

Technical data of Nitrogen Generation Membrane Module

Model : MN2-03550

1. Product : Hollow fiber membrane type module

2. Use : Nitrogen generation

3. Dimensions and Weight

Length	Dimension	Weight
1064 mm	150 mm	14 kg

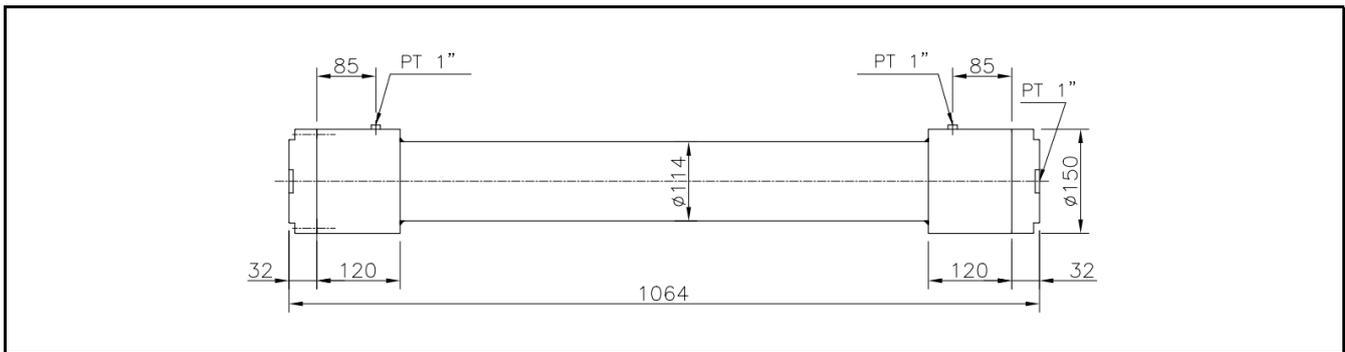
4. Fittings

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

5. Components

Cap / Casing	Hollow fiber	Potting materials	Sealing O-Ring
Aluminium	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	MN2-03550	Nitrogen product flow rate and Air feed required (Nm ³ /hr)					
	Oxygen density (%)	0.5	1	2	3	4	5
5 barg	Nitrogen	1.47	2.05	3.00	3.96	4.98	6.00
	Air	8.18	9.00	10.09	11.19	12.48	13.78
7 barg	Nitrogen	2.55	3.55	5.18	6.82	8.53	10.23
	Air	12.82	13.91	15.96	18.01	19.71	21.42
9 barg	Nitrogen	3.55	5.05	7.37	9.68	12.07	14.46
	Air	15.96	18.01	21.82	23.87	26.46	29.05
11 barg	Nitrogen	4.71	6.55	9.55	12.55	15.62	18.69
	Air	21.01	22.92	27.28	30.42	33.56	37.24
13 barg	Nitrogen	5.78	8.05	11.73	15.41	19.16	22.92
	Air	25.64	27.83	32.74	36.83	40.99	45.22
15 barg	Nitrogen	6.86	9.55	13.91	18.28	22.71	27.14
	Air	30.01	32.87	38.47	43.38	48.01	53.20
17 barg	Nitrogen	7.94	11.05	16.10	21.14	26.26	31.37
	Air	34.37	37.92	44.19	50.06	55.24	61.38
19 barg	Nitrogen	9.02	12.55	18.28	24.01	29.80	35.60
	Air	38.74	42.97	50.06	56.74	62.75	69.70
20 barg	Nitrogen	9.56	13.30	19.37	25.44	31.58	38.60
	Air	41.06	45.56	53.06	60.15	66.29	75.43

