

Committed To Quality

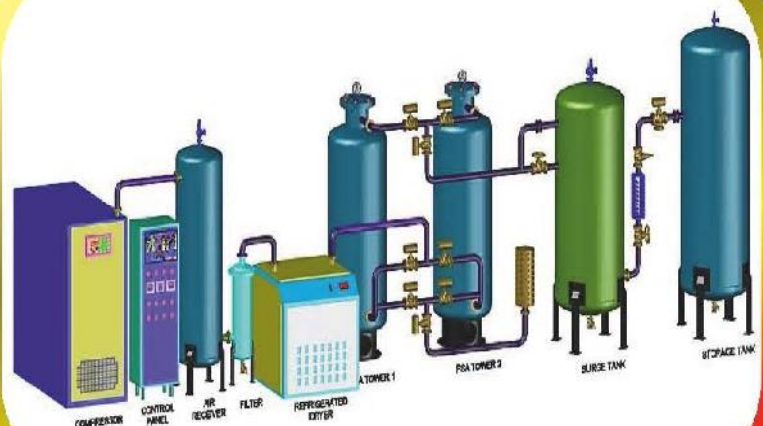
AIR N GAS PROCESS TECHNOLOGIES

(ISO 9001:2015 Certified)



www.air-n-gas.com

- PSA NITROGEN PLANT
- PSA OXYGEN PLANT
- MEDICAL OXYGEN PLANT
- AIR/GAS DRYER
- BIO GAS DRYER
- BIO GAS TO CNG
- AMMONIA CRACKER



THE COMPANY

◆ **Air-N-Gas Process Technologies** was established in the year 2007, with an aim to boost the technical advances in the field of Adsorption based Gas Separation Systems, Air Filters and Air Dryers. In this short span of time, we have earned ourselves a niche in the air dryers industry and have established a great rapport amongst the leading manufacturers, exporters, traders and suppliers.

Supported by a group of efficient technocrats, we are headed by Mr. Shailesh Verma (B.Tech-Mech, DMM), who has accumulated a rich experience of more than 30 years in the respective field. Today We have emerged as a specialized Concern in designing, manufacturing, exporting, site installation and commissioning of a varied range of products like nitrogen/oxygen plant, medical oxygen plant, compressed air drying unit, high/Low pressure Dryers, Air Filters, After Coolers, Auto Drain Valves, Air Receivers, pressure Vessels, etc.

Delivering a high on performance range of products and services, we aim to be a leading name as a manufacture, exporter and service provider in the concerned field. Experimental outlook and innovative designing power have enabled us to Established a firm base, and we are sure that the same will take us ahead as well.

We have our well-equipped factory with state of art equipments to provide excellent quality with stage wise strict quality controls.



