

Nitrogen Gas Generator for **LC-MS**

N₂ SUPPLIER

Vol.3



Nitrogen Gas Generator
for Science Laboratory

N₂ BOY Model **02B**



Manufactured by **SIC SYSTEM INSTRUMENTS CO., LTD.**

Distributed by

EVERSEIKO CORPORATION

Provides security and Safety

Enables 24 hours' Continuous Operation



LC-MS analysis requires constant supply of nitrogen.

However, exchange of cylinder and confirmation of remaining volume of nitrogen are troublesome. 24 hours' continuous operation is possible by using **N2 Supplier**, which provides security and safety for your laboratory.

Free from daily
troublesome work
of exchange of the
nitrogen cylinder



No need of
frequent
confirmation of
remaining volume
of nitrogen

Capacity of usually used 7 liters cylinder is only 7 hours at a flow rate of 15 liters/minute

N2 Supplier is Designed for Low Noise Operation

■ Features

- Nitrogen gas is supplied several minutes after pressing the switch.
- Out of application of the high pressure gas control Law
- Oil-free scroll compressor improved for the equipment
- Low-noise compressor with noise level of below 51db
- Much less pressure fluctuation by compressor on&off

High pressure and high flow rate of nitrogen are required in accordance with high sensitivity of LC/MS in recent years. Our apparatus is sufficient for complying with improved performance of LC/MS.

N₂ SUPPLIER 24 F (Standard)

More Quite! More Security!

Standard Type Nitrogen Gas Generator for LC/MS

- The height is 68cm and it is able to place under laboratory table
- 24 liter/min nitrogen gas generation & applicable to APCI
- Drainage operates internally
- Operable by single phase 100V (110V)

■ Specifications



1. Electricity

AC100V, 11A/50Hz, 10.8A/60Hz

2. Calorific Value

710 kcal/h (2.97MJ)

3. Nitrogen Flow Rate

Purity	99.9%	4 liter/min
	99.0%	13 liter/min
	97.0%	24 liter/min (max.)

4. Size

485 mm (W) × 740 mm (D) × 680 mm (H)

* **Note:** Without Projection. Install a Ventilation system

(10 m³/min) in case of use in a sealed room.

Need 0.05m² for air supply areas.

Inform your power supply & frequency when placed

an orders.

5. Weight

79 kg

■ Option exhaust duct adapter



Available exhaust to outside using by optional duct adapter.

07 E-SDA

Available to Supply Nitrogen Gas, Zero Air & Air!

■ Specification

1. Electricity

AC100V, 11A/50Hz, 10.8A/60Hz

2. Calorific Value

710 kcal/h (2.97MJ)

3. Output Gasses

N ₂ Gas	Flow rate :	6 liter/min,	Purity :	More than 99.5%,	Pressure:	0.38 ~ 0.42MPa (55 ~ 60psi)
Zero Air	Flow rate :	22 liter/min,	Pressure :	0.69 ~ 0.72 MPa (100 ~ 105psi),	Dew point	-40 °C
Air	Flow rate :	6.4 liter/min,	Pressure :	0.42 MPa (60psi)		

4. Size

485 mm(W) × 740 mm(D) × 680 mm(H) (without Projection)

* **Note :** Install Ventilation system (10 m³/min) in case of use in a sealed room. And inform your power supply & frequency when placed an order.

5. Weight

79 kg



Nitrogen Gas Generator for LC-MS

Ready to Meet Your Demands Depending on Your Applications!

★ *A Variety of lineups*

○ **Separate Type**



50EC

Compressor
SLP-551EBD-S
Etc.
3P 200V



30EC/20EC



12EC



Compressor
SLP-371EBD-S
3P 200V



Compressor
SLP-221EBD-S
3P 200V

* Note *
Compressor series "SLP-xxxxx-x"
which with Dryer are just for
Japan market.



24ESDA



12ESDA



10ESDA/10ESDA-S

For High Flow Rate

- Afford for high flow rate
- May keep the separate type compressor out of the laboratory

Safety and Security Service

- While the compressor is safely operable with a margin, service network of Anest Iwata Co. is ready to solve troubles, if any, throughout the country.

Ready for installation in narrow laboratory



Standard type (when a sufficient installation space is available)



Attachment of the base may be changed as shown in the photographs depending on the installation area.

Outline : Nitrogen gas is generated by separating nitrogen in air by taking advantage of differences of film permeation rate of gases.

Construction : The apparatus is composed of a permeation membrane, a pressure reducing valve, a filter and a compressor.

