



AMSA AIR ENGINEERING PVT. LTD.

Your Trusted Partner In Gas Solutions



Every milestone strengthens our commitment to grow together

About Us

We are pleased to introduce **AmsaAir Engineering Pvt. Ltd.**, a professionally managed company based in **Greater Noida, Uttar Pradesh**, specializing in complete **Air and Gas Plant solutions** for **medical, industrial, and governmental sectors**.

With strong technical expertise and industry experience, we are pioneers in the **design, manufacturing, supply, installation, commissioning, and maintenance** of advanced gas generation systems. Our product portfolio includes **PSA/VPSA Oxygen Gas Plants, Nitrogen Gas Plants (PSA, MS, DX, CU-DX, and Membrane Type), Hydrogen Gas Plants, Ammonia Cracker Units, Exo Gas Plants, and Bio Gas Plants**, engineered to deliver **high purity, efficiency, and reliable performance**.

In addition to gas generation systems, **AmsaAir Engineering Pvt. Ltd.** provides a complete range of air **treatment and auxiliary equipment**, such as **Desiccant Air Dryers, Refrigerated Air Dryers, Gas Dryers, Air/Gas Boosters, Electrical Control Panels**, along with **Screw Type and Piston Type Air Compressors**, ensuring a fully integrated solution under one roof.

We also offer **AMC & CMC services**, plant retrofitting, troubleshooting, and **genuine spare parts supply** to support both new and existing installations. By adopting advanced technology and strict quality standards, we ensure **maximum gas purity, operational safety, energy efficiency, and long-term system reliability**.

Committed to customer satisfaction, **AmsaAir Engineering Pvt. Ltd.** delivers prompt service support and customized solutions, making us a trusted partner for hospitals, industries, and government organizations across India.

Our Mission

At **AmsaAir Engineering Pvt. Ltd.**, our mission is to engineer and deliver reliable, efficient, and advanced air and gas solutions for medical and industrial applications. We focus on quality engineering, proven technologies, and customer-centric service to ensure consistent performance and long-term value. Through continuous improvement and technical excellence, we aim to support our customers' operational success.

Our Vision

Our vision is to become a trusted leader in air and gas engineering by providing innovative, sustainable, and future-ready solutions. We aspire to grow with our customers by maintaining high standards of quality, reliability, and service while contributing to industrial development and technological advancement.

OUR PRODUCTS & SERVICES



AIR & GAS GENERATION SYSTEMS

- PSA Nitrogen Gas Generation Systems (MS, DX, Copper DX & Membrane Type)
- PSA & VPSA Oxygen Gas Generation Systems (Medical & Industrial)
- Oxygen & Nitrogen Gas Plants with Cylinder Filling Systems
- Hydrogen Gas Generation Units
- Ammonia Cracker Units
- Exo-Gas Generation systems
- Biogas Generation systems

