

# Commercial Elements

## Small Size Spiral-Wound Elements for Commercial Applications

AG High Rejection Brackish Water Commercial Elements are selected when high solute rejection is required and an operating pressure up to 200 psig is acceptable. These elements are considered a standard in the industry. AK Low Pressure Brackish Water Commercial Elements are selected when the highest solute rejection is not needed but a low operating pressure is desired. These elements allow significant energy savings since good rejection is achieved at operating pressures as low as 100 psig.

These elements are designed for light industrial or commercial applications. For cost optimization, they feature a tape outer wrap.

**Table 1: Element Specification**

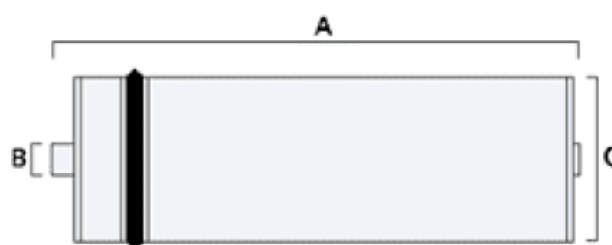
Membrane	Thin-Film Membrane (TFM*)		
Model	Average permeate flow gpd (m3/day) <sup>1</sup>	Average NaCl rejection <sup>1</sup>	Minimum NaCl rejection <sup>1</sup>
AG2521TM	300 (1.14)	99.5% NaCl <sup>2</sup>	99.0% NaCl <sup>2</sup>
AG3218TM	700 (2.6)	99.5% NaCl <sup>2</sup>	99.0% NaCl <sup>2</sup>
AG4021TM	1050 (3.9)	99.5% NaCl <sup>2</sup>	99.0% NaCl <sup>2</sup>
AK2521TM	300 (1.14)	99.0% NaCl <sup>3</sup>	98.0% NaCl <sup>3</sup>
AK3218TM	700 (2.6)	99.0% NaCl <sup>3</sup>	98.0% NaCl <sup>3</sup>
AK4021TM	1050 (3.9)	99.0% NaCl <sup>3</sup>	98.0% NaCl <sup>3</sup>

<sup>1</sup> Average salt rejection after 24 hours operation. Individual flow rate may vary +25%/-15%.

<sup>2</sup> Testing conditions: 2,000ppm NaCl solution at 225psi (1,551kPa) operating pressure, 25°C (77°F), pH 7.5 and 15% recovery.

<sup>3</sup> Testing conditions: 500ppm NaCl solution at 115psi (793kPa) operating pressure, 25°C (77°F), pH 7.5 and 15% recovery.

Model	Active area ft <sup>2</sup> (m <sup>2</sup> )	Outer wrap	Part number
AG2521TM	13 (1.2)	Tape	1206719
AG3218TM	29 (2.7)	Tape	1206739
AG4021TM	42 (3.9)	Tape	1206750
AK2521TM	13 (1.2)	Tape	1206799
AK3218TM	29 (2.7)	Tape	1206803
AK4021TM	42 (3.9)	Tape	1206812



**Figure 1: Element Dimensions Diagram – Male**

**Table 2: Dimensions and Weight**

Model <sup>1</sup>	Dimensions, inches (cm)			Boxed Weight lbs (kg)
	A	B <sup>2</sup>	C <sup>3</sup>	
A*2521TM	21 (53.3)	0.75 (1.90) OD	2.4 (6.1)	2.1 (0.9)
A*3218TM	18 (45.7)	0.75 (1.90) OD	3.2 (8.1)	2.4 (1.1)
A*4021TM	21 (53.3)	0.75 (1.90) OD	3.88 (9.9)	3.3 (1.5)

<sup>1</sup> These elements are bagged dried.

**Table 3: Operating and CIP parameters**

Typical Operating Flux	10-20GFD (15-35 LMH)
Maximum Operating Pressure	400 psi (3,758 kPa)
Maximum Temperature	Continuous operation: 122°F (50°C) Clean-In-Place (CIP): 122°F (50°C)
pH Range	Optimum rejection: 7.0 – 7.5 Continuous operation: 3.0-10.0 Clean-In-Place (CIP): 2.0-11.5
Chlorine Tolerance	1000 ppm-hours, Dechlorination recommended
Feedwater <sup>3</sup>	NTU < 1 SDI < 5

<sup>3</sup>SDI is measured on a non-linear scale using a 0.45 micron filter paper. Additionally, finer colloids, particulates and microorganisms that pass through the filter paper and not measured in the SDI test, will potentially foul the RO element. For performance consistency and project warranty, please use Winflows projection software and consult your Filters with Membranes representative.



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