Specification : N₂ Flow rate and pressure : Refer next page. Room Temp. at 25°C

- Requirement :**
1. For indoor installation (room temperature 15 to 40°C), non-explosion proof area
 2. May cause current leakage and rust at high humidity
 3. Place on a flat floor
 4. Avoid direct sunlight
 5. Avoid to place at a dusty area and an area containing toxic gases
 6. Secure a space for maintenance

Note : A ventilation fan (capacity: 25 m³/min for 221EBD-S, 40 m³/min for 371EBD-S) is necessary when used in a sealed room

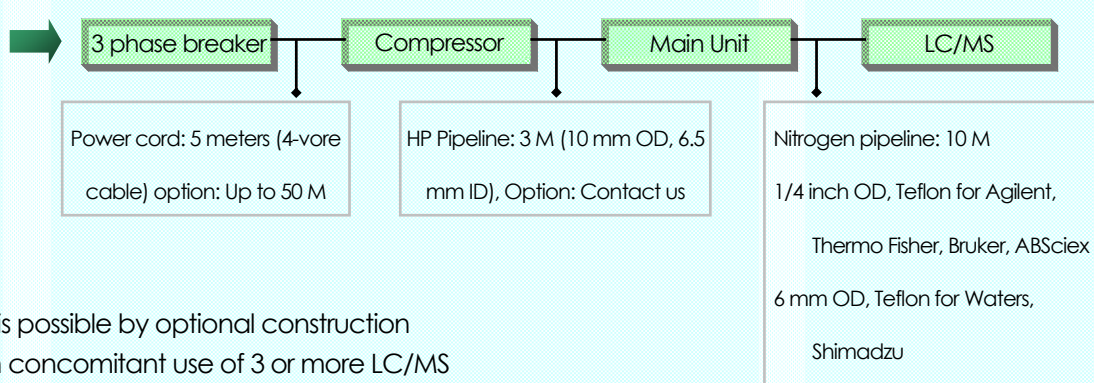
Power source and Pipeline:

Compressor

221EBD-S : 3phase, 200V,
11.3A(50Hz) / 10.4(60Hz)
371EBD-S : 3 phase, 200V,
17.6A(50Hz) / 16.4A(60Hz)

Breaker Capacity

SLP-221EBD-S: 30A
SLP-371EBD-S: 50A



Contact us

- Elongation of air pipeline is possible by optional construction
- Ready for complying with concomitant use of 3 or more LC/MS
- Prepared for power failure

We are ready to supply the N₂ Gas for LC/MS.

Separate type N₂ Suppliers

Purity (%)	Model			
	50EC	30EC	20EC	12EC
99.9	20 L/min	11L/min	9 L/min	4 L/min
99.5	43 L/min	27L/min	20 L/min	9.5 L/min
99.0	60 L/min	36L/min	26 L/min	13 L/min
98.0	86 L/min	58L/min	40 L/min	20 L/min
97.0			*51 L/min (20EC-L)	25 L/min
96.0			*63 L/min (20EC-L)	30 L/min
Size (mm)	250(W) × 280(D) × 1350(H)	200(W) × 270(D) × 1300(H)	200(W) × 150(D) × 1300(H)	200(W) × 200(D) × 780(H)
Weight	35 kg	28 kg	22 kg	18 kg
Base	440(W) × 480(D) × 50(H)	405(W) × 475(D) × 50(H)	400(W) × 400(D) × 50(H)	350(W) × 350(D) × 50(H)
Compressor	SLP-551EBD-S etc	SLP-371EBD-S	SLP-371EBD-S / SLP-221EBD-S	SLP-221EBD-S

* Model 20EC-L is applied in case of set up 20EC and Compressor SLP-371EBD-S

SDA type (for ABI-MS)

Specification	Model			
	24E-SDA (for 2 sets)	12E-SDA	10E-SDA	10E-SDA-S
When N ₂ 99.5%	10 ~ 20 L/min	5 ~ 10 L/min	2 ~ 4 L/min	5 L/min
-Ditto- Pres.	0.38 ~ 0.42 MPa	0.38 ~ 0.42 MPa	0.42 ~ 0.62 MPa	0.38 ~ 0.42 MPa
Zero Air	34 ~ 45 L/min	17 ~ 22.5 L/min	8 ~ 12 L/min	22 L/min
-Ditto- Pres.	0.69 ~ 0.72 MPa	0.69 ~ 0.72 MPa	0.62 ~ 0.72 MPa	0.69 ~ 0.72 MPa
Dew point	- 40 °C	- 40 °C	- 40 °C	- 40 °C
Air	12 ~ 12.8 L/min	6 ~ 6.4 L/min	4 ~ 8 L/min	6.4 L/min
Air Pres.	0.35 ~ 0.42 MPa	0.35 ~ 0.42 MPa	0.28 ~ 0.38 MPa	0.42 MPa
Size (mm)	255(W) × 295(D) × 965(H)	200(W) × 200(D) × 1100(H)	200(W) × 200(D) × 780(H)	200(W) × 200(D) × 780(H)
Weight	37 kg	21 kg	16 kg	16 kg
Base	440(W) × 480(D) × 50(H)	440(W) × 440(D) × 50(H)	390(W) × 390(D) × 50(H)	390(W) × 390(D) × 50(H)
Compressor	SLP-371EBD-S	SLP-221EBD-S	SLP-221EBD-S	SLP-221EBD-S

