

70Nm³/H PSA Nitrogen Generator 99.99% Purity For Metallurgy Industry

Our Product Introduction

Basic Information

- Place of Origin: China
- Brand Name: Eco-Tech
- Certification: CE ISO13485 ISO9001
- Model Number: EN4070
- Minimum Order Quantity: 1
- Price: USD 12000-25000 pieces
- Packaging Details: Wooden Case
- Delivery Time: 20 days
- Payment Terms: L/C, D/A, D/P, T/T, Western Union, MoneyGram
- Supply Ability: 1000 pieces per year



Product Specification

- Capacity: 70Nm³/h
- Inlet Diameter: DN40
- Outlet Diameter: DN25
- Size: 1800*1000*2300mm 1800 Kg
- Demand For Clean Compressed Air: 5.83
- Recommend Air Compressor: 45Kw 6.5 M³/min 10Bar) Or 37Kw (6.8 M³/min 8Bar)
- Control System: PLC
- Type: Nitrogen Generator
- Warranty: 1 Year
- Highlight: **70Nm³/H PSA Nitrogen Generator ,
PSA Nitrogen Generator 70Nm³/H,
99.99% pressure swing adsorption nitrogen**

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Product Description

PSA Nitrogen Generator: 70Nm³/H, 99.99% Purity, for Food, Metallurgy, Chemical
Description of 99.99% Purity 70Nm³/H PSA Nitrogen Plant Food, metallurgy, chemical industry applicable

A **nitrogen plant** is a specialized facility that manufactures nitrogen gas by extracting and purifying it from the surrounding air. Using advanced technologies, the plant separates nitrogen from other gases, providing industries with a reliable source of high-purity nitrogen. It employs compressors, filters, and gas separation units to ensure efficient production and supply of nitrogen for various applications in sectors such as chemicals, electronics, and food preservation.

We have been engaged in the assembly of PSA **nitrogen plants** and oxygen generators in our factory for 15 years, providing approximately 400 sets of PSA **nitrogen plants** and oxygen generators for domestic and international customers each year, including production, and debugging.

In collaboration with Burkert Valves, we have customized our own double-acting pneumatic valve. Through the design of top and middle pressure equalization, and airflow orifice plates, we continuously optimize and reduce the air consumption ratio of the equipment, thus achieving energy savings. The energy consumption ratio of our equipment has reached the highest level in China. And through our patented silencer, our device noise is controlled to less than 55 db.

In terms of process flow, we have cutting, welding, assembly, filling of molecular sieves, automatic rust removal, spraying, and complete procedures and supporting equipment for commissioning.

In the supply chain aspect, we provide first-line brands such as Atlas Copco, Ingersoll Rand, GDK, Liutech, Bolaite, Hanbell, and BK for air compressors, and provide Boly, Atlas Copco, and Liutech refrigerated dryers, as well as Anshan Jiapeng and Anqing Bailian boosters. We can provide supporting equipment and accessories.

Currently, our company's products are aimed at end-users and distributors worldwide. We provide customized remote systems, color customization, display interface customization, and many other OEM services. And we also provide ASME standard equipment and pressure tanks for USA and Australian market.

For specific selection, please contact our customer manager. We hope to become your trusted long-term partner.



| PN4070 PSA Nitrogen Plant Technical Specification | | | |
|---|---------------------------------|---------------------|--|
| lot | Item | | Description /Specification |
| 1 | Model/Place of Manufacture | | PN4070 |
| 2 | Nitrogen making principle | | PSA Pressure swing adsorption PSA 吸附(放式) |
| 3 | Application | Operation place | Indoor |
| | Environment | Ambient temperature | Min -5 /Max 50 / design temperature37 |
| | | Ambient humidity | Min 40%RH Max90%RH |
| 4 | Capacity | | 70 Nm ³ /hr |
| 5 | Nitrogen Gas Purity | | ≥99.99 % Test at outlet of psa Nitrogen |
| 6 | Nitrogen Purity Sensor | | HT-TA261 1set |
| 7 | Nitrogen Flowmeter | | Japan SMC flowmeter 1 sets |
| 8 | Inlet compress air pressure | | 0.75 -0.99Mpa |
| 9 | Inlet Oil Content | | ≤0.001mg/m3 |
| 10 | Residual dust | | ≤0.01um |
| 11 | Residual water | | ≤0.069mg/m3 |
| 12 | Air inlet atmospheric dew point | | -15 |