Operating Temperature : 35 °C

Pressure	MN2-03550	Nitrogen product flow rate and Air feed required (Nm ³ /hr)					
	Oxygen density (%)	0.5	1	2	3	4	5
5 barg	Nitrogen	1.56	2.17	3.18	4.19	5.28	6.36
	Air	9.00	9.90	11.10	12.30	13.73	15.15
7 barg	Nitrogen	2.70	3.76	5.49	7.23	9.04	10.84
	Air	14.10	15.30	17.56	19.81	21.68	23.56
9 barg	Nitrogen	3.76	5.35	7.81	10.27	12.80	15.33
	Air	17.56	19.81	24.01	26.26	29.11	31.96
11 barg	Nitrogen	4.99	6.94	10.12	13.30	16.56	19.81
	Air	23.11	25.21	30.01	33.46	36.91	40.96
13 barg	Nitrogen	6.13	8.53	12.43	16.34	20.31	24.29
	Air	28.21	30.61	36.01	40.51	45.09	49.74
15 barg	Nitrogen	7.27	10.12	14.75	19.37	24.07	28.77
	Air	33.01	36.16	42.31	47.71	52.82	58.52
17 barg	Nitrogen	8.42	11.71	17.06	22.41	27.83	33.26
	Air	37.81	41.71	48.61	55.07	60.77	67.52
19 barg	Nitrogen	9.56	13.30	19.37	25.45	31.59	37.74
	Air	42.61	47.26	55.07	62.42	69.02	76.67
20 barg	Nitrogen	10.13	14.10	20.53	26.97	33.47	40.92
	Air	45.16	50.11	58.37	66.17	72.92	82.97

Operating Temperature : 45 °C

Pressure	MN2-03550	Nitrogen product flow rate and Air feed required (Nm3/hr)					
	Oxygen density (%)	0.5	1	2	3	4	5
5 barg	Nitrogen	1.77	2.46	3.60	4.75	5.97	7.20
	Air	10.48	11.52	12.92	14.32	15.98	17.63
7 barg	Nitrogen	3.06	4.26	6.22	8.18	10.23	12.28
	Air	16.41	17.81	20.43	23.05	25.23	27.41
9 barg	Nitrogen	4.26	6.06	8.84	11.62	14.49	17.35
	Air	20.43	23.05	27.94	30.55	33.87	37.19
11 barg	Nitrogen	5.65	7.86	11.46	15.06	18.74	22.42
	Air	26.89	29.33	34.92	38.94	42.95	47.67
13 barg	Nitrogen	6.94	9.66	14.08	18.50	23.00	27.50
	Air	32.82	35.62	41.90	47.14	52.47	57.88
15 barg	Nitrogen	8.23	11.46	16.70	21.93	27.25	32.57
	Air	38.41	42.08	49.24	55.52	61.46	68.09
17 barg	Nitrogen	9.53	13.26	19.31	25.37	31.51	37.65
	Air	44.00	48.54	56.57	64.08	70.71	78.57
19 barg	Nitrogen	10.82	15.06	21.93	28.81	35.77	42.72
	Air	49.59	55.00	64.08	72.63	80.31	89.22
20 barg	Nitrogen	11.47	15.96	23.24	30.53	37.89	46.32
	Air	52.55	58.32	67.92	77.00	84.85	96.55

Operating Temperature : 55 °C

Pressure	MN2-03550	Nitrogen product flow rate and Air feed required (Nm3/hr)					
	Oxygen density (%)	0.5	1	2	3	4	5
5 barg	Nitrogen	1.90	2.63	3.86	5.05	6.41	7.72
	Air	11.51	12.66	14.20	15.73	17.56	19.38
7 barg	Nitrogen	3.28	4.56	6.67	8.78	10.97	13.16
	Air	18.04	19.57	22.45	25.33	27.73	30.12
9 barg	Nitrogen	4.56	6.49	9.48	12.46	15.53	18.60
	Air	22.45	25.33	30.70	33.58	37.22	40.87
11 barg	Nitrogen	6.05	8.42	12.29	16.15	20.10	24.04
	Air	30.27	32.40	38.39	42.49	46.73	52.27
13 barg	Nitrogen	7.44	10.35	15.09	19.83	24.66	29.49
	Air	37.21	39.83	45.74	52.19	57.35	62.73
15 barg	Nitrogen	8.83	12.29	17.90	23.52	29.22	34.93
	Air	42.21	46.25	54.11	61.02	67.54	74.83
17 barg	Nitrogen	10.21	14.22	20.71	27.20	33.78	40.37
	Air	48.35	53.34	62.17	70.42	77.71	86.34
19 barg	Nitrogen	11.60	16.15	23.52	30.89	38.35	45.81
	Air	55.24	62.10	71.27	79.20	87.15	97.47
20 barg	Nitrogen	12.29	17.11	24.92	32.73	40.63	49.67
	Air	58.54	65.81	75.52	83.93	92.34	105.68