



A CAIRE INC. COMPANY



N2WAVE™

N2WAVE Modular Series
PSA Nitrogen Gas Generators
Efficiency, Reliability and Performance

N2WAVE™ Modular Series PSA Nitrogen Gas Generators

Pressure Swing Adsorption (PSA) Nitrogen Gas Generators use a carbon molecular sieve (CMS) to separate nitrogen from compressed air.

CMS adsorbs oxygen molecules under pressure and allows nitrogen to pass through as a product gas.

Modular Adsorber System

AirSep PSA Modular Gas Generators use columns filled with CMS as adsorbers. As compressed air passes through one of the adsorbers, the molecular sieve adsorbs the oxygen. This allows the remaining nitrogen to pass through and exit the adsorber as a product gas. Before the adsorber becomes saturated with oxygen, the inlet air flow switches to the next adsorber. The first adsorber is now regenerated by desorbing the oxygen through depressurization back to the atmosphere, assisted by a nitrogen purge step. The complete cycle then repeats. Under normal operating conditions and with proper system maintenance, the molecular sieve is designed to be regenerative.



Applications

- Food and Beverage
- Electronic Industry
- Metal Industry
- Chemical Industry
- Cleaning Process
- Plastic industry
- Production process and storage of food

N2WAVE™ Modular Series PSA Nitrogen Gas Generators

FEATURES

Standard

- | | | |
|------------------------|---------------------------------|---------------------------|
| - Silencer | - ECO Mode | - 3 Way By-Pass Valve Kit |
| - 7" HMI Touch Screen | - Mist Eliminator/Carbon Filter | - Flowmeter Kit |
| - Tank Manometers | - Piston Valves | - Post/Dust Filter |
| - Pressure Transmitter | - Valve Control Regulator | - Oxygen Analyzer Kit |

Optional

- Receiver
- Dew Point Sensor Kit
- Pressure Regulator (Nitrogen Outlet)
- Oil Indicator



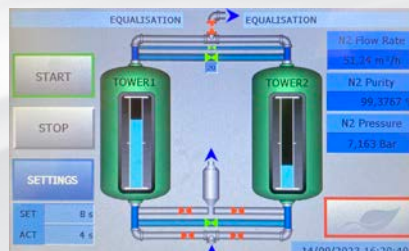
N2WAVE™ Modular Series PSA Nitrogen Gas Generators

Advantages

- Modular Design: Scalable solutions tailored to your capacity needs
- PSA Technology: High purity nitrogen production, highly efficient
- Compact and Space-Saving: Maximizes performance in a minimal footprint
- Cost Savings: Reduce your overall costs when compared to bulk nitrogen deliveries
- Simple structure, compact design, fully automated operation
- Replaces cylinder manifold usage (see pic. 1)
- Touch Screen PLC for controlling the complete system (see pic. 2)
- PLC Screen for monitoring and visualizing the progress
- Rapid start-up and safety system
- Innovative silencer design gives low noise levels during depressurization and purge
- Durable piston valves for long-life operation (see pic. 5)
- On-demand production with low costs
- High performance
 - *The purity and capacity of nitrogen gas is designed to meet customer requirements (Nitrogen Purity 95%~99.999% is available)
- Minimum maintenance cost
- Lower air-to-nitrogen (A/N) ratios and energy consumption
- Advanced air distribution for high-quality nitrogen gas production
- Highly-sensitive sensor technologies (see pic. 3)
- Effective Integrated Filtration (see pic. 4)



Replaces Manifold Usage - pic. 1



Touch Screen PLC - pic. 2



Optional Dew Point Sensor - pic. 3



Air Filter - pic. 4



Long Life Piston Valve - pic. 5

N2WAVE™ Modular Series PSA Nitrogen Gas Generators

Technical Specifications

AirSep Model	Free Nitrogen Delivery @ the Following Purity Levels (SCFM)*									
	95%	97%	98%	99%	99.5%	99.9%	99.95%	99.99%	99.995%	99.999%
N2AS210	1.8	1.6	1.4	1.2	0.8	0.7	0.6	0.3	0.3	0.2
N2AS212	2.9	2.6	2.2	1.9	1.7	1.1	1.0	0.5	0.5	0.3
N2AS214	5.3	4.7	4.1	3.5	3.0	2.1	1.9	0.9	0.8	0.5
N2AS216	8.8	7.9	6.8	5.8	5.1	3.5	3.2	1.5	1.4	0.9
N2AS218	15.2	13.6	11.7	9.9	8.8	6.0	5.5	2.6	2.5	1.5
N2AS220	20.3	18.2	15.6	13.3	11.7	8.0	7.4	3.5	3.3	2.1
N2AS222	24.9	22.2	19.1	16.3	14.4	9.8	9.1	4.3	4.0	2.5
N2AS224	39.6	35.4	30.5	25.9	22.8	15.6	14.4	6.8	6.4	4.0
N2AS226	52.4	46.8	40.3	34.2	30.2	20.6	19.1	9.0	8.4	5.3
N2AS228	70.8	63.3	54.5	46.3	40.9	27.9	25.8	12.1	11.4	7.2
N2AS230	81.1	72.5	62.4	53	46.8	31.9	29.5	13.9	13.1	8.2
N2AS232	90.0	80.5	69.3	58.8	52.0	35.5	32.8	15.4	14.5	9.1
N2AS234	117.8	105.4	90.7	77.0	68.0	46.4	42.9	20.2	19.0	12.0

