

# PSA TECHNOLOGY BASED NITROGEN GAS GENERATOR



ISO 9001 : 2015 CERTIFIED COMPANY

[www.samgasprojects.com](http://www.samgasprojects.com)



**SAM GAS PROJECTS** is **ISO 9001:2015** certified, Professionally Managed Engineering Organization, Specialized in Design , Manufacture , Supply & commissioning of **‘State of the Art’** Gas Plants and Compressed Air Systems.

**SAM GAS PROJECTS** has supplied more than **1500** Systems, which are working satisfactorily all over India & across the Globe in more than **50 countries**.

### **NITROGEN GAS PLANT**

- PSA Technology
- Membrane

### **HYDROGEN GAS PLANT**

- Ammonia Cracking Units
- Water Electrolysis Based

### **OXYGEN GAS PLANT**

- PSA Technology
- VPSA Technology
- Medical Grade

### **COMPRESSED AIR DRYERS**

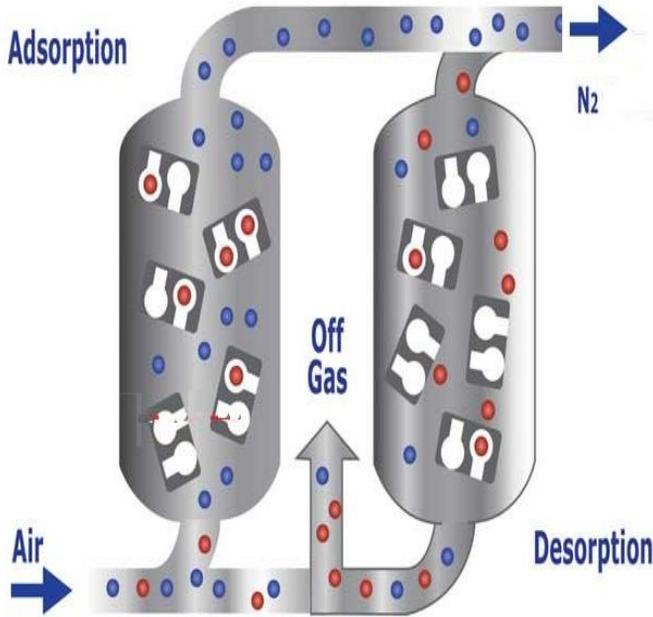
### **GAS PURIFICATION SYSTEMS**

### **HYPOXIC CHAMBERS / SYSTEMS**



Precisely Right.

**ISO 9001 : 2015 CERTIFIED CO.**



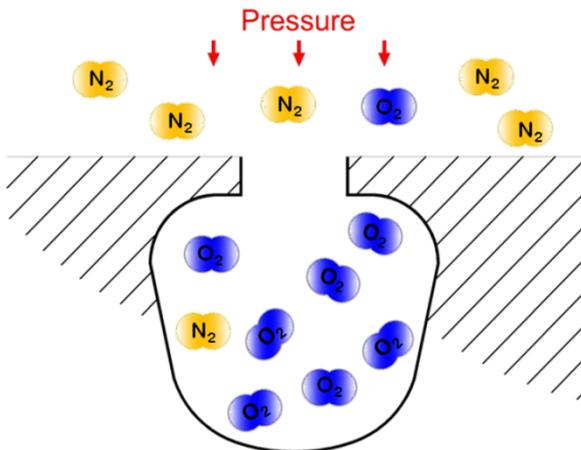
## PROCESS OF NITROGEN GENERATION

Pressure swing adsorption processes utilize the fact that under high pressure, gases tend to get adsorbed in solid surfaces.

PSA Nitrogen Generators are based on well proven technology using Carbon Molecular Sieves (CMS). When CMS is used in the PSA process, oxygen molecules get adsorbed at a faster rate due to their smaller diameter in comparison to nitrogen. Adsorption process takes place at a particular pressure. Therefore, the nitrogen is recovered to a high degree. During the regeneration process, as soon as the PSA tower pressure is brought down to atmospheric conditions, oxygen molecules come out of the pores of the carbon molecular sieve. The process of generation and regeneration gets repeated automatically as per cycle time.

