Module Characteristics

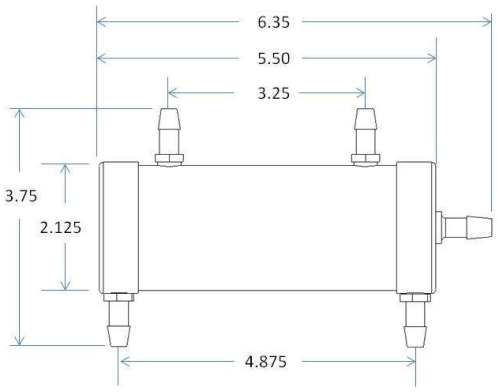
Membrane Material		PDMS (Silicone)
Membrane Type		Dense Hollow Fiber
Fiber ID	µm (in)	190 (0.00748)
Fiber OD	µm (in)	300 (0.0118)
Fiber Wall Thickness	µm (in)	55 (0.0022)
Fiber Count	#	9600
Membrane Area[1]	cm^2 (ft^2)	7500 (8.1)
Module Length	cm (in)	14 (5.5)
Module Diameter	cm (in)	5.4 (2.125)
Fittings / Connection Size	in	Barbed 1/4
Shell / End Caps		Polycarbonate
Fittings Material		Polycarbonate
Potting Material		Polyurethane
Other Materials of Construction[2]		Polypropylene, Acrylic

Operating Conditions

Max Continuous Operating Temperature	°C (°F)	60 (140)
Max Shell Side Pressure	bar (psig)	1 (15) @ 77°F
Max Lumen Pressure	bar (psig)	3 (45) @ 77°F
Max TMP[3] Shell to Lumen	bar (psi)	1 (15) @ 77°F
Max TMP[3] Lumen to Shell	bar (psi)	3 (45) @ 77°F
Typical Liquid Flow Rate	l/min (gpm)	0.5 - 6 (0.125 - 1.6)
Sweep Flow Rate (no Vacuum)	scfm (slpm)	0.1 - 0.5 (3 - 15)
Sweep Flow Rate with Vacuum	scfm (slpm)	0.02 - 0.1 (0.6 - 3)
Typical Gas Flow Rate	scfm (slpm)	0.02 - 1.0 (0.6 - 30)

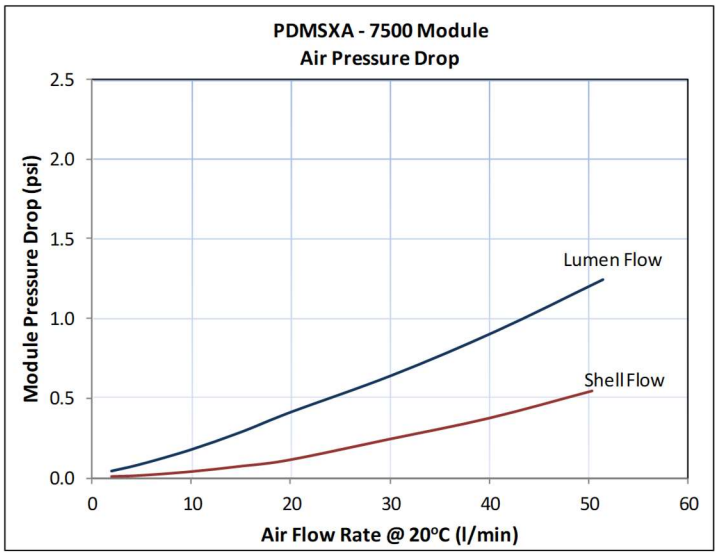
Volume / Weight

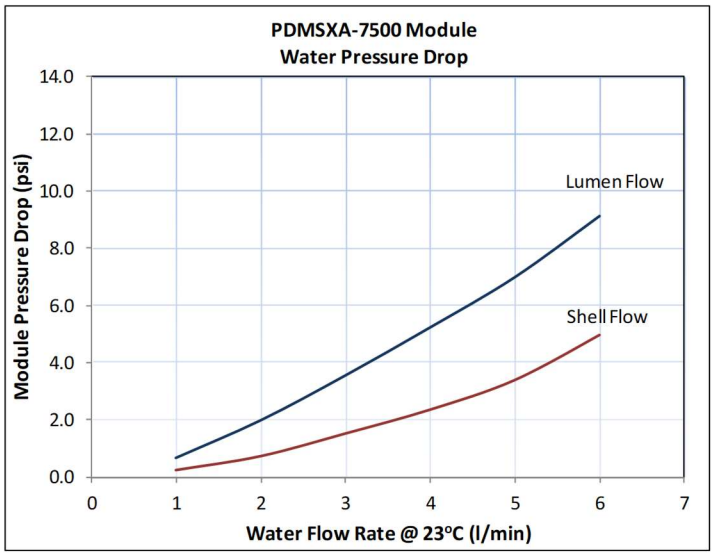
Lumen Side Priming Volume	ml	55
Shell Side Priming Volume	ml	65
Dry Weight	lbs (g)	0.40 (180)
Wet Weight - Shell Side Filled	lbs (g)	0.55 (250)
Shipping Weight	lbs (g)	0.44 (200)

