

# TRISEP® DS Food & Dairy UP150 Series



TRISEP® sanitary membrane elements for food & dairy applications have a long history of outstanding, stable field performance. NADIR® UP150 polyethersulfone (PES) membrane with a nominal 150,000 Da molecular weight cut-off offers consistently high flux rates. TRISEP elements are available with a number of different feed spacers and in all sizes common in the industry. TRISEP DS elements are built with FDA compliant materials, are compliant with European food regulations (EU 10/2011 and EC 1935/2004) and comply with USDA standards.

## MEMBRANE CHARACTERISTICS

<b>Membrane</b>	NADIR® UP150
<b>Membrane Type</b>	Polyethersulfone (PES)
<b>Nominal M.W.C.O. (Da)</b>	150,000

## DESIGN INFORMATION

Model	Membrane Area m <sup>2</sup> (ft <sup>2</sup> )	Feed Spacer Thickness (mil) <sup>a</sup>
TRISEP® DS UP150 3838-46	5.7 (61)	46
TRISEP® DS UP150 4333-31	7.6 (82)	31
TRISEP® DS UP150 4333-46	6.3 (68)	46
TRISEP® DS UP150 4333-80	4.3 (46)	80
TRISEP® DS UP150 6338-80	11.5 (124)	80

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

## OPERATING PARAMETERS

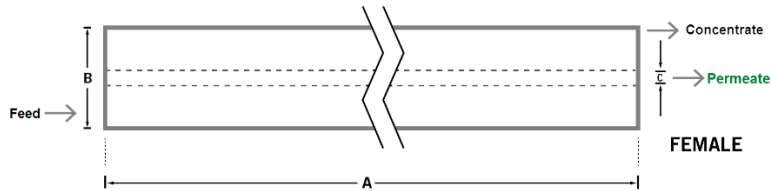
<b>Maximum Operating Pressure</b>	10 bar (145 psi)
<b>Maximum Operating Temperature</b>	50°C (122°F)
<b>Cleaning pH/Temperature Range<sup>1</sup></b>	1.5 - 11.5 at 50°C (122°F)
<b>Cleaning Chlorine Tolerance</b>	200 ppm for sanitization at pH ≥ 10.5
<b>Maximum Pressure Drop</b>	1 bar (15 psi) per element; 4 bar (60 psi) per housing

<sup>1</sup> Refer to temperature and pH limits in Membrane Cleaning Guide – Food & Dairy: UF & MF Elements (TSG-C-004).

**PHYSICAL DIMENSIONS**

Model	Element Weight kg (lb) <sup>b</sup>	Dim. A mm (inches)	Dim. B mm (inches)	Dim. C <sup>c</sup> mm (inches)	Permeate Tube
TRISEP® DS UP150 3838-46	4 (9)	965 (38.0)	96 (3.8)	21.1 (0.83)	Female
TRISEP® DS UP150 4333-31	4 (9)	838 (33.0)	109.5 (4.3)	21.1 (0.83)	Female
TRISEP® DS UP150 4333-46	4 (9)	838 (33.0)	109.5 (4.3)	21.1 (0.83)	Female
TRISEP® DS UP150 4333-80	4 (9)	838 (33.0)	109.5 (4.3)	21.1 (0.83)	Female
TRISEP® DS UP150 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 Membrane Cleaning Guide – Food & Dairy: UF & MF Elements (TSG-C-004).
- 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.

**Contact**

**Europe**  
 Germany: +49 611 962 6001  
 Italy: +39 0721 1796201  
 info@microdyn-nadir.com

**Americas**  
 USA: +1 805 964 8003  
 sales.mnus@microdyn-nadir.com

**Asia**  
 Singapore: +65 6457 7533  
 China: +86 10 8413 9860  
 waterchina@mann-hummel.com