



# 8.5 Inch Diameter Elements Polyamide and Cellulose Acetate RO

TRISEP® 8540 size membrane elements fit older 8.5-inch diameter pressure vessels and are direct replacements for competitive products designed to fit these housings. Other TRISEP membranes are available in this size or other strong and durable spiral-wound designs that may be customized to meet customer requirements.

## MEMBRANE CHARACTERISTICS

Membrane	Stabilized NaCl Rejection (%)	Minimum NaCl Rejection (%)
ACM2 High Rejection Polyamide RO	99.5	99.0
ACM4 Low Energy Polyamide RO	99.3	98.8
X-20™ Low Fouling Polyamide RO	99.5	99.0
SB20 High Rejection Cellulose Acetate RO	98.0	97.0
SB50 High Flow Cellulose Acetate RO	96.0	92.5

## DESIGN INFORMATION

Model	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® 8540-ACM2-TSFA	43.6 (11,500)	40.9 (440)	31
TRISEP® 8540-ACM4-TSFA	66.2 (17,500)	40.9 (440)	31
TRISEP® 8540-X20-TSFA	43.6 (11,500)	40.9 (440)	31
TRISEP® 8540-SB20-TSFA	31.8 (8,400)	40.9 (440)	31
TRISEP® 8540-SB50-TSFA	37.9 (10,000)	40.9 (440)	31

a Polyamide test conditions: 2,000 ppm NaCl, 15.5 bar (225 psi), 25°C (77°F), 15% recovery, pH 8.0, 30 minutes operation.

CA 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.

b 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, one brine seal, and one interconnector.

## OPERATING PARAMETERS

Maximum Operating Pressure	41 bar (600 psi)
Maximum Operating Temperature	Polyamide: 45°C (113°F); CA: 32°C (90°F)
Cleaning pH Range <sup>1</sup>	Polyamide: 1.0 - 12.0; CA: 2.0 - 7.5
Chlorine Tolerance <sup>2</sup>	Polyamide: < 0.1 ppm; CA: 0.5 ppm, 1 ppm max
Maximum Pressure Drop	1 bar (15 psi) per element; 4 bar (60 psi) per housing
Maximum SDI <sub>15</sub>	5.0
Maximum Turbidity	1 NTU

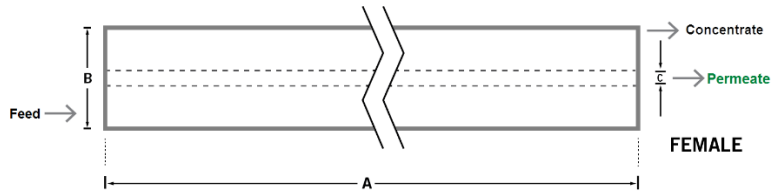
<sup>1</sup> Refer to temperature and pH limits in Membrane Cleaning Guide - Water Application Elements (TSG-C-001) for polyamide membrane elements or Membrane Cleaning Guide - Cellulose Acetate Elements (TSG-C-005) for cellulose acetate membrane elements.

<sup>2</sup> Pretreatment is recommended for the removal of free chlorine and other oxidizing agents to prevent damage to membranes. Oxidizing agents, such as free chlorine, in contact with polyamide membranes may result in shortened operating life or membrane failure. Such oxidation damage is excluded from warranty. Refer to Membrane Operating Guide - Recommendations for Water Purification (TSG-O-012).

**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
TRISEP® 8540-ACM2-TSFA	19 (42)	1,016 (40.0)	215 (8.5)	28.6 (1.125)	Female
TRISEP® 8540-ACM4-TSFA	19 (42)	1,016 (40.0)	215 (8.5)	28.6 (1.125)	Female
TRISEP® 8540-X20-TSFA	19 (42)	1,016 (40.0)	215 (8.5)	28.6 (1.125)	Female
TRISEP® 8540-SB20-TSFA	19 (42)	1,016 (40.0)	215 (8.5)	28.6 (1.125)	Female
TRISEP® 8540-SB50-TSFA	19 (42)	1,016 (40.0)	215 (8.5)	28.6 (1.125)	Female

<sup>c</sup> Shipping weight is dependent on packaging material and quantity shipped.  
<sup>d</sup> Dimension "C" is the Inner Diameter.



**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 – Water Application Elements (TSG-C-001) for polyamide membrane elements or Membrane Cleaning Guide – Cellulose Acetate Elements (TSG-C-005) for cellulose acetate elements.

**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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