



AMSAIR 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/VP SA Oxygen Gas Plants, Nitrogen Gas Plants (PSA, MS, DE-OXO, CU DE-OXO, 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

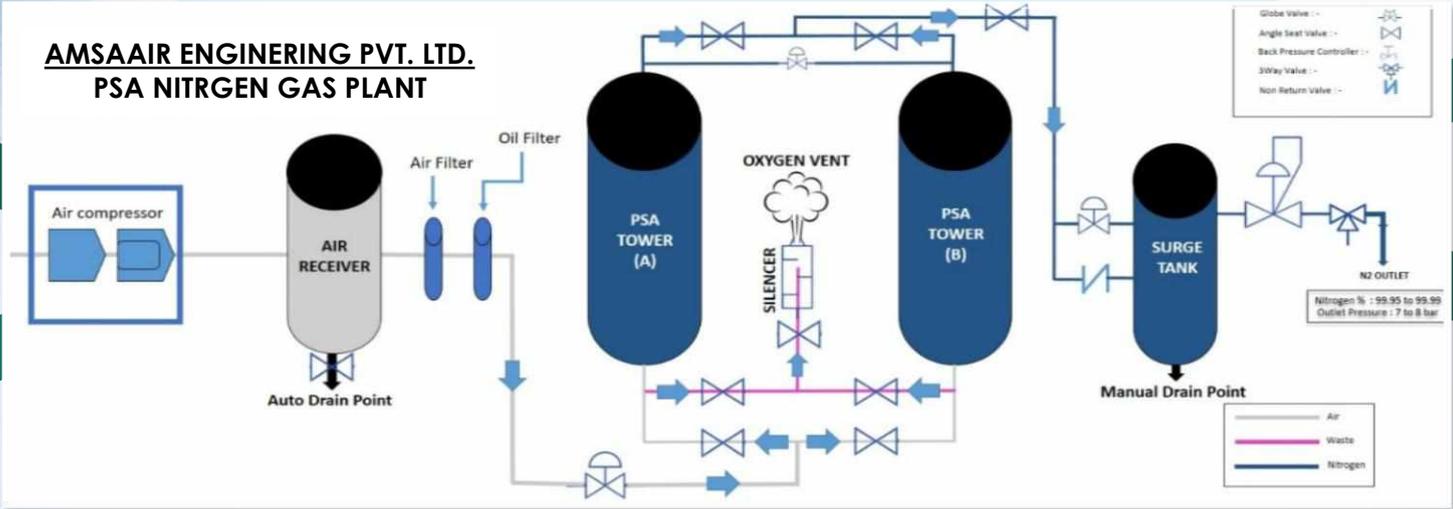
- PSA Nitrogen Gas Generation Systems (MS, DE-OXO, CU DE-OXO & Membrane Type)
- PSA & VPSA Oxygen Gas Generation Systems (Medical & Industrial)
- Oxygen & Nitrogen Gas Plants with Cylinder Filling Systems
- Hydrogen Gas Generation Units
- Ammonia Cracker Units
- Exo-Gas Generation systems
- Biogas Generation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

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.





NITROGEN GAS GENERATION SYSTEMS



PSA Nitrogen Gas Plant 99.99%

PSA Nitrogen Gas Plant Ultra Purity 99.9999



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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.

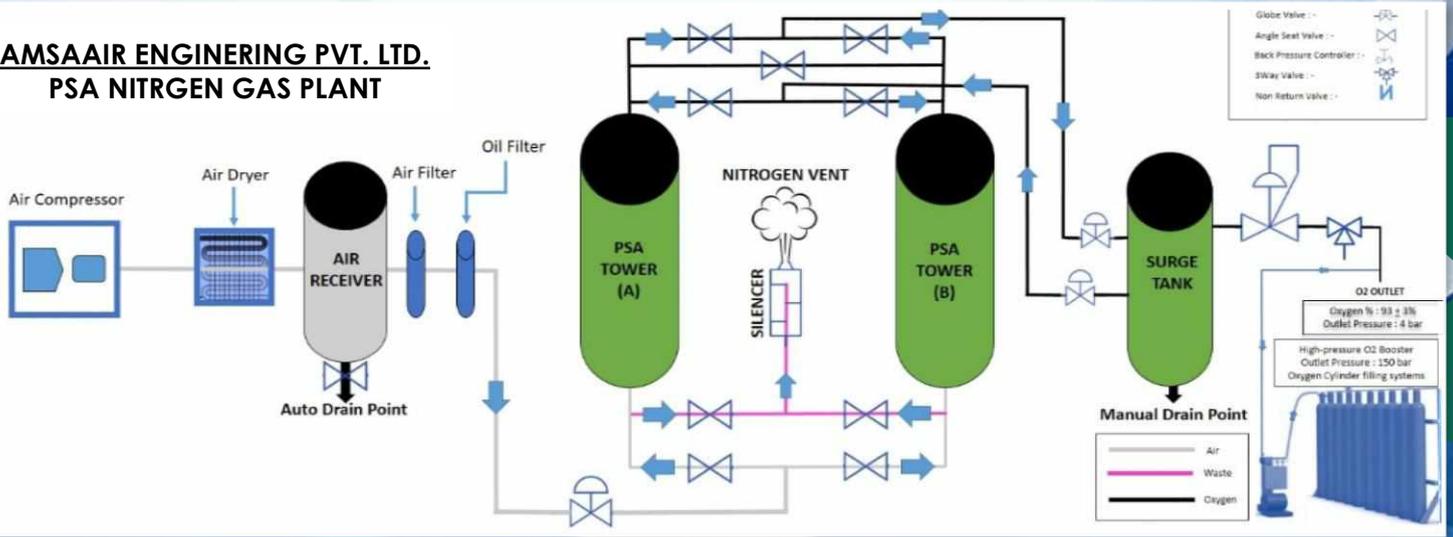


Our nitrogen gas generation systems support diverse industrial applications by providing a safe, reliable, and cost-effective source of high-purity nitrogen. These applications demonstrate the versatility and efficiency of on-site nitrogen solutions across multiple industries.