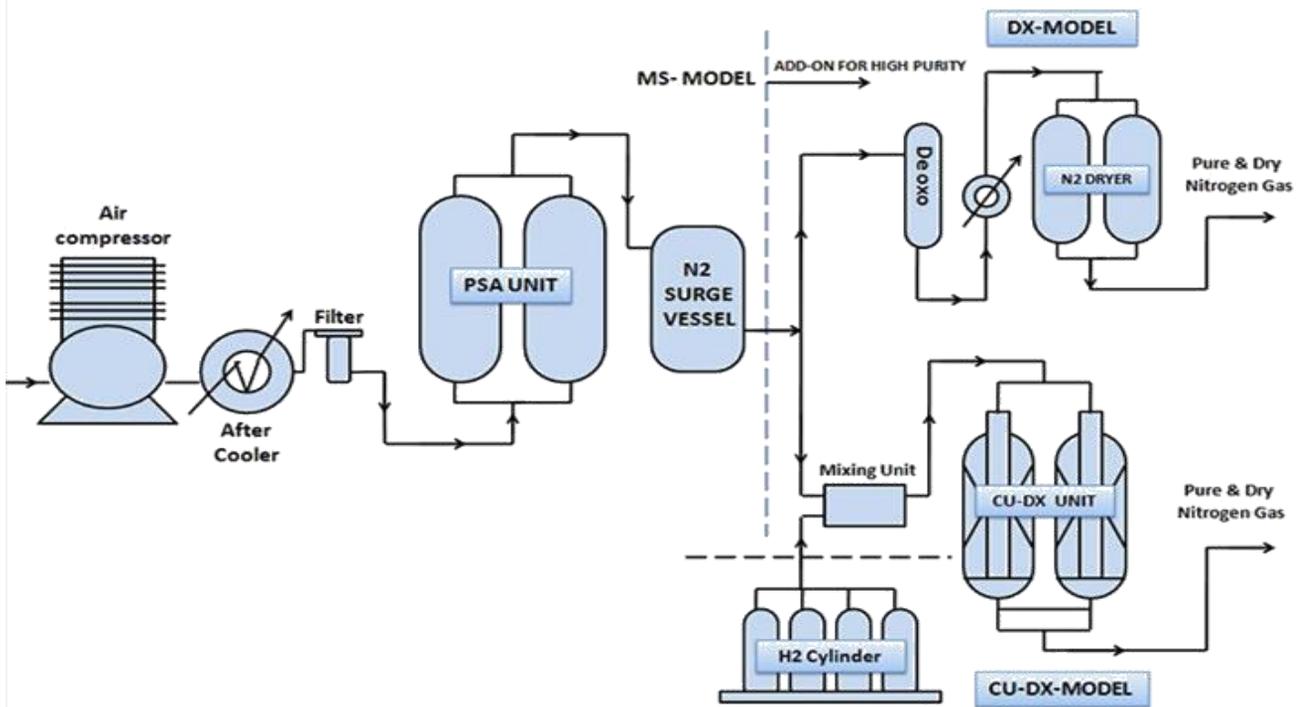
### Carbon Molecular Sieves (CMS)

(MAGNIFIED VIEW)



### MODELS OF NITROGEN GAS PLANTS

	MS - L	MS - H	DX MODEL	CU-DX MODEL
Capacity	1 to 5000 NM <sup>3</sup> /Hr.	1 to 500 NM <sup>3</sup> /Hr.	1 to 5000 NM <sup>3</sup> /Hr.	1 to 2500 NM <sup>3</sup> /Hr.
<b>Composition :</b>				
Oxygen	0.01% to 5.0%	10 – 500 PPM	≤ 3.0 PPM	1.0 PPM
Hydrogen	Nil	Nil	0.5% or Higher	Nil
Nitrogen + Others	95% to 99.99%	99.999%	Balance	99.9999%
Dew Point	(-) 40°C or better	(-) 40°C or better	(-) 60°C or better	(-) 60°C or better
Pressure	5.0 Barg or Higher	5.0 Barg or Higher	5.0 Barg or Higher	5.0 Barg or Higher



