

# Gardner Denver®

NITROGEN GENERATORS | 1-2000+ CFM

## XGN2 Series



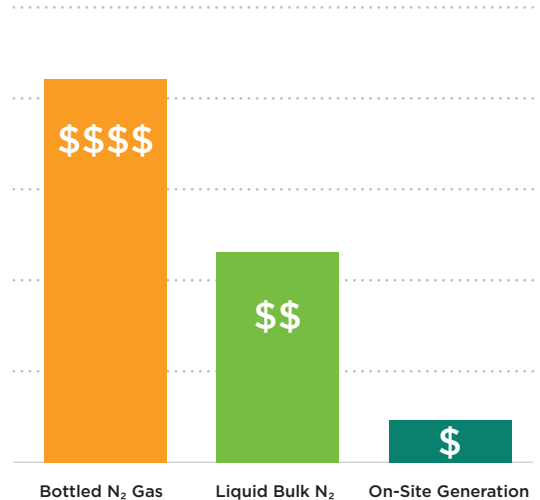
# X Series: NeXt-Generation Gardner Denver Air Treatment

## NITROGEN GENERATION BENEFITS

Gardner Denver's nitrogen generators eliminate the need for traditional nitrogen shipments and storage, providing you with real cost savings. With access to our entire portfolio of related products and services, you'll have a trusted partner for nitrogen solutions from start to finish. Choose between Membrane technology for smaller applications requiring lower purities, and Pressure Swing Adsorption (PSA) technology for lower operation costs and higher purity above 99.5%.

- Lowers your operating cost by generating nitrogen at your facility from freely available air
- Maximizes system energy efficiency by providing industry-leading air-to-nitrogen utilization
- Provides N<sub>2</sub> purity tailored to your operation, whether you need 95% or 99.9999%
- Reduce waste and operate more sustainably
- Avoid safety and footprint issues associated with storing nitrogen

## Annual Operating Cost



Gardner Denver nitrogen generators typically provide a one-year payback. After year one, you'll realize year-over-year savings.

## Did You Know?

The earth's atmosphere is composed of 78% nitrogen, making it the most readily available and economical inert gases. It is used to avoid combustion, corrosion and product spoilage. Many industries rely on nitrogen for their manufacturing processes, including food and beverage, electronics, petrochemicals, pharmaceutical and metal operations.

Gardner Denver offers a complete line of nitrogen generation solutions that allow you to forgo traditional nitrogen delivery, reduce operating expenses and simplify your operations.



# Membrane Nitrogen Generators

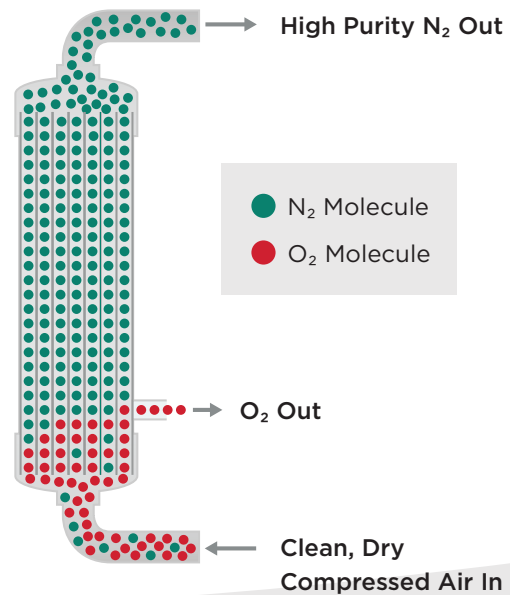
For smaller applications requiring less purity, membrane nitrogen generators provide a reliable economical solution.



## How Membrane Nitrogen Generators Work

Compressed air passes through a separation membrane consisting of thousands of hollow tubes. Small holes in the walls of each tube allow smaller oxygen molecules to filter through, leaving a stream of high purity nitrogen at the membrane outlet. There are no moving parts to the membrane—simply controlling the pressure and flow rate of compressed air through the membrane results in the desired purity.

