

## Industrial Ultrafiltration Spiral-Wound Element: VT (PES 3kDa)

Synder Filtration's Ultrafiltration Elements offer an optimal combination of both flux and rejection in a comprehensive range of MWCO's. Contact us today to learn more about our complete line of membrane products and services.

### RECOMMENDED OPERATING PARAMETERS

| Membrane Type           |   |
|-------------------------|---|
| Proprietary PVDF or PES | Spiral-Wound with netted outerwrap or fiber glass hardshell (FRP) |

| Pressure                              | PSI | Bar |
|---------------------------------------|-----|-----|
| Max Inlet Pressure                    | 116 | 8.0 |
| Min Outlet Pressure                   | 10  | 0.7 |
| Max Differential Pressure per Element | 18  | 1.2 |
| Max Permeate Backpressure             | 5   | 0.3 |

**Note:** Soft start on boost pumps required to minimize pressure/flow shocks to elements.

| Temperature          | Fahrenheit | Celsius |
|----------------------|------------|---------|
| Max. Operating       | 122°       | 50°     |
| Max. CIP Temperature | 122°       | 50°     |

| pH Parameters                              | pH       |
|--|----------|
| pH Range during Operation at 25°C Max.     | 1.0-11.0 |
| pH Range during CIP Operation at 50°C Max. | 2.0-11.0 |

| Peroxide  | Max ppm. |
|---|----------|
| Free Peroxide in Product During Operation                           | <3 ppm   |
| Peroxide as a sanitizer at 25°C Max, pH6-7, 10minutes recirculation | 0.1%     |

| Chlorine                                    | Norm ppm | Max ppm |
|---|----------|---------|
| Free Chlorine During Operation              | 0        | <0.1    |
| Chlorine During CIP at pH10.8-11.0 and 50°C | 150      | 180     |

**Note:** Maximum chlorine exposure for all elements is 30 minutes per day at pH and temperature conditions listed above.

### INDUSTRIAL SERIES BENEFITS

- Widest range of UF MWCO's available
- Good resistance to pH and temperature
- High resistance to fouling
- Customizable dimensions for unique housings



### COMMON APPLICATIONS

- Antibiotic concentration
- Protein & polypeptide concentration

### CONTACT US



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*All inquiries will be responded to by a Synder employee personally within 24 hours.*



## DIMENSIONS & WEIGHT

| Element | Model No. | Diameter (B) in (cm) | Length (A) in (cm) | PWT ID/OD in (cm) | Tube Extension (C) in (cm)   | Dry Weight lb (kg) |
|---------|-----------|----------------------|--------------------|-------------------|------------------------------|--------------------|
| 1.8"    | 1812TM    | 1.8" (4.6)           | 11.75" (29.8)      | 0.665" (1.71)     | 0.75" (perm)<br>1.00" (plug) | 1.0 (.45)          |
|         | 2540TM    | 2.4" (6.1)           | 40.0" (101.6)      | 0.75" (1.90)      | 1.00" (2.54)                 | 4.0 (1.8)          |
| 2.5"    | 2540HF    | 2.4" (6.1)           | 40.0" (101.6)      | 0.625" (1.59)     | -                            | 4.0 (1.8)          |
|         | 2540HM    | 2.4" (6.1)           | 40.0" (101.6)      | 0.75" (1.90)      | 1.00" (2.54)                 | 4.0 (1.8)          |
| 4"      | 4040TM    | 3.9" (9.9)           | 40.0" (101.6)      | 0.75" (1.90)      | 1.00" (2.54)                 | 12.0 (5.5)         |
|         | 4040HM    | 3.9" (9.9)           | 40.0" (101.6)      | 0.75" (1.90)      | 1.00" (2.54)                 | 12.0 (5.5)         |
|         | 4040HF    | 3.9" (9.9)           | 40.0" (101.6)      | 0.625" (1.59)     | -                            | 12.0 (5.5)         |
| 8"      | 7940HF    | 7.9" (20.1)          | 40.0" (101.6)      | 1.138" (2.89)     | -                            | 35.0 (15.9)        |
|         | 8040HF    | 7.9" (20.1)          | 40.0" (101.6)      | 1.125" (2.86)     | -                            | 35.0 (15.9)        |

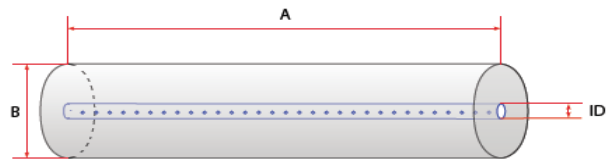
## TECHNICAL NOTES

For element sizes not listed, please call or email Synder Filtration for details. We can design an element to fit your exact needs – just specify the element outer diameter (OD) or vessel/housing inner diameter (ID), element inner diameter (ID), and length. Elements are also available with or without a controlled bypass tail. Additional feed spacers are also available. Trials should be conducted to determine optimal application conditions.

| Membrane Model  | Industrial Designations                      |
|-----------------|--|
| V6 - 2 - 8040HF | T = Tape Wrapped<br>HM = Male<br>HF = Female |

| Spacer Size | Model No. |
|-------------|-----------|
| 24 mil      | 1         |
| 31 mil      | 2         |
| 46 mil      | 3         |
| 65 mil      | 4         |
| 80 mil      | 5         |



## RECOMMENDED ELEMENT CROSS FLOW RATE

| Element |                    | Feed Spacer (in mils) |     |     |     |     |
|---------|--------------------|-----------------------|-----|-----|-----|-----|
|         |                    | 24                    | 31  | 46  | 65  | 80  |
| 1.8"    | m <sup>3</sup> /hr | 0.7                   | 0.8 | 0.9 | 1.0 | 1.1 |
|         | gpm                | 3                     | 3   | 4   | 4   | 5   |
| 2.5"    | m <sup>3</sup> /hr | 1.3                   | 1.5 | 1.8 | 2.0 | 2.1 |
|         | gpm                | 6                     | 7   | 8   | 9   | 9   |
| 4.0"    | m <sup>3</sup> /hr | 3                     | 4   | 5   | 5   | 5   |
|         | gpm                | 15                    | 17  | 20  | 23  | 24  |
| 8"      | m <sup>3</sup> /hr | 15                    | 17  | 20  | 23  | 24  |
|         | gpm                | 66                    | 75  | 89  | 99  | 105 |

\*Note: The recommended cross flow rate will be subject to differential pressure limitations and specific applications.

## MEMBRANE AREA (SQ. FT)

| Element | Feed Spacer (in mils) |     |     |     |     |
|---------|-----------------------|-----|-----|-----|-----|
|         | 24                    | 31  | 46  | 65  | 80  |
| 1812TM  | 3.1                   | 2.7 | 2.1 | 1.6 | 1.3 |
| 2540M   | 28                    | 24  | 20  | 16  | 13  |
| 2540F   | 30                    | 26  | 22  | 17  | 14  |
| 4040M   | 81                    | 72  | 58  | 46  | 39  |
| 4040F   | 86                    | 75  | 61  | 49  | 41  |
| 7940F   | 379                   | 335 | 268 | 210 | 178 |
| 8040F   | 379                   | 335 | 268 | 210 | 178 |