

# GAS GENERATION SOLUTIONS



**LabTech**

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# NITROGEN GENERATORS

## LN Series... innovation inspired.

LabTech develops innovative gas generators that can be used whenever high-quality nitrogen gas and rapid flow changes are required. The LN series meets the “Green Lab Conditions” regulations by using eco-friendly materials. By adapting new technologies and innovations in order to maintain a high reliability level, all of the production steps are focused to offer high-quality and customized solutions to meet any requirements. The LN series is designed especially for analytical and industrial use, providing an accurate control of the supply of nitrogen gas.

- Complete Range of Gas Flow-Rates
- Models with Built-in Low Noise Air Compressor
- Compact Dimensions
- Nitrogen Purity up to 99.9995%
- Auto-Run Function
- Outlet Flow Indicator
- Trend Graphs
- Remote Access to Screen
- Unique Touch Screen Interface
- Oxygen Sensor (optional)
- Catalyst for Low THC Requirements



The LN range by LabTech is the reliable and efficient alternative to conventional high-pressure cylinders. Considering the running costs, safety issues and the risk of running out of gas during operations, the LN series is the most advanced and reliable gas generating solution available. The control system gives all the necessary information to ensure an efficient and consistent gas supply. From process and flow alarms, to the automated start/stop function, to trend graphs, there is simply no other laboratory nitrogen system like the LabTech LN series.

## MAIN APPLICATIONS

- GC
- General laboratory
- ICP
- Evaporative light-scattering detection (ELSD)
- LC/MS and LC/MS/MS
- Sample Concentrator

# TECHNICAL SPECIFICATIONS

LN SERIES					LN PLUS SERIES		LNC SERIES			
LN15	LN30	LN45	LN60	LN75	LN15 PLUS	LN30PLUS	LN30C	LN65C	LN100C	LN200C

## ■ NITROGEN PRODUCTION

Flow rate (up to)	lt/min	15	30	45	60	75	15*	30*	30*	65*	100*	200*	
Purity	%	98 - 99,999						up to 99,5					
Outlet Pressure	bar	up to 8						up to 10					
Total Hydrocarbon Content (THC)	ppm	-						< 0.1		-			

## ■ ELECTRICAL REQUIREMENTS

Power Supply Voltage	Vac/Hz	110-120/60 or 220-240/50						220-240/50				
Rated output	W	80						1,05	2	1,7	3,5	
Rated current	A	0.35						4,6	8,7	7,5	16	
Line Protection	A	2						10				20

## ■ AIR SUPPLY

Air Compressor		Not included						Built-In			
Minimum pressure	bar	6						-			
Maximum pressure	bar	9.7						-			
Maximum temperature	°C	45						-			
Minimum quality		ISO 8573.1 class 1.4.1						-			

## ■ ENVIRONMENTAL CONDITIONS

Temperature	°C	5 ÷ 35											
Relative humidity	%	20 ÷ 80											
Max. elevation (for nominal performances)	m a.s.l.	1000											
Noise (emission)	dB(A)	< 46						< 65					
Dimensions (LxWxH)	cm	81x43x75									83x62,8x136,5		
Weight	kg	75	90	105	120	135	75	90	85	110	200	220	

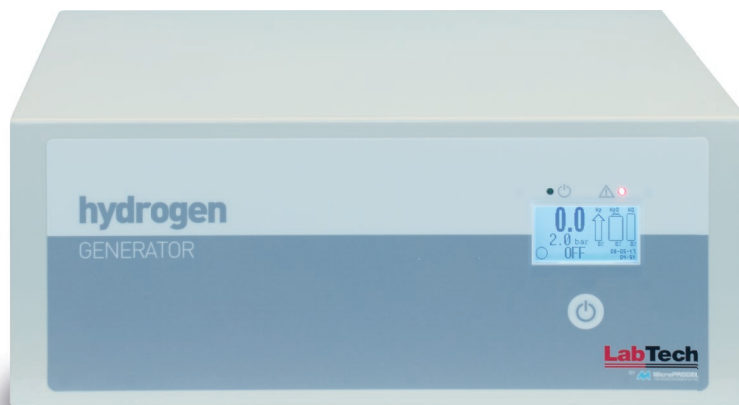
\*Nominal flow rate at the standard conditions: Input air pressure 7.5 bar and temperature 20°C

