# TRISEP® PS Pharmaceutical UH030 Series

TRISEP® PS sanitary membrane elements for pharmaceutical applications have a long history of outstanding, stable field performance. NADIR® UH030 hydrophilic polyethersulfone (PESH) membrane with a nominal 30,000 Da molecular weight cut-off offers consistent separations for applications where a more hydrophilic membrane is required. PS elements are available with a number of different feed spacers and in all sizes common in the industry. TRISEP PS elements are built with FDA compliant materials, are compliant with European food regulations (EU 10/2011 and EC 1935/2004), and comply with both USDA and BSE/TSE standards.

## MEMBRANE CHARACTERISTICS

| | |
|---|---|
| **Membrane** | NADIR® UH030 |
| **Membrane Type** | Polyethersulfone (PES) |
| **Nominal M.W.C.O. (Da)** | 30,000 |

## DESIGN INFORMATION

| Model | Membrane Area $m^2$ ($ft^2$) | Feed Spacer Thickness (mil)[a] |
|---|---|---|
| **TRISEP® PS UH030 4333-31** | 7.6 (82) | 31 |
| **TRISEP® PS UH030 4333-46** | 6.3 (68) | 46 |
| **TRISEP® PS UH030 4333-80** | 4.3 (46) | 80 |
| **TRISEP® PS UH030 6338-31** | 20.5 (221) | 31 |
| **TRISEP® PS UH030 6338-46** | 17.1 (184) | 46 |
| **TRISEP® PS UH030 6338-80** | 11.5 (124) | 80 |
| **TRISEP® PS UH030 8338-31** | 34.0 (366) | 31 |
| **TRISEP® PS UH030 8338-46** | 27.5 (296) | 46 |
| **TRISEP® PS UH030 8338-80** | 21.2 (228) | 80 |

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

## OPERATING PARAMETERS

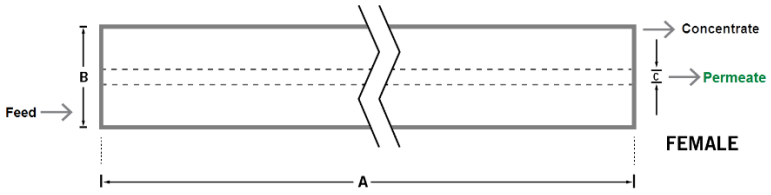
| | |
|---|---|
| **Maximum Operating Pressure** | 10 bar (145 psi) |
| **Maximum Operating Temperature** | 55°C (131°F) |
| **Cleaning pH Range[1]** | 1.0 – 12.0 |
| **Cleaning Chlorine Tolerance** | 200 ppm for sanitization at pH ≥ 10.5 |
| **Maximum Pressure Drop** | 1 bar (15 psi) per element; 4 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 UH030 4333-31** | 4 (9) | 838 (33.0) | 109.5 (4.3) | 21.1 (0.83) | Female |
| **TRISEP® PS UH030 4333-46** | 4 (9) | 838 (33.0) | 109.5 (4.3) | 21.1 (0.83) | Female |
| **TRISEP® PS UH030 4333-80** | 4 (9) | 838 (33.0) | 109.5 (4.3) | 21.1 (0.83) | Female |
| **TRISEP® PS UH030 6338-31** | 11 (24) | 965 (38.0) | 162 (6.3) | 28.9 (1.138) | Female |
| **TRISEP® PS UH030 6338-46** | 11 (24) | 965 (38.0) | 162 (6.3) | 28.9 (1.138) | Female |
| **TRISEP® PS UH030 6338-80** | 11 (24) | 965 (38.0) | 162 (6.3) | 28.9 (1.138) | Female |
| **TRISEP® PS UH030 8338-31** | 18 (40) | 965 (38.0) | 211 (8.3) | 28.9 (1.138) | Female |
| **TRISEP® PS UH030 8338-46** | 18 (40) | 965 (38.0) | 211 (8.3) | 28.9 (1.138) | Female |
| **TRISEP® PS UH030 8338-80** | 18 (40) | 965 (38.0) | 211 (8.3) | 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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