UNISOL NFDK Nanofiltration Elements

Spiral Wound Element ID NFDK Series

Description

NFDK series membrane elements has high rejection of divalent while allowing the majority of monovalent ions to pass through the membrane. With MWCO in the range of 200-300 Daltons, it is a piperazine-based membrane used to demineralize, Seawater Pretreatment, Heavy Metals Removal and concentrate organic solutes.

Specification

Membrane	NFDK		
Material	Polypiperazine		
Out Wrap	Net-Warp		
Permeate Flow[1] [2] [3]	Spacer	31mil (B)	46mil (C)
GPD (m^3/d)	ID NFDK 2540	560 (2.1)	350 (1.3)
	ID NFDK 4040	1,900 (7.6)	1,400 (4.9)
	ID NFDK 8040	8,100 (21.1)	6,500 (20.4)
$MgSO_4$ Rejection[1] [3] [4]	≥ 98%		

Limits

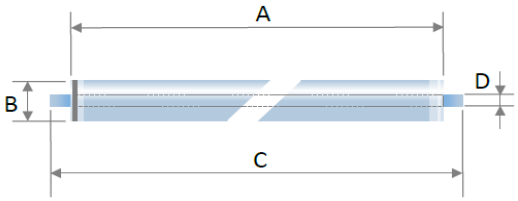
Max Operating Pressure	40 bar (580psi)
Max Pressure Drop	1 bar (14.5 psi) for individual element
Max Operating Temperature	50 °C (122 °F)
Cleaning pH Range	2 – 11
Chlorine Concentration	< 0,1 ppm

Area
ft^2 (m^2)

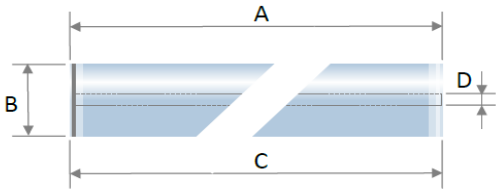
Spacer thickness	ID NFKD 2540	ID NFDK 4040	ID NFDK 8040
31 mil (B)	28 (2.6)	98 (9.1)	347 (32.1)
46 mil (C)	18 (1.6)	65 (6.0)	270 (25.1)

Dimensions

Male Configuration



Female Configuration



Size		2540	4040-M	4040-F	8040
A	mm (inch)	965 (38)	965 (38)	1016 (40)	1016 (40)
⌀B	mm (inch)	62 (2.4)	99.4 (3.9)	99.4 (3.9)	200.5 (7.9)
C	mm (inch)	1016 (40)	1016 (40)	1016 (40)	1016 (40)
⌀D	mm (inch)	19 (0.75)	19 (0.75)	16 (0.63)	28.8 (1.13)
Permeate tube		Male	Male	Female	Female

[1] Test condition: 2000ppm $MgSO_4$ solution, 110psi (7.6bar), 77 °F (25 °C), 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] Stabilized salt rejection is generally achieved within 24 – 48 hours of continuous use, depending upon feed water characteristics and operating conditions.