# HYDROGEN GENERATORS

## LMH & LMHPLUS Series, simply the best!

The LMH & LMHPLUS series use an electrolytic cell with a polymeric membrane (PEM) to produce pure hydrogen gas. The innovative gas-drying system of the LMHPLUS series is completely maintenance-free and can run operations 24 hours a day. The exclusive electronically controlled gas/liquid separator automatically checks for internal leaks when the unit starts. Furthermore, the constant control of the operating parameters guarantees maximum safety and the LCD touchscreen interface provides a simple and user-friendly management of all of the unit's functions without requiring the operator's presence.

- Innovative Maintenance-Free Drying System for 24h/day operations
- Built-in Water Tank with Electronic Level Control and "Auto-Refill" function
- Gas Flow Rates up to 1200 cc/min
- Outlet Pressure up to 16 bar
- Hydrogen Purity up to >99.99999%
- User Friendly Touch Screen Display
- Compact Dimensions
- Cascading Facility
- Hydrogen Sensor (optional)



## MAIN APPLICATIONS

- Carrier gas for GC and GC-MS
- ICP-MS collision gas
- Production of H<sub>2</sub>O<sub>2</sub>
- Flame ionization detector (FID) for feed gas
- Refilling of metal hydride tanks for the application of fuel cells
- Electronics

# TECHNICAL SPECIFICATIONS

	LMH180	LMH350	LMH520	LMH180PLUS	LMH350PLUS	LMH520PLUS	LMH700PLUS	LMH1000PLUS	LMH1200PLUS
<b>▪ GENERAL DATA</b>									
Electrolytic cell	PEM technology								
H <sub>2</sub> purity	>99.9995% <sup>1</sup>			>99.99999% <sup>2</sup>					
Outlet pressure (bar)	8 (115psi)			12 (174psi) - Optional 16 (232psi)					
Max flow rate (cc/min)	180	350	520	180	350	520	700	1000	1200
Dimensions (LxWxH cm)	56x45x19								
Net weight (kg) (water tank empty)	20		22	20		22		25	
<b>▪ COMMUNICATION</b>									
RS232	•	•	•	•	•	•	•	•	•
RS485	-	-	-	•	•	•	•	•	•
USB	-	-	-	•	•	•	•	•	•
<b>▪ SOFTWARE FUNCTIONS</b>									
Parallel mode capability	•	•	•	•	•	•	•	•	•
Auto refill tank function	•	•	•	•	•	•	•	•	•
<b>▪ WATER</b>									
Quality	Deionized, ASTM II, <0.1µS								
Internal tank capacity (L)	1.1								
External tank capacity (L)	5 or 10								
<b>▪ ELECTRICAL REQUIREMENTS</b>									
Power supply voltage	100-240V 50/60Hz								
Max power consumption (W)	280		450	280			450	560	
Fuse rating (A)	4		6.3	4			6.3		
<b>▪ CONNECTIONS</b>									
Hydrogen outlet	1/8" Compression Fitting								
Water	Quick release push-in fitting								
<b>▪ OPERATING CONDITIONS</b>									
Temperature (°C)	5 to 35 (41° to 95°F)								
Humidity (°C) (Max, non condensing)	80% at 25 (77°F)								
Noise (dB)	<25								
IP rating	20								