Compressor (Oil-free scroll type)

(Note : Compressor series "SLP-xxxxx-x" which with Dryer are just for Japan market.)

	SLP-371EBD-S	SLP-221EBD-S
Air Flow Rate	345 L/min	215 L/min
Volume of Integrated Tank	35 liter	20 liter
Noise Level	50 db	50 db
Voltage	3 phase, 200 V	3 phase, 200 V
Current	17.6A / 50Hz (16.4A / 60Hz)	11.3A / 50Hz (10.4A / 60Hz)
Calorific Value	4009 kcal/h(16.78MJ)	2384 kcal/h(9.98MJ)
Size (mm)	545(W) × 622(D) × 1158(H) (Without Protrusion)	453(W) × 682(D) × 975(H) (Without Protrusion)
Weight	151 kg	118 kg
Maintenance Interval	5000 Hour or 3 Years (which reaches earlier)	

★ Option : Air Tank



- Air tank for prolonging maintenance time
(Compressor SLP-371EBD-S, 221EBD-S)
Which makes less ON/OFF switch of the compressor or more prolong of maintenance time.
Volume: 60 liter, 310 φ × 1200 (H) mm, 30 kg (without protrusion)
- Air tank for power failure
Volume: 400 liter, 612 φ × 1715 (H) mm, 175 kg
Volume: 600 liter, 762 φ × 1710 (H) mm, 217 kg (without protrusion)

★ Option : Hydrocarbon Trap



- Collected Hydrocarbon in Nitrogen Gas
 - Available for SIC N₂ Generators upon request
- Size : Overall length : 440mm x 60 φ with 1/4" Joint

Unique N₂ Generator for Scientific Experiments

N₂ SUPPLIER

N₂ BOY

Model **02B**

Handy and Convenient for Experiments

- ✓ No more worry for cylinder's remainder.
- ✓ Supply N₂ Gas within a few minutes after turning on the switch

Features

- ✦ Built-in compressor, Silent noise (no more than 45 db)

Application

- ✦ Used as purge device for catalyst evaporation
- ✦ To dry, solidify and concentrate the samples
- ✦ Explosion-proof frame body for purge device, etc.



sic

Unique N₂ SUPPLIER

Model

02B



N₂ Gas Pressure: 0.15 ~ 0.3 MPa

Flow rate and Purity (at N₂ Pres. 0.15 MPa):

0.6 L / min	: 99.9%
2 L / min	: 99%
3 L / min	: 97%
4 L / min	: 96%

Size and Weight (mm): 280(W) x 390(D) x 430(H) mm, 23 kgs

Power AC 100V, 6.5A

Temperature 25 °C

Dew Point -40 °C

Model

05B / 05BE / 05BL



Size and Weight (mm): 300(W) x 526(D) x 481(H) mm

Temperature: 25 °C

Dew Point: - 40 °C

	【05B】	【05BE】 For <i>ELSD</i>	【05BL】 For <i>ELSD</i>
N ₂ Gas Pres. :	0.5MPa	0.5MPa	0.7MPa(Max)
Flow Rate:	1 L / min: 99.9% 5 L / min: 99%	5 L / min: 99%	1 L / min: 99.9% 5 L / min: 99% 10 L / min: 98.2% 15 L / min: 96.5% 30 L / min: --(at pres. 0.5MPa)
Power:	AC 100V 7.5A	AC 100V 7.5A	AC 100V 9A

Manufacturer

SIC SYSTEM INSTRUMENTS CO., LTD.

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Sole Distributor

EVERSEIKO CORPORATION

ES Bldg., 4-39-5, Senzoku, Taitoku, Tokyo, Japan.

