



A CAIRE INC. COMPANY



N2WAVE™

N2WAVE Twin Tower Series

PSA Nitrogen Gas Generators

Efficiency, Reliability and Performance

N2WAVE™ Twin Tower 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.

Two-Bed Adsorber System

AirSep PSA Nitrogen Gas Generators use two vessels 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

- Electronic Industry
- Metal Industry
- Chemical Industry
- Cleaning Process
- Plastic Industry
- Food and Beverage
- Production Process and Storage of Food

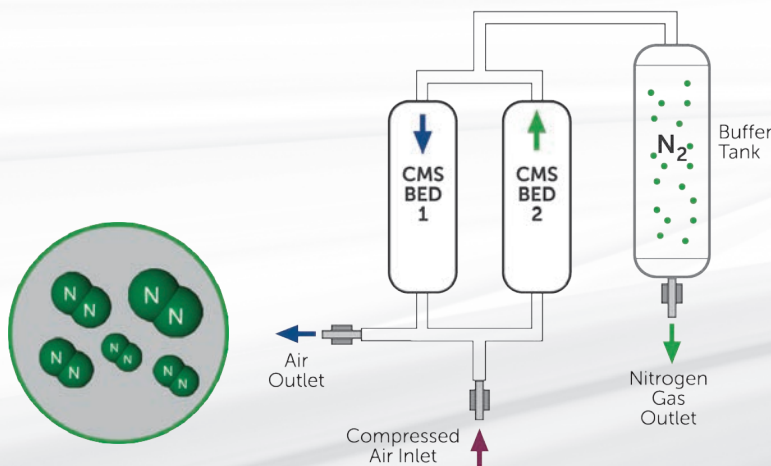
FEATURES

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



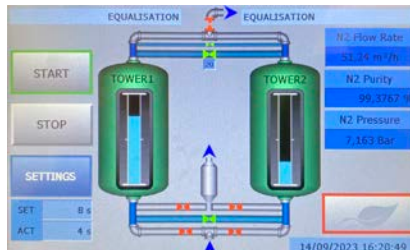
N2WAVE™ Twin Tower Series PSA Nitrogen Gas Generators

Advantages

- Produces nitrogen with purity levels up to 99.999%
- Ensures a long service life and minimal maintenance cost
- 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)
- Lower air-to-nitrogen (A/N) ratios and energy consumption
- Advanced air distribution for high-quality nitrogen gas production



Replaces Manifold Usage - pic. 1



Touch Screen PLC - pic. 2



Optional Dew Point Sensor - pic. 3

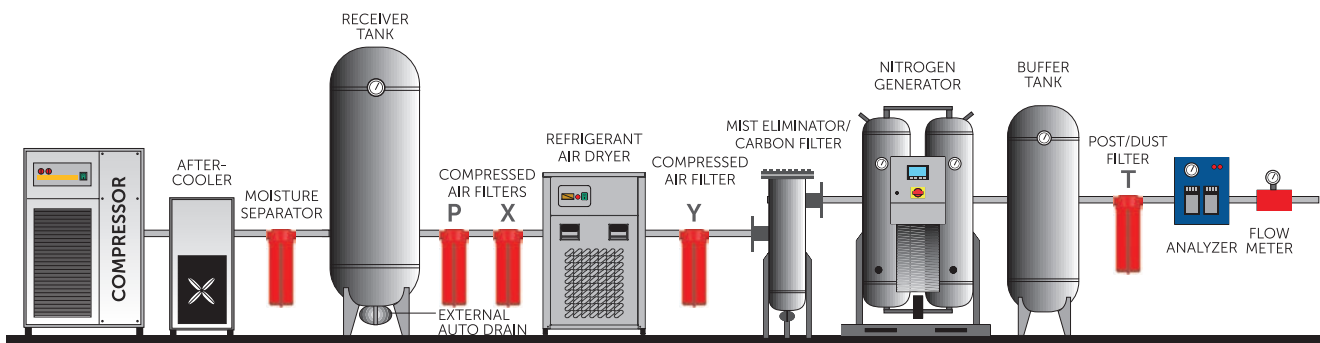


Air Filter - pic. 4



Long Life Piston Valve - pic. 5

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™ Twin Tower Series PSA Nitrogen Gas Generators

