

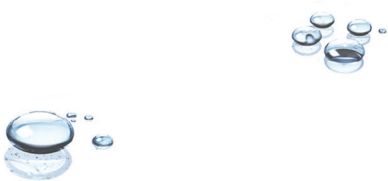
# CSM<sup>®</sup>

## MEMBRANE TECHNOLOGIES

Product Guide for Spiral-Wound RO & NF Elements



- BWM** Brackish Water Membrane
- FRM** Fouling Resistant Membrane
- SWM** Seawater Membrane
- UPWM** Ultra Pure Water Membrane
- NFM** Nanofiltration Membrane
- CRM** Chlorine Resistant Membrane



**CSM<sup>®</sup>**



## BWM Brackish Water Membrane

Size	Model Name	Permeate Flow Rate(GPD)	Salt Rejection(%)	Effective Area(ft <sup>2</sup> )	Test Condition
16"	RE 16040-BE *	41,000	99.7	1,600	1
	RE 16040-BLR *	36,000	99.6	1,600	2
8"	RE 8040-BE *	10,500	99.7	400	1
	RE 8040-BE34	10,500	99.7	400	1
	RE 8040-BE440 *	11,500	99.7	440	1
	RE 8040-BN *	9,500	99.7	365	1
8"	RE 8040-BLF *	11,500	99.2	400	3
	RE 8040-BLN *	12,000	99.6	400	2
	RE 8040-BLN440 *	13,000	99.6	440	2
	RE 8040-BLR *	9,000	99.6	400	2
	RE 8040-BLR440 *	9,900	99.6	440	2
4"	RE 4040-BE	2,400	99.7	85	1
	RE 4040-BLF *	2,500	99.2	85	3
	RE 4040-BLN *	2,600	99.2	85	2
	RE 4040-BLR *	1,900	99.6	85	2
4"	RE 4021-BE	1,050	99.7	35	5
	RE 4021-BLN	1,050	99.2	35	6
2.5"	RE 2540-BE	800	99.7	27	1
	RE 2540-BLN	800	99.2	27	2
2.5"	RE 2521-BE	300	99.7	12	5
	RE 2521-BLN	300	99.2	12	6

※ TWM users can use identical grade BWM membrane models : TE → BE, TL → BLN, TLF → BLF

## FRM Fouling Resistant Membrane

Size	Model Name	Permeate Flow Rate(GPD)	Salt Rejection(%)	Effective Area(ft <sup>2</sup> )	Test Condition
16"	RE 16040-FEn *	41,000	99.7	1,600	1
	RE 16040-FLR *	36,000	99.6	1,600	2
8"	RE 8040-FDn *	10,000	99.7	380	1
	RE 8040-FEn *	10,500	99.7	400	1
	RE 8040-FEn34	10,500	99.7	400	1
	RE 8040-FEn440 *	11,500	99.7	440	1
	RE 8040-FN *	9,500	99.7	365	1
	RE 8040-FL	9,000	99.0	400	2
8"	RE 8040-FL440	12,100	99.0	440	2
	RE 8040-FLR *	9,000	99.6	400	2
	RE 4040-FEn	2,400	99.7	85	1
4"	RE 4040-FL	2,400	99.0	85	2
	RE 4040-FLR	1,900	99.6	85	2

## SWM Seawater Membrane

Size	Model Name	Permeate Flow Rate(GPD)	Salt Rejection(%)	Effective Area(ft <sup>2</sup> )	Test Condition
16"	RE 16040-SHF *	36,000	99.70	1,600	4
	RE 16040-SHN *	24,600	99.75	1,600	4
8"	RE 8040-SHA400	7,500	99.75	400	4
	RE 8040-SHF *	9,000	99.70	370	4
	RE 8040-SHF400 *	9,700	99.70	400	4
	RE 8040-SHN *	6,000	99.75	370	4
	RE 8040-SHN400 *	6,500	99.75	400	4
4"	RE 4040-SHF	1,900	99.70	75	4
	RE 4040-SHN	1,200	99.75	75	4
2.5"	RE 2540-SHN	500	99.75	24	7

## UPWM Ultra Pure Water Membrane

Size	Model Name	Permeate Flow Rate(GPD)	Salt Rejection(%)	IPA Rejection(%)	Effective Area(ft <sup>2</sup> )	Test Condition
8"	RE 8040 HUE	9,000	99.5	96.0	400	1
	RE 8040 HUE440	10,000	99.5	96.0	440	1
	RE 8040 UR	5,500	99.7	96.0	400	1
	RE 8040-UL	10,000	99.5	92.0	400	2
	RE 8040-UL440	11,000	99.5	92.0	440	2

※ IPA Rejection : IPA 1,000mg/L, Pressure 225 psig for UE & HUE/ 150 psig for UL Temperature 25C, pH 6.5-7, Recovery 8%

## NFM Nanofiltration Membrane

Size	Model Name	Permeate Flow Rate(GPD)	Salt Rejection(%)	MgSO <sub>4</sub> Rejection(%)	CaCl <sub>2</sub> Rejection(%)	Effective Area(ft <sup>2</sup> )	Test Condition
8"	NE 8040-90 *	7,500	85~95	97.0	90~95	400	8
	NE 8040-70	7,000	40~70	97.0	45~70	400	8
4"	NE 4040-90 *	1,600	85~95	97.0	90~95	85	8
	NE 4040-70	1,500	40~70	97.0	45~70	85	8
2.5"	NE 2540-90	500	85~95	97.0	90~95	27	8
	NE 2540-70	450	40~70	97.0	45~70	27	8

