



## NITROGEN LC

NITROGEN GENERATORS FOR LASER CUTTING

## SELF-PRODUCED NITROGEN FOR LASER CUTTING

NITROGAS LC is a range of modular nitrogen generators with PSA technology for the production and high pressure storage of pure nitrogen, specifically designed for laser cutting of metals. At all times you will have absolute control of your nitrogen production through:

**PLC supervision system** - ensures continuous control over purity, pressure and flow rate of nitrogen produced through the functions of energy saving, parameter monitoring and alarms as well as the creation of reports that can be easily exported via USB port.

**Zirconium oxide oxygen analyzer** - continuous measurement of the residual oxygen content in the nitrogen flow, certifying its correct purity at all times.

**Self-cleaning** - the system ensures that the correct purity of Nitrogen is always supplied by discharging any non-specified gas into the atmosphere.

**4.0 Ready** - the generator can easily interface via an Ethernet port or Wi-Fi router to a corporate monitoring and control network in compliance with the requirements of industry 4.0.

**Pressure regulation** - each generator is equipped with an internal pressure regulator that allows a flow of nitrogen at constant pressure.

**Electronic flow meters** - allow the measurement the flow of incoming air or outgoing Nitrogen.

**Moisture analyzer** - specially designed for applications that need to continuously monitor the moisture content of the nitrogen produced.

**Temperature transmitters** - measure the temperature of the incoming air or nitrogen leaving the generator.



## SAVE WITH NITROGAS LC

With traditional Nitrogen supply methods, the user incurs hidden "extra-costs" in addition to the cost of the purchased Nitrogen which contribute to drastically increase the final price:

- rental of cylinders / cylinders bundles / tanks
- transport, unloading and management costs
- "Boil-off" of liquid storage

On average, more than 10% of each cylinder or cylinders bundle is returned unused to the supplier

By accounting for all these costs, the self-production of Nitrogen through NITROGAS LC generators is the most convenient solution on the market. Depending on the conditions of use and consumption, the return on investment is guaranteed within 6-48 months.



## RELIABILITY

Nitrogen always available with direct production and back-up

## AUTONOMY

No more long-term leases or contracts with traditional technical gas suppliers

## SAVINGS

Cost reduction up to 90% compared to supply in cylinders or tanks

## MODULARITY

You can easily increase the flow of produced nitrogen with additional modules

## SEMPPLICITY

Intelligent, fully automatic and easy to use PLC based system

## SAFETY

No cryogenic tanks or cylinders to move

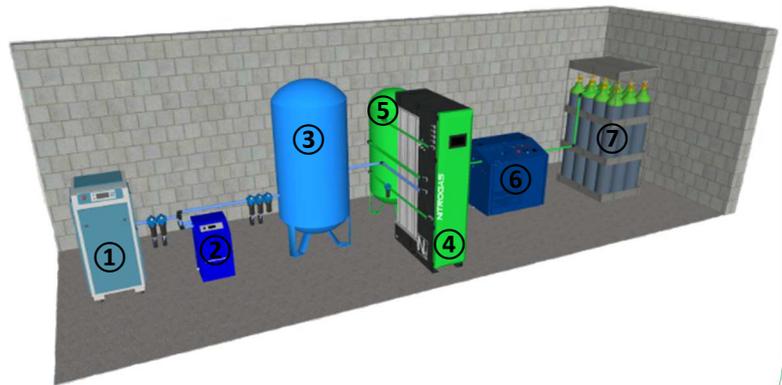
## ECO-FRIENDLY

Reduction of greenhouse gas emissions and carbon footprint

## NITROGEN PLANT - NITROGAS LC

- |                              |                                 |
|------------------------------|---------------------------------|
| 1 - AIR COMPRESSOR           | 5 - N <sub>2</sub> PROCESS TANK |
| 2 - COMPRESSED AIR TREATMENT | 6 - HIGH PRESSURE BOOSTER       |
| 3 - COMPRESSED AIR TANK      | 7 - CYLINDERS BUNDLE            |
| 4 - NITROGEN GENERATOR       |                                 |

ON REQUEST: specific high-flow reducers for laser cutting machines, turnkey projects on skids or in containers, construction of stainless steel connection pipes, customized solutions



## PERFORMANCE

Model	NITROGAS - Nitrogen Flowrate <sup>(1)</sup> and purity <sup>(2)</sup>		Produced Nitrogen (max) [Nm <sup>3</sup> ]	
	99,999%	99,99%	Day	Month
NG-10	3,3	5,4	130	3629
NG-20	6,6	10,8	259	7258
NG-30	9,4	15,4	370	10349
NG-40	12,4	20,1	482	13507
NG-50	14,9	23,6	566	15859
NG-60	16,4	26,1	626	17539
NG-70	18,9	30,1	722	20227

## FEED AIR REQUIREMENTS

Pressure	5-10 bar-g
Temperature	+5°C / +45°C
Air quality	ISO 8573-1:2010 Class 1.4.1

## ELECTRICAL REQUIREMENTS

Power supply	110-230 V / 50-60 Hz
Installed power	0,3 kW (generator)

## CONNECTIONS

Feed air inlet	G1"
Nitrogen send	G1"
Nitrogen return	G1/2"
Nitrogen outlet	G1/2"

## CONFORMITY & CERTIFICATIONS

2014/68/UE	PED - Cat. II
2006/95/UE	Low voltage directive
2006/42/UE	Machinery directive
2004/108/UE	Electromagnetic compatibility

<sup>(1)</sup> Nitrogen flowrates are expressed in Nm<sup>3</sup>/h (tolerance ± 5%) and are valid for generator operating at atmospheric conditions +20°C, 1013 mbar and 60% RH, 9 bar-g inlet air feed pressure. Definition of Nm<sup>3</sup> based on reference conditions of 0°C and 101.325 Pa. For performance in other conditions please contact the manufacturer. The manufacturer reserves the right to change the data without any prior advise.

<sup>(2)</sup> Nitrogen purity is indicated as the content of inert gas at the outlet of the generator or as the residual oxygen content.



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