## APPLICATIONS

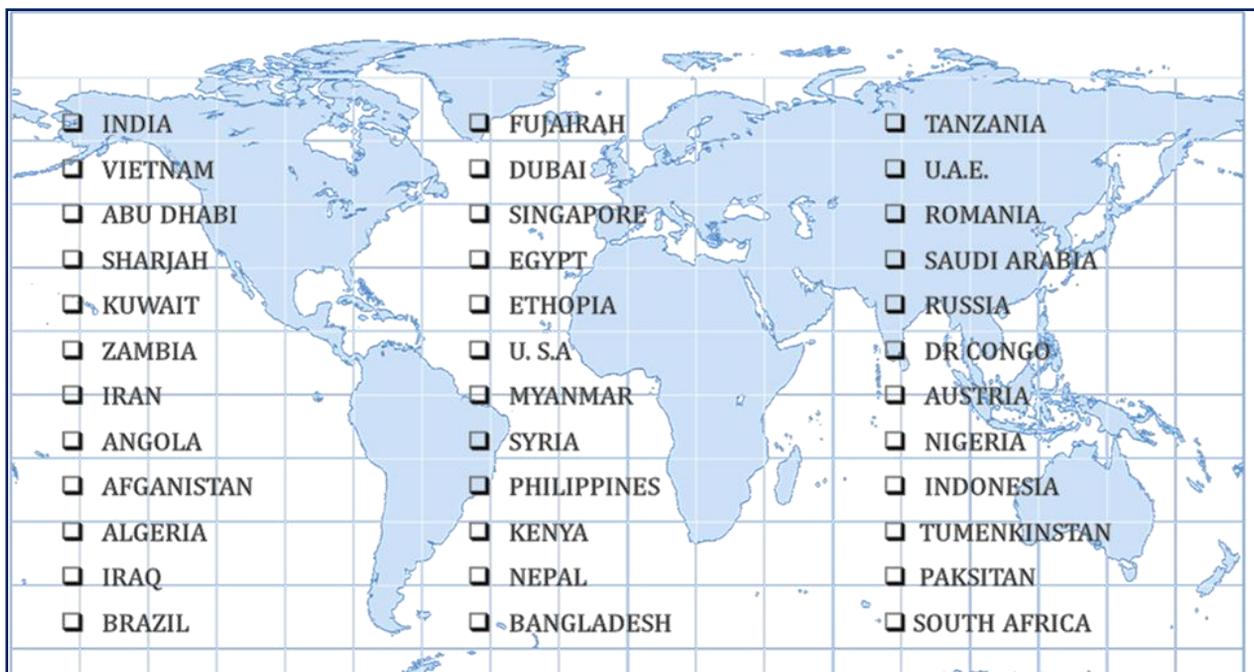
- Heat Treatment ( CRCA / Galvanizing )
- Pharmaceuticals Industry
- Chemical Industry
- Pesticide Industry
- Electronics Industry
- Tyre manufacturing /
- Fertilizer Units
- Textile / Fiber / POY / PFY Units
- Cable Industry
- Petrochemical
- Biodiesel Plants
- Food & beverage
- Lamp manufacturing
- T.V. Picture tubes Manufacturing
- Edible oil
- Glass Manufacturing
- Cold Storages



## FEATURES

- On Site Nitrogen Generation.
- Easy to Operate & Maintain .
- High Reliability
- On line Control on Nitrogen quality
- Automatic operation , no manual intervention.
- Low generation cost.
- Payback Period less than a year .
- No dependency on external Agencies .





-  **MORE THAN 1500 INSTALLATIONS**
-  **PRESENCE IN 50 COUNTERIES**
-  **TEAM OF QUALIFIED & EXPERIENCED ENGINEERS**
-  **ROUND THE CLOCK AFTER SALE SERVICE SUPPORT**



**SAM GAS PROJECTS PVT. LTD.**

E – 30, UDYOG KUNJ, UPSIDC INDUSTRIAL AREA, NH – 24, GHAZIABAD ( U.P.), INDIA,  
 PHONE : +91-98108 68610 / 98182 64540 / 98101 13798  
 E - MAIL: samgasprojects@gmail.com, Web Site : www.samgasprojects.com