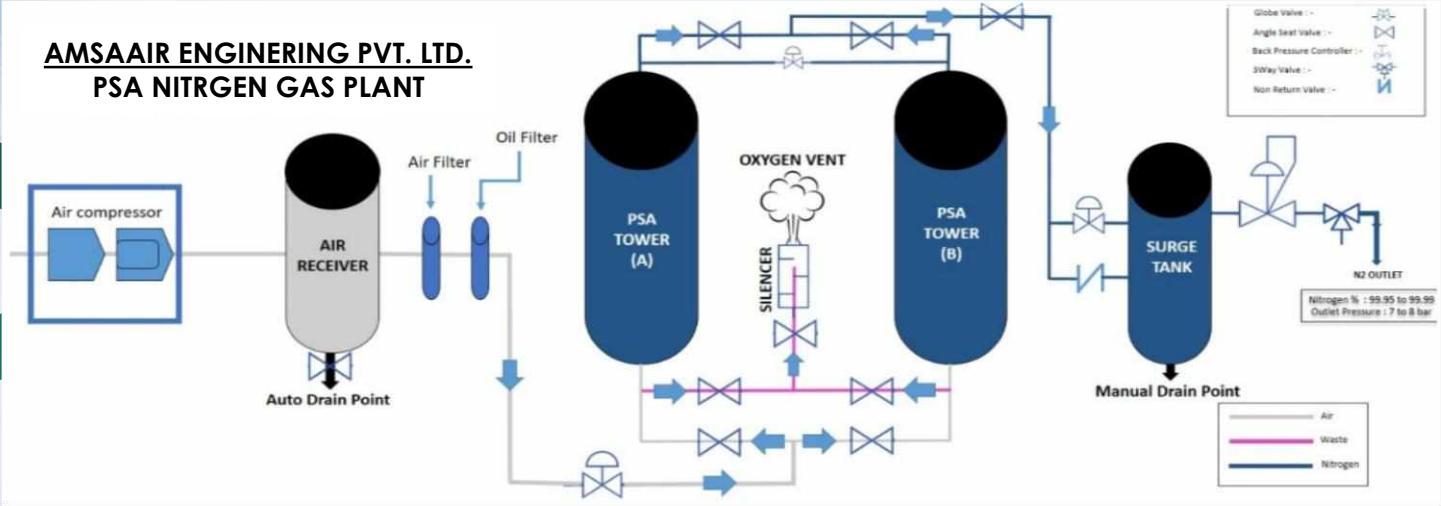
Our air and gas generation systems are engineered for reliable performance, energy efficiency, and long service life. Each solution is developed using proven technologies, precision engineering, and high-quality components to ensure stable output, operational safety, and consistent performance. Our systems are designed to meet the demanding requirements of medical and industrial applications while supporting cost-effective and dependable plant operation.

- Desiccant Air Dryers, Gas Dryers & Refrigerated Air Dryers
- Heat Exchangers, Storage Vessels & Pressure Vessels
- High-Pressure Air & Gas Boosters
- Screw Type & Piston Type Air Compressors
- Electrical Panels (LT / HT / PLC-Based Automation Panels)
- Gas Plant Automation, Instrumentation & Monitoring Systems
- AMC, CMC, Installation, Commissioning & Maintenance Services of all Gas Systems
- Gas Plant Spare Parts & Consumables



NITROGEN GAS GENERATION SYSTEMS

AMSAIR ENGINEERING PVT. LTD. PSA NITRGEN GAS PLANT



PSA Nitrogen
Gas Plant 99.99%

PSA Nitrogen
Gas Plant Ultra Purity
99.9999



NITROGEN GAS PLANTS RANGE & GAS PURITY

MODEL	MS MODEL N2 GAS PLANTS CAPACITY	MODEL	DX MODEL N2 GAS PLANTS CAPACITY	MODEL	CU-DX MODEL N2 GAS PLANTS CAPACITY
AMSA-MS-05	0 TO 05NM3/HR	AMSA -DX-05	1 TO 05NM3/HR	AMSA -CU-05	1 TO 05NM3/HR
AMSA -MS-10	05 TO 10NM3/HR	AMSA - DX -10	05 TO 10NM3/HR	AMSA - CU -10	05 TO 10NM3/HR
AMSA -MS-20	10 TO 20NM3/HR	AMSA - DX -20	10 TO 20NM3/HR	AMSA - CU -20	10 TO 20NM3/HR
AMSA -MS-50	20 TO 50NM3/HR	AMSA - DX -50	20 TO 50NM3/HR	AMSA - CU -50	20 TO 50NM3/HR
AMSA -MS-100	50 TO 100NM3/HR	AMSA -DX-100	50 TO 100NM3/HR	AMSA - CU -100	50 TO 100NM3/HR
AMSA -MS-500	100 TO 500NM3/HR	AMSA -DX-500	100 TO 500NM3/HR	AMSA - CU -500	100 TO 500NM3/HR
AMSA -MS-1000	500 TO 1000NM3/HR	AMSA -DX-1000	500 TO 1000NM3/HR	AMSA - CU -1000	500 TO 1000NM3/HR

