

Direct Replacement Elements Desal Style Permeate Tube



TRISEP® 4040 size membrane elements are available with a 0.625 inch (15.9 mm) ID permeate tube for direct replacement of older-style elements from Desalination Systems Inc. (Desal). In addition to the fiberglass-wrapped elements listed below, TurboClean® sanitary style elements are also available in a flush-ended format with this permeate tube size. These direct replacement membrane elements are just one example of how MICRODYN-NADIR customizes products to meet customer requirements.

MEMBRANE CHARACTERISTICS

Membrane	Membrane Type	Stabilized Salt Rejection (%)	Minimum Salt Rejection (%)	Test Solute
X-20™	Low Fouling Thin-Film RO	99.5	99.0	NaCl
SB20	Cellulose Acetate (CA) RO	98.0	97.0	NaCl
SB90	Cellulose Acetate (CA) NF	85.0	80.0	NaCl
TS40	High Rejection Process Thin-Film NF	99.0	98.5	MgSO ₄

DESIGN INFORMATION

Model	Permeate Flow m ³ /day (GPD)	Membrane Area m ² (ft ²)	Feed Spacer Thickness (mil) ^a	Test Conditions ^b
TRISEP® 4040-X201-TSDA	9.3 (2,450)	8.2 (88)	31	2,000 ppm NaCl, 15.5 bar, pH 8.0
TRISEP® 4040-SB20-TSDA	6.1 (1,600)	8.2 (88)	31	2,000 ppm NaCl, 29.0 bar, pH 5.5
TRISEP® 4040-SB90-TSDA	7.4 (1,950)	8.2 (88)	31	2,000 ppm NaCl, 15.5 bar, pH 5.5
TRISEP® 4040-TS40-TSDA	6.1 (1,600)	8.2 (88)	31	2,000 ppm NaCl, 15.5 bar, pH 5.5
TRISEP® 4040-TS40-TXDA	4.9 (1,300)	6.5 (70)	47	2,000 ppm MgSO ₄ , 7.6 bar, pH 8.0

a All models on this sheet have fiberglass outer wrap; 31 mil feed spacers are in a diamond configuration; 47 mil feed spacers are in a parallel configuration. All models on this sheet include anti-telescoping devices (ATDs) attached to the ends of the element, one brine seal, and one interconnector.

b All models on this sheet are tested at: 25°C (77°F), 15% recovery, 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.

OPERATING PARAMETERS

Maximum Operating Pressure	41 bar (600 psi)
Maximum Operating Temperature	Thin-Film: 45°C (113°F); CA: 32°C (90°F)
Cleaning pH Range ¹	Thin-Film: 1.0 – 12.0; CA: 2.0 – 7.5
Chlorine Tolerance ²	Thin-Film: < 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 ₁₅	5.0
Maximum Turbidity	1 NTU

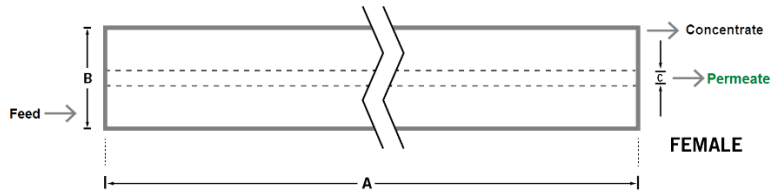
¹ Refer to temperature and pH limits in Membrane Cleaning Guide - Water Application Elements (TSG-C-001) for thin-film membrane elements or Membrane Cleaning Guide - Cellulose Acetate Elements (TSG-C-005) for cellulose acetate membrane elements.

² 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 thin-film 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) ^c	Dim. A mm (inches)	Dim. B mm (inches)	Dim. C ^d mm (inches)	Permeate Tube
TRISEP® 4040-X201-TSDA	4 (9)	1,016 (40.0)	99 (3.9)	15.9 (0.625)	Female
TRISEP® 4040-SB20-TSDA	4 (9)	1,016 (40.0)	99 (3.9)	15.9 (0.625)	Female
TRISEP® 4040-SB90-TSDA	4 (9)	1,016 (40.0)	99 (3.9)	15.9 (0.625)	Female
TRISEP® 4040-TS40-TSDA	4 (9)	1,016 (40.0)	99 (3.9)	15.9 (0.625)	Female
TRISEP® 4040-TS40-TXDA	4 (9)	1,016 (40.0)	99 (3.9)	15.9 (0.625)	Female

^c Shipping weight is dependent on packaging material and quantity shipped.
^d 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 thin-film 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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