Technical Specifications

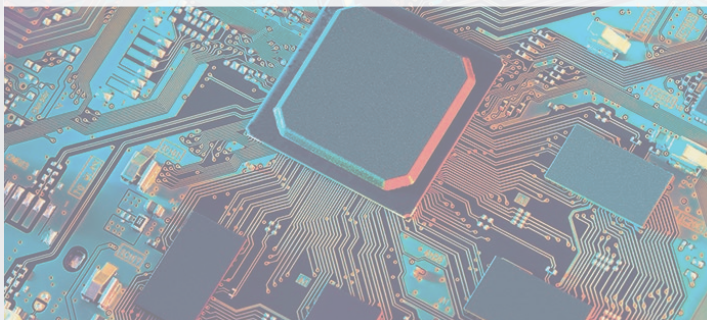
AirSep Model	Free Nitrogen Delivery @ the Following Purity Levels (SCFM)*									
	95%	97%	98%	99%	99.5%	99.9%	99.95%	99.99%	99.995%	99.999%
N2AS310	18.9	15.7	14.5	9.9	8.1	6.2	5.7	3.1	2.4	1.8
N2AS312	25.2	21.0	19.3	13.2	10.8	8.3	7.6	4.1	3.2	2.4
N2AS314	30.9	25.7	23.6	16.2	13.2	10.2	9.3	5.0	3.9	3.0
N2AS316	49.1	40.9	37.6	25.8	21.0	16.2	14.8	8.0	6.2	4.7
N2AS318	65.0	54.2	49.8	34.1	27.8	21.4	19.6	10.6	8.3	6.2
N2AS320	87.8	73.2	67.3	46.1	37.6	29.0	26.4	14.3	11.2	8.4
N2AS322	100.6	83.8	77.0	52.9	43.1	33.2	30.3	16.4	12.8	9.7
N2AS324	111.7	93.1	85.6	58.7	47.8	36.9	33.6	18.2	14.2	10.7
N2AS326	146.2	121.9	112.0	76.8	62.6	48.2	44.0	23.8	18.6	14.0
N2AS328	178.8	149.1	137.0	94.0	76.6	59.0	53.8	29.1	22.7	17.2
N2AS330	217.4	181.2	166.5	114.3	93.1	71.7	65.4	35.4	27.6	20.9
N2AS332	239.8	199.9	183.7	126.0	102.7	79.1	72.2	39.1	30.5	23.0
N2AS334	265.7	221.5	203.6	139.7	113.8	87.7	80.0	43.3	33.8	25.5
N2AS336	359.3	299.5	275.3	188.8	153.9	118.6	108.1	58.5	45.7	34.5
N2AS338	419.0	349.3	321.0	220.2	179.4	138.3	126.2	68.3	53.3	40.2
N2AS340	502.3	418.8	384.8	264.0	215.1	165.8	151.2	81.8	63.8	48.2
N2AS342	619.6	516.5	474.6	325.6	265.4	204.5	186.5	101.0	78.7	59.5
N2AS344	726.1	605.3	556.3	381.6	311.0	239.6	218.5	118.3	92.3	69.7
N2AS346	837.3	698.0	641.4	440.1	358.6	276.3	252.0	136.4	106.4	80.4
N2AS348	1007.9	840.3	772.2	529.7	431.7	332.6	303.3	164.2	128.1	96.8
N2AS350	1244.1	1037.2	953.1	653.9	532.9	410.6	374.4	202.7	158.1	119.4
N2AS352	1480.1	1233.9	1133.9	777.9	633.9	488.5	445.4	241.2	188.1	142.1
N2AS354	1662.5	1385.9	1273.5	873.7	712.0	548.6	500.3	270.9	211.3	159.6
N2AS356	2030.4	1692.7	1555.8	1067.1	869.6	670.1	611.1	330.8	258.0	194.9

*Free Nitrogen Delivery based on: 110 psig inlet / 77°F max ambient / ≤ 37°F inlet dew point. Prior to final selection, consult factory for sizing confirmation.

N2WAVE™ Twin Tower 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%
N2AS310	16	13	12	8	7	5	5	3	2	1
N2AS312	21	17	16	11	9	7	6	3	3	2
N2AS314	26	21	19	13	11	8	8	4	3	2
N2AS316	40	33	31	21	17	13	12	7	5	4
N2AS318	53	44	41	28	23	18	16	9	7	5
N2AS320	72	60	55	38	31	24	22	12	9	7
N2AS322	83	69	63	43	35	27	25	13	10	8
N2AS324	92	76	70	48	39	30	28	15	12	9
N2AS326	120	100	92	63	51	39	36	19	15	11
N2AS328	147	122	112	77	63	48	44	24	19	14
N2AS330	178	148	136	94	76	59	54	29	23	17
N2AS332	196	164	150	103	84	65	59	32	25	19
N2AS334	218	181	167	114	93	72	65	35	28	21
N2AS336	294	245	225	155	126	97	89	48	37	28
N2AS338	343	286	263	180	147	113	103	56	44	33
N2AS340	411	343	315	216	176	136	124	67	52	39
N2AS342	507	423	389	267	217	167	153	83	64	49
N2AS344	594	495	455	312	255	196	179	97	76	57
N2AS346	685	571	525	360	294	226	206	112	87	66
N2AS348	826	688	632	434	353	272	248	134	105	79
N2AS350	1019	849	780	535	436	336	306	166	129	98
N2AS352	1211	1010	928	637	519	400	365	197	154	116
N2AS354	1361	1134	1042	715	583	449	410	222	173	131
N2AS356	1661	1385	1273	873	712	549	500	271	211	160