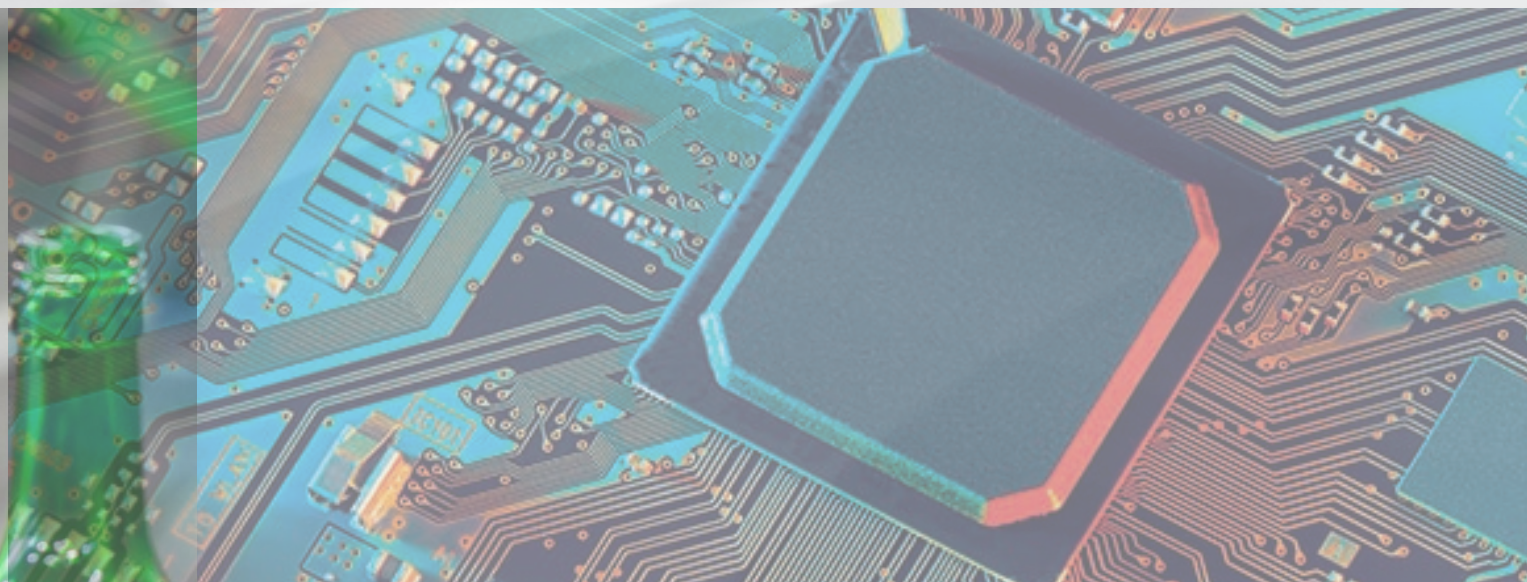
*Free Nitrogen Delivery based on: 110 psig inlet / 77°F max ambient / $\leq 37^\circ\text{F}$ inlet dew point. Prior to final selection, consult factory for sizing confirmation.



