



IMPIANTI LIQUEFAZIONE E PRODUZIONE GAS TECNICI
ING. L. & A. BOSCHI



IMPIANTI LIQUEFAZIONE E PRODUZIONE GAS TECNICI

23 years of Excellence



HIGH PURITY OXYGEN GENERATOR

UNIVERSAL

IN TECHNICAL COLLABORATION WITH

ING L & BOSCHI OF ITALY

www.oxygenplants.com



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Company Profile

*Universal in Collaboration with **ING.L.A. BOSCHI Italy SINCE 1930** manufactures & suppliers Premium Quality low pressure Air separation plants of all sizes ranging from 50m³/hour to 50,000m³/hour including psa oxygen/nitrogen generators for industrial and hospital use .*



Dr.Boschi (Italy) at New Delhi
Press Conference



OEM supplier from Switzerland

With state of the art designs and technology from Europe , established manufacturing facilities spread out in various locations all over India & Asia and sales located in New Corporate Region (NCR) of Delhi, the Italy based company is dedicated to supplying the latest in Cryogenic Technology constantly striving to improve its products through continuous research and development.

Universal is a certified ISO 9001:2000 organization and the latest achievement includes the successful approval for CE Certification which makes our company the first in Asia to certified for Cryogenic Pressure vessel ,Plant machinery exports to Europe and USA. We have success in the low Pressure plants as it is the technology of today and the future. We have manufactured over 300 plants since last 23 years since 1985 at New Delhi and supplied to over 40 countries world wide.



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1. AIR COMPRESSOR:
CABINET TYPE SCREW COMPRESSOR
(ATLAS COPCO OPTIONAL)

2. REFRIGERANT AIR DRYER:

Highly efficient refrigerant dryer to remove all traces of moisture.
(Make-USA Parke(Dominick) or Dominic Hunter)

3. OXYGEN GENERATOR

This system uses beds of imported of molecular sieve of European origin to obtain high purity oxygen.

ITEM	MAKE
Molecular Sieve	France CECA
Pneumatic Pipeline Valve	Japan CKD
5/2 Solenoid Valve	Japan CKD
PLC with touch screen panel	Japan CKD
Air distributing system	Germany BF
High effective Silencer	Japan CKD Import

1



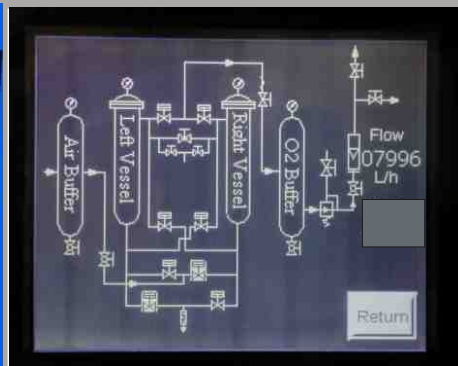
2



3



CABINET TYPE OXYGEN GENERATOR



FLOW DIAGRAM ON TOUCH SCREEN PANEL



CONTROL PANEL



OXYGEN GENERATOR



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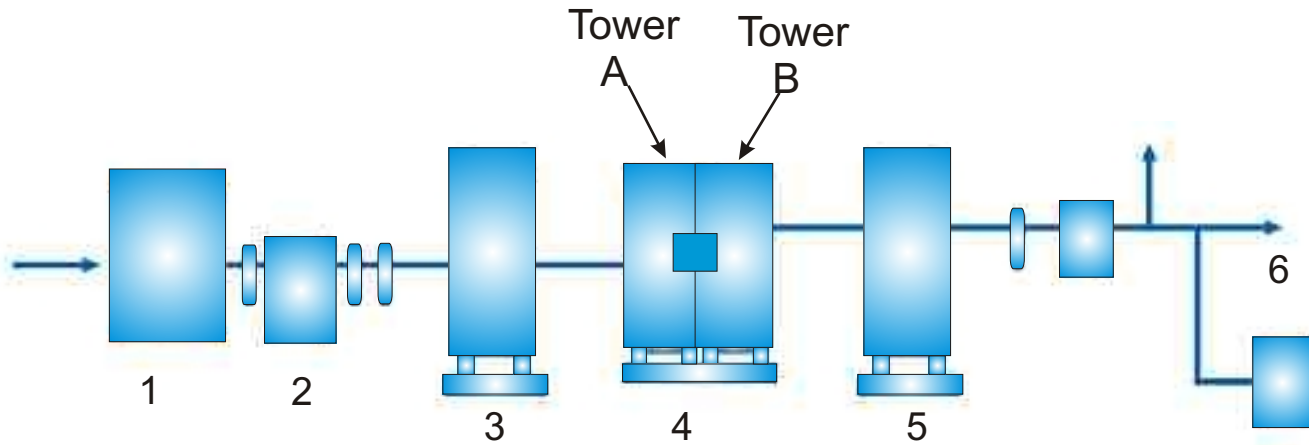