| | | | | | |
|----|-------------------------------------|----------------------|----------------------|--|--|
| 13 | Demand for clean compressed air | 5.83 | Nm ³ /min | Recommend Air compressor | 45Kw (6.5 m3/min 10Bar) or 37Kw (6.8 m3/min 8Bar) |
| 14 | Inlet Diameter | | | DN40 | |
| 15 | Outlet Diameter | | | DN25 | |
| 16 | Maximum inlet temperature | | | MAX 30 | |
| 17 | Allowable working pressure range | | | Min7.5Kgf / cm2 Max9.9Kgf / cm2 | |
| 18 | Carbon molecular sieve model/origin | | | CMS-240 | |
| 19 | The tower body pipe | | | 2 sets | |
| 20 | Air and nitrogen buffer tank | | | Piped storage tank | |
| 21 | Instrument Tank, silencer | | | PB Silencer ≤55dB(A) patent number:ZL 2015 2 0545860.3 | |
| 22 | Solenoid valve brand/origin | | | AirTAC | 7 sets |
| 23 | Pneumatic valve brand/origin | | | PB-Customized | 11 Sets (two for auto drain unqualified Gas) |
| 24 | Control System | Control Power Supply | | 0.2kw/set 220V 50 HZ | |
| | | PLC | | Mitsubishi core integrated screen /or Siemens S7-200 Smart | |
| | | electrical box | | built-in | 1 set |
| | | touch screen | | Mitsubishi core integrated screen/ MCGS | |
| 25 | size LxWxH (mm) / Weight:(Kg) | | | About:1800*1000*2300mm 1800 kg | |
| 26 | Price | | | 含税含 交期20天 | |

2. Working Principles for PSA Nitrogen Generator

Pressure swing adsorption(PSA)nitrogen generator is an automatic equipment that uses air as material,use carbon molecular sieve as adsorbent, pressure reduction desorption principle to adsorb oxygen from the air, thereby separating nitrogen.

3. Main Features for PSA Nitrogen Generator

- Raw material air is taken from nature. Nitrogen can be produced by supplying compressed air and power.
- Nitrogen purity can be adjusted conveniently and be produced by supplying compressed air
- The equipment is highly automated, produces gas quickly, and can be unattended. Nitrogen can be produced within 10-15 minutes of startup.
- The equipment process is simple, occupies a small area, consumes less energy and costs.
- Molecular sieves are filled by snowstorm method to avoid the pulverization of molecular sieves caused by avoid the pulverization of molecular sieves caused by high-pressure airflow impact and ensure the long-term use of molecular sieves.
- On-line inspection of imported analyzer with high access is simple, occupies a small area, consumes less energy,and costs.

4. Technical indicators

- Capacity Range : 2~2000Nm³/H
- Purity Range : 95%~99.9999%
- Outlet Pressure :0~6Bar or 0~ 8Bar
- Booster outlet pressure range : 10 to 200Bar
- Service Life 8-10 years as long as regular maintenance

Carbon Molecular Sieve

High quality,high density, compact spring loaded, top/bottom balance, protected by a dedicated pressure sensor.
We usually use CMS-240 for purity below 99.99%
And use CMS-260 for purity of 99.999% in one step .

5. Standard Features

- Siemens PLC
- Customized and improved domestic valves
- 7-inch LCD display
- Taiwan AirTAC solenoid valve
- Chengdu Jiuyin Nitrogen analyzer
- SMC flowmeter
- Professional brand molecular sieve

6. Optional Features

- Remote control system

- Better valve of brand Gemu, Burkert
- Dew point analyzer
- Import Molecular Sieve
- Italian ODE solenoid valve