- Designed to meet lower flow requirements and lower nitrogen purities up to 99.5%
- Simple design with no moving parts keeps initial purchase cost low
- Comes standard with air filtration needed for a simple plug-and-play design
- Smaller installed footprint, simpler to maintain and repair





## Did You Know?

WITH QUALITY AND RELIABILITY BUILT IN, GARDNER DENVER'S ON-SITE NITROGEN GENERATORS OFFER A WIDE VARIETY OF INNOVATIVE SOLUTIONS TO MEET YOUR PRODUCTION NEEDS AND REDUCE OPERATING COSTS COMPARED TO TRADITIONAL NITROGEN SUPPLY.

# The NeXt Generation of the Gardner Denver Downstream Family

- 1 Compressor
- 2 XG Filtration
- 3 XG Dryer
- 4 XG Air Tanks
- 5 XGN2 Membrane Nitrogen Generator



# PSA Nitrogen Generators

## HOW PSA NITROGEN GENERATORS WORK

PSA technology utilizes a twin tower design where nitrogen production and tower regeneration occur simultaneously.

### N<sub>2</sub> Production

- 1 Compressed air enters the generator.
- 2 O<sub>2</sub> is preferentially adsorbed from the air by the carbon molecular sieve (CMS).
- 3 N<sub>2</sub> continues to pass through the system into the nitrogen receiver tank, for use in your process.

### Regeneration

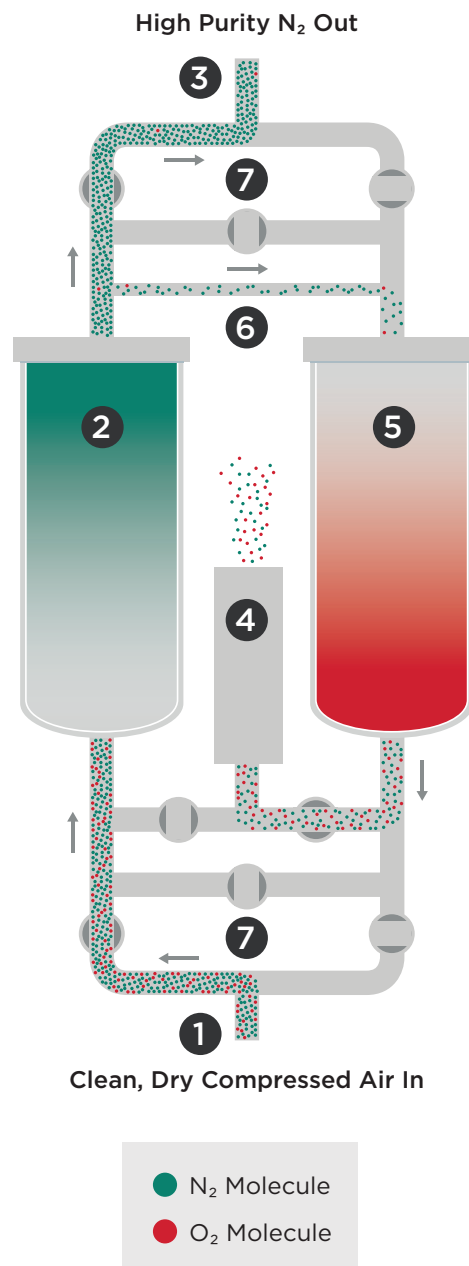
- 4 Pressure is released from the regenerating tower to the atmosphere.
- 5 The O<sub>2</sub> in the CMS is desorbed and exits the tower back into the atmosphere.
- 6 A small amount of N<sub>2</sub> is redirected to the tower to assist with CMS regeneration.

### Pressure Equalization

In between cycles, the generator's inlet and outlet valves are closed and pressure is equalized between the two towers, thus conserving compressed air.

