

Specification manual

Nitrogen and AIR Generators

N2-SIROCCO-3A



LNI SCHMIDLIN AG

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NOTICE: This manual is intended to provide technical specifications of the LNI SCHMIDLIN AG range of Nitrogen Generator SIROCCO Series. If you have any further questions, please contact:

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INTRODUCTION

Product Description

LNI SCHMIDLIN AG high purity Nitrogen- and integrated instrument Air Generator eliminate the need for costly, inconvenient high pressure cylinders in the laboratory. Including integral oil-free air compressors as standard, the generators deliver a continuous stream of 99.999%+ pure nitrogen gas and clean instrument Air.

The **LNI SCHMIDLIN AG** SIROCCO series of Nitrogen / Air Gas Generators is ideal for operation as nitrogen gas supply and instrument air supply for all kind of Laboratory and Chromatography applications.

Technical

LNI SCHMIDLIN AG nitrogen generators use a patented DUAL STEP pressure swing adsorption (DS-PSA) system. Pressure swing adsorption is well known and the DUAL STEP system is new innovation from LNI Schmidlin AG, much more economical and much more efficient way as the traditional standard PSA technique.

The N2-Sirocco-3A include a separate compressed air source including dryer system (dew point less -20°C) with flow rate up to 3000 cc/min and delivery pressure of 5 bar (73 psig)

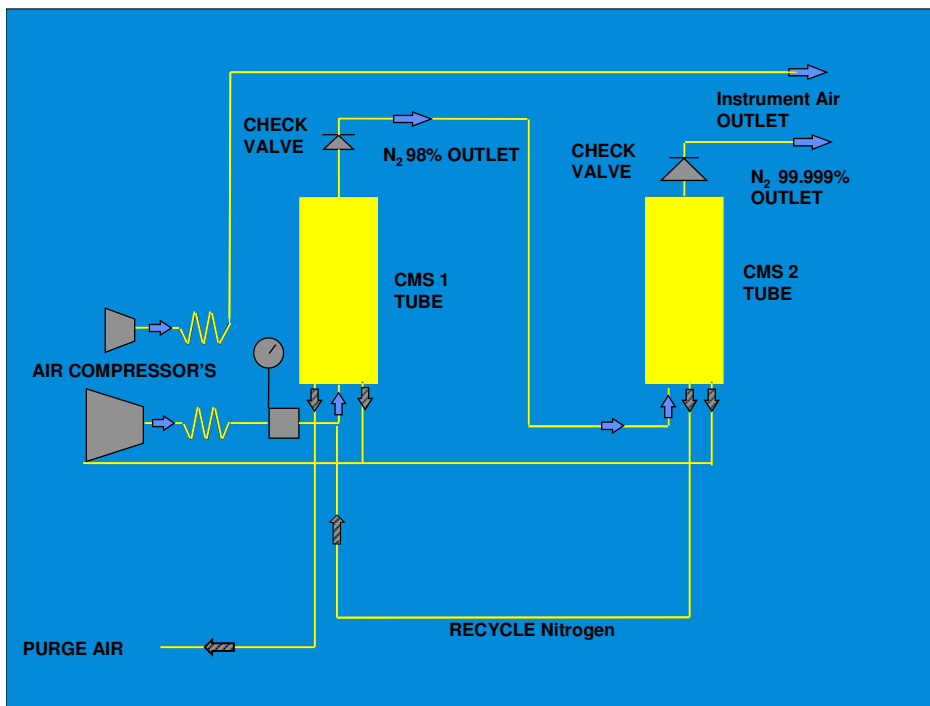
DUAL STEP PRESSURE SWING ADSORPTION DS-PSA:

The production of nitrogen is divided into two steps: in the first step, the compressed air is forced to pass through a carbon molecular sieve to produce nitrogen at a purity of approx 98%; in the second step this nitrogen is forced to pass into a second carbon molecular sieve and reaches a final purity up to 99.999%+. The purge Gas from the second step is recycled and partially used as feed gas in the first step. In addition, the purge process is supported by active evacuation for better performance in the next cycle.

A separate and independent compressed air system inclusive a filtration and drying system produce instrument air @ 5 bar (73 psig) pressure with flow rate up to 3000 cc/min

The Air source of the generator can be used at the same time like the N₂ source, or it can be switched off in case of no demand of instrument air independent from the N₂ part.

The N₂ and Air generator technique



Specifications of the Nitrogen / Air generator N2- SIROCCO.3A series

Type of production	Nitrogen : DS-PSA (DUAL-STEP pressure swing adsorption)
	Instrument air : Integrated oil free air compressor with filtration + drying system

Nitrogen and Instrument Air	NITROGEN	INSTRUMENT AIR
Flow rate STP: Standard temperature and pressure (20 °C, 1 bar)	3000 cc / min N2	3000 cc / min Air
Outlet pressure	5 bar (73 psi)	5 bar (73 psi)
Purity	99.999%+ (O ₂ < 10 ppm)	Dew point < -20 °C
Weight	115 kg	Transport 145kg
Power consumption	820 W	
Input voltage	110 V/ 60 Hz or 230V / 50 Hz	
Fuse	10 A	
Pressure accuracy	0.1 bar (± 0.5 %)	
Microprocessor controlled display	Graphic display, 128 x 64 pixels	
Index of protection	IP2x	
Operating conditions: - Temperature - Relative humidity	10 °C to +40 °C 0-80%, non condens 0-99% with condens drain	
Over voltage category	II	
Pollution degree	2	
Sound pressure level	< 60 dB(A)	
Case dimensions	482 x 835 x 641 mm (WxDxH) Fit under the bench	

FEATURES

- **Improved safety**

Nitrogen and Instrument air produced at low pressure and ambient temperature removes the need for high pressure cylinders or liquid dewars

- **Increased laboratory efficiency**

A constant, uninterrupted gas supply of guaranteed purity eliminates interruptions of analyses to change cylinders and reduces the amount of instrument re-calibrations required

- **Improved economy**

Up to 99.999%+ pure nitrogen gas produced as standard. No need for costly downstream secondary filtration

- **Security of supply**

Integral oil-free air compressor guarantees continuous Nitrogen gas and compressed Air supply, independent of in-house compressed air supply

- **Simple installation**

The gas generators can be installed in the laboratory

MAINTENANCE

- **Service Kit**

Every 4000 h of operation, the filters and silencer need to be changed. This operation can be performed quite simply by the user, and is described in detail in the user manual.

Every 24000 h of operation, we recommend to service the unit from trained service personal. Pls contact your area representative or LNI Schmidlin AG at www.schmidlin-dbs.com.

An in-built clock informs the user of the current operating hours, and a read light on the front panel indicates when the 4000 h threshold has been reached.