



Lab Gas Nitrogen Generators



Laboratory Gas Nitrogen Generation

What we do

We provide solutions and help business conserve money by supplementing or replacing their current nitrogen supply with the use of on location nitrogen generators.

Gas Chromatography (GC)

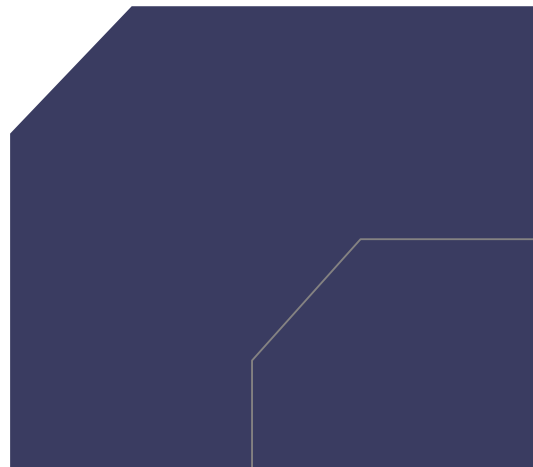
Without a doubt, the Flame Ionization Detector (FID) is the most useful GC detector available and by far that most commonly used in GC analyses. Complex mixtures are routinely separated by gas chromatography coupled with flame ionization detection. The detector usually requires three separate gas supplies together with their precision flow regulators. The gases normally used are hydrogen for combustion, helium or nitrogen for the carrier gas and oxygen or air as the combustion agent. Using zero grade nitrogen as the carrier gas produced by a nitrogen generator is an inexpensive solution.

Liquid Chromatography / Mass Spectrometry (LC/MS)

LC/MS is applied to the identification and quantification of low volatile organic and inorganic compounds in samples. Using our nitrogen generators, we are able to provide a continuous supply of nitrogen for nebulizing gas, curtain or supply, evaporative light scattering detectors and sparging. If required, zero nitrogen containing less than 0.1 ppm hydrocarbons is available.

Zero Air Generation (ZAG)

Zero Air generators remove hydrocarbons from compressed air by means of catalytic conversion, a process commonly used in an automotive exhaust system. The result is hydrocarbon-free air at a purity of 0.1 ppm or better, making it quite suitable for popular laboratory applications such as GC-FID. An increasing number of companies are replacing heavy high-pressure cylinders with Zero Air generators, makes sense from a safety, productivity, and economic standpoint.



Beyond the Technology



Solutions

Nitrogen is commonly used in laboratories for a variety of applications. Some processes demand higher purities, like research and gas chromatography (GC), others are less purity-dependent.

We offer two types of nitrogen generators for lab gas applications. The type of nitrogen generator is dependant on the process. An advantage to using an “in facility” nitrogen generator is that it eliminates the storage of large amounts of compressed gas since there is instant access to newly produced gas. Gas generators are small and they create flexibility in the set up of the laboratory. Due to their small size, laboratory space can be conserved.

Series M1

Series M1 nitrogen generators are the simplest nitrogen generation systems we offer. M1's are membrane based nitrogen generators and can be affixed to a wall or other fixture close to the point of need. Connect your compressed air line to the inlet of the generator. Attach the nitrogen delivery line from the outlet of the nitrogen generator to your process. Turn on the compressed air line and you have nitrogen flowing from the generator outlet. An oil free feed air compressor or zero grade nitrogen generator can be provided as an option.

Series P1

Series P1 nitrogen generators are based on pressure swing adsorption technology. This type of nitrogen generator produces higher purity nitrogen containing ≤ 10 ppm O₂ (99.999% N₂). Installation is simple and the systems are compact allowing them to be placed under a bench. Connect your compressed air line to the inlet of the generator. Attach the nitrogen delivery line from the outlet of the nitrogen generator to your process. Turn on the compressed air line and you have nitrogen flowing from the generator outlet. An oil free feed air compressor or zero grade nitrogen generator can be provided as an option.

Series D Zero Air Generators

Series D membrane based dyers provide up to 3 scfm of hydrocarbon free air for combustion. In comparison to beds of catalyst-coated desiccant beads for the removal of hydrocarbons, we use a coated ceramic disk referred to as a monolithic catalyst. The reason for this is the movement between the coated beads leads to the progressive loss of catalyst material. This loss of catalyst, in turn, leads to deteriorating purity and short life. Our Series D or D-ZAG's are available with an optional oil free air compressor.



Series LM1 and LP1

All of our Lab Gas Generators are available with or without an air compressor. For units supplied without an air compressor, it is important to ensure that your compressed air supply contains less than 7 ppm/v THC (oil) and less than 1500 ppm/v H₂O.

Although we have developed an effective, proprietary blend of media designed to help remove oil and water vapor from your feed air, pre-filtration cannot remove all of the contaminants present in a compressed air stream.

With minimum preventive maintenance, your membrane or PSA based nitrogen generator is expected to have a life of more than 10 years.

Series LM1

LM1 lab gas generators are membrane based nitrogen generators that work with your compressed air supply.

