Psa Based Nitrogen Plant Generator For Fiber Laser Cutting Machine

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: OSP100-A
- 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

- Flow: 5-5000Nm3/hr
- Purity: 99.99%-99.9995%
- Material: Mild Steel /stainless Steel
- Dew Point: -70℃
- Pressure: 5-30 Bar
- Medium: Clean N2
- Control Type: PLC Control
- Display: HMI
- Instrument: Included
- Flow Meter: Included
- Oxygen Analyzer: Included
- Mannometer: Included
- Alarming System: Included
- Certificates: CE, ISO, ASME, GOST, KGS, NB Etc
- Application: Fiber Lasers Cutting Field

Our Product Introduction

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Product Description

OSP100-A High purity PSA nitrogen generator

What is PSA ?

1. PSA technology utilizes two towers which are filled with carbon molecular sieve (CMS). Compressed air enters the bottom of the “online” tower and flows up through the CMS. Oxygen and other trace gases are preferentially adsorbed by the CMS, allowing nitrogen to pass through. After a pre-set time the on-line tower automatically switches to the regenerative mode, venting contaminants from the CMS. Carbon molecular sieve differs from ordinary activated carbons as it has a much narrower range of pore openings. This allows small molecules such as oxygen to penetrate the pores and separate from nitrogen molecules which are too large to enter the CMS. The larger molecules by-pass the CMS and emerge as nitrogen gas.
PSA nitrogen generators are typically used in applications where the purity requirement is higher than 99.5% (0.5% O2 or below).
PSA Nitrogen Generators are supplied to our customers as complete systems, ready for hookup to a compressed air supply, and include air filters and controls for automatic operation. Getting started with your PSA Nitrogen Generator is simple too – just start up the PSA nitrogen generators by a switch and you’re good to go. Maintenance is easy as well. You will only be required to change the filters on your PSA Nitrogen Generators every three to twelve months.

2. PSA nitrogen generators come pre-tested, fine tuned and inspected thoroughly to ensure that our generators are set up to meet the specific needs of our customers – as every application’s nitrogen flow rate and purity differ. One of the best things about PSA Nitrogen Generators are their ability to assist various businesses with on-site nitrogen production and the various applications PSA nitrogen generators are good for.
PSA Nitrogen Generators also assist businesses with eliminating risks that are typically associated with liquid nitrogen or highly pressurized nitrogen and the best part is – it’s extremely cost efficient.

The Benefits of an Onsite Nitrogen Generating System

Cost Savings

Factors like market cost and delivery location will impact what you spend if you have nitrogen delivered to your facility. When you shift to onside nitrogen generation, you can significantly reduce these costs no matter where you are located. In fact, you can see a return on investment in a little as nine to 24 months.

Increase Safety for Employees

Since your primary concern is your employee safety, onsite nitrogen generation significantly reduces the risk of worker injury. Handling nitrogen cylinders, tank leaks and exposure to liquid nitrogen through delivery and unloading is 100% eliminated, thus creating a safe and reliable system.

Reduce Impact on Environment

By having your own nitrogen generating system you reduce your environmental impact as you no longer need to use heavy transport trucks to deliver and replenish your tanks. You also increase efficiency and improve your reputation in the industry as a company that is environmentally conscious.

Efficient Time Savings

Industrial users who set up onsite nitrogen generation save time on critical operations that use nitrogen. One of the biggest losses for industrial users each year is operational downtime caused by logistical issues with transporting nitrogen from vendor locations. With an onsite nitrogen generating system, you have a 24-hour supply of high-purity gas to run your processes.

Model of OSP50-A High purity PSA nitrogen generator

Item	Nitrogen purity (Nm3/hr)							Dimensions	Weight
	95%	99%	99.5%	99.9%	99.99%	99.995%	99.999%	(L*W*H) mm	KG
OSP5	21	13	11	8	5	4.2	3	1100*600*1700	300
OSP10	38	29	25	15	10	7.5	6.1	1200*650*1800	350
OSP20	80	56	52	32	20	16	14	1600*1000*2200	450
OSP40	160	116	105.2	67.2	40	34	28	1800*1000*2200	600
OSP60	252	174	157.8	100.8	60	51	45	1900*1200*2200	750
OSP80	339.2	232	211	132	80	70	62	2000*1200*2400	980
OSP100	420	290	263	168	100	90	78	2100*1600*2500	1300
OSP150	630	435	394.5	252	150	135	120	2500*1800*2600	1600
OSP200	848	580	526	336	200	180	160	2800*1900*2850	2200
OSP250	1060	725	657.5	420	250	225	200	3100*2000*3200	2600
OSP300	1270	870	780	500	300	260	240	3900*2600*3400	3850
OSP400	1696	1160	1052	672	400	360	320	4500*3250*3600	5000
OSP500	2120	1450	1300	840	500	450	400	4900*3600*3800	6500
OSP600	2540	1740	1578	1000	600	540	480	5300*3600*3900	7800
OSP800	3390	2320	2100	1340	800	720	640	5600*3900*4100	10200
OSP1000	4240	2900	2630	1680	1000	900	800	5800*4000*4500	11800

Design reference :

Compressed air inlet pressure 7.5 bar(g)/108 psi(g)
Air quality 1.4.1 according to ISO 8573-1:2010
Nitrogen outlet pressure 6 bar(g)/87psi(g)
Nitrogen quality 1.2.1 according to ISO 8573-1:2010.
Designed working temperature max 50 ℃
Dew point at Nitrogen outlet - 40 ℃

Notes:

OSP nitrogen generator max working pressure 10 bar(g)/145psi(g)
Following request of PSA on-site nitrogen generator will be customized :
Working pressure ＞10 bar(g)/145 psi(g)
Dew point ＜ - 50 ℃
Plug and play
Movable/containerized
Other special requirements as per site conditions

Nitrogen Generator Applications

Here are the five most popular nitrogen generator applications in the industrial industry.

Food Packaging

Modified Atmosphere Packaging (MAP) with nitrogen and nitrogen-CO2 gas mixes are often used in the food packaging industry to preserve perishable items by preventing spoilage, ensuring freshness, maintaining flavour, and extending the product shelf life. Onsite nitrogen generation is highly beneficial in the food packaging industry to maintain a quality product. Food packagers can save hundreds of thousands of dollars by having an onsite system installed.

Beverage Storage, Transport, and Dispensing

Like the food industry, the beverage industry can also improve from having onsite nitrogen generating systems. These systems make it more efficient to transport beverages to end users such as juice packagers, vintners, breweries, and other manufacturers of beverage dispensing systems.

Laser Cutting

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