

Technical data of Nitrogen Generation Membrane Module

Model : MN2-07100

1. Product : Hollow fiber membrane type module

2. Use : Nitrogen generation

3. Dimensions and Weight

Length	Dimension	Weight
1564 mm	160 mm	19 kg

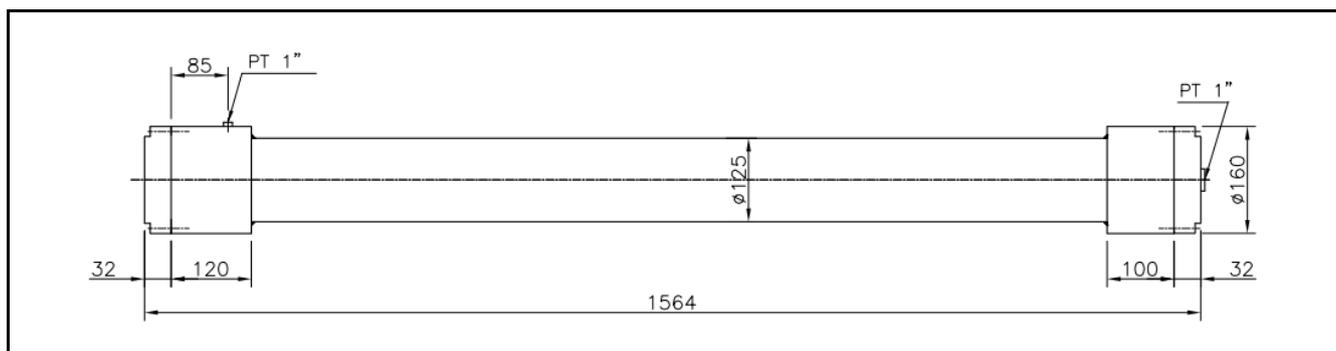
4. Fittings

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 3 μ m gas filter and 0.01 μ m mist separator)
Residual oil		Less than 0.01 (Remove oil with 3 μ m gas filter and 0.01 μ m mist separator)
Hydrocarbons		Less than 0.01 (Remove hydrocarbons with activated carbon if necessary)

8. Performance

Operating Temperature : 25°C

Pressure	MN2-07100	Nitrogen product flow rate and Air feed required (Nm3/hr)					
	Oxygen density (%)	0.5	1	2	3	4	5
5 barg	Nitrogen	2.9	4.1	6.0	7.9	9.9	12.0
	Air	16.2	17.9	20.2	22.2	24.9	27.6
7 barg	Nitrogen	5.1	7.1	10.3	13.6	17.0	20.4
	Air	25.6	27.8	31.9	35.9	39.4	42.8
9 barg	Nitrogen	7.1	10.1	14.7	19.3	24.1	28.9
	Air	31.9	35.9	43.6	47.7	52.8	58.0
11 barg	Nitrogen	9.4	13.1	19.1	25.1	31.2	37.3
	Air	41.9	45.8	54.5	60.7	67.0	74.3
13 barg	Nitrogen	11.5	16.1	23.4	30.8	38.3	45.8
	Air	51.2	55.6	65.4	73.5	81.8	90.3
15 barg	Nitrogen	13.7	19.1	27.8	36.5	45.3	54.2
	Air	59.9	65.6	76.8	86.6	95.9	106.2
17 barg	Nitrogen	15.9	22.1	32.1	42.2	52.4	62.6
	Air	68.6	75.7	88.2	100.0	110.3	122.6
19 barg	Nitrogen	18.0	25.1	36.5	47.9	59.5	71.1
	Air	77.3	85.8	100.0	113.3	125.3	139.2
20 barg	Nitrogen	19.1	26.6	38.7	50.8	63.0	75.3
	Air	82.0	91.0	105.9	120.1	132.4	147.1

