



TRISEP® UE50

PES Ultrafiltration Elements

TRISEP® UE50 membrane is a polyethersulfone (PES) ultrafiltration membrane with a nominal molecular weight cut-off (M.W.C.O.) of 100,000 Daltons. UE50 membrane is commonly used in the removal of macromolecules or concentration of large organic solutes in both water and process applications. UE50 membrane is available in numerous spiral designs that may be customized to meet varied customer requirements.

MEMBRANE CHARACTERISTICS

Membrane	UE50
Membrane Type	Polyethersulfone (PES)
Nominal M.W.C.O. (Da)	100,000

DESIGN INFORMATION

Model	Permeate Flow m ³ /day (GPD) ^a	Membrane Area m ² (ft ²)	Feed Spacer Thickness (mil) ^b
TRISEP® PLT 2540-UE50-31	4.5 (1,200)	2.4 (26)	31
TRISEP® PLT 2540-UE50-46	15.1 (4,000)	1.5 (16)	46
TRISEP® PLT 4040-UE50-31	16.7 (4,400)	7.4 (80)	31
TRISEP® PLT 4040-UE50-46	12.9 (3,400)	5.8 (62)	46
TRISEP® 4040-UE50-QXA	13.2 (3,500)	6.0 (65)	47
TRISEP® 8040-UE50-QXA	56.8 (15,000)	25.1 (270)	47
TRISEP® 8040-UE50-QSA	75.7 (20,000)	33.0 (355)	31
TRISEP® 8040-UE50-QSFA	75.7 (20,000)	33.0 (355)	31

a Test conditions: Clean water, 2.1 bar (30 psi), 25°C (77°F), 15% recovery, pH 8.0, 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. All 47 mil feed spacers are parallel; all other models have 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

Maximum Operating Pressure	21 bar (300 psi)
Maximum Operating Temperature	45°C (113°F)
Cleaning pH Range ¹	1.0 - 12.0
Cleaning Chlorine Tolerance	200 ppm (sanitization) at pH ≥ 10.5
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).

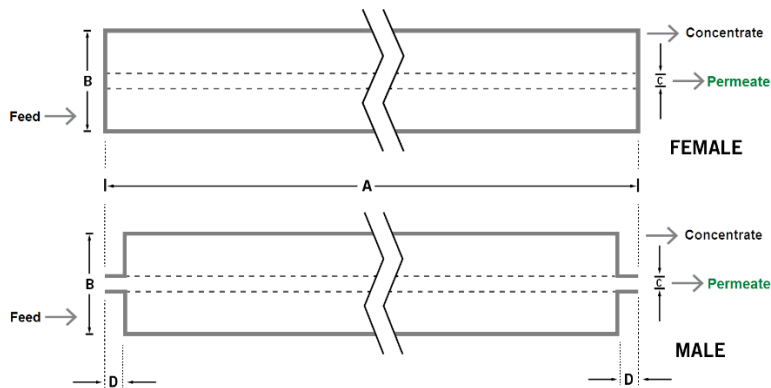
PHYSICAL DIMENSIONS

Model	Element Weight kg (lb) ^c	Dim. A mm (inches)	Dim. B mm (inches)	Dim. C ^d mm (inches)	Permeate Tube ^e
TRISEP® PLT 2540-UE50-31	3 (7)	1,016 (40.0)	64 (2.5)	19.1 (0.75)	Male
TRISEP® PLT 2540-UE50-46	3 (7)	1,016 (40.0)	64 (2.5)	19.1 (0.75)	Male
TRISEP® PLT 4040-UE50-31	4 (9)	1,016 (40.0)	99 (3.9)	19.1 (0.75)	Male
TRISEP® PLT 4040-UE50-46	4 (9)	1,016 (40.0)	99 (3.9)	19.1 (0.75)	Male
TRISEP® 4040-UE50-QXA	4 (9)	1,016 (40.0)	99 (3.9)	19.1 (0.75)	Female
TRISEP® 8040-UE50-QXA	16 (36)	1,016 (40.0)	201 (7.9)	38.1 (1.50)	Female
TRISEP® 8040-UE50-QSA	16 (36)	1,016 (40.0)	201 (7.9)	38.1 (1.50)	Female
TRISEP® 8040-UE50-QSFA	16 (36)	1,016 (40.0)	201 (7.9)	28.6 (1.125)	Female

^c Shipping weight is dependent on packaging material and quantity shipped.

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

^e 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 – Water Application Elements (TSG-C-001).

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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