N2WAVE™ Twin Tower 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%
N2AS310	32.1	26.7	24.6	16.9	13.7	10.6	9.7	5.2	4.1	3.1
N2AS312	42.8	35.7	32.8	22.5	18.3	14.1	12.9	7	5.4	4.1
N2AS314	52.4	43.7	40.2	27.6	22.5	17.3	15.8	8.5	6.7	5
N2AS316	83.4	69.5	63.9	43.8	35.7	27.5	25.1	13.6	10.6	8
N2AS318	110.4	92	84.6	58	47.3	36.4	33.2	18	14	10.6
N2AS320	149.2	124.4	114.3	78.4	63.9	49.2	44.9	24.3	19	14.3
N2AS322	170.9	142.4	130.9	89.8	73.2	56.4	51.4	27.8	21.7	16.4
N2AS324	189.8	158.2	145.4	99.7	81.3	62.6	57.1	30.9	24.1	18.2
N2AS326	248.4	207.1	190.3	130.5	106.4	82	74.7	40.5	31.6	23.8
N2AS328	303.8	253.3	232.8	159.7	130.1	100.3	91.4	49.5	38.6	29.2
N2AS330	369.4	307.9	283	194.1	158.2	121.9	111.2	60.2	46.9	35.5
N2AS332	407.5	339.7	312.1	214.1	174.5	134.5	122.6	66.4	51.8	39.1
N2AS334	451.5	376.4	345.9	237.3	193.4	149	135.9	73.6	57.4	43.3
N2AS336	610.5	508.9	467.7	320.8	261.5	201.5	183.7	99.5	77.6	58.6
N2AS338	711.9	593.5	545.4	374.2	304.9	234.9	214.4	116	90.5	68.4
N2AS340	853.4	711.5	653.8	448.5	365.5	281.6	256.8	139.1	108.5	81.9
N2AS342	1052.7	877.6	806.4	553.2	450.9	347.4	316.8	171.5	133.8	101.1
N2AS344	1233.7	1028.5	945.1	648.4	528.4	407.1	371.3	201	156.8	118.4
N2AS346	1422.6	1186	1089.8	747.7	609.3	469.5	428.1	231.8	180.8	136.6
N2AS348	1712.5	1427.7	1311.9	900	733.5	565.2	515.4	279	217.7	164.5
N2AS350	2113.8	1762.2	1619.4	1111	905.4	697.6	636.2	344.4	268.6	202.9
N2AS352	2514.7	2096.4	1926.5	1321.7	1077.1	829.9	756.8	409.7	319.6	241.4
N2AS354	2824.6	2354.6	2163.7	1484.4	1209.7	932.1	850	460.2	359	271.1
N2AS356	3449.7	2875.9	2643.3	1813	1477.5	1138.5	1038.2	562.1	438.4	331.2

*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.

N2WAVE™ Twin Tower Series PSA Nitrogen Gas Generators

Technical Specifications

AirSep Model	RECOMMENDED BUFFER TANK VOLUMES (Liters)									
	95%	97%	98%	99%	99.5%	99.9%	99.95%	99.99%	99.995%	99.999%
N2AS310	59	50	46	31	25	20	18	10	8	6
N2AS312	79	66	61	42	34	26	24	13	10	8
N2AS314	97	81	74	51	42	32	29	16	12	9
N2AS316	155	129	118	81	66	51	47	25	20	15
N2AS318	205	170	157	107	88	67	62	33	26	20
N2AS320	276	230	212	145	118	91	83	45	35	27
N2AS322	317	264	243	166	136	104	95	52	40	30
N2AS324	352	293	269	185	151	116	106	57	45	34
N2AS326	460	384	353	242	197	152	139	75	58	44
N2AS328	563	469	431	296	241	186	169	92	72	54
N2AS330	684	571	524	360	293	226	206	112	87	66
N2AS332	755	629	578	397	323	249	227	123	96	72
N2AS334	837	697	641	440	358	276	252	136	106	80
N2AS336	1131	943	867	594	484	373	340	184	144	109
N2AS338	1319	1100	1011	693	565	435	397	215	168	127
N2AS340	1581	1318	1211	831	677	522	476	258	201	152
N2AS342	1950	1626	1494	1025	835	644	587	318	248	187
N2AS344	2286	1906	1751	1201	979	754	688	372	291	219
N2AS346	2636	2197	2019	1385	1129	870	793	429	335	253
N2AS348	3173	2645	2431	1668	1359	1047	955	517	403	305
N2AS350	3917	3265	3001	2059	1678	1293	1179	638	498	376
N2AS352	4660	3885	3570	2449	1996	1538	1402	759	592	447
N2AS354	5234	4363	4009	2751	2242	1727	1575	853	665	502
N2AS356	6392	5329	4898	3359	2738	2110	1924	1041	812	614





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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