Corporate Office

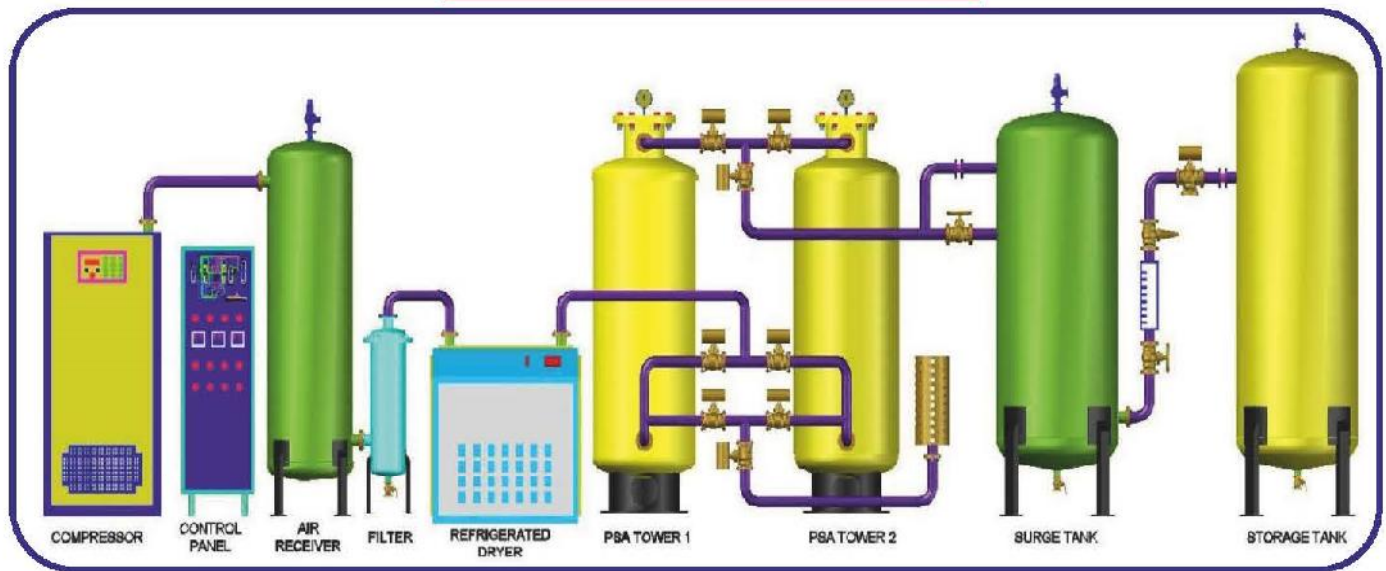


Project Office



Manufacturing Unit

PSA NITROGEN PLANT



The compressed air is passed through a Twin Tower PSA module interconnected with automatic changeover valves. After passing through this bed of Activated Alumina air gets dried. Supply of dry compressed air from this layer of desiccant (activated alumina) will be continuous without any interruption. Dried compressed air will now come in contact with bed of Molecular sieves (MS). At a time one tower remains under pure gas production cycle, whereas the other tower undergoes regeneration which is achieved through depressurization of the tower to atmospheric pressure. The two towers of PSA modules are inter-connected with automatic changeover valves through pneumatic signal given by solenoid valve which in turn get the electrical signal from the timer provided in the control panel. The changeover time cycle will be 1 + 1 minute. The outgoing pure gas is sent to a surge vessel where the minimum gas pressure will be maintained with the help of Back pressure Regulator. The product gas will now be sent to the consumer point through a pressure reducing valves at required pressure.



ADVANTAGES

- ✦ Easy to install and maintain
- ✦ Generates N_2 gas and when required
- ✦ No dependency on outside source.
- ✦ Fully Automatic Operation requiring no special attention.
- ✦ manless operation
- ✦ Proven Technology.
- ✦ Purity of N_2 up to 99.9999% can be Achieved.
- ✦ Generates Nitrogen at almost $1/10^{th}$ cost of cylinder nitrogen.
- ✦ More than 10000 Plants based on PSA Technology operating successfully in India and abroad.
- ✦ For achieving High purity and ultra highpurity Deoxo units are provide

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)

PSA OXYGEN PLANT



- ✦ Fully Automatic Operation requiring no Special attention .
- ✦ Generates O₂ as and when required.
- ✦ Easy to install and maintain.
- ✦ Purity of O₂ up to 93% to 95% can be Achieved. 99% purity with additional system is possible.
- ✦ Latest Low Temperature Adsorption Technology
- ✦ Proven Technology

ADVANTAGES :

- ✦ Lower your Facility's Operation Cost—Take it directly from Air.
- ✦ Eliminate the expense of Purchasing, Receiving & Monitoring Your Hospital's Oxygen Supply.
- ✦ Monitor the Oxygen quality instantly.
- ✦ Fully Automatic Operation requiring no special attention—Man less Operation.
- ✦ Easy to install and maintain— Skid Mounted, Pre Wired & Pre commissioned.
- ✦ Safer than cryogenic storage & managing high pressure cylinders.
- ✦ Not required N.O.C/CCOE approval
- ✦ Faster Payback period 1 Year or lesser.

APPLICATION :

- ✦ Medical Oxygen Plant.
- ✦ Glass and Enamel industry.
- ✦ Steel Industry.
- ✦ Pulp and Paper Industry.
- ✦ Chemical Industry.
- ✦ Drinking water Industry.
- ✦ Waste Water Treatment and Waste Disposal Industry.
- ✦ Bio-technology Industry.

PSA MEDICAL OXYGEN PLANT

- ✦ On Site Oxygen Production:
No risk of Supply chain failure.
- ✦ Autonomy: Produce what you use.
- ✦ Safety: No more explosion or Fire Hazards related to filling of cryogenic Tanks or with high pressure cylinder Storage.
- ✦ Consistent Purity: Oxygen purity of PSA meets US Pharmacopeia Standard (93% +3%) which can be Monitored.
- ✦ Enormous Saving: 65-70% saving on present oxygen consumption.
- ✦ Reliability: System designed for 24*7—365 days continuous use
- ✦ Less Operating Cost: Reaches break-even point within 6 months to 3 years



AIR/GAS DRYING SYSTEMS

REFRIGERATED AIR DRYER

◆ The simplest way of removing moisture from compressed air by reducing the temperature.

- ✦ Simple Non Cyclic Operation
- ✦ Low Operating cost
- ✦ Low Noise
- ✦ Zero purge loss
- ✦ PDP 3°C
- ✦ Environment Friendly Refrigerant



HEATLESS DESSICANT DRYER

◆ The simplest way of removing moisture from compressed air by Dessicant.

- ✦ Simple Operation
- ✦ Easy to maintain
- ✦ Microprocessor based Controller With Purge Saver
- ✦ No need of heater or cooler
- ✦ Low ADP of (-) 40°C can be easily achieved.



INTERNALLY / EXTERNALLY HEATED DRYER

◆ This is an advance version of the heatless dryer where purge air loss is very low due to regeneration is achieved by dry air at low pressure and at high temperature.

- ✦ Dew point up to (-) 80 Deg C (atm) can be achieved.
- ✦ Longer Life of Desiccant
- ✦ Microprocessor based Controller With MIMIC Display.
- ✦ No need of Cooling Water





HEAT OF COMPRESSION AIR DRYER

◆ In this type of dryer regeneration process is done using compressed hot air.