ADVANTAGES

- Easy to Install and maintain
- Generates N2 gas automatically when required
- If not required it will automatically turn off.
- No dependency on outside sources.
- Fully Automatic Operation requiring no special attention.
- Manless operation
- Proven Technology.
- Purity of N2 up to 99.9998% can be achieved. Generates Nitrogen at almost 1/10 the cost of cylinder nitrogen.
- More than 1000000 Plants based on PSA Technology
- Operating successfully in India and abroad. For achieving High purity and ultra-high purity
- De-Oxo units are provided

APPLICATION

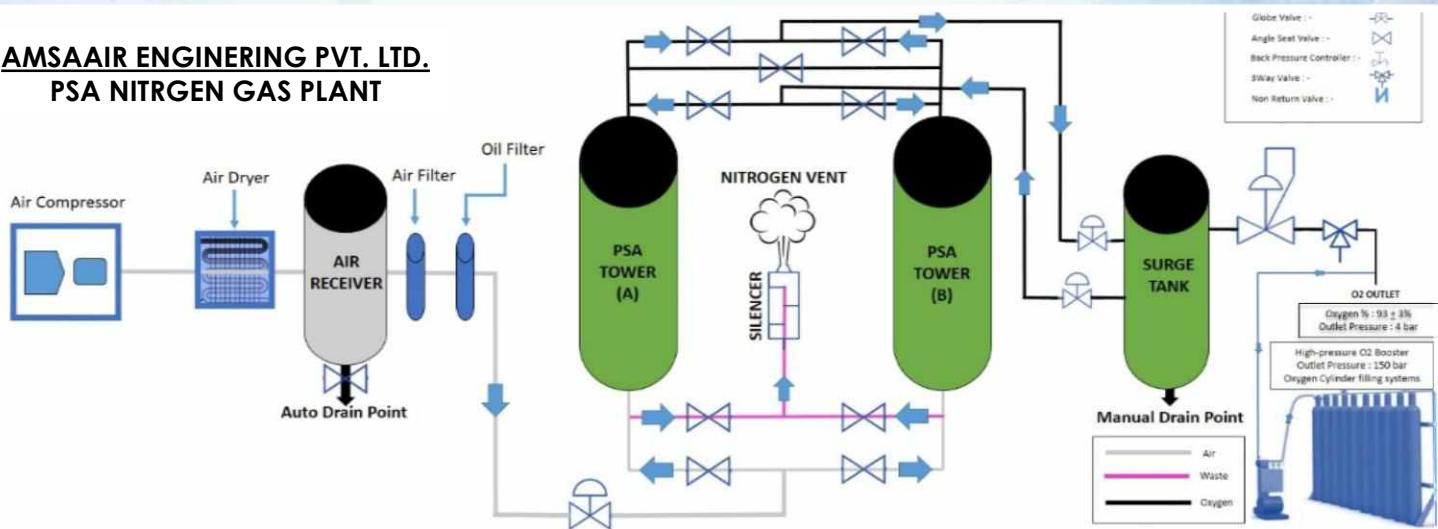
- Metallurgical Industries-to provide inert atmosphere.
- Synthetic & Fiber Industries.
- Chemical Industries-Nitrogen Blanketing & Purging.
- Food packing Industries.
- Pharmaceutical Industries.
- Optical Fiber Industries.
- Electric Industries,
- Tyre Inflation-Longer life & Low seepage of Air
- Rubber Industries (For Vulcanizing) etc.

Our nitrogen gas generation systems support diverse industrial applications by providing a safe, reliable, and cost-effective source of high-purity nitrogen. These applications demonstrate the versatility and efficiency of on-site nitrogen solutions across multiple industries.



