



# TRISEP® SB20

## Cellulose Acetate (CA)

### RO Elements

The TRISEP® SB series of cellulose acetate membranes features a cellulose acetate / triacetate blend that delivers an excellent combination of solute rejection, fouling resistance, and chlorine tolerance. SB20 is a high rejection CA RO membrane that is used to purify water where chlorine is used to control the growth of biological organisms. The combination of high chlorine tolerance and smooth surface morphology makes these membranes a perfect fit for applications where biofouling is an issue.

#### MEMBRANE CHARACTERISTICS

<b>Membrane</b>	SB20
<b>Membrane Type</b>	Cellulose Acetate
<b>Stabilized Salt Rejection (%)</b>	98.0
<b>Minimum Salt Rejection (%)</b>	97.0

#### DESIGN INFORMATION

Model	Part Number	Permeate Flow m <sup>3</sup> /day (GPD) <sup>a</sup>	Membrane Area m <sup>2</sup> (ft <sup>2</sup> )	Feed Spacer Thickness (mil) <sup>b</sup>
TRISEP® PLT 2540-SB20-31	151000252	1.9 (500)	2.4 (26)	31
TRISEP® PLT 4040-SB20-31	151013442	6.1 (1,600)	7.4 (80)	31
TRISEP® 4040-SB20-TSA	151000442	6.1 (1,600)	7.4 (80)	31
TRISEP® 8040-SB20-TPA	151070842	24.6 (6,500)	30.2 (325)	34
TRISEP® 8040-SB20-TSA	151000842	26.5 (7,000)	32.5 (350)	31
TRISEP® 8040-SB20-TSFA	151040842	26.5 (7,000)	32.5 (350)	34

<sup>a</sup> Test conditions: 2,000 ppm NaCl, 29.0 bar (420 psi), 25°C (77°F), 15% recovery, pH 5.5, 30 minutes operation. Flow rates will be no more than 15% below the values shown. Product specifications may change without notice as design revisions occur.

<sup>b</sup> All models on this sheet have fiberglass outer wrap and diamond shaped feed spacers. All models on this sheet include anti-telescoping devices (ATDs) attached to the ends of the element and one brine seal. All 4040 and 8040 models on this sheet include one interconnector.

#### OPERATING PARAMETERS

<b>Maximum Operating Pressure</b>	41 bar (600 psi)
<b>Maximum Operating Temperature</b>	32°C (90°F)
<b>Nominal Operating pH</b>	5.5
<b>Cleaning pH Range<sup>1</sup></b>	2.0 - 7.5
<b>Chlorine Tolerance</b>	0.5 ppm nominal, 1 ppm max
<b>Maximum Pressure Drop</b>	1 bar (15 psi) per element; 4 bar (60 psi) per housing
<b>Maximum SDI<sub>15</sub></b>	5.0
<b>Maximum Turbidity</b>	1 NTU

<sup>1</sup> Refer to pH limits in Membrane Cleaning Guide - Cellulose Acetate Elements (TSG-C-005).

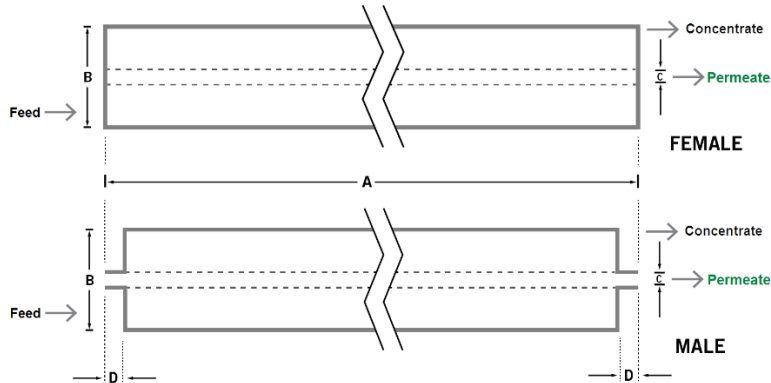
PHYSICAL DIMENSIONS

Model	Element Weight kg (lb) <sup>c</sup>	Dim. A mm (inches)	Dim. B mm (inches)	Dim. C <sup>d</sup> mm (inches)	Permeate Tube <sup>e</sup>
TRISEP® PLT 2540-SB20-31	3 (7)	1,016 (40.0)	64 (2.5)	19.1 (0.75)	Male
TRISEP® PLT 4040-SB20-31	4 (9)	1,016 (40.0)	99 (3.9)	19.1 (0.75)	Male
TRISEP® 4040-SB20-TSA	4 (9)	1,016 (40.0)	99 (3.9)	19.1 (0.75)	Female
TRISEP® 8040-SB20-TPA	16 (36)	1,016 (40.0)	201 (7.9)	38.1 (1.50)	Female
TRISEP® 8040-SB20-TSA	16 (36)	1,016 (40.0)	201 (7.9)	38.1 (1.50)	Female
TRISEP® 8040-SB20-TSFA	16 (36)	1,016 (40.0)	201 (7.9)	28.6 (1.125)	Female

<sup>c</sup> Shipping weight is dependent on packaging material and quantity shipped.

<sup>d</sup> Diameters for Dimension "C" are as follows. For Female elements, "C" is the Inner Diameter. For Male elements, "C" is the Outer Diameter.

<sup>e</sup> Male elements have a protruding permeate tube, indicated as "D" in the diagram. Dimension "D" is 25.4 mm (1.0 in).



IMPORTANT INFORMATION

- Start-up:** MANN+HUMMEL Water & Fluid Solutions recommends flushing elements for 30 minutes at low pressure and discarding permeate during the flush prior to operation. For a more detailed start-up procedure, please see Element Start-Up Guide – System Start-Up (TSG-O-005).
- Cleaning:** TRISEP® membrane elements must be cleaned periodically to ensure proper operation and to prevent membrane damage. Please see Membrane Cleaning Guide – Cellulose Acetate Elements (TSG-C-005).
- Storage:** TRISEP membrane elements must be stored appropriately to ensure proper operation and to prevent membrane damage. Please see Element Storage Guides (TSG-O-009 & TSG-O-010).

CUSTOMIZABLE SPECIALTY ELEMENTS

MANN+HUMMEL Water & Fluid Solutions offers a full range of membranes and element designs for challenging water and process applications. Technologies include low-fouling RO, submerged UF, continuous high temperature, ultra-high pressure, unique sanitary designs and more. Contact us to customize a product that satisfies your specific requirements.

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