

# SPIRA-CEL® OX Industry

## UH Series



SPIRA-CEL® OX modules have an outstandingly high stability against temperature and pH. They may be used to clean caustic solutions and may be used in biotechnological applications where extreme cleaning conditions are required. NADIR® UH hydrophilic polyethersulfone (PESH) membranes offer consistent separations for applications where a more hydrophilic membrane is required.

### MEMBRANE CHARACTERISTICS

Membrane	NADIR® UH004	NADIR® UH030	NADIR® UH050
Nominal M.W.C.O. (Da)	4,000	30,000	50,000

### DESIGN INFORMATION

Model	Membrane Area m <sup>2</sup> (ft <sup>2</sup> )	Feed Spacer Thickness (mil) <sup>a</sup>
SPIRA-CEL® OX UH004 4040C	6.0 (65)	46
SPIRA-CEL® OX UH004 8040B	32.0 (344)	31
SPIRA-CEL® OX UH030 4040C	6.0 (65)	46
SPIRA-CEL® OX UH050 4040C	6.0 (65)	46

<sup>a</sup> All models on this sheet have fiberglass outer wrap, diamond-shaped feed spacers, and one brine seal. All models on this sheet include anti-telescoping devices (ATDs) attached to the ends of the element as default. ATDs can instead be provided loose in the box on request.

### OPERATING PARAMETERS

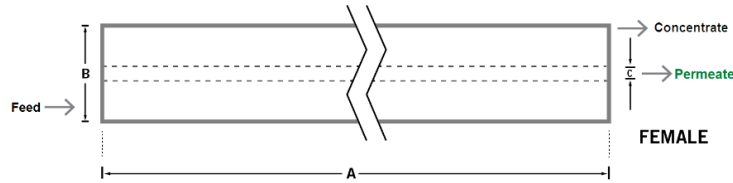
Maximum Operating Pressure	10 bar (145 psi)
Maximum Operating Temperature	80°C (176°F)
Operating pH Range	3.0 - 14.0
Cleaning pH Range <sup>1</sup>	2.0 - 14.0
Maximum Pressure Drop	2 bar (29.0 psi) @ 5 - 50°C per element 1.3 bar (18.9 psi) @ 50 - 65°C per element 0.5 bar (7.3 psi) @ 65 - 80°C per element 2 bar (29.0 psi) @ 80°C per housing

<sup>1</sup> Refer to temperature and pH limits in Membrane Cleaning Guide - Water Application Elements (TSG-C001).

**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
SPIRA-CEL® OX UH004 4040C	4 (9)	1,016 (40.0)	101.5 (4.0)	16.0 (0.63)	Female
SPIRA-CEL® OX UH004 8040B	16 (36)	1,016 (40.0)	200.5 (7.9)	30.15 (1.187)	Female
SPIRA-CEL® OX UH030 4040C	4 (9)	1,016 (40.0)	101.5 (4.0)	16.0 (0.63)	Female
SPIRA-CEL® OX UH050 4040C	4 (9)	1,016 (40.0)	101.5 (4.0)	16.0 (0.63)	Female

<sup>b</sup> Shipping weight is dependent on packaging material and quantity shipped.  
<sup>c</sup> 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 – Water Application Elements (TSG-C001).
- 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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