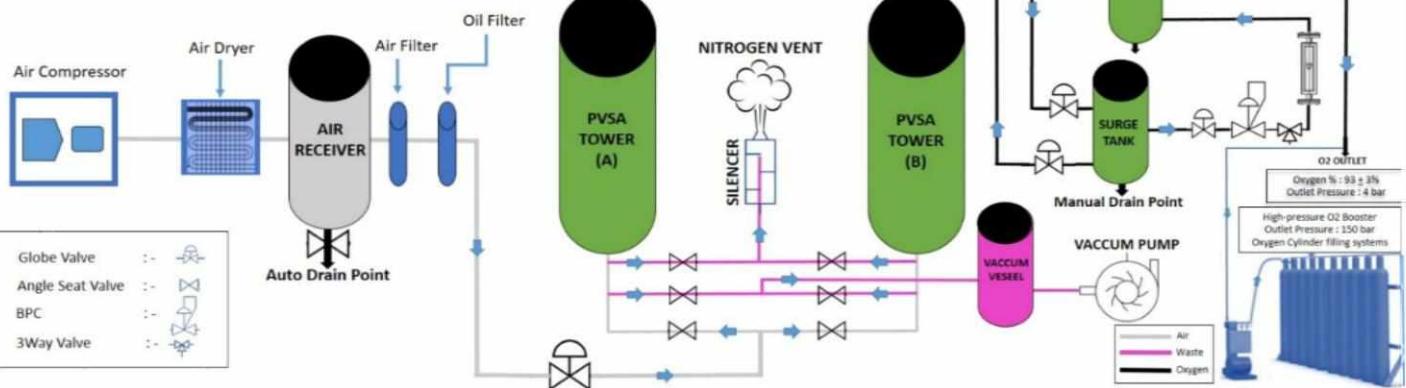
PSA OXYGEN GENERATION SYSTEMS

AMSAIR ENGINEERING PVT. LTD. PSA NITRGEN GAS PLANT



VPSA OXYGEN GENERATION SYSTEMS

AMSA AIR ENGINEERING PVT. LTD. PSA NITRGEN GAS PLANT



Capacity with
Purity $93\% \pm 3\%$

PSA Oxygen
Gas Plant
Purity $93\% \pm 3\%$

MODEL	O2 GAS PLANTS CAPACITY
AMSA-OX-05	1 TO 05NM3/HR
AMSA -OX-10	05 TO 10NM3/HR
AMSA -OX-20	10 TO 20NM3/HR
AMSA -OX-30	20 TO 30NM3/HR
AMSA -OX-50	30 TO 50NM3/HR
AMSA -OX-100	50 TO 100NM3/HR
AMSA -OX-150	100 TO 150NM3/HR
AMSA -OX-200	150 TO 200NM3/HR
AMSA -OX-300	200 TO 300NM3/HR
AMSA -OX-500	300 TO 500NM3/HR
AMSA -OX-750	500 TO 750NM3/HR
AMSA -OX-1000	750 TO 1000NM3/HR



ADVANTAGES

- Easy to Install and maintain
- Generates O₂ gas automatically when required
- If not required it will automatically turn off.
- No dependency on outside sources.
- Fully Automatic Operation requiring no special attention.
- Not required special operation for gas the plant
- Proven Technology.
- Purity of O₂ gas up to 93+-3% can be achieved. Generates Oxygen at almost 1/5 the cost of cylinder oxygen.
- More than 10000 Plants based on PSA Technology
- Operating successfully in India and abroad For medical and industries achieving purity 93%

APPLICATION

- Hospital.
- Healthcare Facilities.
- Pharmaceutical Industries.
- Medical Institutes.
- Multi-Specialty Units.
- Medical Institute & Research etc.

INDUSTRIAL APPLICATIONS

- Hospital.
- Healthcare Facilities.
- Pharmaceutical Industries.
- Medical Institutes.
- Multi-Specialty Units.
- Medical Institute & Research etc.



