

Specifications of Nitrogen Generation Membrane Module

Model : MNH-6160A

1. Product : Hollow fiber membrane type module

2. Use : Nitrogen generation

3. Dimensions and Weight

Length	Diameter	Weight
1580 mm	200 mm	27 kg

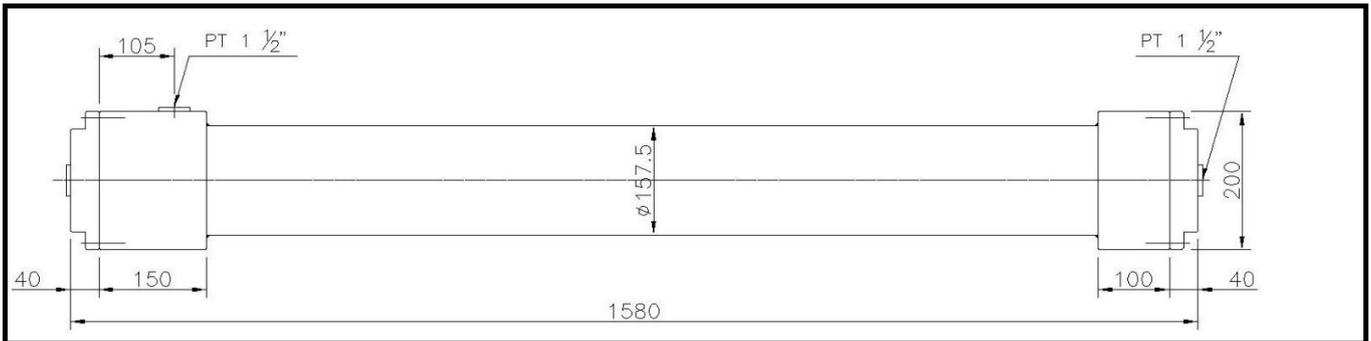
4. Fittings

Air inlet	N2 product outlet	O2 enriched air outlet
Rc1.5" (PT)	Rc1.5" (PT)	Rc1.5" (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 / 60
Relative humidity	%	Less than 60 (at Operating pressure and temperature, Remove moisture with air drier)
Particles		Less than 0.1 (Remove particles with 3µm gas filter and 0.01µm mist separator)
Residual oil	mg/m ³ (0 °C, 101.3 kPa)	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-6160A	Nitrogen product flow rate and Air feed required (Nm ³ /hr)					
	Oxygen density (%)	0.5	1	2	3	4	5
5barg	Nitrogen	4.5	6.3	9.3	12.2	15.4	18.5
	Air	25.3	27.8	31.2	34.5	38.5	42.5
7barg	Nitrogen	7.9	11.0	16.0	21.1	26.3	31.6
	Air	39.6	43.0	49.3	55.6	60.9	66.1
9barg	Nitrogen	11.0	15.6	22.7	29.9	37.3	44.7
	Air	49.3	55.6	67.4	73.7	81.7	89.7
11barg	Nitrogen	14.5	20.2	29.5	38.8	48.2	57.7
	Air	64.9	70.8	84.3	93.9	103.6	115.0
13barg	Nitrogen	17.9	24.9	36.2	47.6	59.2	70.8
	Air	79.2	85.9	101.1	113.7	126.6	139.6
15barg	Nitrogen	21.2	29.5	43.0	56.4	70.1	83.8
	Air	92.7	101.5	118.8	134.0	148.3	164.3
17barg	Nitrogen	24.5	34.1	49.7	65.3	81.1	96.9
	Air	106.2	117.1	136.5	154.6	170.6	189.6
19barg	Nitrogen	27.8	38.8	56.4	74.1	92.0	109.9
	Air	119.6	132.7	154.6	175.2	193.8	215.3
20barg	Nitrogen	29.5	41.1	59.8	78.6	97.5	119.2
	Air	126.8	140.7	163.9	185.8	204.7	233.0

