

Gas Pipeline Supply Oxygen Nitrogen Plants

We offer highly advanced gas pipeline supply oxygen nitrogen plants which are extensively used in oxygen and nitrogen production industries. These are renowned among our valued client for its effectual functioning.

1) Air compressor: Screw/ low pressure- type:

The advanced series which are accessible from the market have different combination of fulfilling client requirement for Low installation, Operating and maintenance costs, with high dependability and easy usage. These screw rotary compressors are trouble free and advanced.

Centrifugal Type:

It is highly efficient, economical, consistent and is highly reliable source of air supply. It has very low maintenance cost which is very good for the compressor.

2) Pre-cooling system

The pre cooling system is highly effective skid mounted equipment and is offered with the primary purpose of cooling down the air to temperature of 5 to 8 degrees & helps in discharging of condensed water. These compressors are of European origin.

3) Universal Boschi Purifier

The universal boschi purifier helps in the removal of moisture, carbon dioxide, hydrocarbons and gases which are considered as the impurities in the process of air separation. The structure includes the double layered molecular sieves from the “Zeochem” (Switzerland) with alumina which acts as a absorbent.

For the purity of the final product like oxygen and nitrogen in the air separation column, the process purifier is important for the entire process. This includes the 2 skid mounted molecular sieve regeneration batteries which works on night shifts and switches for:

- Manually
- PLC control

4) Air separation unit

In this unit the mixture of nitrogen and oxygen is divided by the difference in their liquefaction temperatures. With double rectification process and at temperatures below (-) 180 deg centigrade, the liquefied air is sent to the lower and upper column.

The quality of final product ie oxygen and nitrogen in terms of quantity and quality is determined by the design and efficiency of the ASU. The boschi design includes the highly efficient fin type aluminum heat exchangers and column, in which the entire upper column is packed, thus lowering down the operational pressure and growing the oxygen, nitrogen and argon recovery.

The highly effective argon is attained above the 1000M3/HOUR Oxygen Plants by the advanced techniques using the full rectification without using the hydrogen and de-oxo unit helps in saving down of:

- Power costs
- Operational costs
- Investment

These features make these machines highly effective and versatile with complete research and development.

5) Turbo expander

The Turbo expander is a gas bearing expansion refrigeration turbine that is much more efficient than any other expansion device.

It is a gas bearing expansion refrigeration turbine which is highly effective than other expansion device. This works on the technique of induced cooling via expansion because of which operational pressure is lowered and the performance of the distillation is stable for consistent production.

Below mentioned are its technical specifications:

Models	UBT SERIES:- UBT40, UBT80, 100, 120, 150 , 180, 200, 220, 250, 300, 350, 400, 500, 600, 800 & 1000 upto 50,000	
Oxygen production		
Oxygen Output (cu. Mtr/hr)	40 TO 50,000m3/hour	
Oxygen Purity (%)	99.6%	
Oxygen Pressure in cylinders	150 200 optional	bar(kg/cm2)
Nitrogen production		
Nitrogen Pressure out of Column (bar)	40 to 50,000 m3/hr.*	
Nitrogen Output (cu. Mtr/hr)	99.9% to 99.99/3ppm opt.	
Nitrogen Purity (ppm optional)	150 bar(kg/cm2)	
Nitrogen filling in cylinders (optional)	150 bar(kg/cm2)	
Type		
Operation Pressure (bar)	7 bar(kg/cm2)	
Operation Period	24 hours -continuous	
Air compressor	Rotary/screw	
Expander	turbo	
Downtime for repair	Very low due to screw compressor and low working pressure there are no leakages.	
Air separation unit	High yield >99%	
Exchanger efficiency(plate fin type)	Very high	
Oxygen & nitrogen production	Simultaneous (no loss of oxygen)	
Power		

Connected	AS PER CAPACITY
Consumed(abt.)	AS PER MODEL
Specific power per m3 of oxygen	UPTO 0.6 UNITS DEPENDING ON CAPACITY
Specific power per m3 of oxygen +nitrogen(pure)	0.2 to0.4kwh(units)
Voltage 3 phase**	380-415 50/60 hz or as per country

Following are its salient features:

- Purity of Oxygen produced from all plants is minimum 99.6% and Nitrogen Purity CAN BE available up to 1-3 PPM (Depending upon requirement of the customer)
- All plants use “Oil free” rotary screw /centrifugal oil compressor working between 5-7 BAR
- All plants incorporate Aluminum Brazed exchangers and packed columns for high efficiency
- Turbo expanders (GAS Bearing) for trouble free operation
- All plants above “500M3/HOUR ” CAN supplied with automatic PLC control
- Engineering support along with complete quality control is provided by our company
- We provide qualified engineers for Supervision, Installation and start up of all our plants as well as training of manpower at customers’ site
- Very low power consumption with proven performance and virtually Zero maintenance required for the machines
- 100% reliability for oxygen gas quality for industrial & hospital use