93%-95% High Purity Industrial Oxygen Generator Lab Glass Blowing 80 Nm3/Hr

Our Product Introduction

Basic Information

- Place of Origin: SUZHOU, CHINA
- Brand Name: SUMAIRUI GAS
- Certification: ISO9001, CE, BV, SGS, TUV, ASME, GOST,NB,NR ETC
- Model Number: OSO
- Minimum Order Quantity: 1 set
- Price: Negotiable
- Packaging Details: Exporting wooden case /Film packing
- Delivery Time: 30-45 days
- Payment Terms: L/C, T/T, Western Union, MoneyGram
- Supply Ability: 100 sets/months

Product Specification

- Material: Mild Steel/Stainless Steel
- Purity: 93%-95%
- Pressure: 3-5 Bar
- Capacity: 10-1000Nm3/hr
- Type: Plug And Play
- Twin Adsorbers: Yes
- Customized: Available
- PLC: S7-1200
- HMI: 7inches
- Voltage: 220-575V 50Hz/60Hz
- Certificates: CE, ISO, ASME, GOST, KGS, NB Etc
- Color: Customized
- Size: As Per Actual Size
- Highlight: **high purity oxygen generator**, **oxygen generator lab**,

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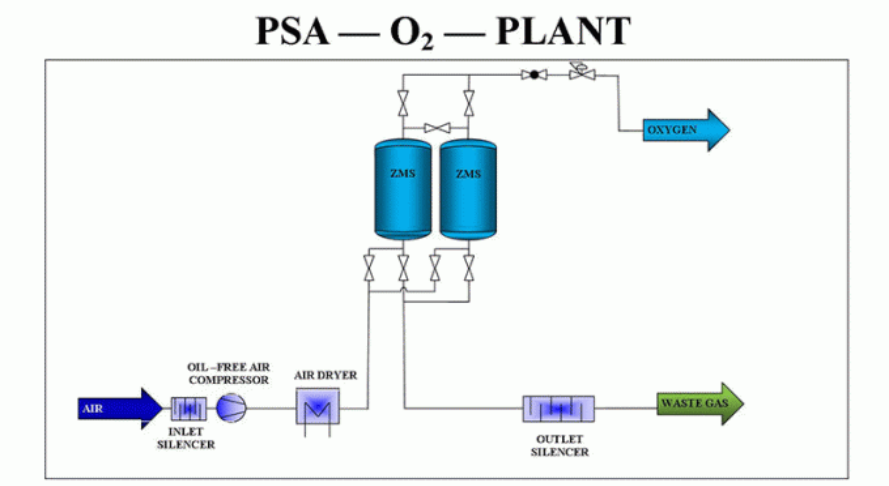
Product Description

80 Nm3/hr purity 93%-95% oxygen generator plug and play for glass manufacturing making your own oxygen for operation

What Is an Oxygen Generator?

An oxygen generator is a device that separates oxygen from compressed air using special selective adsorptive technology called pressure swing adsorption (PSA). The compressed air used in the oxygen generation process has a similar composition to ambient environmental air with 21% oxygen and 78% nitrogen. The oxygen contained in the compressed air is allowed to flow through a zeolite molecular sieve which retains nitrogen resulting in high purity oxygen at gas production outlets.



Operating Principles for a PSA Oxygen Generator

The pressure swing adsorption process for a PSA oxygen generator is essentially the same as that of a nitrogen generator with one major distinction. The adsorptive material inside its molecular sieve is made of zeolite rather than carbon found in a nitrogen PSA device.
During a routine operation, compressed air channeled through the oxygen generator will be separated into its component gases. The zeolite molecular sieve will selectively adsorb nitrogen that meets it while allowing high purity oxygen gas to flow onwards to a product gas outlet.
A unique feature of zeolite that makes it ideal for an oxygen generator is its ability to released retained nitrogen gas once the pressure within the generator is eased. This makes it quite easy to regenerate the medium for a further cycle of oxygen generation.

How Does an Oxygen Generator Work?