N2WAVE™ Modular Series PSA Nitrogen Gas Generators

Technical Specifications

AirSep Model	Recommended Buffer Tank Volumes (Gallon)									
	95%	97%	98%	99%	99.5%	99.9%	99.95%	99.99%	99.995%	99.999%
N2AS210	2.6	2.2	2.0	1.6	1.3	1.1	1.1	0.5	0.5	0.3
N2AS212	4.1	3.7	3.2	2.6	2.6	1.6	1.6	1.1	0.5	0.5
N2AS214	7.9	6.7	5.8	5.0	4.2	3.2	2.6	1.3	1.3	1.1
N2AS216	12.7	11.4	9.8	8.2	7.3	5.0	4.6	2.2	2.0	1.3
N2AS218	21.6	19.4	16.8	14.3	12.5	8.6	7.9	3.7	3.7	2.2
N2AS220	29.0	25.9	22.3	19.0	16.8	11.5	10.6	5.0	4.8	3.2
N2AS222	35.4	31.7	27.3	23.2	20.5	14.0	12.9	6.1	5.7	3.7
N2AS224	56.4	50.4	43.4	37.0	32.6	22.2	20.6	9.8	9.1	5.8
N2AS226	74.7	66.8	57.6	48.8	43.0	29.6	27.2	12.8	12.1	7.7
N2AS228	100.8	90.3	77.6	66.0	58.3	39.9	36.7	17.3	16.4	10.3
N2AS230	115.6	103.5	89.0	75.5	66.8	45.4	42.2	19.8	18.7	11.7
N2AS232	128.3	114.8	98.7	84.0	74.2	50.7	46.7	21.9	20.9	13.2
N2AS234	167.9	150.0	129.4	109.8	97.2	66.3	61.2	28.8	27.2	17.2



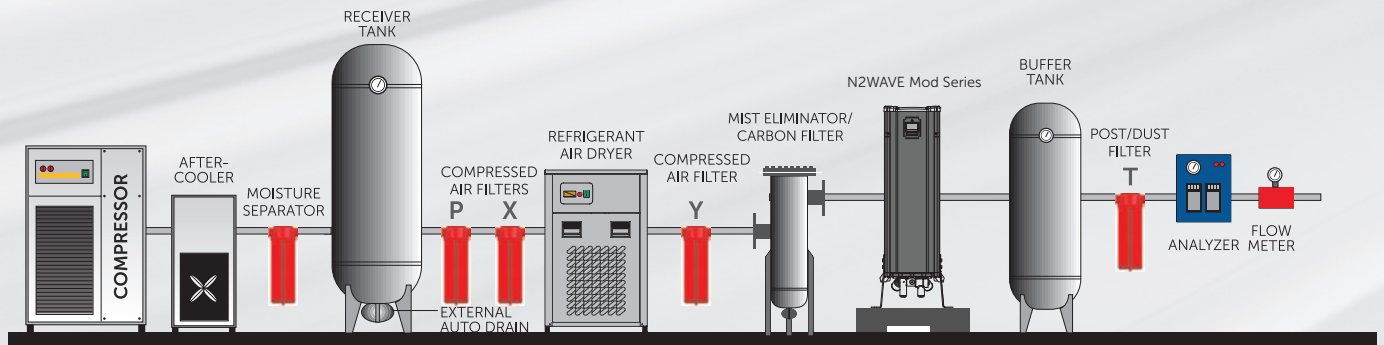
N2WAVE™ Modular Series PSA Nitrogen Gas Generators

Technical Specifications

AirSep Model	Free Nitrogen Delivery @ the Following Purity Levels (Sm ³ /hr)*									
	95%	97%	98%	99%	99.5%	99.9%	99.95%	99.99%	99.995%	99.999%
N2AS210	3	2.7	2.3	2	1.4	1.2	1.1	0.5	0.4	0.3
N2AS212	4.9	4.4	3.8	3.2	2.9	1.9	1.8	0.8	0.7	0.5
N2AS214	9	8.0	6.9	5.9	5	3.6	3.3	1.5	1.4	0.9
N2AS216	15	13.4	11.6	9.8	8.6	5.9	5.5	2.6	2.4	1.5
N2AS218	25.9	23.1	19.9	16.9	14.9	10.2	9.4	4.4	4.2	2.6
N2AS220	34.5	30.9	26.6	22.6	19.9	13.6	12.6	5.9	5.6	3.5
N2AS222	42.3	37.7	32.5	27.6	24.4	16.7	15.4	7.2	6.8	4.3
N2AS224	67.3	60.1	51.8	44	38.8	26.5	24.5	11.5	10.8	6.8
N2AS226	89	79.5	68.5	58.2	51.4	35.1	32.4	15.2	14.4	9
N2AS228	120.3	107.5	92.6	78.6	69.5	47.4	43.8	20.6	19.4	12.2
N2AS230	137.8	123.2	106.1	90.1	79.6	54.3	50.2	23.6	22.2	14
N2AS232	153	136.8	117.8	100	88.4	60.3	55.7	26.2	24.7	15.5
N2AS234	200.3	179.1	154.2	130.9	115.6	78.9	72.9	34.3	32.3	20.3

*Free Nitrogen Delivery based on: 7.5barg inlet / 20°C max ambient / ≤3°C inlet dew point / 1 atm reference conditions.
Prior to final selection, consult factory for sizing confirmation.