### Tower Switch

- 7 Once equalized, the freshly regenerated tower now becomes the production tower while the other tower is regenerated.



## Did You Know?

10-20% OF BULK NITROGEN IS TYPICALLY WASTED THROUGH BLEED OFF OR FAILURE TO EXTRACT ALL PRODUCT FROM CANISTERS.

# The NeXt Generation of the Gardner Denver Downstream Family



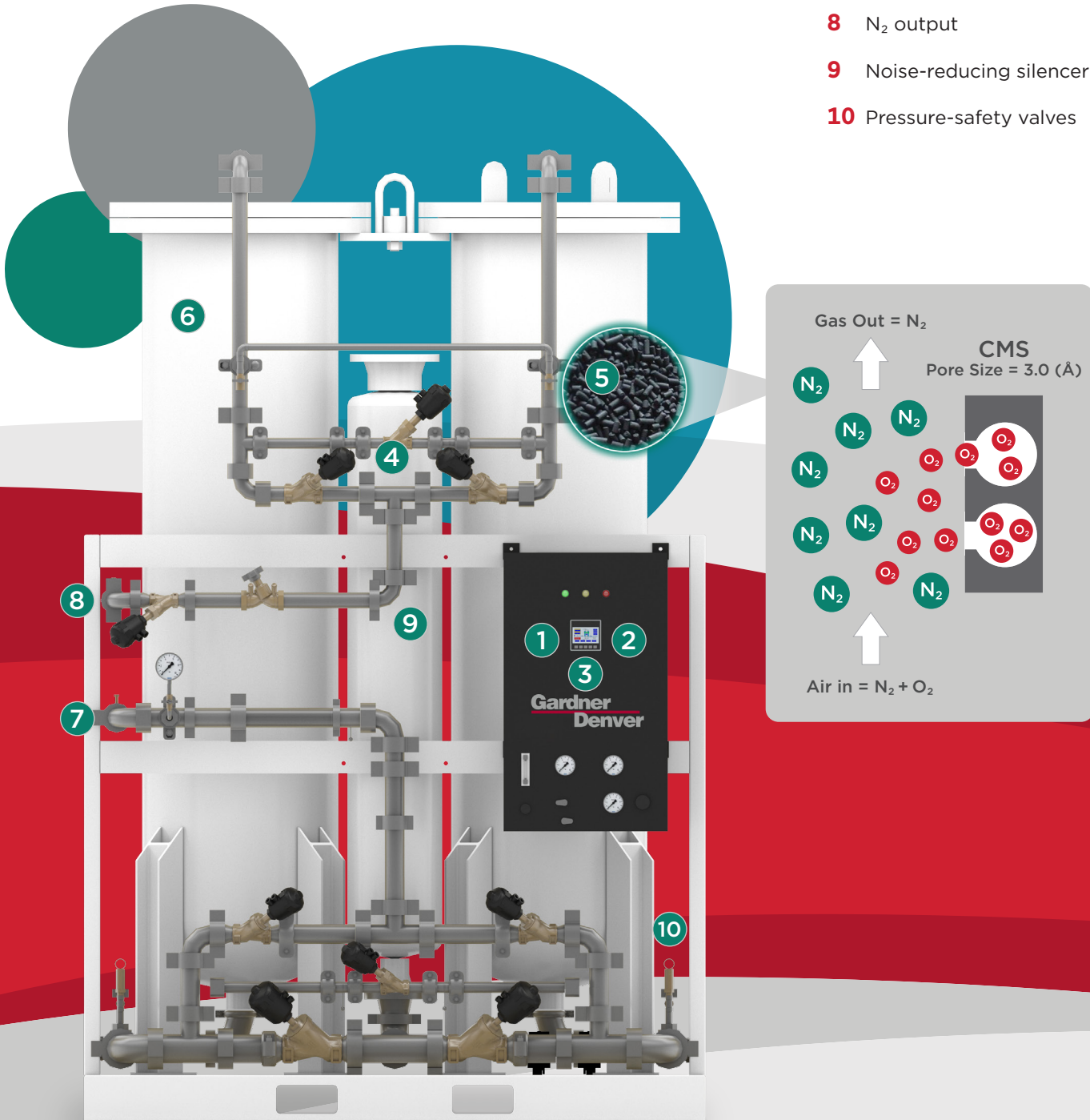
- 1 Compressor
- 2 XG Filtration
- 3 XG Dryer
- 4 XGCT Tower
- 5 XG Air Tanks
- 6 **XGN2 PSA Nitrogen Generator**

