

# UNISOL Food & Dairy UF Elements

## Sanitary UF Spiral Wound Elements

### SN UF Series

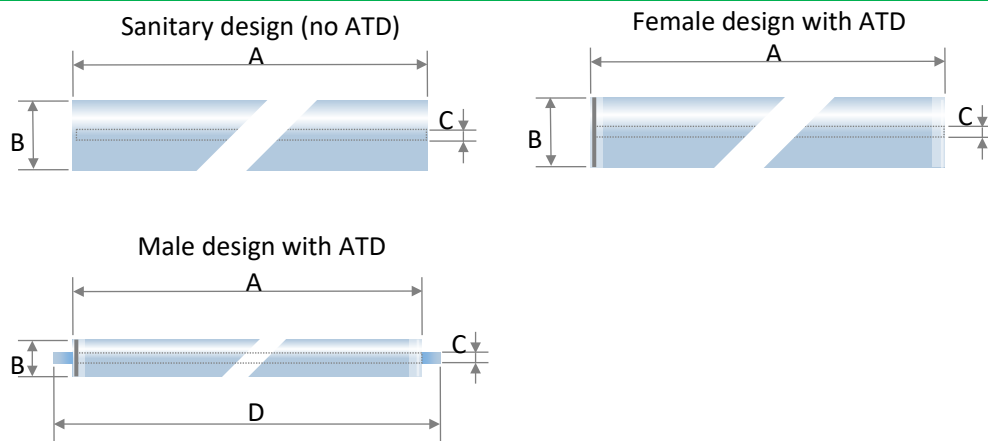
<b>Description</b>	UNISOL sanitary UF is a polyethersulfone (PES) membrane that is suited for process separations, particularly applications involving protein concentration to high solids levels. In these applications, a tighter ultrafiltration membrane is often used to maximize product yield. It is available in a wide variety of element designs for food, dairy and process separations as well as water purification.					
<b>Characteristics</b>	Membrane Chemistry:	Polyethersulfone (PES)				
	Nominal MWCO:	UPS003 with 3,000 Daltons UPS005 with 5,000 Daltons UPS010 with 10,000 Daltons UPS020 with 20,000 Daltons				
	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 the Islamic Food and Nutrition Council of America (IFANCA). Kosher certificate by Committee of Kashrut.				
<b>Limits</b>	Max Operating Pressure	10 bar (145 psi)				
	Max Pressure Drop	1 bar (14.5 psi)				
	Max. Operating Temperature	55 °C (131 °F)				
	Max. Cleaning Temperature	50 °C (122 °F)				
	Operating pH range	2 – 10				
Cleaning pH Range	1.8 – 11					
<b>Area</b> ft <sup>2</sup> (m <sup>2</sup> )	Spacer	31mil (B)	46mil (C)	65mil (E)	80mil (F)	80mil (G)
	2540	24 (2.2)	19 (1.8)	/	/	/
	3838	75 (7.0)	58 (5.4)	45 (4.2)	/	/
	3840	81 (7.5)	62 (5.8)	/	/	/
	4040	78 (7.2)	68 (6.3)	/	/	/
	4338	102 (9.5)	81 (7.5)	/	/	/
	6338	226 (21)	172 (16)	142 (13.2)	119 (11.1)	119 (11.1)
	6438	226 (21)	172 (16)	142 (13.2)	119 (11.1)	119 (11.1)
	8038	370 (34)	290 (27)	225 (20.9)	180 (16.7)	180 (16.7)
8040	355 (33)	269 (25)	/	/	/	

<sup>(1)</sup> For the purpose of improvement, specifications may be updated periodically

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

<sup>(3)</sup> For the product name, please refer to the annex in the last page

## Dimensions



Size mm (inch)	A <sup>[1]</sup>	∅B <sup>[2]</sup>	∅C <sup>[3]</sup>	D	Tube	ATD
2540	965 (38)	62 (2.4)	19 (0.7485)	1016 (40)	Male	With
3838	965 (38)	96 (3.8)	21.1 (0.831)	965 (38)	Female	/
3840	984 (38.8)	96 (3.8)	21.1 (0.831)	984 (38.75)	Female	/
4040	1016 (40)	99 (3.9)	16 (0.629)	1016 (40)	Female	With
4338	965 (38)	109 (4.3)	21.1 (0.831)	965 (38)	Female	/
6338	965 (38)	160 (6.3)	28.9 (1.138)	965 (38)	Female	/
6438	965 (38)	162 (6.4)	28.9 (1.138)	965 (38)	Female	/
8038	965 (38)	200.5 (7.9)	28.9 (1.138)	965 (38)	Female	/
8040	1016 (40)	200.5 (7.9)	28.9 (1.138)	1016 (40)	Female	With

<sup>[1]</sup> Tolerance: ±0.5mm

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

<sup>[3]</sup> 2540/3840/4040-M tolerance: 0~+0.1mm, 3838/4040/4338 tolerance: ±0.1 mm, 6338/6438/8038/8040 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 cleaning cycle (CIP) should be 150 ppm @ pH 10.5 or higher. Chlorine concentration should never exceed 200 ppm.

**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-UPS020–8038-B

SN	UPS020	8038	B
Design/Application	Membrane	Diameter & Length	Feed spacer
<b>SN</b>	UPS003	3838	<b>B: 31mil /0.8mm (diamond)</b>
Sanitary Design	UPS005	3840	C: 46mil/1.1mm (diamond)
	UPS010	4338	E: 65mil /1.6mm (diamond)
	<b>UPS020</b>	6338	F: 80mil /2.0mm (diamond)
		6438	G:80mil /2.0mm (parallel)
		<b>8038</b>	