N2 Gas Generator Filters Psa Nitrogen Generation System

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: OSP
- 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: Carbon Steel /Stainless Steel
- Nitrogen Purity: 99.99%-99.999%
- Application: Electron
- Processing: SMT
- Pressure: 7-10 Bar
- Dew Point: -70℃
- Flow: 50-200 Nm3/hr
- Purging: Included
- Highlight: **n2 gas generator**, **n2 generator filters**, **n2 generator**

Our Product Introduction

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Product Description

99.99% & 7 bar N2 nitrogen generator for electron SMT processing and purging system

What is PSA nitrogen?

PSA is short for pressure swing adsorption.
Pressure
Elevated pressures, normally 5-10 bar(g), are needed for the process. Higher pressure can be applied, if required.
Swing
Two vessels work in counter phase in terms of pressurising and depressurising.
Adsorption
The PSA principle is applied for separation of atmospheric air where nitrogen

How does it work?

On-site nitrogen generators are based on the well-known PSA (pressure swing adsorption) technology. Two pressurised vessels with molecular sieves ensure continuous production for separation of nitrogen from other gases.
Nitrogen generator consists of two pressure vessels storing carbon molecular sieves (CMS).
Dry compressed air is blown through a valve to the first vessel where the pressure is built to reach 5 to 10 bar(g). The unwanted gas (oxygen) is adsorbed by the pellets during the building of pressure, and the nitrogen will pass through to the accumulation tank.
While pressure is building up in one vessel, the other vessel is regenerating through a decrease in pressure, all to guarantee a continuous flow. Before the subsequent adsorption or desorption stage, a pressure equalisation between the adsorption vessels will take place. When the pressure decreases in the first vessel, and the CMS pellets are saturated, the waste product is exhausted through the exhaust system. The pressure in the second vessel will now build up until the pressure between both vessels is once again equalised.

Advantages of PSA

The process of the pressure swing adsorption (PSA) technology is an extremely clean operation. The only ‘raw material’ is air.
On-site nitrogen generators allow for an uninterrupted supply of gas with a high purity output. This means that you can produce nitrogen where and when you need it, and in the exact quantity and quality you need.
PSA is a cost-efficient process for producing high purity nitrogen.
For an uninterrupted production of gas this process is continuously repeated.
Our PSA nitrogen generators can produce purities between 95-99.9999% (1 ppm) nitrogen.

Features of PSA system :

Compact, modular, well-proven design
Automatic, unattended operation with advanced monitoring and control system
Low specific power
Low maintenance
Higher capacity units can be UIG owned and operated to provide hassle-free, low-cost onsite-produced nitrogen.
Units are available for purchase, with lease-purchase as an option

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.

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