons while passing monovalent salts.		
<b>Characteristics</b>	Membrane	NFDL	
	Material	Polypiperazine	
	Outer wrap	Net wrap	
	Regulatory Status	Compliant with US FDA CFR Title 21, EC Reg. No. 1935/2004, and EU Reg. No. 10/2011. Halal certificate by by the Islamic Food and Nutrition Council of America (IFANCA). Kosher certificate by Committee of Kashrut.	
<b>Limits</b>	Max Operating Pressure	55 bar (800psi)	
	Max Pressure Drop	1 bar (14.5 psi)	
	Max. Operating Temperature	50 °C (122 °F)	
	Max. Cleaning Temperature	55 °C (131 °F)	
	Operating pH range	2 – 10	
	Cleaning pH Range	1.8 – 11	
	Free Chlorine Tolerance	Non-detectable	
<b>Area</b>	Spacer	B 31 mil diamond	C46 mil diamond
ft <sup>2</sup> (m <sup>2</sup> )	3838	75 (7.0)	58 (5.4)
	3840	81 (7.5)	62 (5.8)
	4040	85 (7.9)	68 (6.3)
	6338	226 (21)	172 (16)
	8038	344 (32)	290 (27)
	8040	355 (33)	269 (25)

(1) For the purpose of improvement, specifications may be updated periodically

(2) Consult UNISOL Membrane Technology when intend to operate at elevated pressure, temperature, concentrations.

**Dimensions**



Size mm (inch)	A <sup>[1]</sup>	∅B <sup>[2]</sup>	∅C <sup>[3]</sup>	D	Permeate tube	ATD
3838	965 (38)	96 (3.8)	21.1 (0.831)	/	Female	NO
3840	1016 (40)	96 (3.8)	21.1 (0.831)	/	Female	NO
4040	965 (38)	99.4 (3.9)	19 (0.748)	1016 (40)	Male	With
6338	965 (38)	160 (6.3)	28.9 (1.138)	/	Female	NO
8038	965 (38)	200.5 (7.9)	28.9 (1.138)	/	Female	NO
8040	1016 (40)	200.5 (7.9)	28.9 (1.138)	/	Female	With

<sup>[1]</sup> Tolerance: ±0.5mm

<sup>[2]</sup> Tolerance: -2~0mm

<sup>[3]</sup> 3840/4040-M tolerance: 0~+0.1mm, 3838 tolerance: ±0.1 mm, 6338/8038/8040 tolerance: -0.2~0mm

**Handling**

**Water quality for cleaning and diafiltration.** Maximum feed turbidity is 1 NTU. Maximum feed SDI is 5.0 (15 minutes test).

**Operation.** Stated operational conditions are valid and the rules for installation, cleaning, water and preservation have to be adhered. UNISOL approved cleaning detergent, anti-foam, polymers, other chemicals and filter-aids lubricants can be applied only. For further questions, do not hesitate to contact our service engineer.

**Lubricants.** During installation, use only water or glycerin to lubricate seals. The use of petroleum or vegetable-based oils or solvents may damage the element and void any warranty.

**Preservation and Storage.** Plan ahead to use new membranes. The element should be stored in a sealed bag, at 4 – 30 °C (39 – 86 °F). Storage solutions should be made with: 1 % w/w sodium metabisulfite.

**Chemical Exposure.** Residual chlorine concentration during CIP would be <0.1ppm

**Cleaning.** UNISOL modules may be put into production after having gone through the first cleaning prescribed by UNISOL on product packing notes or given differently by UNISOL.

## Annex

Nomenclature: SN-NFDL-8038-B

SN	NFDL	8038	B
Design/Application	Membrane	Diameter & Length	Feed spacer
<b>SN</b>	<b>NFDL</b>	3838	<b>B: 31mil /0.8mm (diamond)</b>
Sanitary Design		3840	C: 46mil/1.1mm (diamond)
		4338	E: 65mil /1.6mm (diamond)
		6338	F: 80mil /2.0mm (diamond)
		6438	
		<b>8038</b>	