

65Nm³/H Portable Oxygen Concentrator Continuous Flow Medical Oxygen Generation Plant

Our Product Introduction

Basic Information

- Place of Origin: China
- Brand Name: Eco-Tech
- Certification: CE ISO13485 ISO9001
- Model Number: Eco-65
- Minimum Order Quantity: 1
- Price: USD 12000-25000 pieces
- Packaging Details: Wooden Case
- Delivery Time: 40 days
- Payment Terms: L/C, D/A, D/P, T/T, Western Union, MoneyGram
- Supply Ability: 1000 pieces per year



Product Specification

- Capacity: 65Nm³/h
- Outlet Pressure: 4~5.5bar Adjustable
- Filling Pressure: 150Bar Or 200 Bar
- Size: 2000*1400*2550 1800kg
- Highlight: 150bar medical oxygen generation plant, 65Nm³/H Portable Oxygen Concentrator, 93% medical oxygen generation plant

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Product Description

93% Purity 65Nm³/H PSA Oxygen Genertor Continuous Flow Po/rtable Oxygen Concentrator

Description for PSA Oxygen Generator

PSA Oxygen Generator is consisted of the screw air compressor, air dryer, filters, buffer tanks, oxygen generator, electricity control system and the optional oxygen cylinder filling station. The complete system is installed and tested at factory, delivery to customer's turn-key project. PB containerized oxygen generator is removable, and makes the onsite installation and operation very easy. It can also save the cost for the decoration cost of the machine room.

Main Features for PSA Oxygen Generator

Runs automatically without human intervention
 Routine maintenance reminder and 10 years spares parts available
 Complete support, from installation to debugging to training to support
 End-to-end monitoring of pressure, purity, flow rate and alarm function.
 Quiet, safe and energy efficient
 Automatic discharge of unqualified gas
 PID output function
 Emergency Stop Control
 All the tubing is in stainless steel bright tube ensuring a bactericidal action

Some semi-finished products



PB PSA Oxygen Generator Model Select

Range of the PSA Oxygen Generator							
Model	O ₂ Flow (Nm ³ /h)	O ₂ Flow (LPM)	Equivalent cylinder-7m ³ (per day Nos)	Power With booster(Kw)	Power Without HPBC(Kw)	Purity	Loading
PB-5	5	83	17	13	9	93%±3%	LCL
PB-10	10	167	34	22	16.5	93%±3%	LCL/20GP
PB-15	15	250	51	28	20.5	93%±3%	LCL/20GP
PB-20	20	333	68	43	32	93%±3%	20HQ/40HQ
PB-25	25	417	85	43	32	93%±3%	20HQ/40HQ
PB-30	30	500	102	55	40	93%±3%	20HQ/40HQ
PB-40	40	667	136	63	48	93%±3%	40HQ
PB-50	50	833	170	76	57.5	93%±3%	40HQ
PB-65	65	1083	221	101	79	93%±3%	40OT
PB-80	80	1333	272	145	115	93%±3%	40FR
PB-90	90	1500	306	181	144	93%±3%	40FR
PB-100	100	1667	340	214	177	93%±3%	40FR
PB-120	120	2000	408	247	203	93%±3%	40FR+20GP
PB-150	150	2500	510	263	218	93%±3%	40FR+20GP

Working Principles for PSA Oxygen Generator

Air contains 21% Oxygen, 78% Nitrogen, 0.9% Argon and 0.1% other trace gases. Oxygen plant separates this oxygen from Compressed Air through a unique process called Pressure Swing Adsorption. (PSA).

The Pressure Swing Adsorption process for the generation of enriched oxygen gas from ambient air utilizes the ability of a synthetic Zeolite Molecular Sieve to absorb mainly nitrogen. While nitrogen concentrates in the pore system of the Zeolite, Oxygen Gas is produced as a product. Oxygen generation plant's use two vessels filled with Zeolite Molecular sieve as adsorbers. As Compressed Air passes up through one of the

adsorbers, the molecular sieve selectively adsorbs the Nitrogen. This then allows the remaining Oxygen to pass on up through the adsorber and exit as a product gas. When the adsorber becomes saturated with Nitrogen the inlet airflow is switched to the second adsorber. The first adsorber is regenerated by desorbing nitrogen through depressurization and purging it with some of the product oxygen. The cycle is then repeated and the pressure is continually swinging between a higher level at adsorption (Production) and a lower level at desorption (Regeneration).

PB-65 PSA Oxygen Plant Technical Specification				
lot	Item		Description /Specification	
1	Model/Place of Manufacture		PB-65	China
2	Oxygen 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		65	Nm3/hr
5	Oxygen Gas Purity		93% ±3% Test at outlet of psa oxygen generator	
6	Oxygen Purity Sensor		HT-TA530 1set	
7	Oxygen Flowmeter		Japan SMC flowmeter 1 sets	
8	Inlet compress air pressure		0.55~0.7 Mpa	
9	Inlet Oil Content		≤0.001mg/m3	
	Residual dust		≤0.01um	
	Residual water		≤0.069mg/m3	
10	Air inlet atmospheric dew point		-15	
11	Demand for clean compressed air	13.0 m³/min	Recommend Air compressor	75Kw 13.1 m³/min 8Bar
12	Inlet Diameter		DN40	
13	Outlet Diameter		DN25	
14	Maximum inlet temperature		MAX 30	
15	Allowable working pressure range		Min7.5Kgf / cm2 Max9.9Kgf / cm2	
16	Carbon molecular sieve model/origin		JLOX-500	
17	The tower body pipe		2 sets	
18	Air and Oxygen buffer tank		Piped storage tank	
19	Instrument Tank, silencer		PB Silencer ≤55dB(A)	
20	Solenoid valve brand/origin		AirTAC	9 sets
21	Pneumatic valve brand/origin		Powerbuilder	9 Sets+2 Sets
22	Control System	Control Power Supply	0.2kw/set 220V 50 HZ	
		PLC	Siemens PL Smart S7-200 or Mitsubishi integrated PLC	
		Electrical box	built-in	1 set
		Touch screen	MCGS 7 inch or Mitsubishi integrated PLC with screen	
23	size LxWxH (mm) / Weight:(Kg)		About:2000*1400*2550// 1800kg	

