



**N<sub>2</sub>**

**Nitrogen Gas  
Plant**

**O<sub>2</sub>**

**Oxygen Gas  
Plant**



**Air  
Dryers**



**Gas Storage  
Solutions**

# **NITROGEN GENERATION** BY PRESSURE SWING ADSORPTION (PSA) TECHNOLOGY



# PSA – N<sub>2</sub>

Nitrogen Gas Plant separate nitrogen from compressed air utilizing Pressure Swing Adsorption (PSA) technologies. Compressed air, which consists of approximately 21% oxygen and 78% nitrogen, is passed through a bed of Carbon Molecular Sieve (CMS).



The CMS preferentially adsorbs O<sub>2</sub> and moisture, allowing the N<sub>2</sub> to pass through as a PSA Nitrogen plant product. psa Nitrogen gas generators at the specified pressure. While one of the towers is in the adsorption phase, the other tower is being regenerated, by de-pressurizing and allowing the CMS to release the adsorbed gases to the atmosphere. The cycle then repeats, allowing for constant flow of a controlled Nitrogen purity and flow.

## Options / Upgrades

HMI Display Screen

Containerized or Trailer Mounted Plant

Dew Point Analyzer

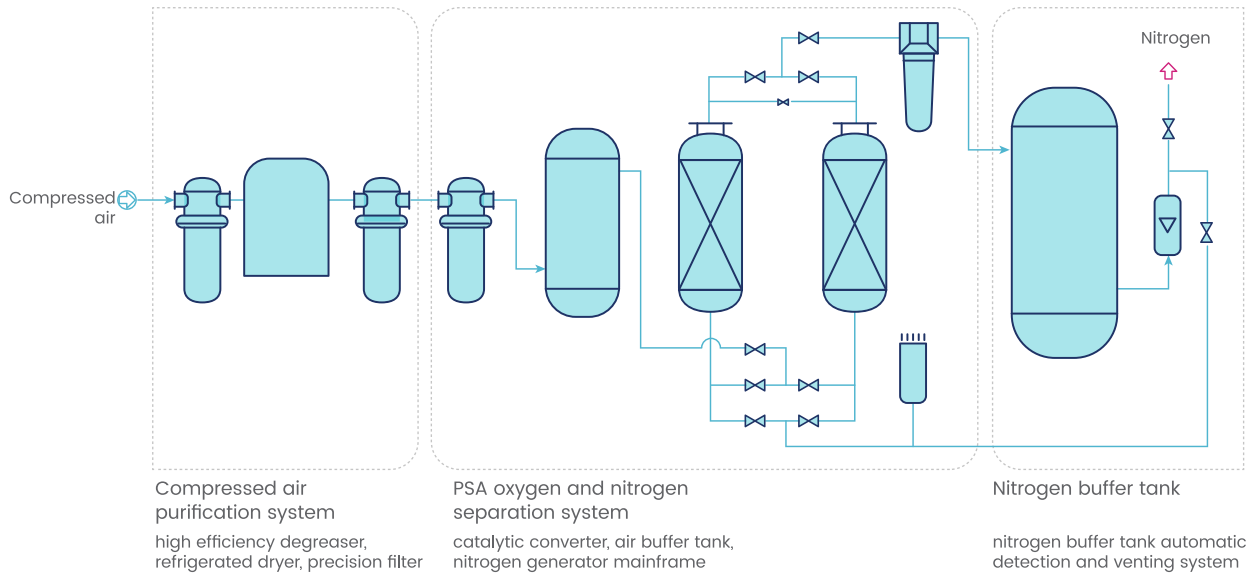
Booster Compressor

This product line is designed for medium to large flow rates and has a reduced footprint. It consists of single pairs of our Twin Tower Adsorber Vessels and air and nitrogen buffer vessels (installed on a common skid or supplied separately).

## Technical Indicators

Flow Rate	5 to 500 Nm <sup>3</sup> /hr
Purity	95% to 99.999%
Pressure	5 Kg/cm <sup>2</sup> g (standard)
At Dew Point	Up to (-) 80°C

- ASME Heavy Duty Adsorber Vessel
- Highest Performance Adsorbent Media
- High Cycle Life Electro Pneumatic Valves
- Online Oxygen Analyzer
- Modular Skid Mounted
- PLC Control System
- Advance Stage Filtration System
- Exhaust Silencing Muffler
- Fully automated unattended Operation



**Engineered  
with you in  
mind**



**Nitrogen  
that makes  
sense**



**Benefits for your  
business and  
the planet**



**Low maintenance &  
generate continuously  
on demand**



**24x7  
Uninterrupted  
Supply**



**Effective  
cost reduction  
& saving**



**Produce  
high-quality 99.99%  
purity level**



**For long term  
pricing is stable  
& minimal**



**No need for  
high-pressure  
gas storage**



**Product that is  
environmentally  
friendly**



**Produce  
no waste  
at the end**



**Design to meet  
specific capacity  
requirements**



LCMS



Modified Atmosphere Packing (MAP)



Chemical Blanketing



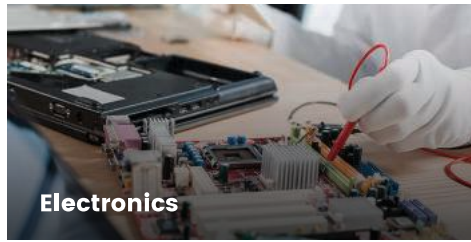
Pharmaceutical



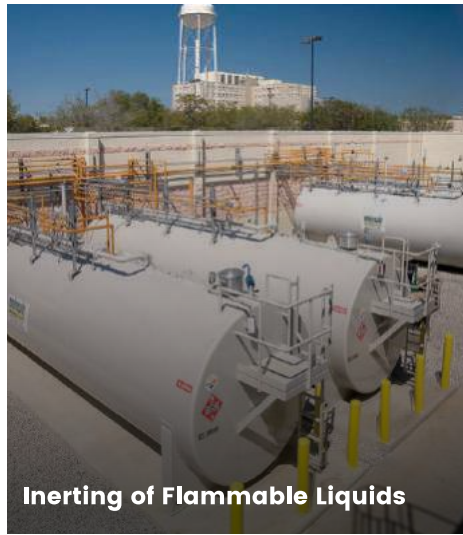
Heat Treatment



Product Storage and Transfer



Electronics



Inerting of Flammable Liquids



Food Processing



Injection Moulding



Spray Drying



Pressure Testing



Fire Prevention



Laser Cutting

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