Atlas Copco

Membrane Nitrogen Generators

NGM Series (capacity 0.7 – 58.3 l/s; flow 2.5 – 209.9 m³/h; purity 95% - 99.5%)

Atlas Copco's innovative Membrane Nitrogen Generator uses membrane air separation to produce nitrogen. The membrane consists of a bundle of hollow fibers with a polymeric structure. The membrane allows nitrogen to pass and other gases (such as oxygen, water vapor and CO_2) to permeate. Compressed air enters at the inlet of the generator, and nitrogen exits at the outlet. Membrane technology generates nitrogen with a purity between 95 and 99.5% and flows up to 209.9 m³/h.

Features and Benefits

Ready to Use

- Requires only a supply of dry compressed air
- No specialist installation or commissioning
- Fitted with pre-filtration, pressure gauges and flow meter to ensure accurate system monitoring at all times

Cost Savings

- Low operating expenses
- No additional costs such as order processing, refills and delivery charges
- Limited maintenance costs

Exceptional Convenience

- Continuous availability (24 hours a day, 7 days a week)
- Risk of production breakdown due to gas running out is eliminated

Desired Purity

- Nitrogen supply according to your need: from 5% to 0.5% oxygen content
- Very easy to set up the device for other purity levels

Optimum Flexibility

- Modular design for adaptation to your exact application needs

High Flow Capacity

- Ideal for applications such as fire prevention, tire inflation, oil & gas, marine, packaging and many more

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Technical Specifications

95%	20°C			7 bar(g)		
NGM	Capacity			Air consumption		
	l/s	cfm	m³/h	l/s	cfm	m³/h
1	3.3	7.0	11.9	8.6	18.2	31.0
2	6.7	14.2	24.1	17.3	36.7	62.3
3	11.7	24.8	42.1	30.3	64.2	109.1
4	23.3	49.4	83.7	60.7	128.6	218.5
5	35.0	74.2	126.0	91.0	192.8	327.6
6	46.7	99.0	168.1	121.3	257.0	436.7
7	58.3	123.5	209.9	151.7	321.5	546.1

Reference conditions:

Ambient temperature	*20°C*
Ambient pressure	*1013 mbar*
Unit inlet temperature	*20°C*
Membrane working pressure	*7 bar(g)*
Unit outlet nitrogen purity	*95%*
Compressed air inlet quality	*ISO8573-1 class 1-4-1*

Outputs (Min/Max)

Maximum compressed air inlet temperature	*50°C*
Maximum ambient temperature	*50°C*
Minimum compressed air inlet temperature	*5°C*
Minimum ambient temperature	*0°C*
Minimum compressed air inlet pressure	*4 bar(g)*
Maximum compressed air inlet pressure	*13 bar(g)*
Maximum nitrogen purity	*99.5%*

Correction Factors for Nitrogen Capacity

Membrane pressure (barg)	Correction factor
7	1.0
8	1.2
9	1.4
10	1.6
11	1.8
12	2.0

Inlet temperature (°C)	Purity (% N2)					
	95	96	97	98	99	99.5
5	0.9	0.9	0.9	0.9	0.9	0.9
10	0.9	0.9	0.9	0.9	0.9	0.9
20	1.0	1.0	1.0	1.0	1.0	1.0
30	1.0	1.0	1.0	1.0	1.0	1.0
40	1.1	1.1	1.0	1.0	0.8	0.6
50	1.2	1.1	1.1	1.0	0.8	0.6

Sizing example

NGM 4	*95%, 11 bar, 40°C*
Capacity	*23.3 l/s x 1.8 x 1.1 = 45.9 l/s*

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