| Item No. | Capacity | Purity | Size mm | Inlet Diameter | Outlet Diameter | Weight Kg | Power |
|----------|-----------------------|---------|----------------|----------------|-----------------|-----------|---------------|
| PN4005 | 5Nm ³ /H | ≥99.99% | 1200*850*1500 | DN15 | DN15 | 300 | AC220V/0.2 KW |
| PN4010 | 10Nm ³ /H | ≥99.99% | 1200*900*1900 | DN15 | DN15 | 500 | AC220V/0.2 Kw |
| PN4020 | 20Nm ³ /H | ≥99.99% | 1450*900*1900 | DN25 | DN15 | 600 | AC220V/0.2 Kw |
| PN4030 | 30Nm ³ /H | ≥99.99% | 1450*900*2250 | DN32 | DN15 | 700 | AC220V/0.2 Kw |
| PN4040 | 40Nm ³ /H | ≥99.99% | 1600*1100*1950 | DN32 | DN15 | 800 | AC220V/0.2 Kw |
| PN4050 | 50Nm ³ /H | ≥99.99% | 1700*1100*2200 | DN40 | DN15 | 1000 | AC220V/0.2 Kw |
| PN4060 | 60Nm ³ /H | ≥99.99% | 1800*1000*2300 | DN40 | DN25 | 1200 | AC220V/0.2 Kw |
| PN4070 | 70Nm ³ /H | ≥99.99% | 1800*1000*2300 | DN40 | DN25 | 1800 | AC220V/0.2 Kw |
| PN4080 | 80Nm ³ /H | ≥99.99% | 1800*1000*2300 | DN40 | DN25 | 1900 | AC220V/0.2 Kw |
| PN4100 | 100Nm ³ /H | ≥99.99% | 1800*1300*2450 | DN40 | DN25 | 2500 | AC220V/0.2 Kw |
| PN4120 | 120Nm ³ /H | ≥99.99% | 1800*1300*2450 | DN40 | DN25 | 2600 | AC220V/0.2 Kw |
| PN4150 | 150Nm ³ /H | ≥99.99% | 2000*1300*2450 | DN40 | DN25 | 2900 | AC220V/0.2 Kw |
| PN4200 | 200Nm ³ /H | ≥99.99% | 2200*1500*2650 | DN50 | DN40 | 3400 | AC220V/0.2 Kw |
| PN4250 | 250Nm ³ /H | ≥99.99% | 2500*1600*2680 | DN50 | DN40 | 3800 | AC220V/0.2 Kw |
| PN4300 | 300Nm ³ /H | ≥99.99% | 2500*1600*2900 | DN50 | DN40 | 5000 | AC220V/0.2 Kw |
| PN4350 | 350Nm ³ /H | ≥99.99% | 2500*1600*2900 | DN80 | DN50 | 5500 | AC220V/0.2 KW |
| PN4400 | 400Nm ³ /H | ≥99.99% | 3000*2000*3750 | DN80 | DN50 | 7500 | AC220V/0.2 Kw |

-Applications-

- **Application of SMT industry**
- **Semiconductor silicon industry application**
Semiconductor and integrated circuit manufacturing process atmosphere protection, cleaning, chemical recovery, etc.
- **Electronic components industry application**
Selective welding, purging and encapsulation with nitrogen. Scientific nitrogen inert protection has proven to be an essential step in the successful production of high quality electronic components.
- **Semiconductor packing industry application**
Packaging, reduction, storage with nitrogen.
- **Powder metallurgy, metal processing industry**
Heat treatment industry application, Steel, iron, copper, aluminum products annealing, carbonization, high temperature furnace protection, Low temperature assembly and plasma cutting of metal parts.
- **Chemical industry, advanced material industry application**
Nitrogen is used to create oxygen - free atmosphere in chemical process, improve the safety of production process, fluid transmission power source, etc: It can be used for nitrogen purging of pipes and vessels in the system, filling nitrogen Storage tank, gas displacement, leak detection, combustible gas protection, chemical reaction agitation, chemical fiber production protection, also used in diesel hydrogenation and catalytic reforming.
- **Oil and Gas Industry:**
In the oil and gas industry, nitrogen plays a crucial role in various applications. It is extensively used in oil refining processes, specifically for container machine pipeline nitrogen-filled purge box leak detection and nitrogen injection for oil recovery. These applications help ensure the safety and efficiency of operations, as well as optimize production processes.
- **Food and Medicine Industry:**
Nitrogen finds widespread applications in the food and medicine industry. In food packaging, it is commonly used to create a modified atmosphere, preserving the quality and freshness of packaged food products. Nitrogen is also employed in food storage facilities to prevent spoilage and extend shelf life. Additionally, in certain cases, a sterilization filter can be integrated into the nitrogen system to ensure microbial safety.

In the medicine industry, nitrogen plays a crucial role in various applications. It is used in medical packaging to create a controlled atmosphere, maintaining the integrity and efficacy of pharmaceutical products. Nitrogen is also employed as a replacement gas during medical procedures

and in medical delivery systems.

Furthermore, nitrogen finds applications in food drying and sterilization processes, as well as in the creation of specific atmospheres for pharmaceutical production. Its inert nature and ability to displace oxygen make it a valuable resource in ensuring product quality and safety in the food and medicine industries.

Ten common questions about nitrogen generators

1. What purity of nitrogen gas can a nitrogen generator produce?

A nitrogen generator can produce nitrogen gas of various purities, ranging from standard industrial-grade nitrogen (typically 95% to 99% purity) to high-purity nitrogen (usually exceeding 99.9%), and even ultra-high purity nitrogen (typically exceeding 99.999%). The choice of purity depends on specific application requirements.

2. What is the working principle of a nitrogen generator?

The working principle of a nitrogen generator is primarily based on either the adsorption technology using molecular sieves or membrane separation technology. Adsorption technology selectively adsorbs oxygen and moisture using a specific adsorbent material, such as molecular sieves, while allowing nitrogen to pass through. Membrane separation technology, on the other hand, utilizes the size and permeability of gas molecules to achieve the separation of nitrogen from other gas components on a membrane.