※ MgSO<sub>4</sub> Rejection : MgSO<sub>4</sub> 2,000mg/L, Pressure 75 psig, Temperature 25C, pH 6.5-7, Recovery 15%

※ CaCl<sub>2</sub> Rejection : CaCl<sub>2</sub> 500mg/L, Pressure 75 psig, Temperature 25C, pH 6.5-7, Recovery 15%

## CRM Chlorine Resistant Membrane

Size	Model Name	Permeate Flow Rate(GPD)	Salt Rejection(%)	Effective Area(ft <sup>2</sup> )	Test Condition
8"	RE 8040-CE *	8,500	99.5	400	1
4"	RE 4040-CE	1,900	99.5	85	1

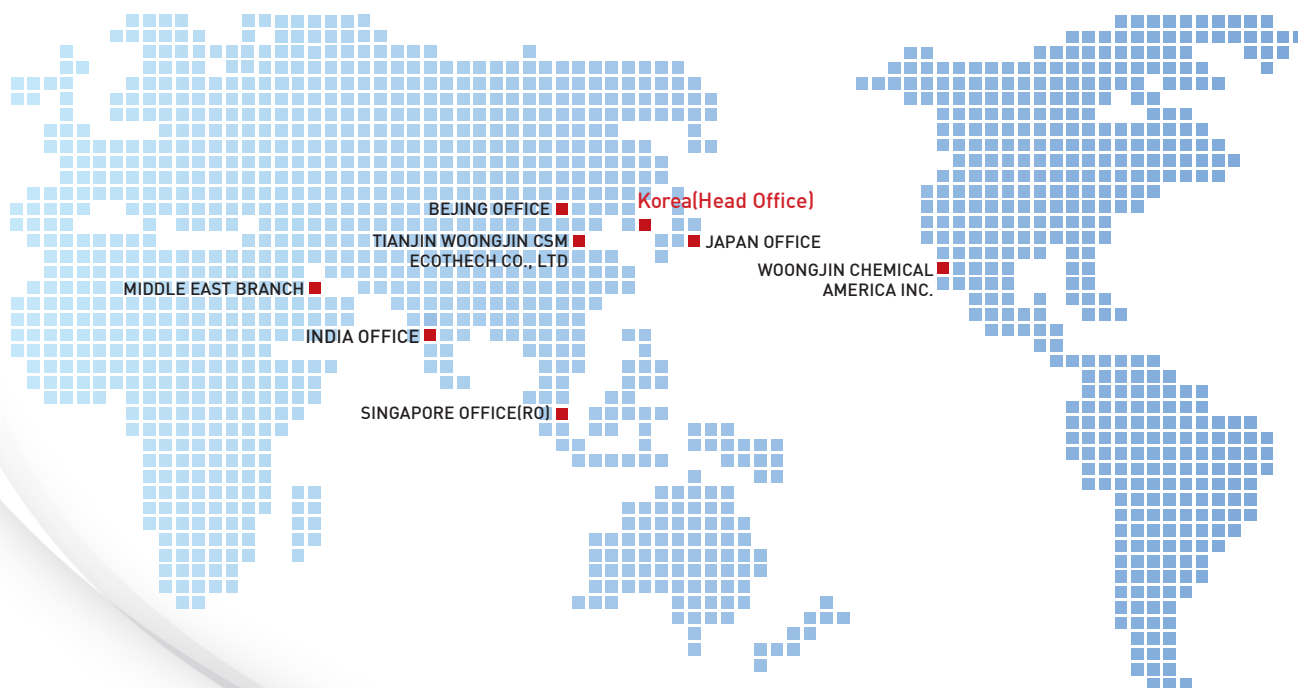
### Test Condition : Salt Rejection

1	40" BW Standard	NaCl 2,000mg/L, Pressure 225 psig, Temperature 25C, pH 6.5-7, Recovery 15%
2	40" LP Standard	NaCl 1,500mg/L, Pressure 150 psig, Temperature 25C, pH 6.5-7, Recovery 15%
3	40" LP High Flux	NaCl 500mg/L, Pressure 100 psig, Temperature 25C, pH 6.5-7, Recovery 15%
4	40" SW Standard	NaCl 32,000mg/L, Pressure 800 psig, Temperature 25C, pH 6.5-7, Recovery 8%
5	21" BW Standard	NaCl 2,000mg/L, Pressure 150 psig, Temperature 25C, pH 6.5-7, Recovery 8%
6	21" LP Standard	NaCl 1,500mg/L, Pressure 150 psig, Temperature 25C, pH 6.5-7, Recovery 8%
7	21" SW Standard	NaCl 32,000mg/L, Pressure 800 psig, Temperature 25C, pH 6.5-7, Recovery 4%
8	NE Standard	NaCl 2,000mg/L, Pressure 75 psig, Temperature 25C, pH 6.5-7, Recovery 15%



Element models marked with an asterisk (\*) are certified by NSF to NSF/ANSI Standard 61

## CSM® Global Coverage



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