# Industry-Leading Features

Gardner Denver nitrogen generators are precisely designed to ensure a long operating life and efficient operation.

- 1 Intuitive touch screen controller
- 2 Real-time onboard trending
- 3 Long-life oxygen analyzer

- 4 Precision switching valves
- 5 Long-life CMS adsorption media
- 6 ASME-certified pressure vessels
- 7 Air input
- 8 N<sub>2</sub> output
- 9 Noise-reducing silencer
- 10 Pressure-safety valves





# Built-In Reliability

Your success depends on safety and reliability—that's why it's built into all of our PSA nitrogen generators. Each system comes pre-assembled and tested at the factory for simple, plug-and-play installation at your site to maximize productivity and ensure out-of-box operation. Our robust design includes:

- Superior quality CMS media that extends product life, simplifies maintenance and reduces replacement costs
- High precision switching valves with quick-acting, long-life, superior efficiencies, and robust durability
- Intelligent controls designed to optimize set points, improve performance, and protect your entire nitrogen generation system
- ASME-certified pressure vessels to ensure safe operation
- Standard extended warranties to keep you protected for 24/30 months



# Specifications

## MEMBRANE NITROGEN GENERATION PERFORMANCE, 77°F AMBIENT, 125 PSIG

MODEL*	N <sub>2</sub> FLOW AT EACH PURITY SCFM			INLET	OUTLET	DIMENSIONS L×W×H		WEIGHT	
	95%	99%	99.5%	FNPT	FNPT	INCHES	MM	LBS	KG
XGN21MP	1.00	0.39	0.29	1/4"	1/4"	21 × 4 × 45	534 × 102 × 1143	25	12
XGN22MP	1.68	0.65	0.49	1/4"	1/4"	21 × 4 × 45	533 × 102 × 1143	27	13
XGN24MP	2.98	1.16	0.87	1/4"	1/4"	21 × 4 × 45	533 × 102 × 1143	35	16
XGN27MP	4.90	1.90	1.43	3/8"	1/4"	21 × 7 × 69	533 × 178 × 1753	117	54
XGN28MP	5.43	2.15	1.62	1/4"	1/4"	21 × 4 × 45	533 × 102 × 1143	35	16
XGN29MP	8.35	3.13	2.32	3/8"	1/4"	21 × 4 × 45	533 × 102 × 1143	46	21
XGN212MP	8.70	3.47	2.62	3/8"	3/8"	21 × 7 × 69	533 × 178 × 1753	117	54
XGN218MP	16.95	6.55	4.85	1/2"	1/2"	21 × 7 × 69	533 × 178 × 1753	142	65
XGN218ME	16.95	6.55	4.85	1"	3/4"	31 × 20 × 63	787 × 508 × 1600	302	137
XGN235ME	33.90	13.10	9.70	1"	3/4"	31 × 20 × 63	787 × 508 × 1600	327	149
XGN253ME	50.85	19.65	14.55	1"	3/4"	31 × 20 × 63	787 × 508 × 1600	352	160
XGN276ME	74.83	29.07	26.87	1-1/2"	1-1/2"	49 × 24 × 77	1245 × 610 × 1956	873	396
XGN2115ME	112.25	43.60	40.30	1-1/2"	1-1/2"	49 × 24 × 77	1245 × 610 × 1956	950	431
XGN2153ME	149.67	58.13	53.73	1-1/2"	1-1/2"	49 × 24 × 77	1245 × 610 × 1956	1027	466

\*Additional models available; contact your local Gardner Denver representative for more information.  
 \*Consult factory for operation at other conditions.