PSA and VPSA oxygen gas plants from **AmsaAir Engineering Pvt. Ltd.** are engineered to provide a continuous, on-site supply of high-purity oxygen for medical and industrial applications. These systems ensure stable oxygen purity, energy-efficient operation, and dependable performance, reducing dependency on cylinders and bulk liquid oxygen. The following applications highlight the critical role of oxygen in enhancing process efficiency, safety, and productivity across various sectors.

Our biogas generation plants are engineered to convert organic waste into a reliable and sustainable energy source. Designed for stable gas output and efficient operation, these systems support eco-friendly fuel generation for industrial and energy applications.

Bio-Gas Plant Capacity & Gas Purity



GAS PURITY: METHANE (CH₄): 55% – 65%, CO₂ & TRACES: BALANCE

MODEL	O2 GAS PLANTS CAPACITY
AMSA-BIO-10	10 Nm ³ /hr
AMSA-BIO-20	20 Nm ³ /hr
AMSA-BIO-50	50 Nm ³ /hr
AMSA-BIO-100	100 Nm ³ /hr
AMSA-BIO-200	200 Nm ³ /hr
AMSA-BIO-100	500 Nm ³ /hr
AMSA-BIO-600	600 Nm ³ /hr
AMSA-BIO-700	700 Nm ³ /hr
AMSA-BIO-800	800 Nm ³ /hr
AMSA-BIO-900	900 Nm ³ /hr
AMSA-BIO-1000	1,000 Nm ³ /hr

Our exothermic gas plants are designed to deliver controlled and consistent protective atmosphere for heat treatment and furnace applications. Built with proven technology and robust construction, these systems ensure process stability, safety, and operational efficiency.

Exo-Gas Plant Capacity & Gas Purity



GAS PURITY: CO: 18% – 22%, H₂: 2% – 5%, CO₂: 4% – 8% & N₂: Balance

MODEL	O2 GAS PLANTS CAPACITY
AMSA-EXO-10	10 Nm ³ /hr
AMSA-EXO-20	20 Nm ³ /hr
AMSA-EXO-50	50 Nm ³ /hr
AMSA-EXO-100	100 Nm ³ /hr
AMSA-EXO-200	200 Nm ³ /hr
AMSA-EXO-100	500 Nm ³ /hr
AMSA-EXO-600	600 Nm ³ /hr
AMSA-EXO-700	700 Nm ³ /hr
AMSA-EXO-800	800 Nm ³ /hr
AMSA-EXO-900	900 Nm ³ /hr
AMSA-EXO-1000	1,000 Nm ³ /hr & Above

Our ammonia cracker units are engineered to produce a consistent hydrogen–nitrogen gas mixture through efficient thermal cracking. Designed with robust construction and proven technology, these systems ensure stable output, operational safety, and reliable performance for heat treatment and industrial applications.

Ammonia Cracker Unit



Our screw type air compressors are designed to deliver continuous, reliable compressed air with high energy efficiency. Built for industrial-duty operation, these compressors ensure stable airflow, low maintenance, and long service life across demanding applications.

Screw Type Air Compressor



GAS PURITY: Hydrogen (H₂): 75% and Nitrogen (N₂): 25%

MODEL	O2 GAS PLANTS CAPACITY
AMSA-BIO-10	10 Nm ³ /hr
AMSA-BIO-20	20 Nm ³ /hr
AMSA-BIO-50	50 Nm ³ /hr
AMSA-BIO-100	100 Nm ³ /hr & Above

AIR COMPRESSOR CAPACITY

05 HP	30 HP
7.5 HP	40 HP
05 HP	50 HP
10 HP	60 HP
15 HP	75 HP
20 HP	100 HP & Above

Working Pressure: 7 / 8 / 10 / 13 bar

Refrigerated air dryers are designed to remove moisture from compressed air by cooling the air stream and condensing water vapor. By maintaining a stable pressure dew point, these dryers protect pneumatic equipment, pipelines, and downstream gas generation systems from corrosion and moisture-related damage. Their energy-efficient operation, compact design, and reliable performance make them ideal for industrial air preparation and pre-treatment in PSA and gas plant applications.

