

MW series

industrial oil/water separation UF elements

The M-Series Ultrafillic* membranes are made of polyacrylonitrile (PAN) polymer. This membrane is characterized by a pore size of 0.01 microns with an approximate molecular weight cut-off of 20K-50K Dalton. To avoid fouling by "free" oils, the MW-series elements have been engineered to be extremely **hydrophilic** (water attracting) as compared to conventional membranes that are oleophilic (oil attracting).

MW Elements are used for oil/water separation and suspended solids removal. They are also used as pretreatment of process water before reverse osmosis or nanofiltration.

Table 1: Element Specification

| Membrane | M-series, polyacrylonitrile |
|----------|-----------------------------|
|----------|-----------------------------|

| Model | Spacer mil (mm) | Active area ft ² (m ²) | Outer wrap | Part number |
|-----------|-----------------|---|------------|-------------|
| MW2540F30 | 30 [0.76] | 28 [2.6] | Fiberglass | 1233383 |
| MW4040F50 | 50 [1.27] | 62 [5.8] | Fiberglass | 3050562 |
| MW8040C50 | 50 [1.27] | 264 [24.7] | Cage | 1220654 |
| MW8040F50 | 50 [1.27] | 269 [25.0] | Fiberglass | 1229852 |

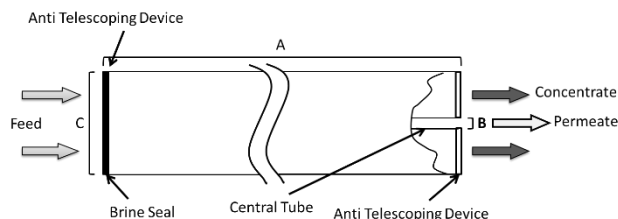


Figure 1: Element Dimensions Diagram, Female 8040

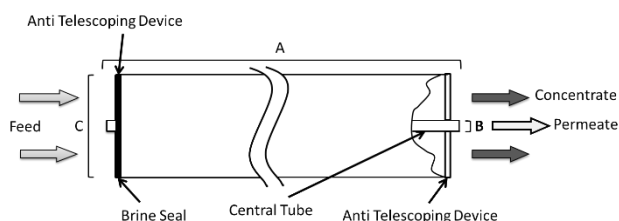


Figure 2: Element Dimensions Diagram, Male 2540 & 4040

Table 2: Dimensions and Weight

| Model | Type | Dimensions, inches (cm) | | | Boxed Weight lbs (kg) |
|-----------|--------|-------------------------|--------------|------------|-----------------------|
| | | A | B | C | |
| MW2540F30 | Male | 40.0 [101.6] | 0.75 [1.9] | 2.4 [6.1] | 4 [1.8] |
| MW4040F50 | Male | 40.0 [101.6] | 0.75 [1.9] | 3.9 [9.9] | 11 [5.0] |
| MW8040C50 | Female | 40.0 [101.6] | 1.125 [2.86] | 7.9 [20.1] | 35 [15.9] |
| MW8040C50 | Female | 40.0 [101.6] | 1.125 [2.86] | 7.9 [20.1] | 35 [15.9] |

Table 3: Operating and CIP parameters

| | |
|-----------------------------------|--|
| Typical Operating Flux | 5 - 20 GFD [8 - 34 LMH] |
| Maximum Operating Pressure | 100psi [700kPa] |
| Maximum Temperature | For fiberglass elements (1): Continuous operation: 122°F (50°C) Clean-In-Place (CIP): 122°F (50°C) For cage elements: Continuous operation: 176°F (80°C) Clean-In-Place (CIP): 122°F (50°C) |
| pH Range | Continuous operation: 3-9, Clean-In-Place (CIP): 2-11 (2) |
| Maximum Pressure Drop | Over an element: 15psi [103kPa] Per housing: 60psi [414kPa] |
| Chlorine Tolerance | 200,000 ppm-hours |

- (1) Element sized 8040 can be used and flushed at higher temperature. Contact your SUEZ representative for further technical recommendations.
(2) Refer to Cleaning Guidelines Technical Bulletin TB1194EN.

Note: Oil/water separation applications require the selection of materials compatible with the content of the highly concentrated solution.

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