## PSA NITROGEN GENERATION PERFORMANCE, 70°F AMBIENT, 110 PSIG

MODEL*	N <sub>2</sub> FLOW AT EACH PURITY SCFM			INLET	OUTLET	DIMENSIONS L×W×H		WEIGHT	
	95%	99%	99.5%	FNPT	FNPT	INCHES	MM	LBS	KG
XGN215LS	13.3	7.5	6.7	3/4"	1/2"	35 × 26 × 80	889 × 661 × 2032	702	319
XGN221LS	17.4	9.9	8.8	3/4"	1/2"	35 × 26 × 100	889 × 660 × 2540	738	335
XGN226LS	23.0	13.1	11.6	3/4"	1/2"	35 × 26 × 80	889 × 660 × 2032	866	393
XGN232LS	28.4	16.2	14.3	3/4"	1/2"	35 × 26 × 97	889 × 660 × 2464	998	453
XGN241LS	35.1	20.0	17.7	1"	3/4"	35 × 30 × 80	889 × 762 × 2032	1,060	481
XGN247LS	42.3	24.1	21.3	1"	3/4"	35 × 30 × 100	889 × 762 × 2540	1,194	542
XGN259LS	49.6	28.2	24.9	1"	3/4"	35 × 30 × 100	889 × 762 × 2540	1,292	587
XGN268LS	58.4	33.2	29.3	1"	3/4"	35 × 30 × 91	889 × 762 × 2311	1,443	655
XGN276LS	64.8	36.8	32.6	1"	3/4"	35 × 37 × 85	889 × 940 × 2159	1,500	681
XGN288LS	76.2	43.3	38.3	1-1/2"	1"	35 × 37 × 96	889 × 940 × 2438	1,630	740
XGN2100LS	89.1	50.6	44.8	1-1/2"	1"	35 × 39 × 85	889 × 991 × 2159	1,850	840
XGN2118LS	101.0	57.4	50.7	1-1/2"	1"	35 × 39 × 99	889 × 991 × 2515	2,025	919
XGN2132HS	119.5	67.9	60.0	1-1/2"	1"	35 × 39 × 116	889 × 991 × 2946	3,450	1,565
XGN2144HS	130.1	73.9	65.3	1-1/2"	1"	64 × 34 × 124	1626 × 864 × 3150	3,610	1,638
XGN2159HS	143.3	81.5	71.9	2"	1-1/2"	64 × 34 × 134	1626 × 864 × 3404	3,810	1,729
XGN2174HS	149.5	85.0	75.1	2"	1-1/2"	76 × 48 × 110	1930 × 1219 × 2794	4,330	1,965
XGN2191HS	163.8	93.1	82.2	2"	1-1/2"	76 × 48 × 117	1930 × 1219 × 2972	4,520	2,051
XGN2212HS	182.2	103.6	91.5	2"	1-1/2"	76 × 48 × 135	1930 × 1219 × 3429	4,750	2,155
XGN2232HS	200.6	114.0	100.7	2"	1-1/2"	76 × 48 × 146	1930 × 1219 × 3708	4,990	2,264
XGN2259HS	223.1	126.8	112.0	2"	1-1/2"	76 × 48 × 119	1930 × 1219 × 3023	5,280	2,395
XGN2285HS	245.0	139.3	123.0	2"	1-1/2"	76 × 48 × 119	1930 × 1219 × 3023	6,120	2,776
XGN2315HS	271.8	154.5	136.4	2"	1-1/2"	76 × 48 × 128	1930 × 1219 × 3251	6,430	2,917
XGN2347HS	298.6	169.8	149.9	2"	1-1/2"	76 × 48 × 137	1930 × 1219 × 3480	6,760	3,067
XGN2382HS	328.4	186.7	164.9	2"	1-1/2"	76 × 48 × 147	1930 × 1219 × 3734	7,120	3,230
XGN2418HS	358.2	203.6	179.8	2"	1-1/2"	76 × 48 × 157	1930 × 1219 × 3988	7,480	3,393