Desiccant air dryers are used for deep moisture removal in compressed air and gas systems by passing air through high-performance desiccant materials. They operate on the principle of adsorption to achieve very low pressure dew points, ensuring dry, contamination-free air for critical applications. These dryers are essential for protecting PSA gas plants, instruments, and pipelines, especially in demanding industrial and medical environments where consistent air quality is required.

Refrigerated Air Dryer



Capacity & Dew Point

Capacity Range: 10 – 10,000 CFM
Pressure Dew Point: +2°C to +5°C

Desiccant Air Dryer



Capacity & Dew Point

Capacity Range: 5 – 5,000 CFM
Pressure Dew Point: -40°C / -70°C

DIFFERENCE BETWEEN REFRIGERATED & DESICCANT AIR DRYERS

Feature	Refrigerated Air Dryer	Desiccant Air Dryer
Working Principle	Air is cooled to condense and remove moisture	Moisture is removed by adsorption using desiccant
Dew Point	+2°C to +5°C	-40°C / -70°C
Drying Level	Standard moisture removal	Deep drying
Best For	General industrial applications	Critical & gas plant applications
Energy Consumption	Lower	Higher than refrigerated
Operating Cost	Economical	Higher, but high performance
Typical Use	Workshops, utilities, general plants	PSA oxygen/nitrogen plants, instrumentation
Moisture Protection	Moderate	Very high

GAS PLANT CHEMICALS

CMS
(CARBON MOLECULAR SIEVE)



Carbon Molecular Sieve is a specialized adsorbent used in PSA nitrogen gas generation systems based on selective adsorption of oxygen molecules. Its controlled pore structure allows rapid oxygen separation while retaining nitrogen, ensuring stable purity levels, consistent performance, and long service life under continuous industrial operation.

ZMS
(ZEOLITE MOLECULAR SIEVE)



Zeolite Molecular Sieve is a crystalline aluminosilicate adsorbent used in PSA and VPSA oxygen generation systems. It selectively adsorbs nitrogen under pressure, enabling the production of high-purity oxygen with reliable cycle performance, high adsorption efficiency, and proven durability in medical and industrial applications.

13X MOLECULAR SIEVE



13X Molecular Sieve is a high-capacity adsorbent widely used for air drying and removal of moisture, CO₂, and trace impurities in gas systems. Operating on molecular size exclusion principles, it protects downstream equipment, enhances system efficiency, and ensures stable operation of air and gas generation plants.

ACTIVATED ALUMINA



Activated alumina is a highly porous aluminum oxide adsorbent used for deep drying and moisture removal in compressed air and gas systems. It works on the principle of physical adsorption, ensuring low dew point levels and stable system performance. Its high mechanical strength, thermal stability, and long service life make it ideal for desiccant air dryers and gas purification applications.

ACTIVATED CARBON



High-quality activated carbon is used in air and gas plants for the removal of oil vapors, hydrocarbons, odors, and organic impurities. Its highly porous structure provides a large surface area for efficient adsorption, protecting downstream equipment and improving gas purity. It plays a critical role in air purification and pre-treatment stages of PSA and gas generation systems.

CERAMIC BALLS



Ceramic balls are used as inert support media in gas plants and process vessels to ensure uniform gas flow and proper distribution of adsorbents or catalysts. They provide mechanical support, prevent channeling, and enhance system efficiency. Due to their high compressive strength, thermal resistance, and chemical inertness, ceramic balls ensure reliable and long-term operation.