3. What inputs does a nitrogen generator require, and how does it operate?

A nitrogen generator typically requires air as the input source. When operating the nitrogen generator, air is compressed using an air compressor and then processed through the adsorber with molecular sieves or the membrane separator within the nitrogen generator. Finally, pure nitrogen is obtained as the output. Some nitrogen generators may also require an electrical power supply.

4. How is a nitrogen generator different from nitrogen supply in gas cylinders?

The main difference between a nitrogen generator and nitrogen supply in gas cylinders lies in the mode of nitrogen supply. A nitrogen generator continuously extracts nitrogen from the air, providing a continuous nitrogen supply without the need for cylinder replacements. In contrast, nitrogen supply in gas cylinders requires periodic cylinder replacements, and the supply quantity is limited by the cylinder capacity.

5. What should be considered for the maintenance of a nitrogen generator?

The maintenance of a nitrogen generator typically involves regular cleaning and replacement of the adsorber with molecular sieves or membrane separator, inspection and maintenance of the compressed air system, monitoring nitrogen generation performance, etc. Specific maintenance requirements should be referred to the user manual or guidance provided by the manufacturer of the nitrogen generator.

6. Which industries are nitrogen generators suitable for?

Nitrogen generators are widely used in various industries, including industrial, medical, food and beverage, and laboratory applications. They are commonly used in industries such as chemicals, electronics, and metal processing. In the medical field, they are used for anesthesia and gas delivery. In the food and beverage industry, they are used for packaging and preservation. In laboratories, they are used for atmospheric control and protection of equipment.

7. What is the noise level of a nitrogen generator during operation?

The noise emitted by nitrogen generators can vary depending on factors such as the model, design, and operating conditions. In general, nitrogen generators are designed to operate at low noise levels, offering a quieter alternative compared to traditional compressed air systems. To obtain precise information about the noise level of a specific nitrogen generator, it is recommended to refer to the manufacturer's technical specifications or noise test reports. These resources provide detailed data on the noise emissions, helping users evaluate the generator's acoustic performance and determine its suitability for their intended application and surrounding environment.

8. How long does it take for a nitrogen generator to start producing nitrogen gas?

The startup time of a nitrogen generator depends on the model and specifications. In general, nitrogen generators have short startup times, typically ranging from a few minutes to several tens of minutes. Larger capacity or higher purity requirement nitrogen generators may require longer startup times.

9. Can a nitrogen generator simultaneously produce nitrogen gas and oxygen gas?

The design purpose of a nitrogen generator is to separate oxygen and nitrogen to produce high-purity nitrogen gas. Therefore, in most cases, a nitrogen generator does not simultaneously produce nitrogen gas and oxygen gas. If simultaneous production of nitrogen and oxygen is required, additional equipment or techniques need to be used for further processing.

10. What is the energy consumption of a nitrogen generator?

The energy consumption of a nitrogen generator varies depending on the model, specifications, and operating conditions. Generally, nitrogen generators have relatively low energy consumption, especially when compared to traditional nitrogen supply in gas cylinders. Nitrogen generators are typically adjusted based on the actual nitrogen demand to improve energy efficiency and minimize energy consumption.

OUR SERVICE

1. Setting trace file for every sold product, quarterly survey for every sold product.
2. Providing remote instruction and training for free.
3. Providing on-site services and repairs for free during warranty period
4. Spare parts and on-site service would be charged with best price after warranty period.
5. 7*24 hours online service for free, solution within 48 hours.
6. If customer required, assigning experienced after-sales engineer for on-site service with 7 days. (Visa apply should be considered)

Our Certifications



COMPANY INTRODUCTION—BUSINESS LINE

- 1) Fabrication line and Automation system
- 2) Calibration/Testing system, ICT/FCT
- 3) PSA Oxygen and Nitrogen Generator
- 4) ABB Instrumentation Agent(Pressure, flow, Level, Temp, Drive, Motor)
- 5) ODM include Software & Hardware development and structure/fluid simulation
- 6) Onsite engineering Services / Technology Services: Installation, Commissioning and Maintenance

OUR CLIENTS:



OUR PARTNERS:



Warranty

The Guarantee/Warranty Period shall be a period of twelve months after on-site startup & commissioning or eighteen months after shipment, whichever occurs first. If any trouble or defect, originating with the design, material, and workmanship or operating characteristics of any Goods, arises at any time during GUARANTEE/WARRANTY period, PB shall, at his own expense and as promptly as possible, make such alterations, repairs and replacements.

On-Site Support

PB can do paid services of on-site startup, commissioning, installation supervision, training, by providing purchaser with the services of qualified English-speaking engineer at step shall obtain all permits and licenses required to perform the services under this Agreement.

After Sales Support



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