AIR LINE DESIGN

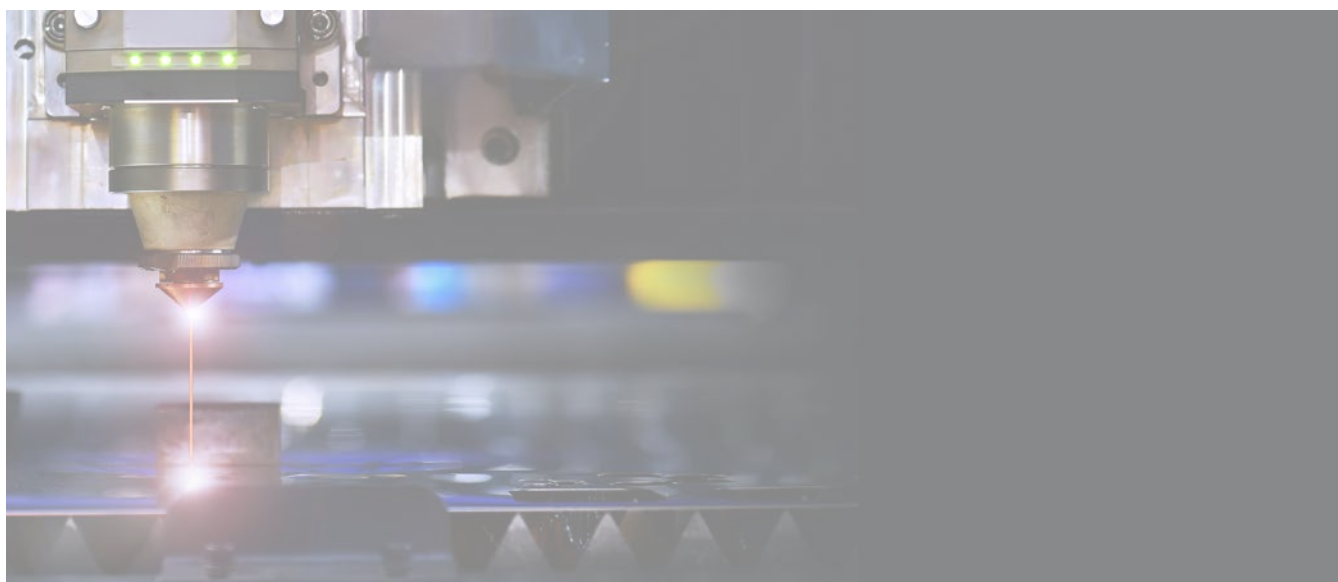


AirSep reserves the right to change the design and/or dimensions and/or weight of its products at any time without any notice or liability.

N2WAVE™ Modular Series PSA Nitrogen Gas Generators

Technical Specifications

AirSep Model	Recommended Buffer Tank Volumes (Liter)									
	95%	97%	98%	99%	99.5%	99.9%	99.95%	99.99%	99.995%	99.999%
N2AS210	10	8.5	7.5	6	5	4	4	2	2	1
N2AS212	15.6	14	12	10	10	6	6	4	2	2
N2AS214	30	25.5	22	19	16	12	10	5	5	4
N2AS216	48	43	37	31	27.5	19	17.5	8.5	7.5	5
N2AS218	82	73.5	63.5	54	47.5	32.5	30	14	14	8.5
N2AS220	110	98	84.5	72	63.5	43.5	40	19	18	12
N2AS222	134	120.1	103.4	87.8	77.5	52.9	48.9	23	21.7	14
N2AS224	213.7	191	164.5	140	123.5	84	78	37	34.5	22
N2AS226	283	253	218	185	163	112	103	48.5	46	29
N2AS228	382	342	294	250	221	151	139	65.5	62	39
N2AS230	438	392	337	286	253	172	160	75	71	44.5
N2AS232	486	435	374	318	281	192	177	83	79	50
N2AS234	636	568	490	416	368	251	232	109	103	65





COMPANY OVERVIEW

Leader in On-Site Gas Generation

Founded in 1987 in Buffalo, NY, AirSep Corporation offers innovative, cost-effective, non-cryogenic gas supply solutions as an alternative to cylinder or liquid systems. A division of CAIRE Inc., AirSep has earned a strong brand reputation over the past three decades as a manufacturer of high-quality, built-to-last oxygen systems accompanied by robust PSA nitrogen generators and unparalleled service and support to ensure your systems operate at peak performance with little to no downtime.

The benefits of a broad portfolio offering customizable equipment to meet your needs:

- Extensive selection of PSA Nitrogen Systems that serve a diverse range of applications and industries
- Lowered costs and increased business efficiencies through elimination of dependence on gas companies, long-term gas contracts and price increases
- Reliably produce unlimited highly concentrated nitrogen 24/7
- 2-year warranty on workmanship for all nitrogen systems

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