

HBCR™ High Brine Concentration and Recovery Spiral Elements

HBCR™ High Brine Concentration and Recovery spiral membrane element is available as a standalone product or in combination with Forward Osmosis and Sea Water Reverse Osmosis. When used within a standalone process, an HBCR train is capable of generating greater than 140,000 TDS NaCl at 1000 psi (70 bar) from 70,000 TDS NaCl with 35,000 TDS NaCl permeate. In combination with SWRO, permeate of less than 1000 TDS is generated while still reaching 140,000 TDS concentrate. The most common application is the re-concentration of draw solution in Forward Osmosis, generating above 100,000 TDS waste water concentrate and thereby minimizing ZLD costs.

- HBR-TFC-8040 High Brine Concentration
- HBR-TFC-4040 High Brine Concentration

Features and Benefits:

- High brine concentration, concentrating 35,000 TDS NaCl to 140,000 TDS using only 5 KWH per m²⁵ of water removed.
- Conventional SWRO equipment and components operated at 70 bar
- Robust design, long service lifef



Type	Configuration: Spiral Wound		Membrane Polymer: Composite Polyamide			Feed Spacer Material Polypropylene	
Specs	Permeate Flow: 500 gpd (5.7 m ³ /h)		Permeate Salinity: 55,000 ppm less than feed salinity			Nominal Membrane Area 400 ft (37 m ²)	
Test Conditions	NaCl Feed Concentration: 90,000 ppm	Applied Pressure: 1050 psi	Feed Flow: 10 gpm	Temperature: 25°C	Permeate Salinity: 35,000 ppm	Reject Salinity: 96,000 ppm	pH Range 6.5 - 7
Dimensions	A Total Length 40.0 inches (1016 mm)		B ATD Diameter 7.89 inches (200 mm)		C Connection Int. Diameter 1.125 inches (28.6 mm)		Weight 36 lbs (16.4Kg)



HBCR™ High Brine Concentration and Recovery Membrane

Model#: HBR-TFC- 8040 and HBR-TFC-4040

Maximum Operating Limits:

Operating Pressure	Temperature	Pressure Differential	Feed Flow	Chlorine Concentration	Feedwater SDI	Freedwater Turbidity
1150 psi (80 bar)	113°F (45°C)	10 psi (0.7 bar)	75 gpm (17.0 m / h)	<0.1 ppm	5.temp0	1.0 NTU

Other Operating Parameters:

Feedwater pH limits: 3.0 - 10.0

The limitations shown in Operating Limits are for general use. The values may be more conservative for specific projects to ensure the best performance and longest life of the membrane.

Notice:

Element is vacuum sealed in a polyethylene bag containing less than 1.0% sodium meta-bisulfite. Element is supplied with interconnector.

Guidelines:

Avoid static permeate-side backpressure at all times. For element loading use only silicon or glycerin to lubricate o-rings and brine seal.

The customer is fully responsible for the effects of incompatible chemicals on elements. The presence of free chlorine and other oxidizing agents will cause membrane failure, the damaged is not covered under warranty.

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