- ✦ Excellent in Desiccant Drying
- ✦ Minimum Energy Loss
- ✦ No Purge Loss
- ✦ ADP of (-) 40°C can be easily Achieved
- ✦ Conceptualization of 3 way Valve System
- ✦ Most economical air dryer
- ✦ Advanced dry air cooling for no Dip in dew point during Changeover.

SPLIT FLOW NO PURGELOSS AIR DRYER

◆ In this Dryer a portion of inlet air is split 40% of air used for regeneration.

- ✦ Advanced Desiccant type air drying.
- ✦ Minimum Energy Loss
- ✦ No Purge Loss
- ✦ Used where inlet air temperature is not high.
- ✦ ADP of (-) 40°C can be easily achieved.
- ✦ Conceptualization of 3 valve system
- ✦ Advanced Dry air cooling for no dip in dew point used



LOW PRESSURE DRYER



3 TOWER SYSTEM



2 TOWER SYSTEM

◆ Using of large desiccant bed to get consistent dew point of low pressure air.

- ✦ Advanced PLC system for Timing sequence.
- ✦ Reliable and Efficient Air Dryer.
- ✦ Large Desiccant Beds for Consistent Dew Point.
- ✦ Easy Maintenance
- ✦ Long life of 4-way valve system
- ✦ Most economical air dryer

BIOGAS DEHUMIDIFICATION SYSTEM



REFRIGERATED TYPE

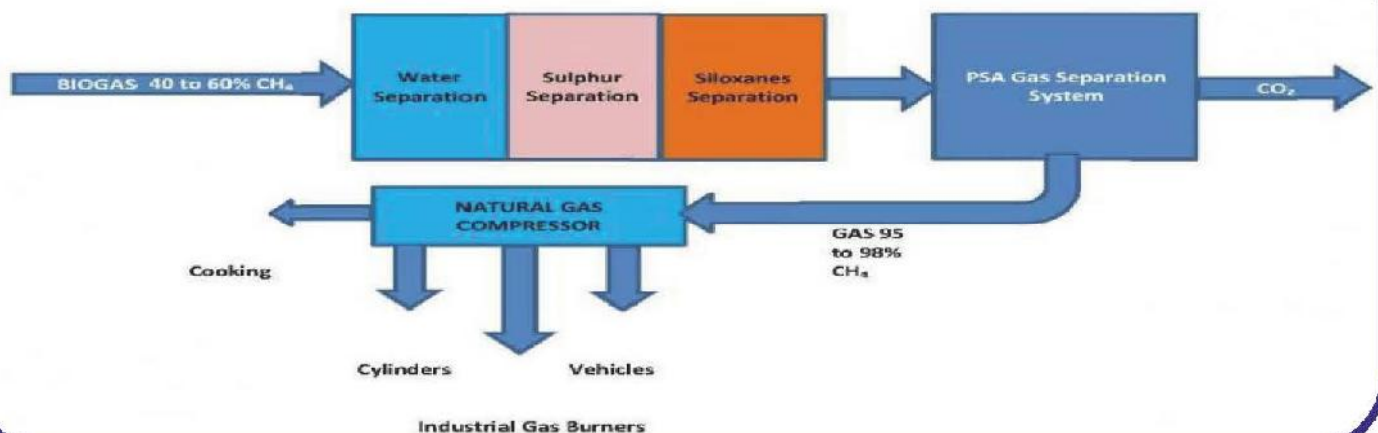
- ✦ Stainless Steel heat exchangers.
- ✦ Low RH.
- ✦ Hermetically Sealed scroll type Compressor
- ✦ CFC Free Refrigerant.
- ✦ Easy Maintenance.
- ✦ Structural solid steel base.

DESSICANT TYPE

- ✦ -40 Deg. C Dew point
- ✦ Dessicant Based
- ✦ Low maintenance
- ✦ Low operating Cost
- ✦ Skid mounted

BIO GAS TO CNG CONVERSION SYSTEM

SCHEMATIC DIAGRAM BIOGAS TO BIOMEthane (CNG) CONVERSION



◆ Purification of un-pure raw biogas to Produce fuel grade methane (CNG) by Using of vacuum pressure swing Adsorption

- ✦ Based on PSA/VPsA Technology.
- ✦ Eco Friendly Fuel.
- ✦ Efficient way of energy conversion
- ✦ Digested Sludge is high quality Fertilizer.
- ✦ Source for decentralized power Generation.
- ✦ Organic waste material use as a raw Material.



Some of Our Valued Clients



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AIR N GAS PROCESS TECHNOLOGIES

(ISO 9001:2015 Certified)

Corporate Office:

B-1, 801, Westgate Business Bay
S.G. Highway, Makarba
Ahmedabad-380051 Gujarat
Tel: +91 79 40064451
E-mail: sales@airngas.co.in

www.airngas.co.in

Factory

B-8 Maruti Industrial Estate, Phase-I.
G.I.D.C. Vatva Ahmedabad- 382445 Gujarat
Tel: +91 79 48913298
E-mail: ang@air-n-gas.com

www.air-n-gas.com