Catalog and Selection of VONTRON^{RO} Membrane Elements

1-3.1 Catalog of Industrial Membrane Elements

Type	Model	Reject. (%)	Average Permeate GPD (m^3/d)	Working Pressure & Application Fields	Testing Conditions		
					Pressure psi (MPa)	Solution Concentr. NaCl(ppm)	Recovery Rate (%)
General-purpose Industrial Membrane Elements	LP21-8040	99.5	9600 (36.3)	Working under low pressure. Applicable to regular or high content brackish water.	225 (1.55)	2000	15
	LP22-8040	99.5	10500 (39.7)				
	LP21-4040	99.5	2400 (9.1)				
	XLP11-4040	98.0	2000 (7.6)	Working under extremely low pressure. Applicable to feedwater with low salinity that requires low rejection rate.	100 (0.69)	500	15
	ULP21-8040	99.0	11000 (41.6)	Working under ultra low pressure. Applicable to feedwater with fairly low salinity.	150 (1.03)	1500	15
	ULP12-8040	98.0	13200 (49.9)				
	ULP22-8040	99.0	12100 (45.7)				
	ULP32-8040	99.5	10500 (39.7)				
	ULP11-4040	98.0	2700 (10.2)				

	ULP21-4040	99.0	2400 (9.1)				
	ULP31-4040	99.4	1900 (7.2)				
	ULP11-4021	98.0	1000 (3.78)	Working under ultra low pressure. Applicable to commercial water purifier, and water purifying devices for hospital and laboratory.	150 (1.03)	1500	8
	ULP21-4021	99.0	950 (3.6)				
	ULP31-4021	99.4	850 (3.2)				
	ULP21-2521	99.0	300 (1.13)				
	ULP21-2540	99.0	750 (2.84)				15
Seawater Desalination Element	SW21-8040	99.7	5000 (18.9)	Working under high pressure. Applicable to seawater or quasi seawater.	800 (5.5)	32800	8
	SW22-8040	99.7	6000 (22.7)				
	SW21-4040	99.5	1400 (5.3)				
	SW11-2540	99.2	500 (1.89)	Working under high pressure. Applicable to small-sized system in military ship, marine ship, laboratory, etc. for desalination of seawater or high-content brackish water.			
	SW11-4021	99.2	750 (2.8)				4
	SW11-2521	99.2	200 (0.76)				
Fouling Resistant Element	FR11-8040	99.5	9600 (36.3)	Working under low pressure. Applicable to	225 (1.55)	2000	15

	PURO-I	99.5	10500 (39.7)	feedwater with small content of contaminants (organic substances, colloids).			
	FR11-4040	99.5	2200 (8.3)				
High Oxidation Resistant Element	HOR21-8040	99.2	9000	Applicable to feedwater with oxidative substances or serious microbial contamination.	225 (1.55)	2000	15
	HOR21-4040	99.2	2200				

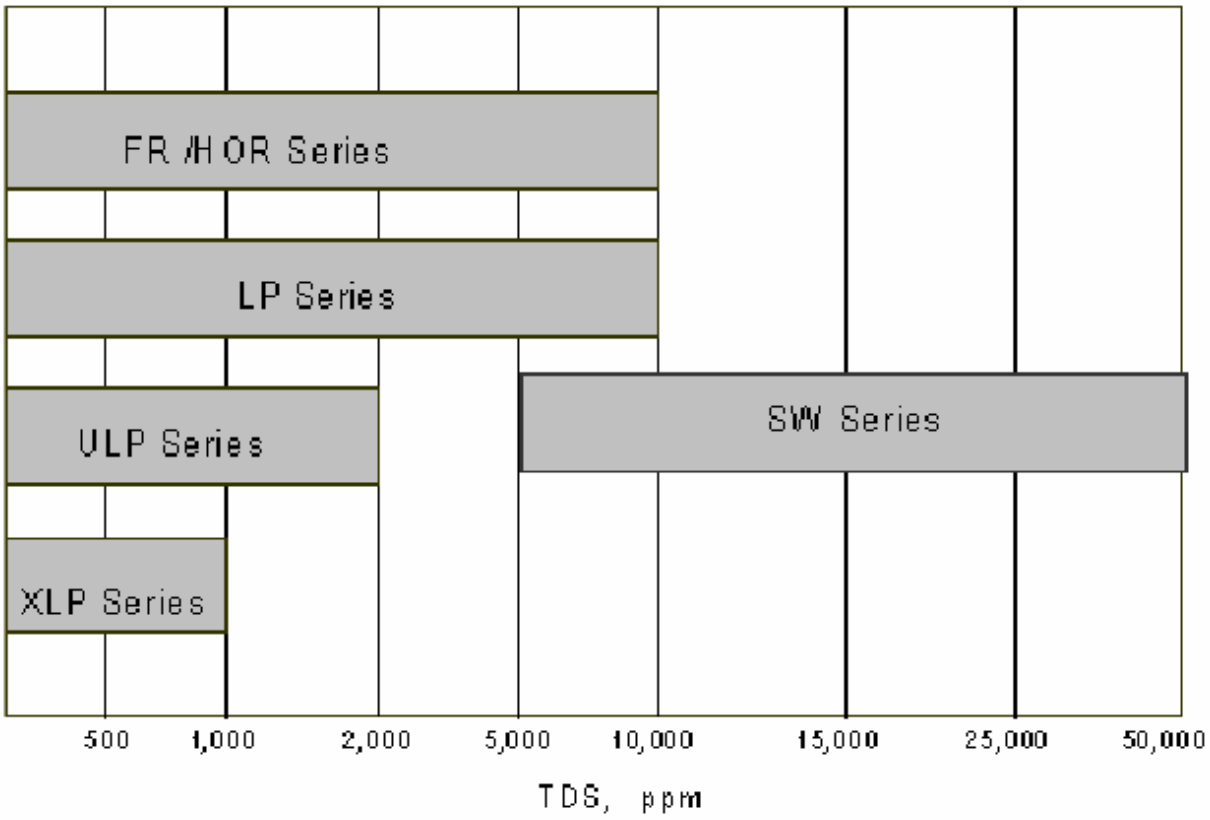
1-3.2 Catalog of Residential Membranes and Non-standard Membranes

Type	Model	Reject. (%)	Average Permeate GPD (m^3/d)	Working Pressure & Application Fields	Testing Conditions		
					Pressure psi (MPa)	Solution Concentr. NaCl(ppm)	Recovery Rate (%)
Residential	ULP1810-40	97.0	40 (0.15)	Working under extremely low pressure. Applicable to residential water purifier and water purifying devices in hospital and laboratory for treatment of feedwater with TDS lower than 500 ppm.	60 (0.41)	250	15
	ULP1812-50	97.5	50 (0.19)				
	ULP1812-75	97.5	75 (0.28)				
	ULP2012-100	95.0	100 (0.38)				

Residential Oxidation Resistant Element	HOR2012	97.5	50 (0.19)	Applicable to water sources with oxidizing substance or high microbial pollution.	60 (0.41)	250	15
Non-standard	ULP2812	97.0	200 (0.76)	Working under extremely low pressure. Applicable to automatic water dispenser and residential drinking fountain.	100 (0.69)	500	15
	ULP3012	97.0	240 (0.91)				
	ULP3020	97.0	420 (1.60)				

1–3.4 Guide to Selection of Membrane Elements

1) Selection of Membrane Elements according to Salinity of Feedwater



2) Frame Diagram of Selection of Membrane Elements