Operating Temperature : 35°C

Pressure	MNH-6160A	Nitrogen product flow rate and Air feed required (Nm ³ /hr)					
	Oxygen density (%)	0.5	1	2	3	4	5
5barg	Nitrogen	4.8	6.7	9.8	12.9	16.3	19.6
	Air	27.8	30.6	34.3	38.0	42.4	46.8
7barg	Nitrogen	8.4	11.6	17.0	22.3	27.9	33.5
	Air	43.6	47.3	54.2	61.2	67.0	72.8
9barg	Nitrogen	11.6	16.5	24.1	31.7	39.5	47.3
	Air	54.2	61.2	74.1	81.1	89.9	98.7
11barg	Nitrogen	15.4	21.4	31.3	41.1	51.1	61.2
	Air	71.4	77.8	92.7	103.3	114.0	126.5
13barg	Nitrogen	18.9	26.3	38.4	50.5	62.7	75.0
	Air	87.1	94.5	111.2	125.1	139.2	153.6
15barg	Nitrogen	22.5	31.3	45.5	59.8	74.3	88.9
	Air	101.9	111.7	130.7	147.4	163.1	180.7
17barg	Nitrogen	26.0	36.2	52.7	69.2	86.0	102.7
	Air	116.8	128.8	150.1	170.1	187.7	208.5
19barg	Nitrogen	29.5	41.1	59.8	78.6	97.6	116.5
	Air	131.6	146.0	170.1	192.8	213.2	236.8
20barg	Nitrogen	31.3	43.5	63.4	83.3	103.4	126.4
	Air	139.5	154.8	180.3	204.4	225.2	256.2

8. Performance

Operating Temperature : 45 °C

Pressure	MNH-6160A	Nitrogen product flow rate and Air feed required (Nm ³ /hr)					
	Oxygen density (%)	0.5	1	2	3	4	5
5barg	Nitrogen	5.5	7.6	11.1	14.7	18.5	22.2
	Air	32.4	35.6	39.9	44.2	49.3	54.5
7barg	Nitrogen	9.5	13.1	19.2	25.3	31.6	37.9
	Air	50.7	55.0	63.1	71.2	77.9	84.7
9barg	Nitrogen	13.1	18.7	27.3	35.9	44.7	53.6
	Air	63.1	71.2	86.3	94.4	104.6	114.9
11barg	Nitrogen	17.4	24.3	35.4	46.5	57.9	69.3
	Air	83.0	90.6	107.8	120.2	132.6	147.2
13barg	Nitrogen	21.4	29.8	43.5	57.1	71.0	84.9
	Air	101.4	110.0	129.4	145.6	162.0	178.7
15barg	Nitrogen	25.4	35.4	51.6	67.7	84.2	100.6
	Air	118.6	129.9	152.1	171.5	189.8	210.3
17barg	Nitrogen	29.4	40.9	59.6	78.4	97.3	116.3
	Air	135.9	149.9	174.7	197.9	218.4	242.6
19barg	Nitrogen	33.4	46.5	67.7	89.0	110.5	131.9
	Air	153.1	169.8	197.9	224.3	248.0	275.5
20barg	Nitrogen	35.4	49.3	71.8	94.3	117.0	143.1
	Air	162.3	180.1	209.8	237.8	262.1	298.2

Operating Temperature : 55 °C

Pressure	MNH-6160A	Nitrogen product flow rate and Air feed required (Nm ³ /hr)					
	Oxygen density (%)	0.5	1	2	3	4	5
5barg	Nitrogen	5.9	8.1	11.9	15.6	19.8	23.8
	Air	35.6	39.1	43.8	48.6	54.2	59.8
7barg	Nitrogen	10.1	14.1	20.6	27.1	33.9	40.7
	Air	55.7	60.4	69.3	78.2	85.6	93.0
9barg	Nitrogen	14.1	20.1	29.3	38.5	48.0	57.5
	Air	69.3	78.2	94.8	103.7	115.0	126.2
11barg	Nitrogen	18.7	26.0	37.9	49.9	62.1	74.3
	Air	93.5	100.1	118.6	131.2	144.3	161.4
13barg	Nitrogen	23.0	32.0	46.6	61.2	76.2	91.1
	Air	114.9	123.0	141.3	161.2	177.1	193.7
15barg	Nitrogen	27.3	37.9	55.3	72.6	90.2	107.9
	Air	130.4	142.8	167.1	188.4	208.6	231.1
17barg	Nitrogen	31.5	43.9	64.0	84.0	104.3	124.7
	Air	149.3	164.7	192.0	217.5	240.0	266.7
19barg	Nitrogen	35.8	49.9	72.6	95.4	118.4	141.5
	Air	170.6	191.8	220.1	244.6	269.2	301.0
20barg	Nitrogen	38.0	52.8	77.0	101.1	125.5	153.4
	Air	180.8	203.3	233.2	259.2	285.2	326.4