-Standard Features -

Control system with SIEMENS touch operated panel
Automatic start/stop
Built in purity analyzer for continues monitoring
Reliable- built for uninterrupted operation
Designed for dynamic pressure loading
Robust design, piping from Stainless Steel

-Optional Features-

Molecular sieve moisture protection
GSM modem (remote start/stop, status SMS, alarm warning SMS)
Flow meter with totalize
Oxygen dew point sensor
Temperature sensor
Purity and pressure control
Audio/visual alarm
Modbus TCP/IP connection
Remote control system
Data-logging (saved on memory card)

-Applications-

Aquaculture
Feed Gas for Ozone Generators
Glass blowing
Leaching
NOx Reduction for Fuel Burners
Oxygen Lancing
Welding, Brazing
Wellness

Ten frequently asked Questions about PSA oxygen generators

1.What is a PSA oxygen concentrator?

A PSA oxygen concentrator is a device that separates and purifies high-purity oxygen from the air using pressure swing adsorption (PSA) technology. It utilizes molecular sieve adsorbents to achieve the separation and purification of oxygen based on the differential adsorption properties of oxygen and nitrogen in the molecular sieve.

2.How does a PSA oxygen concentrator work?

The working principle of a PSA oxygen concentrator is based on the adsorption properties of the molecular sieve. It cycles compressed air and passes it through the bed of molecular sieve adsorbents. Nitrogen molecules are adsorbed onto the sieve, while oxygen molecules pass through, thereby achieving the separation and purification of oxygen.

3.What are the advantages of a PSA oxygen concentrator?

PSA oxygen concentrators have several advantages:

They can generate oxygen on-demand in real-time, eliminating the need for oxygen storage.

They are easy to operate and maintain.

They can be used indoors without the need for external gas pipelines.

They produce high-purity oxygen, suitable for medical-grade applications.

4.What are the main uses of a PSA oxygen concentrator?

PSA oxygen concentrators are widely used in medical, pharmaceutical, food processing, and electronic industries. They provide high-purity oxygen to meet the requirements of various industries and applications, such as oxygen therapy in hospitals and oxygen combustion in industries.

5.What is the oxygen purity achievable with a PSA oxygen concentrator?

Typically, PSA oxygen concentrators can provide oxygen with a purity of 93% or higher. For specific requirements, the oxygen purity can be further increased through additional oxygen purification processes.

6.Does a PSA oxygen concentrator require maintenance?

Yes, PSA oxygen concentrators require regular maintenance and servicing to ensure their proper operation and extended lifespan. Maintenance tasks include cleaning filters, inspecting, and replacing adsorbents, among others.

7.What is the noise level of a PSA oxygen concentrator?

PSA oxygen concentrators generally have low noise levels, typically below 50 decibels. However, the noise level may vary depending on the model and brand of the concentrator, but most are designed to operate quietly.

8.Does a PSA oxygen concentrator require a power source?

Yes, PSA oxygen concentrators require a power source to function properly. Typically, they need to be connected to a 220V AC power supply with a frequency of 50Hz.

9.Does a PSA oxygen concentrator need a compressed air source?

Yes, a PSA oxygen concentrator needs to be equipped with a compressed air source. It uses compressed air as the oxygen feedstock for its operation.

10.Is it necessary to frequently replace the adsorbents in a PSA oxygen concentrator?

Adsorbents play a crucial role in the functioning of a PSA oxygen concentrator, and they typically have a long lifespan that can span several years. However, as the concentrator is used over time, the adsorbents gradually become less effective at separating nitrogen from oxygen, necessitating periodic checks and replacements.

The actual replacement cycle for the adsorbents can vary depending on factors such as the frequency and duration of usage, as well as the specific model of the oxygen concentrator. To ensure the optimal performance of the concentrator, it is important to follow the manufacturer's guidelines and recommendations for checking and replacing the adsorbents.

Manufacturers of PSA oxygen concentrators typically provide guidelines and recommendations on when and how to assess the condition of the adsorbents and determine if they need replacement. These guidelines help users maintain the concentrator's efficiency and effectiveness over time.

The assessment of adsorbent condition may involve various methods, including visual inspections, pressure and flow rate measurements, or other diagnostic techniques. By following the manufacturer's guidelines and performing these assessments at the recommended intervals, users can ensure that the adsorbents are replaced when necessary, thereby preserving the concentrator's performance.

Regularly checking and replacing the adsorbents is crucial for maintaining the consistent production of high-purity oxygen. Over time, adsorbents can become saturated with nitrogen and lose their ability to separate oxygen effectively. If not replaced in a timely manner, this can lead to decreased oxygen purity levels, reduced efficiency, and compromised overall performance of the concentrator.

To obtain accurate information and specific guidance on checking and replacing the adsorbents, it is advisable to consult the user manual provided by the manufacturer or reach out to them directly. Authorized service providers can also offer valuable assistance in understanding the replacement process and ensuring the continued reliable operation of the PSA oxygen concentrator.

By adhering to the manufacturer's guidelines and regularly assessing and replacing the adsorbents, users can maintain the performance and longevity of their PSA oxygen concentrators. This proactive approach ensures the consistent delivery of high-purity oxygen and supports the optimal functioning of the concentrator in various applications and industries.

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:



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)

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

Our Certifications





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