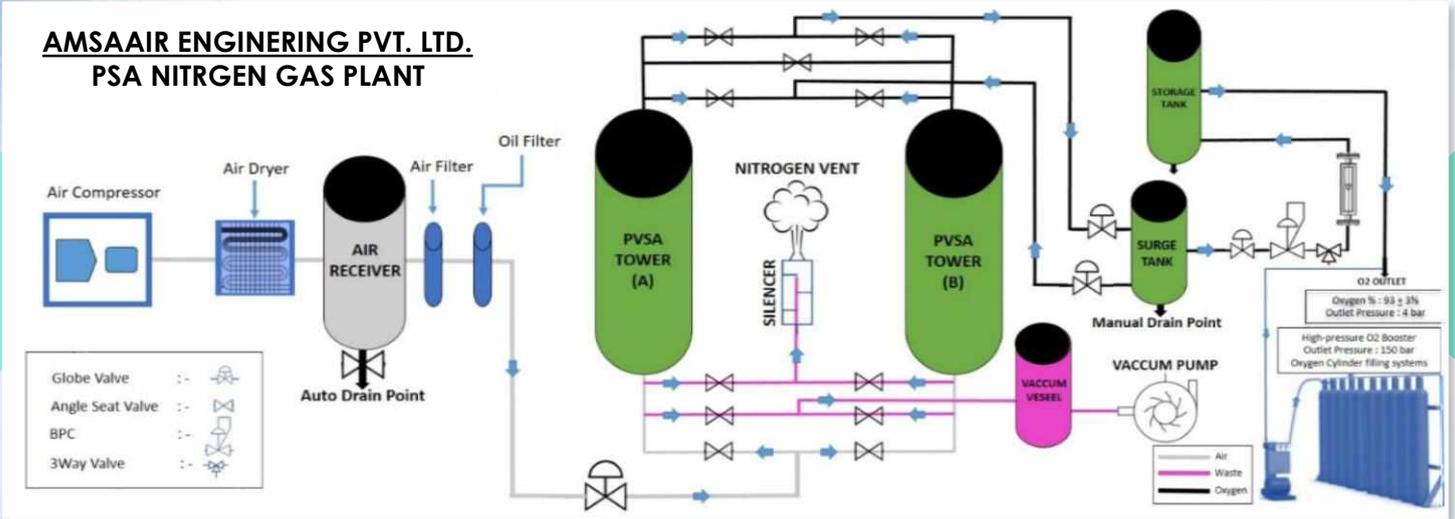
PSA OXYGEN GENERATION SYSTEMS

AMSAAIR ENGINEERING PVT. LTD. PSA NITROGEN GAS PLANT





VPSA OXYGEN GENERATION SYSTEMS



**Capacity with
Purity 93 % ± 3%**

**PSA Oxygen
Gas Plant
Purity 93% ± 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.

INDUSTRIALS 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.

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.

Bio-Gas Plant Capacity & Gas Purity

Exo-Gas Plant Capacity & Gas Purity



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

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

MODEL	O ₂ 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

MODEL	O ₂ 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.

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.

Ammonia Cracker Unit

Screw Type Air Compressor



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

MODEL	O ₂ 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

Desiccant Air Dryer



Capacity & Dew Point

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

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.

COPPER CATALYST



Copper Catalyst is a high-activity catalytic material used in Cu De-Oxo plants for effective removal of trace oxygen from nitrogen, hydrogen, and other industrial gases. It works on the principle of catalytic oxidation, converting oxygen into water vapor to achieve ultra-low oxygen levels and stable gas purity. Its high mechanical strength, thermal stability, and long service life make it ideal for nitrogen gas plants, hydrogen purification systems, and critical gas processing applications.

NICKEL CATALYST



Nickel Catalyst is a high-performance catalytic material used in hydrogenation and gas purification processes for the removal of residual oxygen, carbon oxides, and unsaturated hydrocarbons from industrial gases. It works on the principle of catalytic reaction, ensuring high gas purity, stable process performance, and efficient conversion. Its excellent thermal stability, strong mechanical strength, and long service life make it ideal for hydrogen gas plants, ammonia cracker units, and critical gas processing applications.

PALLADIUM CATALYST



Palladium Catalyst is a highly active noble metal catalyst used in De-Oxo plants for the efficient removal of trace oxygen from hydrogen, nitrogen, and other industrial gases. It works on the principle of catalytic oxidation, where oxygen reacts with hydrogen to form water vapor, ensuring extremely low oxygen levels and high gas purity. Its superior catalytic activity, excellent thermal stability, and long service life make it ideal for high-purity gas systems and critical De-Oxo applications.



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.



All brand names and logos are the property of their respective owners and are used only to indicate product compatibility and technology association.



AMSAAIR ENGINEERING

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WE PROVIDE SERVICES OF GAS SOLUTIONS

ALL OVER INDIA



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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**.

M/s. AMSAAIR ENGINEERING PVT. LTD.

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