E-mail : info@everseiko.co.jp, Fax : 813-3874-8873

N₂ Supplier Model 30F

◇ **This is the best seller N₂ Generator for LC/MS**

◇ **Extra Low Noise 47dB(A)**

◇ **Internal Drain System**

◇ **Built-in type Safety Hi-performance Compressor**

■ **Model:** New Model 30F

■ **Composition:** N₂ Gas Generator with built-in Compressor

■ **Specification:**

1. Power AC220V, 50Hz, 5A
2. Calorific Value 710 kcal/h (2.97MJ)
3. N₂ Flow Rate Max. 30 L/min (at N₂ Gas Pressure 0.69MPa)
4. Purity Max. 99.9%
5. Dimension: 485 (W)×740 (D)×680 (H)mm (without Projections)
6. Weight: 79kg

■ **Options:**

- Hydrocarbon Trap Set
- Duct Connecting Adaptor for Exhaust Air
- Aluminum Spiral Duct for Exhaust Air (1 to 3M; Connection extension available)
 - * Approach or connect the one tip of duct to a powered exhaust-fan.
 - * The duct installation can be done by customer or us with a proper additional fee.
- Auto Switching controller for 30FC/24F
 - * When the power shut-down, N₂ supplier will automatically stop.

In that case, Auto Switching Controller changes the N₂ flow from the Generator to a N₂ cylinder and supplies N₂ gas to LC/MS continuously.

■ **Warning and Caution:**

- Install a Ventilation fan (10m³/min) in case of use in a sealed room.
In addition, at least 0.05m² needs for the air supply area.
- Inform us Power supply (voltage and frequency) when you placed an order.

* Specifications are subject to change without prior notice.

Manufacture by

System Instruments Co., Ltd.

URL : <http://www.sic-ky.com>



Tentative Photo

N2 SUPPLIER
for AB Sciex

Model 07E-SDA Specification



Tentative Photo

1. Model : New Model 07E-SDA

2. Composition : N2 Generator with built-in Compressor Type

3. N2 Gas Supply Capacity :

- | | |
|-------------|---|
| 1) N2 Gas | Flow Rate : 6 L/min at purity more than 99.5%
Pressure : 0.38 ~ 0.42MPa (55 ~ 60psi) |
| 2) Zero Air | Flow Rate : 22 L/min
Pressure: 0.69 ~ 0.72MPa(100 ~ 105psi). Dew point: -40°C |
| 3) Air | Flow Rate : 6.4 L/min
Pressure: 0.42MPa (60psi) |

4. Gas Generation Method :

- | | |
|-------------|---|
| 1) N2 Gas | N2 Gas Generates by injecting High-pressure Air to N2 separator membrane |
| 2) Zero Air | Zero Air Generates by injecting High-pressure Air to Zero Air generating separator membrane |
| 3) Air | Compressed Air after refined through each filters |

5. Control Section :

- ON/OFF Switch
- Automatic-restarting operation after power failure
- Display of maintenance sign by accumulated time and etc

6. Display Sections :

Digital Display Section

- Compressor Air Pressure
- Accumulated Working Time (Display of Switching)
- Compressor's Temperature Error, Maintenance Alert (Compulsion Display)
- N2 Gas Flow Rate

Analog Display Section

- N2 Gas Pressure

Others

- Built-in Pressure Regulator (In left-side plate when face to front panel)



7. Connecting Section :

1/4" tube with one-touch connector for N2 Gas, Zero Air and Air

8. Dimension : 485(W) × 740(D) × 680(H) mm (without Projections)

9. Weight : Approx. 79 kg

10. Power : AC 220V, 50 Hz or 60 Hz
Power Cable 5M(L) with Standard Plug Type (without plug for export models)

11. Noise Level: 47dB

12. Using Parts :

1) High-durable Compressor (SIC's Spec.)

✦ Oil Free Scroll Type

* The compressor shall be replaced at every cumulative operation time 16,000h (when annual working time 8,000h)

✦ Rust-proof coated lining Air tank (with Relief Valve)

2) Auto Drain System

3) Order Removal Filter (including Activated Carbon)

* Install an optional "Hydrocarbon Trap" if the Activated Carbon can't eliminate the hydrocarbon enough.

4) N2 Separator Membrane

5) Zero Air Generates Membrane

6) Suction Air Filter

13. Attachments :

1) Instruction Manual	1 each
2) Warranty	1 each
3) 1/4" tube for connecting LC/MS	1 roll (20M)

14. Warranty Period :

1 year (excluded consumption parts)

15. Options :

1) Duct Connecting Adaptor for exhaust, Size : 125 φ mm
2) Hydrocarbon Trap assembly

* Specifications are subject to change without prior notice.

Manufacture by

System Instruments Co., Ltd.

HP : <http://www.sic-tyk.com>