

UNISOL Food & Dairy NF Elements

Sanitary NF Spiral Wound Elements

SN NFDK Series

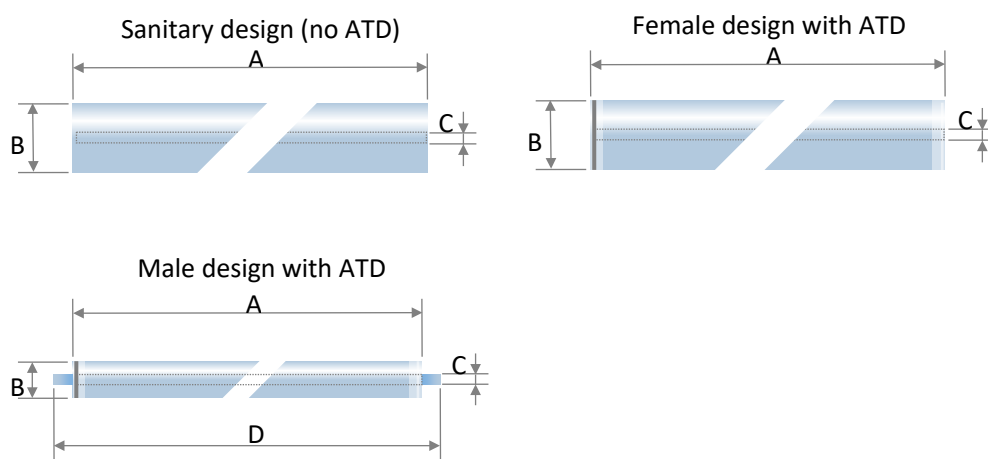
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|---|--|--|-------------|-------------|-------------|-------------|
| Description | UNISOL sanitary nanofiltration (NF) membrane elements are used by food and dairy processors for a variety of desalting, purification and other separations. All NFDK elements contain an improved Nano-filtration membrane sheet designed to reject organics with a MWCO more than 300 Daltons while passing monovalent salts. | | | | | |
| Characteristics | Membrane | NFDK | | | | |
| | 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 the Islamic Food and Nutrition Council of America (IFANCA). Kosher certificate by Committee of Kashrut. | | | | |
| Limits | 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 | | | | |
| Area ft ² (m ²) | Spacer ⁽³⁾ | 28mil D (J) | 34mil P (A) | 31mil D (B) | 46mil D (C) | 51mil P (D) |
| | 2540 | / | / | 24 (2.2) | 19 (1.8) | / |
| | 3838 | / | / | 75 (7.0) | 58 (5.4) | / |
| | 3840 | / | / | 81 (7.5) | 62 (5.8) | / |
| | 4040-M | 90 (8.4) | 85 (7.9) | 85 (7.9) | 68 (6.3) | 65 (6.0) |
| | 6338 | / | / | 226 (21) | 172 (16) | / |
| | 8038 | / | / | 344 (32) | 290 (27) | / |
| | 8040 | 390 (37) | / | 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.

(3) D for diamond grid, P for parallel grid, detailed information can be found in the appendix on the last page.

Dimensions



| Size mm (inch) | A ^[1] | ∅B ^[2] | ∅C ^[3] | D | Permeate tube |
|----------------|------------------|-------------------|-------------------|-----------|---------------|
| 2540 | 965 (38) | 62 (2.4) | 19 (0.748) | 1016 (40) | Male |
| 3838 | 965 (38) | 96 (3.8) | 21.1 (0.831) | / | Female |
| 3840 | 984.3 (38.8) | 96 (3.8) | 21.1 (0.831) | / | Female |
| 4040-M | 965 (38) | 99.4 (3.9) | 19 (0.748) | 1016 (40) | Male |
| 6338 | 965 (38) | 160 (6.3) | 28.9 (1.138) | / | Female |
| 8038 | 965 (38) | 200.5 (7.9) | 28.9 (1.138) | / | Female |
| 8040 | 1016 (40) | 200.5 (7.9) | 28.9 (1.138) | / | Female |

^[1] Tolerance: -2~0mm

^[2] Tolerance: -2~0mm

^[3] 2540/3840/4040-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- NFDK-8038-B

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