

Specifications of Nitrogen Generation Membrane Module

Model : MNH-1512A

1. Product : Hollow fiber membrane type module

2. Use : Nitrogen generation

3. Dimensions and Weight

Length	Dimension	Weight
359 mm	55 mm	0.9 kg

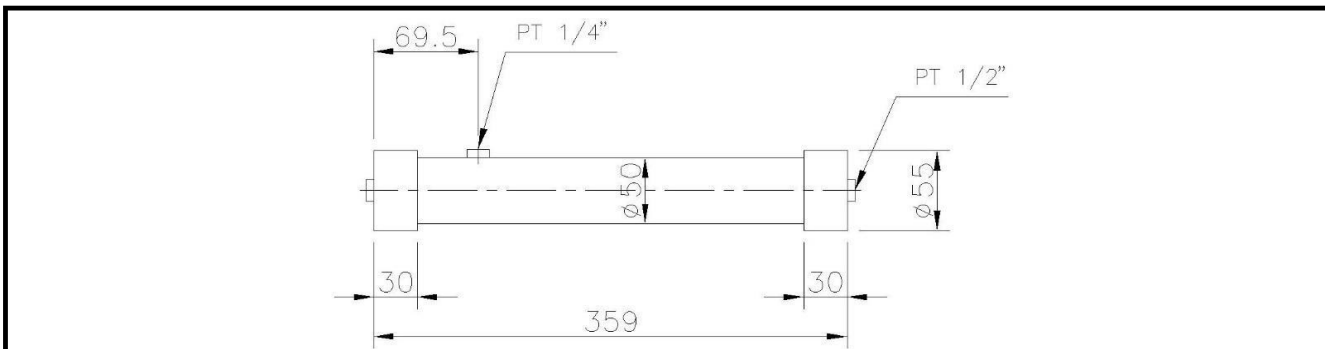
4. Fittings

Air inlet	N2 product outlet	O2 enriched air outlet
Rc1/2" (PT)	Rc1/2" (PT)	Rc1/4" (PT)

5. Components

Cap / Casing	Hollow fiber	Potting materials	Sealing O-Ring
AL-6063	Polysulfone	Epoxy	NBR

6. Module Configuration



7. Operating Conditions

Item	Unit	Condition
Operation Pressure	barg	Max. 20
Temperature(Min/Max)	°C	5 / 55
Relative humidity	%	Less than 60 (at Operating pressure and temperature, Remove moisture with air drier)
Particles	mg/m ³ (0 °C, 101.3 kPa)	Less than 0.1 (Remove particles with 3µm gas filter and 0.01µm mist separator)
Residual oil		Less than 0.01 (Remove oil with 3µm gas filter and 0.01µm mist separator)
Hydrocarbons		Less than 0.01 (Remove hydrocarbons with activated carbon if necessary)

8. Performance

Operating Temperature : 25°C

Pressure	MNH-1512A	Nitrogen product flow rate and Air feed required (NLPM)					
	Oxygen density (%)	0.5	1	2	3	4	5
5barg	Nitrogen	0.78	1.08	1.58	2.09	2.63	3.17
	Air	4.32	4.75	5.33	5.90	6.59	7.27
7barg	Nitrogen	1.35	1.87	2.74	3.60	4.50	5.40
	Air	6.77	7.34	8.42	9.50	10.40	11.30
9barg	Nitrogen	1.87	2.66	3.89	5.11	6.37	7.63
	Air	8.42	9.50	11.52	12.60	13.97	15.34
11barg	Nitrogen	2.48	3.46	5.04	6.62	8.24	9.86
	Air	11.09	12.10	14.40	16.06	17.71	19.66
13barg	Nitrogen	3.05	4.25	6.19	8.14	10.12	12.10
	Air	13.54	14.69	17.28	19.44	21.64	23.87
15barg	Nitrogen	3.62	5.04	7.34	9.65	11.99	14.33
	Air	15.84	17.35	20.30	22.90	25.34	28.08
17barg	Nitrogen	4.19	5.83	8.50	11.16	13.86	16.56
	Air	18.14	20.02	23.33	26.42	29.16	32.40
19barg	Nitrogen	4.76	6.62	9.65	12.67	15.73	18.79
	Air	20.45	22.68	26.42	29.95	33.12	36.79
20barg	Nitrogen	5.04	7.02	10.22	13.43	16.67	20.38
	Air	21.67	24.05	28.01	31.75	34.99	39.82

