



## 99.9995% Nitrogen Purification Plant For Roller Type Furnace Fully Automatic

### 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-C
- 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

- Purity: 99.999-99.9999%
- Flow: 5-5000Nm3/hr
- Pressure: 5-8 Bar(g)
- Application: Food, Heat Treatment, Electron, Pharmacy, Steel, Chemical, Oil And Gas Field
- Material: Stainless Steel
- Certificates: CE, ISO, ASME, GOST, KGS, NB Etc
- Pipeline: Seamless Steel
- Working Duration: 24 Hrs Non-stop
- Operation Mode: Fully Automatic
- Instrument: Included
- Oxygen Anaylzer: Included
- Display: HMI
- PLC: Siemens S7-1200
- Temperature Controller: Schneider

## Product Description

### **Nitrogen 99.9995% Plant for heat treatment Roller type furnace (fully automatic) Bright quenching technics**

#### **Principle:**

#### **Technological Process:**

Nitrogen Generation system from our company are designed and manufactured based on the principle of Pressure Swing Adsorption(PSA). Ambient air, having being compressed and purified to remove oil, water and dust, enters the adsorption swing adsorbing device with two adsorption towers filled with Carbon molecular sieve(CMS). The compressed air flow to the adsorption tower from the bottom to up. In the process, oxygen molecular is adsorbed, while nitrogen flows out of the upper side of adsorption tower and then enters then buffer tank for impure nitrogen. After a period of time, the CMS in the adsorption tower is saturated by the oxygen adsorbed. At this time, regeneration is needed. It is realized by stopping adsorbing step and reduce pressure in the adsorption tower. Adsorption and regeneration are conducted alternatively in the two adsorption towers to ensure the consecutive output of nitrogen gas.

#### **The whole system components:**

The whole nitrogen generation system mainly consists of the air compressor, the compressed air receiver, filters, refrigeration dryer, the PSA nitrogen generator, and the nitrogen receiving tank. For the air compressor, famous brand such as the Atlas Copco, the Ingersoll Rand can be available from our company to match the PSA nitrogen generators. For filters, the elements with brand of Hankison, Domnick are available.

#### **Application Range:**

**Metallurgy:** For anneal protection, agglomeration protection, furnace washing and blowing ,etc. Used in fields such as metal heating treatment, powder metallurgy, magnetic material,copper process, metallic mesh, galvanized wire, semiconductor, etc.

**Chemical and new material industries:** For chemical material gas, pipeline blowing, gas replacement,gas protection, product transport, etc. Used in fields such as chemical ,urethane elastic fiber, rubber, plastic, tyre, polyurethane, biological technology, intermediate, etc.

**Electronic industry:** For encapsulation, agglomeration, anneal, deoxygenation, storage of electronic products. Used in fields such as peak welding, circumfluence welding, crystal, piezoelectricity, electronic porcelain, electronic copper tape, battery, electronic alloy material, etc.



## TECHNICAL SPECIFICATIONS OF OSP-C

NO	Model	Capacity (Nm <sup>3</sup> /hr)	Install Power (KW)	Inlet (mm)	Outlet (mm)	Weight (KG)	Dimensions (L*W*H mm)
1	OSP-H-100	100	39	DN25	DN25	800	Customized
2	OSP-H-120	120	43.5	DN32	DN32	900	
3	OSP-H-150	150	52.5	DN32	DN32	1200	
4	OSP-H-180	180	63	DN40	DN40	1500	
5	OSP-H-200	200	63	DN40	DN40	1700	
6	OSP-H-250	250	87	DN40	DN40	1950	
7	OSP-H-300	300	87	DN40	DN40	2350	
8	OSP-H-350	350	108	DN50	DN50	2500	
9	OSP-H-400	400	114	DN50	DN50	2800	
10	OSP-H-450	450	120	DN50	DN50	3200	
11	OSP-H-500	500	135	DN65	DN65	3500	

### Design reference:

- Crude Nitrogen : purity @ 99.9% pressure @ 7 bar (g)
- Nitrogen quality 1.2.1 according to ISO 8573-1:2010
- Designed working temperature max 350 °C
- Dew point at Nitrogen outlet - 70 °C
- O<sub>2</sub> ppm :< 3 ppm
- H<sub>2</sub> free

### Notes:

- ※ OSP-C models suitable for strict requirements for hydrogen & oxygen content field
- ※ Dimensions will be customized
- ※ Other special requirements as per site conditions



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