

Atlas Copco

Membrane Nitrogen Generators

NGM Series (capacity 1.4 - 140 l/s; flow 5 - 500 Nm³/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 CO₂) 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 500 Nm³/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	3.2	6.7	11.5	8.2	17.4	29.5
	2	6.3	13.3	22.7	16.4	34.7	59.0
	3	11.1	23.5	39.9	28.9	61.2	104.0
	4	22.2	47.0	80.0	57.8	122.5	208.1
	5	33.3	70.6	119.9	86.7	183.7	312.1
	6	44.4	94.0	159.8	115.6	244.9	416.2
	7	55.6	117.8	200.2	144.4	305.9	519.8

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)
Minimum nitrogen purity	90%
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
13	2.1

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	22.2 l/s x 1.8 x 1 = 40 l/s
Air consumption	57.8 l/s x 1.8 x 1.2 = 124.8 l/s



www.atlascopco.com

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