Operating Temperature : 35°C

Pressure	MNH-1512A	Nitrogen product flow rate and Air feed required (NLPM)					
	Oxygen density (%)	0.5	1	2	3	4	5
5barg	Nitrogen	0.8	1.1	1.7	2.2	2.8	3.4
	Air	4.8	5.2	5.9	6.5	7.2	8.0
7barg	Nitrogen	1.4	2.0	2.9	3.8	4.8	5.7
	Air	7.4	8.1	9.3	10.5	11.4	12.4
9barg	Nitrogen	2.0	2.8	4.1	5.4	6.8	8.1
	Air	9.3	10.5	12.7	13.9	15.4	16.9
11barg	Nitrogen	2.6	3.7	5.3	7.0	8.7	10.5
	Air	12.2	13.3	15.8	17.7	19.5	21.6
13barg	Nitrogen	3.2	4.5	6.6	8.6	10.7	12.8
	Air	14.9	16.2	19.0	21.4	23.8	26.3
15barg	Nitrogen	3.8	5.3	7.8	10.2	12.7	15.2
	Air	17.4	19.1	22.3	25.2	27.9	30.9
17barg	Nitrogen	4.4	6.2	9.0	11.8	14.7	17.6
	Air	20.0	22.0	25.7	29.1	32.1	35.6
19barg	Nitrogen	5.0	7.0	10.2	13.4	16.7	19.9
	Air	22.5	24.9	29.1	32.9	36.4	40.5
20barg	Nitrogen	5.3	7.4	10.8	14.2	17.7	21.6
	Air	23.8	26.5	30.8	34.9	38.5	43.8

Operating Temperature : 45 °C

Pressure	MNH-1512A	Nitrogen product flow rate and Air feed required (NLPM)					
	Oxygen density (%)	0.5	1	2	3	4	5
5barg	Nitrogen	0.93	1.30	1.90	2.51	3.15	3.80
	Air	5.53	6.08	6.82	7.56	8.43	9.31
7barg	Nitrogen	1.62	2.25	3.28	4.32	5.40	6.48
	Air	8.66	9.40	10.78	12.17	13.32	14.47
9barg	Nitrogen	2.25	3.20	4.67	6.13	7.65	9.16
	Air	10.78	12.17	14.75	16.13	17.88	19.63
11barg	Nitrogen	2.98	4.15	6.05	7.95	9.89	11.84
	Air	14.19	15.48	18.43	20.55	22.67	25.16
13barg	Nitrogen	3.66	5.10	7.43	9.76	12.14	14.52
	Air	17.33	18.80	22.12	24.88	27.69	30.55
15barg	Nitrogen	4.35	6.05	8.81	11.58	14.39	17.19
	Air	20.28	22.21	25.99	29.31	32.44	35.94
17barg	Nitrogen	5.03	7.00	10.20	13.39	16.63	19.87
	Air	23.22	25.62	29.86	33.82	37.32	41.47
19barg	Nitrogen	5.71	7.95	11.58	15.21	18.88	22.55
	Air	26.17	29.03	33.82	38.34	42.39	47.09
20barg	Nitrogen	6.05	8.42	12.27	16.11	20.00	24.45
	Air	27.74	30.78	35.85	40.64	44.79	50.96

Operating Temperature : 55 °C

Pressure	MNH-1512A	Nitrogen product flow rate and Air feed required (NLPM)					
	Oxygen density (%)	0.5	1	2	3	4	5
5barg	Nitrogen	1.00	1.39	2.04	2.67	3.38	4.08
	Air	6.08	6.68	7.49	8.30	9.27	10.23
7barg	Nitrogen	1.73	2.41	3.52	4.63	5.79	6.95
	Air	9.52	10.33	11.85	13.37	14.63	15.90
9barg	Nitrogen	2.41	3.43	5.00	6.58	8.20	9.82
	Air	11.85	13.37	16.20	17.72	19.65	21.57
11barg	Nitrogen	3.20	4.45	6.48	8.52	10.61	12.69
	Air	15.98	17.10	20.27	22.43	24.67	27.59
13barg	Nitrogen	3.93	5.47	7.97	10.47	13.02	15.56
	Air	19.64	21.02	24.14	27.55	30.27	33.11
15barg	Nitrogen	4.66	6.48	9.45	12.41	15.42	18.44
	Air	22.28	24.41	28.56	32.21	35.65	39.50
17barg	Nitrogen	5.39	7.50	10.93	14.36	17.83	21.31
	Air	25.52	28.16	32.81	37.17	41.02	45.58
19barg	Nitrogen	6.12	8.52	12.41	16.30	20.24	24.18
	Air	29.16	32.78	37.62	41.81	46.00	51.45
20barg	Nitrogen	6.49	9.03	13.15	17.28	21.45	26.22
	Air	30.90	34.74	39.86	44.30	48.74	55.78