

SPIRA-CEL® OY Industry UP Series



SPIRA-CEL® OY modules have an outstandingly high stability against temperature and pH. They may be used to clean acid solutions and may be used in biotechnological applications where extreme cleaning conditions are required. NADIR® UP polyethersulfone (PES) membranes offers consistent flux and rejection in process applications.

MEMBRANE CHARACTERISTICS

Membrane	NADIR® UP005	NADIR® UP010	NADIR® UP020	NADIR® UP150
Nominal M.W.C.O. (Da)	5,000	10,000	20,000	150,000

DESIGN INFORMATION

Model	Membrane Area m ² (ft ²)	Feed Spacer Thickness (mil) ^a
SPIRA-CEL® OY UP005 4040C	6.3 (68)	46
SPIRA-CEL® OY UP005 4040D	6.3 (68)	47
SPIRA-CEL® OY UP005 8040C	25.0 (269)	46
SPIRA-CEL® OY UP005 8040D	25.0 (269)	47
SPIRA-CEL® OY UP005 8040G	19.0 (205)	80
SPIRA-CEL® OY UP010 4040C	6.0 (65)	46
SPIRA-CEL® OY UP010 4040D	6.0 (65)	47
SPIRA-CEL® OY UP010 4040G	4.2 (45)	80
SPIRA-CEL® OY UP010 8040C	25.0 (269)	46
SPIRA-CEL® OY UP010 8040D	25.0 (269)	47
SPIRA-CEL® OY UP010 8040G	19.0 (205)	80
SPIRA-CEL® OY UP020 4040C	6.0 (65)	46
SPIRA-CEL® OY UP020 4040D	6.0 (65)	47
SPIRA-CEL® OY UP020 8040C	25.0 (269)	46
SPIRA-CEL® OY UP020 8040D	25.0 (269)	47
SPIRA-CEL® OY UP020 8040G	19.0 (205)	80
SPIRA-CEL® OY UP150 4040C	6.0 (65)	46
SPIRA-CEL® OY UP150 4040D	6.0 (65)	47
SPIRA-CEL® OY UP150 8040C	25.0 (269)	46
SPIRA-CEL® OY UP150 8040D	25.0 (269)	47
SPIRA-CEL® OY UP150 8040G	19.0 (205)	80

^a All models on this sheet have fiberglass outer wrap and one brine seal. Models ending in "D" and "G" have parallel feed spacers; all other models have diamond shaped feed spacers. 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	0.0 - 12.0
Cleaning pH Range ¹	0.0 - 12.0
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

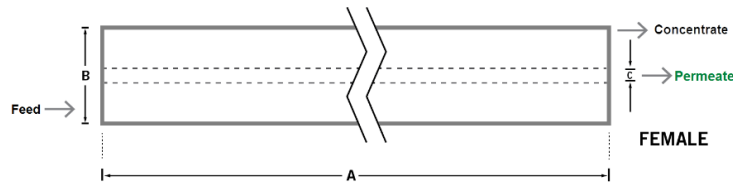
¹ Refer to temperature and pH limits in Membrane Cleaning Guide - Water Application Elements (TSG-C001).

PHYSICAL DIMENSIONS

Model	Element Weight kg (lb) ^b	Dim. A mm (inches)	Dim. B mm (inches)	Dim. C ^c mm (inches)	Permeate Tube
SPIRA-CEL® OY UP005 4040C	4 (9)	1,016 (40.0)	101.5 (4.0)	16.0 (0.63)	Female
SPIRA-CEL® OY UP005 4040D	4 (9)	1,016 (40.0)	101.5 (4.0)	16.0 (0.63)	Female
SPIRA-CEL® OY UP005 8040C	16 (36)	1,016 (40.0)	200.5 (7.9)	30.15 (1.187)	Female
SPIRA-CEL® OY UP005 8040D	16 (36)	1,016 (40.0)	200.5 (7.9)	30.15 (1.187)	Female
SPIRA-CEL® OY UP005 8040G	16 (36)	1,016 (40.0)	200.5 (7.9)	30.15 (1.187)	Female
SPIRA-CEL® OY UP010 4040C	4 (9)	1,016 (40.0)	101.5 (4.0)	16.0 (0.63)	Female
SPIRA-CEL® OY UP010 4040D	4 (9)	1,016 (40.0)	101.5 (4.0)	16.0 (0.63)	Female
SPIRA-CEL® OY UP010 4040G	4 (9)	1,016 (40.0)	101.5 (4.0)	16.0 (0.63)	Female
SPIRA-CEL® OY UP010 8040C	16 (36)	1,016 (40.0)	200.5 (7.9)	30.15 (1.187)	Female
SPIRA-CEL® OY UP010 8040D	16 (36)	1,016 (40.0)	200.5 (7.9)	30.15 (1.187)	Female
SPIRA-CEL® OY UP010 8040G	16 (36)	1,016 (40.0)	200.5 (7.9)	30.15 (1.187)	Female
SPIRA-CEL® OY UP020 4040C	4 (9)	1,016 (40.0)	101.5 (4.0)	16.0 (0.63)	Female
SPIRA-CEL® OY UP020 4040D	4 (9)	1,016 (40.0)	101.5 (4.0)	16.0 (0.63)	Female
SPIRA-CEL® OY UP020 8040C	16 (36)	1,016 (40.0)	200.5 (7.9)	30.15 (1.187)	Female
SPIRA-CEL® OY UP020 8040D	16 (36)	1,016 (40.0)	200.5 (7.9)	30.15 (1.187)	Female
SPIRA-CEL® OY UP020 8040G	16 (36)	1,016 (40.0)	200.5 (7.9)	30.15 (1.187)	Female
SPIRA-CEL® OY UP150 4040C	4 (9)	1,016 (40.0)	101.5 (4.0)	16.0 (0.63)	Female
SPIRA-CEL® OY UP150 4040D	4 (9)	1,016 (40.0)	101.5 (4.0)	16.0 (0.63)	Female
SPIRA-CEL® OY UP150 8040C	16 (36)	1,016 (40.0)	200.5 (7.9)	30.15 (1.187)	Female
SPIRA-CEL® OY UP150 8040D	16 (36)	1,016 (40.0)	200.5 (7.9)	30.15 (1.187)	Female
SPIRA-CEL® OY UP150 8040G	16 (36)	1,016 (40.0)	200.5 (7.9)	30.15 (1.187)	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 – 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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