XGN2456HS	392.3	223.0	196.9	3"	2"	95 × 53 × 125	2413 × 1346 × 3175	8,030	3,643
XGN2503HS	434.7	247.1	218.2	3"	2"	95 × 53 × 135	2413 × 1346 × 3429	8,510	3,861
XGN2550HS	477.2	271.3	239.5	3"	2"	95 × 53 × 143	2413 × 1346 × 3632	8,990	4,078
XGN2606HS	524.3	298.1	263.2	3"	2"	95 × 53 × 153	2413 × 1346 × 3886	9,550	4,332
XGN2668HS	576.2	327.6	289.2	3"	2"	95 × 53 × 164	2413 × 1346 × 4166	10,170	4,614
XGN2735HS	637.5	362.4	320.0	3"	2"	95 × 53 × 177	2413 × 1346 × 4496	10,870	4,931
XGN2809HS	697.0	396.2	349.9	3"/4" FLG	2"/3" FLG	111 × 60 × 148	2819 × 1524 × 3759	14,090	6,392
XGN2894HS	771.3	438.5	387.2	3"/4" FLG	2"/3" FLG	111 × 60 × 159	2819 × 1524 × 4039	15,010	6,809
XGN2982HS	852.3	484.5	427.8	3"/4" FLG	3" FLG	111 × 60 × 171	2819 × 1524 × 4343	15,980	7,249
XGN21071HS	926.6	526.7	465.1	3"/4" FLG	2"/3" FLG	111 × 60 × 182	2819 × 1524 × 4623	16,910	7,671
XGN21176HS	1017.9	578.7	511.0	3"/4" FLG	3" FLG	120 × 66 × 158	3048 × 1676 × 4013	17,430	7,907
XGN21306HS	1129.1	641.9	566.8	3"/4" FLG	3" FLG	120 × 66 × 170	3048 × 1676 × 4318	19,200	8,709
XGN21438HS	1249.6	710.4	627.3	3"/4" FLG	3" FLG	120 × 66 × 183	3048 × 1676 × 4648	20,540	9,317
XGN21588HS	1379.3	784.1	692.4	3"/4" FLG	3" FLG	120 × 66 × 197	3048 × 1676 × 5004	22,030	9,993
XGN21765HS	1528.5	868.9	767.3	3"/4" FLG	3" FLG	120 × 66 × 213	3048 × 1676 × 5410	23,760	10,778
XGN21929HS	1673.1	951.1	839.9	4"/6" FLG	3" FLG	135 × 76 × 190	3429 × 1930 × 4826	28,620	12,982
XGN22130HS	1841.7	1047.0	924.5	4"/6" FLG	3" FLG	135 × 76 × 204	3429 × 1930 × 5182	30,650	13,903
XGN22353HS	2034.5	1156.6	1021.3	4"/6" FLG	3" FLG	135 × 76 × 220	3429 × 1930 × 5588	32,950	14,946

\*Additional models available; contact your local Gardner Denver representative for more information.  
 \*Consult factory for operation at other conditions.

The leader in every market we serve  
by continuously improving all business processes  
with a focus on innovation and velocity

**Gardner**  

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**Denver**<sup>®</sup>

**Gardner Denver, Inc.**

1800 Gardner Expressway  
Quincy, IL 62305  
[www.gardnerdenver.com](http://www.gardnerdenver.com)



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