GAS PLANT INSTRUMENTS

MECHANICAL COMPONENTS / ACCESSORIES

- Ball Valves, Globe Valves, Butterfly Valves, Safety Valves
- Pneumatic Changeover Angle Seat Valves
- Pressure Relief Valves (PRV), Diaphragm Valves
- 3-Way Valves, Cook Exhaust Valves, NRV / Niddle Valves
- PU Connectors, PU Pipes, Hose Pipes
- Pressure Gauges Etc.

GAS PLANT AUTOMATION PRODUCTS

- Oxygen Analyzers, PPM Analyzers, Oxygen Sensors
- HMI, PLC & Analog Cards
- SMPS, MCB & MCCB, Relays, Contactors, Timers
- Pressure Switches, Indicator Lights (230V & 24V), Buzzer, Selector Switch
- All Types of Solenoid Valves (230V & 24V)
- Pneumatic Changeover Angle Seat Valves, 3-Way Valves, Auto Drain Valves

INDUSTRIAL AUTOMATION PRODUCTS

- LT & HT Panels
- PLC-Based Panels, Process Control Panels, Electrical Control Panels
- MCC & PCC Panels
- Allen Bradley, Delta, Siemens, Schneider, ABB, Danfoss Projects
- OMRON AC Drives / VFD & Panels
- Siemens PLC S7-300
- Complete Industrial Automation Solutions

PROCESS INSTRUMENTS – FLOW, LEVEL, PRESSURE, TEMPERATURE

- **Flow Measurement:** Thermal Mass / Vortex / Turbine / Oval Gear Flow Meters, Orifice, Mechanical Diesel, Glass Tube Rotameter, Digital Flow Meters
- **Level Measurement:** Level Transmitters & Switches, Level Gauges (Float & Board Type)
- **Pressure Measurement:** Pressure Gauges & Switches, Transmitters, Differential Pressure Transmitters, Flush Diaphragm Transmitters, Digital Pressure & Water Pressure Gauges
- **Temperature Measurement:** RTD & Thermowell, Thermocouples, Head/Field Mounted Temperature Transmitters, Temperature Gauges & Sensors

INDUSTRIAL AUTOMATION PRODUCTS

- Online VOC Gas Detectors
- Stack Dust Monitoring Systems
- Stack Temperature, Pressure & Flow Measurement
- Continuous Ambient Air Quality Monitoring Systems
- Zirconia Type Oxygen Analyzers
- SOx & NOx Analyzers

Associated with Leading Brands

We collaborate with reputed national and international OEM brands to source high-quality components, automation systems, and process instrumentation for our air and gas plant solutions. These associations enable us to deliver reliable performance, industry compliance, and long-term operational value across all our engineered systems.

Atlas Copco

nucon

 **DELTA**

Honeywell

Danfoss

 **POLYCARB**

 **SMC**

SIEMENS

 **ANEST IWATA**

 **aira**

 **ROTEX**

 **TECHNOVATION**

 **Delta**

 **L7**

 **Parker**

 **JANATICS**
Pneumatic

 **Uflow**
Automation
INDIA

 **HAVELLS**

 **Schneider**
Electric

 **Flowstar**

 **IR**

 **ABB**

 **ANEST IWATA**  **mohrson**

 **ELGI**

 **Jindal**


सेल **SAIL**

 **Honeywell**

 **TATA STEEL**

 **SORBEAD INDIA**

 **CarboTech**
The activated carbon people

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AMSAIR ENGINEERING

WE PROVIDE SERVICES OF GAS SOLUTIONS

ALL OVER INDIA



CONTACT US

At **AmsaAir Engineering Pvt. Ltd.**, we shape the future of **air and gas solutions** through innovation, reliability, and engineering excellence. Our cutting-edge technologies are designed to enhance efficiency and performance across medical and industrial applications.

Contact us today to learn how our advanced solutions can meet your **oxygen and nitrogen requirements**. Let us work together to deliver customized, efficient, and sustainable gas systems—**building a better future, together.**

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