Operating Temperature : 35°C

Pressure	MN2-07100	Nitrogen product flow rate and Air feed required (Nm3/hr)					
	Oxygen density (%)	0.5	1	2	3	4	5
5 barg	Nitrogen	3.1	4.3	6.4	8.3	10.5	12.8
	Air	17.9	19.7	22.2	24.5	27.4	30.4
7 barg	Nitrogen	5.4	7.5	11.0	14.4	18.0	21.7
	Air	28.2	30.6	35.1	39.5	43.3	47.0
9 barg	Nitrogen	7.5	10.7	15.6	20.5	25.5	30.6
	Air	35.1	39.5	47.9	52.4	58.1	63.8
11 barg	Nitrogen	10.0	13.9	20.2	26.6	33.1	39.5
	Air	46.1	50.3	59.9	66.8	73.7	81.8
13 barg	Nitrogen	12.2	17.0	24.8	32.6	40.6	48.5
	Air	56.3	61.1	71.9	80.9	90.0	99.3
15 barg	Nitrogen	14.5	20.2	29.4	38.7	48.1	57.4
	Air	65.9	72.2	84.5	95.3	105.5	116.8
17 barg	Nitrogen	16.8	23.4	34.1	44.7	55.6	66.4
	Air	75.5	83.3	97.1	109.9	121.3	134.8
19 barg	Nitrogen	19.1	26.6	38.7	50.8	63.1	75.3
	Air	85.1	94.4	109.9	124.6	137.8	153.1
20 barg	Nitrogen	20.2	28.1	41.0	53.8	66.8	79.8
	Air	90.2	100.1	116.5	132.1	145.6	161.9

Operating Temperature : 45°C

Pressure	MN2-07100	Nitrogen product flow rate and Air feed required (Nm3/hr)					
	Oxygen density (%)	0.5	1	2	3	4	5
5 barg	Nitrogen	3.5	4.9	7.2	9.4	11.9	14.4
	Air	20.8	22.9	25.9	28.5	31.9	35.3
7 barg	Nitrogen	6.1	8.5	12.4	16.3	20.4	24.5
	Air	32.8	35.6	40.8	46.0	50.4	54.7
9 barg	Nitrogen	8.5	12.1	17.6	23.2	28.9	34.6
	Air	40.8	46.0	55.8	61.0	67.6	74.3
11 barg	Nitrogen	11.3	15.7	22.9	30.1	37.4	44.8
	Air	53.7	58.6	69.7	77.7	85.8	95.2
13 barg	Nitrogen	13.9	19.3	28.1	36.9	45.9	54.9
	Air	65.5	71.1	83.7	94.1	104.8	115.6
15 barg	Nitrogen	16.4	22.9	33.3	43.8	54.4	65.0
	Air	76.7	84.0	98.3	110.9	122.7	136.0
17 barg	Nitrogen	19.0	26.5	38.6	50.7	62.9	75.2
	Air	87.8	96.9	112.9	127.9	141.2	156.9
19 barg	Nitrogen	21.6	30.1	43.8	57.5	71.4	85.3
	Air	99.0	109.8	127.9	145.0	160.4	178.1
20 barg	Nitrogen	22.9	31.9	46.4	61.0	75.7	90.4
	Air	104.9	116.4	135.6	153.7	169.4	188.3

Operating Temperature : 55°C

Pressure	MN2-07100	Nitrogen product flow rate and Air feed required (Nm3/hr)					
	Oxygen density (%)	0.5	1	2	3	4	5
5 barg	Nitrogen	3.8	5.2	7.7	10.0	12.8	15.5
	Air	22.9	25.1	28.4	31.3	35.1	38.8
7 barg	Nitrogen	6.6	9.1	13.3	17.5	21.9	26.3
	Air	36.0	39.1	44.8	50.6	55.4	60.1
9 barg	Nitrogen	9.1	13.0	18.9	24.9	31.0	37.1
	Air	44.8	50.6	61.3	67.0	74.3	81.6
11 barg	Nitrogen	12.1	16.8	24.5	32.2	40.1	48.0
	Air	60.4	64.7	76.7	84.8	93.3	104.4
13 barg	Nitrogen	14.9	20.7	30.1	39.6	49.2	58.9
	Air	74.3	79.5	91.3	104.2	114.5	125.3
15 barg	Nitrogen	17.6	24.5	35.7	47.0	58.3	69.7
	Air	84.3	92.3	108.0	121.8	134.9	149.4
17 barg	Nitrogen	20.4	28.4	41.3	54.3	67.5	80.6
	Air	96.5	106.5	124.1	140.6	155.2	172.4
19 barg	Nitrogen	23.2	32.2	47.0	61.7	76.6	91.5
	Air	110.3	124.0	142.3	158.1	174.0	194.6
20 barg	Nitrogen	24.5	34.2	49.8	65.4	81.1	96.9
	Air	116.9	131.4	150.8	167.6	184.4	206.2