

FG-SpiraCore™ R990 Reverse Osmosis Membrane Element Series

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PCI Membranes® sanitary reverse osmosis (RO) membrane elements are made with high-rejection membrane that is used to process a wide range of food, beverage, and dairy streams. These elements are especially effective for dewatering and product concentration.



Characteristics

Membrane	R990
Material	Polyamide
Outer wrap	Net wrap

Regulatory Status

Compliant with US FDA CFR Title 21, EC Reg. No. 1935/2004, and EU Reg. No. 10/2011. Halal certificate by the Islamic Food and Nutrition Council of America (IFANCA). Kosher certificate by Committee of Kashrut.

Limits

Max Operating Pressure	55 bar (800 psi)
Max Pressure Drop	1 bar (14.5 psi)
Max. Operating Temperature	50 °C (122 °F)
Max. Cleaning Temperature	55 °C (131 °F)
Operating pH Range	2 - 10
Cleaning pH Range	1.8 - 11
Free Chlorine Tolerance	Non-detectable
NaCl Rejection⁽¹⁾	≥ 99%

Area ft² (m²)

Spacer	R3838	R3840	R4040	R6338	R8038
31 mil	75 (7.0)	81 (7.5)	85 (7.9)	226 (21)	390 (36)
46 mil	58 (5.4)	62 (5.8)	68 (6.3)	172 (16)	/

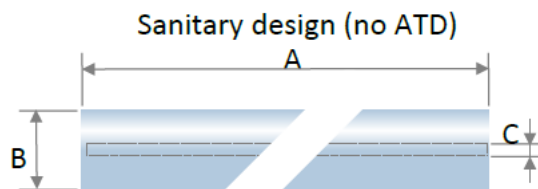
Notes:

(1) Test condition: 2000ppm NaCl solution, 225 psi (15.5bar), 77 °F (25 °C), pH 7.

(2) For the purpose of improvement, specifications may be updated periodically

(3) Consult PCI Membranes® when intending to operate at elevated pressure, temperature, concentrations.

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Dimensions

Size	A ^[1] [mm (inch)]	øB ^[2] [mm (inch)]	øC ^[3] [mm (inch)]	D [mm (inch)]
R3838-990-080-XX ^[4]	965 (38)	96 (3.8)	21.1 (0.831)	/
R3840-990-080-XX ^[4]	984 (38.8)	96 (3.8)	21.1 (0.831)	/
R4040-990-080-XX ^[4]	1016 (40)	99 (3.9)	16 (0.629)	/
R6338-990-080-XX ^[4]	965 (38)	160 (6.3)	28.9 (1.138)	/
R8038-990-080-XX ^[4]	965 (38)	200.5 (7.9)	28.9 (1.138)	/

[1] Tolerance: -2~0mm

[2] Tolerance: -2~0mm

[3] 3838/3840/4040 tolerance: ±0.1mm, 6338/8038 tolerance: -0.2~0 mm

[4] XX: 31 mil or 46 mil

Handling

Water quality for cleaning and diafiltration. Maximum feed turbidity is 1 NTU. Maximum feed SDI is 5.0 (15 minutes test).

Operation. Stated operational conditions are valid and the rules for installation, cleaning, water and preservation have to be adhered. PCI Membranes® approved cleaning detergent, anti-foam, polymers, other chemicals and filter-aids lubricants can be applied only. For further questions, do not hesitate to contact our service engineer.

Lubricants. During installation, use only water or glycerin to lubricate seals. The use of petroleum or vegetable-based oils or solvents may damage the element and void any warranty.

Preservation and Storage. Plan ahead to use new membranes. The element should be stored in a sealed bag, at 4 – 30 °C (39 – 86 °F). Storage solutions should be made with: 1 % w/w sodium metabisulfite.

Chemical Exposure. Residual chlorine concentration during CIP would be <0.1ppm

Cleaning. PCI Membranes® modules may be put into production after having gone through the first cleaning prescribed by PCI Membranes® on product packing notes or given differently by PCI Membranes®.

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