

Performance Parameters Of Membrane Components

RO membrane performance parameters

Category	Model	Stable desalination rate %	Average water production GPD (m3/d)	Membrane area ft2(m2)	Inlet grid (mil)	Test conditions		
						Test pressure	Test solution	Recovery rate %
Low pressure reverse osmosis membrane LP	LP22-8040	99.7	10500(39.7)	400(37.2)	28	225(1.55)	2000	15
	LP22-8040PRO	99.7	11000(41.6)	400(37.2)	28			
	LP22-8040/31	99.7	10500(39.7)	400(37.2)	31			
	LP22-8040-440	99.7	11500(43.5)	440(40.9)	28			
	LP21-4040	99.6	2800(10.6)	100(9.3)	28			
Ultra low pressure reverse osmosis membrane ULP	ULP22-8040	99.0	12100(45.8)	400(37.2)	28	150(1.03)	1500	15
	ULP32-8040	99.5	10500(39.7)	400(37.2)	28			
	ULP32-8040/31	99.5	10500(39.7)	400(37.2)	31			
	ULP32-8040-440	99.3	12650(47.9)	440(40.9)	28			
	ULP21-4040	99.5	2600(9.8)	100(9.3)	28			
	ULP31-4040	99.6	2000(7.6)	100(9.3)	28			
	ULP21-4021	99.0	950(3.6)	36(3.3)	28			8
	ULP21-2521	99.0	300(1.1)	14(1.3)	28			
	ULP21-2540	99.0	750(2.8)	30(2.8)	28			15
Ultra low pressure reverse osmosis membrane XLP	XLP12-8040	99.2	12800(48.4)	400(37.2)	28	100(0.69)	500	15
	XLP11-4040	99.2	2600(9.8)	100(9.3)	28			
Anti pollution reverse osmosis membrane FR	FR12-8040	99.5	10500(39.7)	400(37.2)	34	225(1.55)	2000	15
	FR22-8040PRO	99.7	11000(41.6)	400(37.2)	34			
	FR400-LD	99.6	10500(39.7)	400(37.2)	34			
	FR11-4040	99.5	2200(8.3)	90(8.4)	34			
Antioxidant reverse osmosis membrane HOR	HOR22-8040	99.5	9000(34.0)	400(37.2)	28	225(1.55)	2000	15
	HOR21-4040	99.5	2200(8.3)	90(8.4)	28			

Seawater desalination membrane performance parameters

Category	Model	Stable desalination rate %	Average water production GPD (m3/d)	Membrane area ft2(m2)	Inlet grid (mil)	Test conditions		
						Test pressure psi (MPa)	Test solution concentration NaCl (ppm)	Recovery rate %
Seawater desalination membrane SW	SW8040XHR-400	99.85	6000(22.7)	400(37.2)	28	800(5.52)	32000	8
	SW8040XHR-440	99.85	6600(25.0)	440(40.9)	28			
	SW8040FR-400	99.8	8200(31.0)	400(37.2)	34			
	SW8040HR-400	99.8	7500(28.4)	400(37.2)	28			
	SW8040HR-440	99.8	8250(31.2)	440(40.9)	28			
	SW8040LE-400	99.8	9000(34.0)	400(37.2)	28			
	SW8040LE-440	99.8	9500(35.9)	440(40.9)	28			
	SW8040XLE-400	99.7	11000(41.6)	400(37.2)	28			
	SW8040XLE-440	99.7	12100(45.8)	440(40.9)	28			
	SW4040HR	99.8	1600(6.1)	90(8.4)	28			
	SW4040LE	99.7	1900(7.2)	90(8.4)	28			
	SW11-4021	99.5	750(2.8)	33(3.1)	28			4
	SW11-2521	99.5	270(1.0)	12(1.1)	28			
	SW11-2540	99.5	600(2.3)	28(2.6)	28			8
	SW21-2540	99.7	800(3.0)	28(2.6)	28			

NF membrane element performance parameters

Category	Model	Stable desalination rate %	Average water production GPD (m3/d)	Membrane area ft2(m2)	Inlet grid (mil)	Test conditions		
						Test pressure psi (MPa)	Test solution concentration NaCl (ppm)	Recovery rate %
Water treatment nanofiltration membrane	VNF1-8040	98	10000(37.9)	28	100(0.69)	2000 MgSO4	15	
	VNF2-8040	97	10500(39.7)	28				
	VNF1-4040	98	2000 (7.5)	28				
	VNF2-4040	97	2400 (9. 1)	28				
	VNF1-2540	98	650 (2.46)	28				
	VNF2-2540	97	750 (2.84)	28				
Municipal nanofiltration membrane	TAPU-LS	95	12000(45.4)	34-LD	70(0.48)	NaCl、MgSO4、CaCl2	15	
	TAPU-MS	95	9000(34. 1)	34-LD				
	TAPU-HS	95	8000(30.3)	34-LD				
	TAPU4040-LS	95	2200(8.3)	34-LD				
	TAPU4040-MS	95	2000(7.6)	34				
	TAPU4040-HS	95	1700(6.4)	34-LD				
Material separation nanofiltration membrane	MASE-SP	90	12000(45.4)	34-LD	100(0.69)	2000 MgSO4	15	
	MASE-SL	98	12000(45.4)	34-LD				
	MASE-PS	98	12000(45.4)	34-LD				
	MASE-CR	95	12000(45.4)	34-LD				
High pressure nanofiltration membrane	MASE-SL 80	98	8200(31.0)	28	100(0.69)	2000 MgSO4	15	
	MASE-CR 80	95	9500(35.9)	28				
Acid resistant nanofiltration membrane	Acidstab NF-8040	96	5500(20.8)	28	110(0.76)	2000 MgSO4	15	
	Acidstab NF-4040	96	1200(4.5)	28				
	Acidstab NF-2540	96	350(1.3)	28				
Alkali resistant nanofiltration membrane	Alkalistab NF-8040	96	5500(20.8)	28	110(0.76)	2000 MgSO4	15	
	Alkalistab NF-4040	96	750(2.8)	28				
	Alkalistab NF-2540	96	220(0.82)	28				

UF membrane element performance parameters

Category	Model	Average water production GPD (m3/d)	Test conditions			
			Test pressure psi	Type of testing	Test solution concentration	Recovery rate %
Roll type ultrafiltration membrane	VUF8040-4K/31F	8700(32.9)	60(0.41)	PEG 4000	1000	15
	VUF8040-6K/31F	6500(24.6)		PEG 6000		
	VUF8040-8K/31F	9500(35.9)		PEG 8000		
	VUF8040-10K/31F	7000(26.5)	40(0.28)	PEG 10000	1000	15
	VUF8040-20K/31F	10500(39.7)		PEG 20000		
	VUF8040-67K/31F	25000(94.6)	40(0.28)	bovine serum	300	15

Flat ultrafiltration membrane

Category	Model	Weight Kg	Length x Width x Height mm	Average membrane pore size
Flat ultrafiltration membrane	VMR 88	2.34	490×1000×7	0.1
	VMR 160	3.73	515×1750×7	0.1

hollow-fiber ultrafiltration membrane

Category	Model	Effective membrane	Design flux	nominal bore	Membrane material	Production process
		m2	LMH	μm		
hollow-fiber ultrafiltration membrane	VUF-2860	51	30-120	0.02	PVDF	NIPS
	VUF-2880	77	30-120	0.02	PVDF	NIPS
	VUF-2860T	51	35-120	0.08	PVDF	TIPS
	VUF-2880T	77	35-120	0.08	PVDF	TIPS