UNISOL NFDK Nanofiltration Membrane Modules

Spiral Wound Element FG NFDK Series

Description

NFDK series membrane elements allow most monovalent ions to pass through while having a high retention rate for divalent and higher ions, with a molecular weight cutoff of 200-300 Daltons, and are a type of polypiperazine amide membranes used for desalination, seawater pre-treatment, heavy metal removal, and concentration of organic solutes.

Specification

Membrane	NFDK				
Material	Polypiperazine amide				
Outer wrap	TFC				
Permeate Flow (1) (2) (3) (m^3/d)	Size	34mil(A)	31mil(B)	46mil(C)	34mil(M)
	2540	/	2.1	1.3	/
	4040	7.2	7.2	5.3	/
	8040	28.5	30.7	24.6	32.5
$MgSO_4$ retention rate (1) (3) (4)	≥98%				

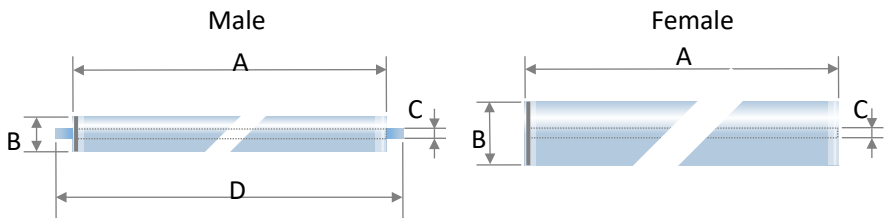
Limits

Max Operating Pressure:	40bar
Max Pressure Drop:	1bar
Max Operating Temperature:	50℃
Cleaning pH Range:	2–11
Chlorine Concentration:	＜0.1ppm

Area (m^2)

Original water grid	FG NFDK 2540	FG NFDK 4040	FG NFDK 8040
34mil parallel(A)	/	7.9	30
31mil rhombic(B)	2.2	7.9	32.6
46mil rhombic(C)	1.8	6.3	25
34mil rhombic(M)	/	/	33

Dimensions



Size	A[1]	⌀B[2]	⌀C[3]	D
2540-Male	965 (38)	62 (2.4)	19 (0.748)	1016 (40)
4040-Male	962 (37.9)	99.4 (3.9)	19 (0.748)	1016 (40)
4040-Female	1016 (40)	99.4 (3.9)	16 (0.629)	/
8040-Female	1016 (40)	200.5 (7.9)	28.9 (1.138)	/

[1] Tolerance: ±0.5mm.
[2] Tolerance: -2/0mm.
[3] 2540/4040-M tolerance: 0~+0.1 mm.4040-F tolerance: ±0.1mm. 8040 tolerance: -0.2~0 mm.

(1) Test condition: 2000ppm $MgSO_4$, 7.6bar, 25℃, pH 6.5-7.0；
(2) Permeate flow for individual elements may vary ± 20%；
(3) For the purpose of improvement, specifications may be updated periodically；
(4)Depending on the characteristics of the influent water and operating conditions, the retention rate can be stabilized after 24-48 hours of operation.