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Operation Principle

Making use of pressure swing adsorption technology, adopting zeolite molecular sieve as adsorbent, under certain pressure, utilizing the different absorbability of N₂ & O₂ to surface of zeolite molecular sieve, with PLC controlling open & close of Pneumatic valves to achieve alternative circulation between tower A & tower B, adsorbing when pressure rises, desorbing when pressure drops down, realizing oxygen and nitrogen separation. After further purification process, medical oxygen with high purity is obtained.



1. AIR COMPRESSOR.
2. REFERIGERANT DRYER WITH FILTER.
3. BUFFER TANK.
4. OXYGEN GENERATOR.
5. OXYGEN BUFFER TANK
6. OUT LET.

Technical Data

Production	Oxygen
Purity	98 %
Outlet Pressure	0.5Mpa(5 Bar)
Normal Operating Pressure	0.4-0.5Mpa(4-5 Bar)
Flow Rate	6M ³ /hr to 40 M ³ /hr



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Features of the plant:

Full Automation

All systems are designed for un-attended operation and automatic Oxygen demand adjustment.

Lower Space Requirement and Short installation period

The design and Instrumentation makes the plant size very compact, assembly on skids, prefabricated and supplied from factory. Installation is very easy and convenient.

Fast Start-Up

Start-up time is about 30 minutes to get desired Oxygen purity. So these units can be switched ON & OFF as per Oxygen demand changes.

High Reliability

Very reliable for continuous and steady operation with constant Oxygen purity. Plant availability time is better than 98% always.

Molecular Sieves Life

Expected Molecular sieves life is more than 10-years i.e. Whole life time of Oxygen plant. So no replacement costs.

Low investment and energy consumption

Simple operation and maintenance



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UOG Oxygen Generator Specifications

Model	Capacity	Purity	NO. OF CYL/DAY /APPRO-	AREA REQUIRED
UOG-6	6Nm3/hr	98%	30	3m X 6m
UOG-8	8Nm3/hr	98%	40	3m X 6m
UOG-12	12Nm3/hr	98%	55	3m X 8m
UOG-15	15Nm3/hr	98%	70	3m X 8m
UOG-20	20Nm3/hr	98%	95	3m X 10m
UOG-25	25Nm3/hr	98%	120	4m X 10m
UOG-30	30Nm3/hr	98%	140	5m X 10m
UOG-40	40Nm3/hr	98%	190	6m X 12m
UOG-50	50Nm3/hr	98%	240	6m X 12m
UOG-60	60Nm3/hr	98%	290	8m X 12m
UOG-75	75Nm3/hr	98%	360	8m X 12m
UOG-90	90Nm3/hr	98%	435	8m X 12m

* Oxygen Filling Booster Extra

* Purity Varies

Design Suction condition & Standard Tolerance



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OPTIONAL OXYGEN FILLING BOOSTER



Working Principle

The booster operates on the differential Piston area principle. A larger area piston, driven at low air pressures, drives a small area compression piston which converts input gas to higher pressure. The output gas or discharge pressure is determined by the ratio between the area of the drive piston, the operating air pressure and the available precharge pressure supply.

The function of the precharge pressure is to charge the high pressure cylinder inside the booster with gas, reducing the time need to reach higher pressures.