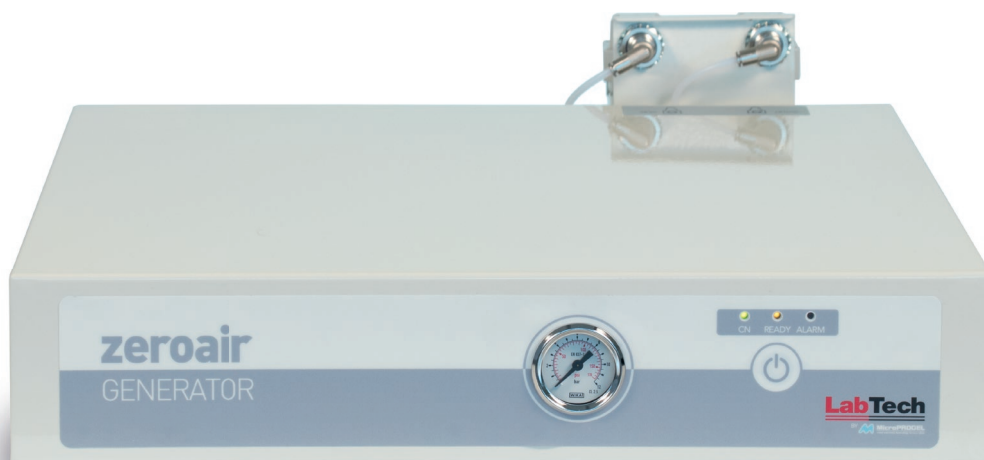
<sup>1</sup>Referred to O<sub>2</sub>, DewPoint < -50°C - <sup>2</sup>Referred to O<sub>2</sub>, DewPoint < -75°C

# ZERO AIR GENERATORS

## LZA Series, the right partner in air purification.

The LZA series is one of the smallest and most efficient hydrocarbon-free air purifier systems for laboratory use. It utilizes the reliable and efficient heated catalyst technology to reduce the emission of THC and methane to less than 0.05 ppm. The LZA series increases the efficiency of any laboratory by removing the high-pressure gas cylinders. Zero air is used in many commercial and laboratory applications to improve the quality of a product or process, like the source of fuel air for Flame Ionization Detectors (FID) or a zero reference for any instrument that measures hydrocarbon concentration. The LZA generators allow the production of in-house purified air in a simple and inexpensive way.

- Flow-Rates up to 6000 cc/min
- Outlet Pressure up to 6,5 bar
- Total Hydrocarbon Content < 0,05 ppm
- Compact Dimensions
- Plug & Play Solution



## MAIN APPLICATIONS

- THA
- Flame ionization detector (FID) for feed gas
- Flame photometric detector (FPD)
- Pulsed flame photometric detector (PFPD)
- NPD

# TECHNICAL SPECIFICATIONS

LZA1000

LZA2000

LZA3000

LZA6000

LZA15000

LZA30000

LZA50000

## ▪ GENERAL DATA

Max flow rate (cc/min)	1000	2000	3000	6000	15000	30000	50000
Min outlet pressure (bar)	Inlet Pressure – 0.5 (8psi) at maximum flow						
Max outlet pressure (bar)	6.5 (94psi)						
Total hydrocarbon content (ppm)	< 0.05						
Dimensions (LxWxH cm)	51x44.5x10						65x45x18
Net weight (kg)	12		13		14		

## ▪ AIR INLET REQUIREMENTS

Max Inlet hydrocarbon content	50ppm			100ppm			
Supply pressure (bar)	3 to 10 (43psi to 145psi)						
Dew-point (°C)	< -20						
Temperature (°C)	1 to 35 (34° to 95°F)						

## ▪ ELECTRICAL REQUIREMENTS

Power supply voltage	90-240V 50/60Hz						
Connection type	IEC320-C13						
Max consumption power (W)	240 (280V)						
Fuse rating (A)	4						

## ▪ CONNECTIONS

Outlet port	1/8" female						
Inlet port	1/8" female						
Water purge	ISO M5 female pipe thread						

## ▪ OPERATING CONDITIONS

Temperature (°C)	5° to 35 (41° to 95°F)						
Humidity (°C) (Max, non condensing)	80% at 25 (77°F)						
IP rating	20						

# LabTech

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## **LabTech, your reliable laboratory solution provider.**

LabTech is a leading manufacturing company with skill and passion devoted to provide advanced laboratory solutions to the analytical community. We are located in Sorisole, northern Italy, with facilities in USA and China. Incorporated with global branches, LabTech is organized into R&D, production, marketing & sales and customer support. Major LabTech products include organic/inorganic sample preparation systems, laboratory cooling/heating/temperature control equipments, analytical instruments, gas generators, laboratory centrifuges and liquid nitrogen generators. With knowledgeable scientists and experienced engineers, our R&D team has developed and released a series of new lab equipments and instruments dedicated to the modern analytical laboratories. With all of these accomplishments and our endless research and development efforts, we are proud to be your professional partner in lab solutions.



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