Model	% O ₂			Connections	Power	Dimensions (in) H x W x D	Weight (lbs)
	0.5%	1.0%	2.0%				
LM1-2	1	2.5	3.5	1/4" FNPT	n/a	34 x 18 x 48	98
LM1-4	2	5	7	1/4" FNPT	n/a	34 x 18 x 48	104
LM1-6	3	7.5	10.5	1/4" FNPT	n/a	34 x 18 x 48	110
LM1-8	4	10	14	1/4" FNPT	n/a	34 x 18 x 48	116
LM1-20	10	14	37	1/4" FNPT	n/a	34 x 18 x 48	116
LM1-40	20	28	51	1/4" FNPT	n/a	34 x 18 x 48	116
LM1-60	30	42	65	1/4" FNPT	n/a	34 x 18 x 48	116

Contact us for greater flow rates or higher inlet pressures

Flows listed in liters per minute (lpm)

Series LM3

LM3 lab gas generators are membrane based nitrogen generators that include an integral oil free air compressor

Model	% O ₂			Connections	Power	Dimensions (in) H x W x D	Weight (lbs)
	0.5%	1.0%	2.0%				
LM3-2	1	2.5	3.5	1/4" FNPT	120 Vac	34 x 18 x 48	220
LM3-4	2	5	7	1/4" FNPT	120 Vac	34 x 18 x 48	220
LM3-6	3	7.5	10.5	1/4" FNPT	120 Vac	34 x 18 x 48	220
LM3-8	4	10	14	1/4" FNPT	120 Vac	34 x 18 x 48	220
LM3-20	10	14	37	1/4" FNPT	120 Vac	34 x 18 x 48	265
LM3-40	20	28	51	1/4" FNPT	120 Vac	34 x 18 x 48	265
LM3-60	30	42	65	1/4" FNPT	120 Vac	34 x 18 x 48	280

Flows listed in liters per minute (lpm)

Series LP1

LP1 lab gas generators are PSA based nitrogen generators that work with your compressed air supply.

Model	lpm	% O2	Connections	Power	Dimensions (in) H x W x D	Weight (lbs)
LP1-1	.55	10 ppm	1/8" FNPT	120 Vac	36 x 18 x 14	115
LP1-2	1.5	10 ppm	1/8" FNPT	120 Vac	36 x 18 x 14	170
LP1-3	2.5	100 ppm	1/8" FNPT	120 Vac	36 x 18 x 14	157
LP1-4	5.0	100 ppm	1/8" FNPT	120 Vac	36 x 18 x 14	170
Zero Nitrogen						
LP1-5	1	10 ppm	1/8" FNPT	120 Vac	36 x 18 x 14	112
Flows listed in liters per minute (lpm)						

Series LP3

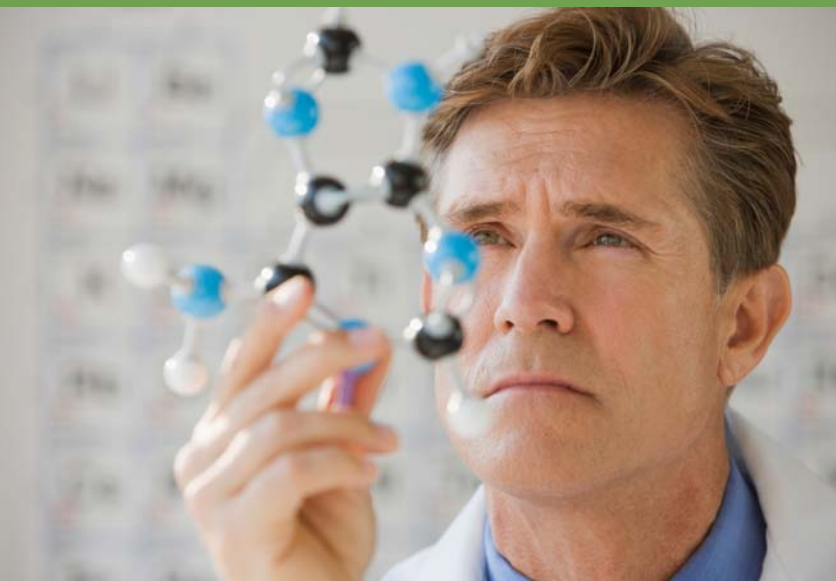
LP3 lab gas generators are PSA based nitrogen generators that include an integral oil free air compressor.

Model	lpm	% O2	Connections	Power	Dimensions (in) H x W x D	Weight (lbs)
LP3-1	0.75	10 ppm	1/8" FNPT	120 Vac	36 x 18 x 14	124
LP3-2	3	10 ppm	1/8" FNPT	120 Vac	36 x 18 x 14	198
LP3-3	5	100 ppm	1/8" FNPT	120 Vac	36 x 18 x 14	183
LP3-4	7	100 ppm	1/8" FNPT	120 Vac	36 x 18 x 14	198
Zero Nitrogen						
LP3-5	1	10 ppm	1/8" FNPT	120 Vac	36 x 18 x 14	121
Flows listed in liters per minute (lpm)						

D ZAG's

D Zag's are zero air generators containing ≤ 0.1 ppm Hydrocarbon as methane. D Zag's are available with or without an oil free air compressor.

Model	- 67°F	- 55°C	Connections	Power	Dimensions (in) H x W x D	Weight (lbs)
LD-3	3	3	1/8" FNPT	n/a	36 x 18 x 14	110
LD-6	6	6	1/8" FNPT	n/a	36 x 18 x 14	110
LD-3K	3	3	1/8" FNPT	120 Vac	36 x 18 x 14	119
LD-6K	6	6	1/8" FNPT	120 Vac	36 x 18 x 14	119
Flows listed in liters per minute (lpm)						
Suffix "K" represents the addition of an integral oil free air compressor						



Beyond the Technology

Just a Phone Call Away!

For more information about opportunities regarding your application, please contact us or visit our website www.LibertyN2.com.