

TRISEP® PS Pharmaceutical

NPO30 Series



LENNTECH
WATER TREATMENT SOLUTIONS

TRISEP® PS sanitary membrane elements for pharmaceutical applications have a long history of outstanding, stable field performance. NADIR® NPO30 polyethersulfone (PES) membrane exhibits nanofiltration properties and a molecular weight cut-off in the range of 500 – 600 Da after a high-pressure stabilization, offering unique separation properties for process applications. PS elements are available with a number of different feed spacers and in all sizes common in the industry.

MEMBRANE CHARACTERISTICS

Membrane	NADIR® NPO30
Membrane Type	Polyethersulfone (PES)
Nominal M.W.C.O. (Da)	500 – 600
Na₂SO₄ Salt Rejection (%)^a	77 – 95

DESIGN INFORMATION

Model	Membrane Area m ² (ft ²)	Feed Spacer Thickness (mil) ^a
TRISEP® PS NPO30 3838-31	7.0 (75)	31
TRISEP® PS NPO30 3838-46	5.7 (61)	46
TRISEP® PS NPO30 6338-31	20.5 (221)	31
TRISEP® PS NPO30 6338-46	17.1 (184)	46
TRISEP® PS NPO30 6338-80	11.5 (124)	80

^a All models on this sheet have a netting outer wrap and diamond shaped feed spacers.

OPERATING PARAMETERS

Maximum Operating Pressure	40 bar (580 psi)
Maximum Operating Temperature	55°C (131°F)
Cleaning pH Range¹	1.0 – 12.0
Cleaning Chlorine Tolerance	200 ppm for sanitization at pH ≥ 10.5
Maximum Pressure Drop	1 bar (15 psi) per element; 4 bar (60 psi) per housing

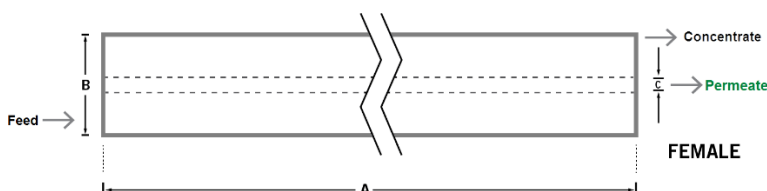
¹ Refer to temperature and pH limits in our Membrane Cleaning Guides.

PHYSICAL DIMENSIONS

Model	Element Weight kg (lb) ^b	Dim. A mm (inches)	Dim. B mm (inches)	Dim. C ^c mm (inches)	Permeate Tube
TRISEP® PS NP030 3838-31	4 (9)	965 (38.0)	96 (3.8)	21.1 (0.83)	Female
TRISEP® PS NP030 3838-46	4 (9)	965 (38.0)	96 (3.8)	21.1 (0.83)	Female
TRISEP® PS NP030 6338-31	11 (24)	965 (38.0)	162 (6.3)	28.9 (1.138)	Female
TRISEP® PS NP030 6338-46	11 (24)	965 (38.0)	162 (6.3)	28.9 (1.138)	Female
TRISEP® PS NP030 6338-80	11 (24)	965 (38.0)	162 (6.3)	28.9 (1.138)	Female

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

^c 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 our Membrane Cleaning Guides.
- 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).
- Regulatory:** All models on this sheet conform to USDA 3A sanitary standard 45-03, use FDA (CFR Title 21) compliant materials, comply with EU regulation (EC) No. 1935/2004 and No. 10/2011, and have Halal and Kosher certifications.

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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