



TRISEP® PS Pharmaceutical UP020 Series

TRISEP® PS sanitary membrane elements for pharmaceutical applications have a long history of outstanding, stable field performance. NADIR® UP020 polyethersulfone (PES) membrane with a nominal 20,000 Da molecular weight cut-off offers high protein rejection in combination with high flux rates. 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	Nominal M.W.C.O. (Da)
NADIR® UP020	20,000

Maximum Operating Pressure.....	10 bar (145 psi)
Maximum Operating Temperature.....	50°C (122°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*.

Design Information

MICRODYN-NADIR has the versatility to customize elements to meet customers' specific needs. Please contact MICRODYN-NADIR for information on customized solutions.

Model	Membrane Area m ² (ft ²)	Feed Spacer Thickness (mil) ^a
TRISEP® PS UP020 3838B	7.0 (75)	31
TRISEP® PS UP020 3838C	5.7 (61)	46
TRISEP® PS UP020 3838F	4.0 (43)	80
TRISEP® PS UP020 4025B	5.4 (58)	31
TRISEP® PS UP020 4025C	4.2 (45)	46
TRISEP® PS UP020 4333B	7.6 (82)	31
TRISEP® PS UP020 4333C	6.3 (68)	46
TRISEP® PS UP020 4333F	4.3 (46)	80
TRISEP® PS UP020 6338B	20.5 (221)	31
TRISEP® PS UP020 6338C	17.1 (184)	46
TRISEP® PS UP020 6338F	11.5 (124)	80
TRISEP® PS UP020 8338B	34.0 (366)	31
TRISEP® PS UP020 8338C	27.5 (296)	46
TRISEP® PS UP020 8338F	21.2 (228)	80

^a All models on this sheet are net wrapped and have diamond shaped feed spacers.



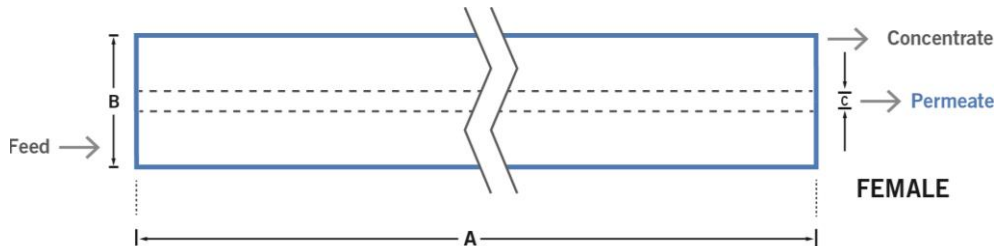
Product Specification (continued)

Physical Dimensions

Model	Element Weight kg (lbs) ^b	Dimensions, mm (inches)			Permeate Tube
		A	B	C ^c	
TRISEP® PS UP020 3838B	4 (9)	965 (38.0)	96 (3.8)	21.1 (0.83)	Female
TRISEP® PS UP020 3838C	4 (9)	965 (38.0)	96 (3.8)	21.1 (0.83)	Female
TRISEP® PS UP020 3838F	4 (9)	965 (38.0)	96 (3.8)	21.1 (0.83)	Female
TRISEP® PS UP020 4025B	4 (9)	636 (25.0)	101.5 (4.0)	16.0 (0.63)	Female
TRISEP® PS UP020 4025C	4 (9)	636 (25.0)	101.5 (4.0)	16.0 (0.63)	Female
TRISEP® PS UP020 4333B	4 (9)	838 (33.0)	109.5 (4.3)	21.1 (0.83)	Female
TRISEP® PS UP020 4333C	4 (9)	838 (33.0)	109.5 (4.3)	21.1 (0.83)	Female
TRISEP® PS UP020 4333F	4 (9)	838 (33.0)	109.5 (4.3)	21.1 (0.83)	Female
TRISEP® PS UP020 6338B	11 (24)	965 (38.0)	162 (6.3)	28.9 (1.138)	Female
TRISEP® PS UP020 6338C	11 (24)	965 (38.0)	162 (6.3)	28.9 (1.138)	Female
TRISEP® PS UP020 6338F	11 (24)	965 (38.0)	162 (6.3)	28.9 (1.138)	Female
TRISEP® PS UP020 8338B	18 (40)	965 (38.0)	211 (8.3)	28.9 (1.138)	Female
TRISEP® PS UP020 8338C	18 (40)	965 (38.0)	211 (8.3)	28.9 (1.138)	Female
TRISEP® PS UP020 8338F	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:** MICRODYN-NADIR 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).

Customizable Specialty Elements

MICRODYN-NADIR 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 MICRODYN-NADIR to customize a product that satisfies your specific requirements.

Solving Unmet Needs with Customized Products



Headquarters
MICRODYN-NADIR GmbH
Building D512
Kasteler Straße 45
65203 Wiesbaden
Germany
info@microdyn-nadir.de
www.microdyn-nadir.de

USA Office
MICRODYN-NADIR US, Inc.
93 South La Patera Lane
Goleta, CA 93117
USA
info@microdyn-nadir.com
www.microdyn-nadir.com/en
www.microdyn-nadir.com/trisep

China Office
MICRODYN-NADIR (Xiamen) Co. Ltd.
No. 66 Jinting North Road Xinglin
Xiamen, China 361022
infochina@microdyn-nadir.com

Singapore Office
MICRODYN-NADIR Singapore Pte. Ltd.
18 Tuas Avenue 8
Singapore 639233
info@microdyn-nadir.com