An oxygen generator using PSA technology utilizes the ability of adsorbent zeolite material to separate a stream of compressed air into its component gases. The pressure swing adsorption process to produce high purity oxygen is a two-stage cycle that involves simultaneous adsorption and desorption activities in two generation towers.

Adsorption

The adsorption stage of oxygen generation uses an adsorptive tower packed with molecular zeolite pellets that selectively retains nitrogen while allowing oxygen to pass into a collecting tank as product gas under pressure.

This process of selective adsorption will continue until the adsorptive tower reaches its maximum saturation point at which the zeolite sieve can no longer absorb more nitrogen gas.

Desorption

This second step in the PSA oxygen generation process is essentially a reversal of the adsorption process. Once the saturation point for a tower in the adsorptive phase is reached, its function is altered. Regeneration of the zeolite material is by rapidly depressurizing the cylinder to release absorbed nitrogen gas into the atmosphere.

The entire PSA process is automated with a central regulatory unit detecting oxygen and nitrogen gas saturation levels in both the adsorption and desorption towers. The phase switch is done by opening or closing the appropriate process valves and raising or reducing the pressure within the zeolite packed cylinders.

Features and Benefits :

Turnkey solution
Fully automatic operation
High purity of gas outlet stability
Very competitive production costs
Evolving concept with one or more interconnected production lines
Integrated controller system with high definition color touch screen
Ergonomic design for simple and economical maintenance

Durable performance thanks to reliable, tested and controlled components
Low consumption - high efficiency molecular sieve

Technical datas

Purity : from 90 to 99.5% (DS-PSA models)
Flow : from 2 to 150Nm3/h
Inlet pressure : from 7.5 to 10 bar
Applications
Fish farming
Glass Industry
Healthcare / Veterinary
Metal Industry
Water Treatment
Vinification

Model	Capacity (Nm3/hr)	Purity	Outlet pressure (Mpa)	Inlet (mm)	Outlet (mm)	Dimensions L*W*H (mm)	Weight (KG)
OSO5	5	93±3%	0.2-0.4 Mpa	DN20	DN10	1350*1200*1800	800
OSO10	10			DN25	DN15	1800*1250*2200	1200
OSO15	15			DN25	DN15	2100*1450*2200	1500
OSO20	20			DN40	DN25	2300*1550*2450	1800
OSO30	30			DN40	DN25	2450*1650*2550	1950
OSO35	35			DN50	DN25	2650*1900*2550	2150
OSO40	40			DN50	DN25	2800*2200*2600	2200
OSO50	50			DN50	DN25	3100*2450*2700	2350
OSO60	60			DN65	DN40	3300*2600*2900	2550
OSO80	80			DN80	DN50	3500*2950*3100	3300
OSO100	100			DN80	DN50	3850*3100*3300	4000
OSO150	150			DN100	DN65	4100*3300*3450	5100
OSO200	200			DN125	DN80	4600*3550*3500	6200
OSO250	250			DN125	DN80	5500*3900*3900	8500
OSO300	300			DN150	DN100	5800*4200*3980	10500

Design reference :

Compressed air inlet pressure 7.5 bar(g)/108 psi(g)
Air quality 1.4.1 according to ISO 8573-1:2010
Oxygen outlet pressure 2-4 bar(g)/58psi(g)
Oxygen quality 1.2.1 according to ISO 8573-1:2010.
Designed working temperature max 50 ℃
Dew point at Oxygen outlet - 50 ℃

Notes:
Following request of oxygen generator will be customized :
Oxygen outlet pressure ＞4 bar(g)/58 psi(g)
Filling cylinders 150 bar(g)/200 bar(g)/300 bar(g)
Dew point ＜ - 50 ℃
Movable/containerized , plug and play
Other special requirements as per site conditions

Suzhou Sumairui Gas System Co.,Ltd.

+8613812659092 dylan@sumairui.com n2-nitrogengenerator.com

No 161,ZhongfengJie, Suzhou High technology district, Suzhou