

NEOMETRIX DEFENCE

About

Nitrogen Generating Storage and Distribution System-UGSSN2

The Nitrogen Generating Storage and Distribution System (UGSS N2) is used for generation of nitrogen and charging Nitrogen Cylinders. This system can charge the Nitrogen bottles with compressed Nitrogen Gas up to a pressure of 350 Kg/cm².

Process Flow Chart



There shall be following major sub systems of UGSS N2 namely:

- (a) Trailer mounted Nitrogen Generation System.
- (b) Trailer mounted High pressure Nitrogen Storage.
- (c) Mobile Nitrogen transportation carts.
- (d) Ground Power Unit (GPU).

The **Nitrogen Generating Storage and Distribution System (UGSS N2)** is an advanced setup designed for generating nitrogen gas and compressing it into storage cylinders for later use. This system can charge nitrogen cylinders with compressed nitrogen gas at high pressures, reaching up to **350 kg/cm²**.

Key Features:

1. **Nitrogen Generation:** Produces high-purity nitrogen gas, suitable for a variety of industrial, medical, or scientific applications.
2. **Cylinder Charging:** Compresses and transfers nitrogen into storage cylinders, allowing easy transportation and usage.
3. **High-Pressure Capability:** The system supports compression of nitrogen gas to pressures as high as **350 kg/cm²**, making it ideal for high-demand scenarios.
4. **Versatility:** Useful in industries such as aerospace, food processing, manufacturing, and laboratories, where nitrogen is essential.

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This system is typically equipped with specialized components like compressors, storage tanks, and control mechanisms to ensure safe and efficient operation.



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Specification

Technical Specifications of the Nitrogen Generating Storage and Distribution System (UGSS N2):

The Nitrogen generating Storage and distribution System shall be D Designed and constructed for operation for the following environmental condition:

Name	Specifications
Operation	Outdoor
Temperature	-20 Degree to +55 degree C
Relative Humidity	Up to 100%
Wind Velocity	100km/Hr.
Altitude	3500 m above sea level
Rain	form light drizzling to heavy rain
Salt fog	Suitable for operation under seal Water condition
Flow rate (Nitrogen generation rate)	Suitable to Generate 400 (+/-5%) liters of Nitrogen in 10 hrs.
Nitrogen Purity	99.5%
Pressure	350 Bar
Dew point	-65 Degree C @150 Kg/cm ²
Storage Capacity	640 liters @ 350bar
Membrane	
Medium	Nitrogen
Booster type	Electrical /pneumatic
Power source	Engine or battery of the vehicle
Booster Ratio	10: 1 min
Output pressure	350 Bars
Reject pressure	35 Bars
Inlet pressure Range	0 to 350 bars
Nitrogen filtration (inlet)	0.01Micron at the inlet with clogging

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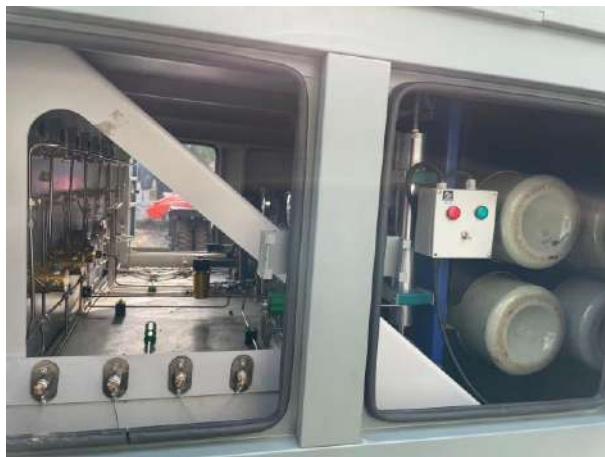
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	indication filter element replaceable.
Nitrogen filtration (outlet)	0.01micron at the outlet with clogging indication .filter element replaceable.
High pressure Nitrogen storage	16 cylinders of 40 liters each on a cascade. Divided & interconnection (in four sub sections) control valves on panel.



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Key Features

- **Nitrogen Generator:** Often based on Pressure Swing Adsorption (PSA), membrane technology, or cryogenic distillation.
- **Compressor:** High-pressure compressor to achieve the required 350 kg/cm².
- **Storage Tanks:** For intermediate storage of nitrogen gas before cylinder filling.
- **Control Panel:** Automated control for system operation, pressure regulation, and safety features.
- **Safety Valves and Gauges:** To monitor and maintain safe operating conditions.
- **Nitrogen Generation:** Produces high-purity nitrogen gas from atmospheric air or another nitrogen-rich source.
- **Cylinder Charging:** Compresses nitrogen gas into cylinders for storage and distribution.



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Applications

Nitrogen Generating Storage and Distribution System-UGSSN2: Suitable for industries like aerospace, electronics, food processing, medical equipment, metallurgy, and research facilities.



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