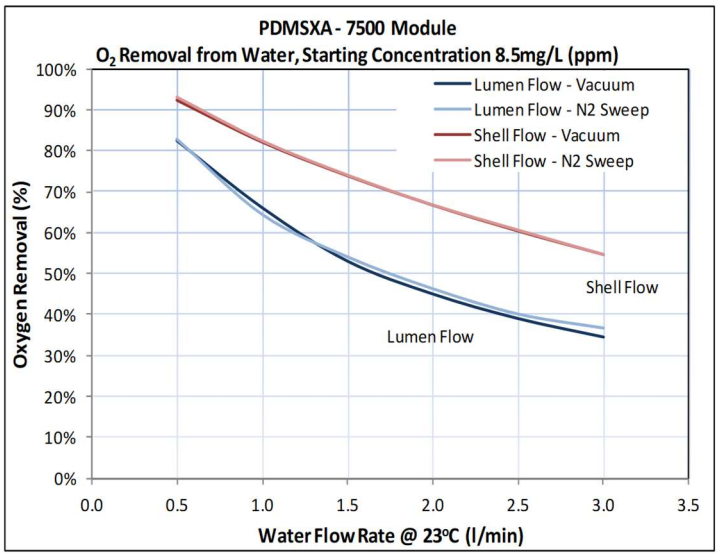


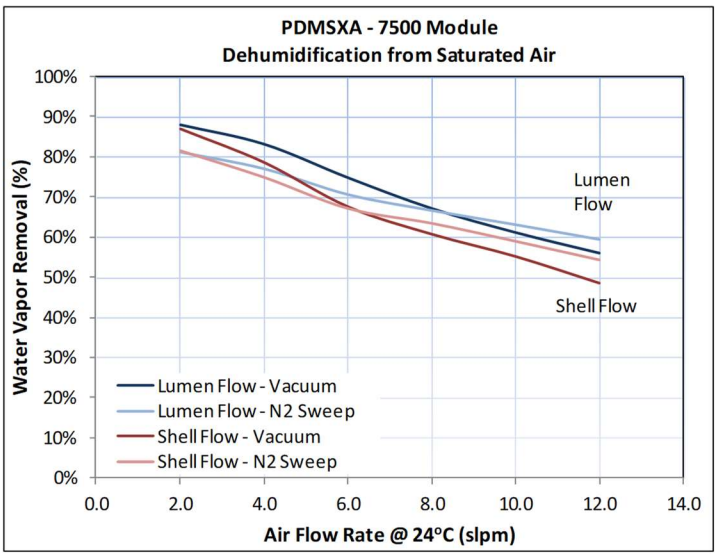
Note: All dimensions in inches

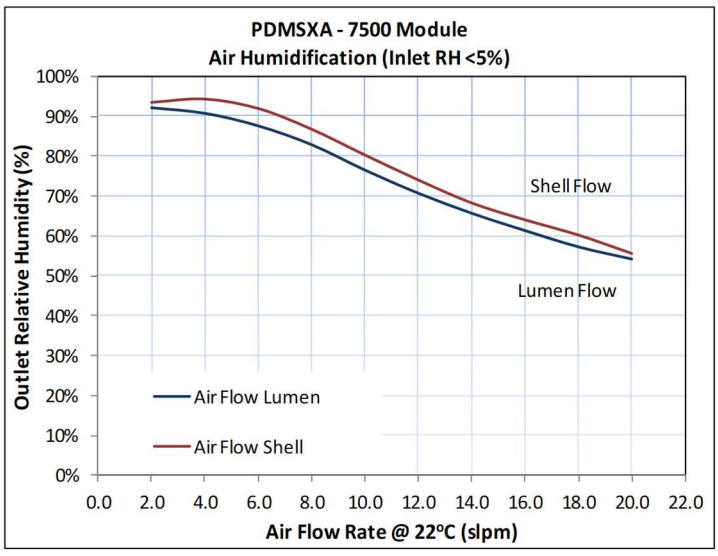
1- Based on fiber OD
2- Traces of PVOH (polyvinyl alcohol) possible in lumens
3- TMP (Trans-Membrane Pressure)


PDMSXA - 7500 Module
Air Pressure Drop
Module Pressure Drop (psi)
2.5
2.0
1.5
1.0
0.5
0.0
0
10
20
30
40
50
60
Lumen Flow
Shell Flow
Air Flow Rate @ 20°C (l/min)


PDMSXA-7500 Module
Water Pressure Drop
Module Pressure Drop (psi)
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
0
1
2
3
4
5
6
7
Lumen Flow
Shell Flow
Water Flow Rate @ 23°C (l/min)


PDMSXA - 7500 Module
O2 Removal from Water, Starting Concentration 8.5mg/L (ppm)
Oxygen Removal (%)
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
Lumen Flow - Vacuum
Lumen Flow - N2 Sweep
Shell Flow - Vacuum
Shell Flow - N2 Sweep
Shell Flow
Lumen Flow
Water Flow Rate @ 23°C (l/min)


PDMSXA - 7500 Module
Dehumidification from Saturated Air
Water Vapor Removal (%)
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
0.0
2.0
4.0
6.0
8.0
10.0
12.0
14.0
Lumen Flow
Shell Flow
Lumen Flow - Vacuum
Lumen Flow - N2 Sweep
Shell Flow - Vacuum
Shell Flow - N2 Sweep
Air Flow Rate @ 24°C (slpm)


PDMSXA - 7500 Module
Air Humidification (Inlet RH <5%)
Outlet Relative Humidity (%)
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
0.0
2.0
4.0
6.0
8.0
10.0
12.0
14.0
16.0
18.0
20.0
22.0
Shell Flow
Lumen Flow
Air Flow Lumen
Air Flow Shell
Air Flow Rate @ 22°C (slpm)

WARNING

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