

Launching new generation Ozone generator systems in India



Sanjay Jaiswal, Director, Airox Technologies Pvt. Ltd., in an exclusive interview with **Medical Equipment & Automation**, remarks that we are the pioneer in oxygen generator systems in India.

— Could you elaborate to our readers the evolution of Airox Technologies Pvt. Ltd. and your journey so far.

I have completed B.E. (Chemical) & M.B.A. (Marketing) from K.J. Somaiya, Mumbai. I am in Medical industry from last 14 years & have exposure to be associated with Companies like SIEMENS, Maquet & Agfa. We use to take MGPS (Medical Gas Pipe Line systems) projects. We realized the different issues hospital industry is facing regarding uninterrupted & quality oxygen supply. This has motivated us to bring this oxygen

generator technology from USA to India.

— It is known that you are the pioneer in launching Oxygen generator systems in Private hospital in India, with immense success; do share your experiences about the same and also do enlighten our readers regarding the Oxygen generator systems.

Yes, we are the pioneer in oxygen generator systems in India. Being new technology in India, initial days, we do faced problem regarding acceptability of this product in hospital industry. But

after seeing our product running successfully in Major Hospitals across the India we started getting good response. Our customers benefited immensely on their hospital oxygen consumption cost, it went down by 50 to 70% & many of them had their return of investment in 12 to 18 months. Now they are spending just on small electricity & maintenance cost.

This system has made them self sufficient on oxygen which also takes care of all inflationary hike of future oxygen costing. It is a far safe system as it is in gaseous form and operates just on five bars unlike cylinders which run at 160 bars and are not that combustive like liquid oxygen. This is a compact system and it can be installed on a terrace which saves huge ground floor space required for liquid oxygen. We can always check oxygen purity with the help of an oxygen analyser given along with the system.

Our customers' confidence level is high on our product and they strongly recommend us.

The Oxygen generator system has screw compressor, filtering system & oxygen generator. Air contains 21% oxygen, 78% nitrogen, 1% argon and other gases. Air is compressed with screw compressor which is filtered through driers & filters. The purified air goes to oxygen generator which separates oxygen from air by using PSA (Pressure Swing Adsorption) technology with help of Zeolite.

What according to makes Airox, the number one PSA oxygen generator supplier in India? Does Airox Technologies Pvt. Ltd. plan to supply any new high quality products in the Indian market if so, give us a brief idea of the same?

We have been chosen as "Fastest Growing Indian Company Excellence Award-2014" by On Global Corporate Achievements & social responsibilities by International Achievers Conference.

We have 100+ successful installations including all major states in India.

This milestone is been achieved by combination of great quality of Airsep Oxygen Generator (World's Largest Manufacturer of PSA Oxygen Systems), expert team for sales and service of Airox with 55 employees & strong 15 distributors across the India. We are planning to supply advance PSA oxygen generator systems with touch screen and remote monitoring mechanism. The system would be with mobile alerts and all other safety features. We are also launching new generation Ozone generator systems in India.

Does the Airsep Oxygen Generator supplied by Airox Technologies Pvt. Ltd possess any quality certifications, if so which are they?

AirSep Corporation is the ONLY PSA oxygen manufacturer that meets the following standards of construction.

- ASME VIII (American Society of Mechanical Engineers)

- NEMA (National Electrical Manufacturers Association)
- CE/PED 97/23/EC (European Standard/Pressure Equipment Directive)
- CSA/CRN (Canadian Standards Association/Canadian Registration Number)
- NYFD (New York Fire Department)
- NRTL-UL 3101.1 (Nationally Recognized Testing Laboratory/Underwriters Lab)
- Indian FDA
- ISO 9001:2008
- Our system oxygen complies with,
- USP93XXII (United States Pharmacopeia)
- EUROPIAN Pharmacopoeia
- Indian Pharmacopoeia
- HTM 2022
- HTM 02-01
- ISO 7396-1 & EN 737-3
- ISO/DIS 10083 (International Organization for Standardization).

How does the Airsep Oxygen Generator supplied by Airox Technologies Pvt. Ltd. differ from the Oxygen Generator supplied by other companies? What are the unique features of the Oxygen Generator supplied by Airox Technologies Pvt. Ltd.?

To maintain 4.5 Bar pressure & consistent purity, you require state of the art technology which is not available with any other Indian manufacturer. The Zeolite which separates oxygen from air is innovated by core team of Airsep Corporation. We manufacture our own Zeolite which are not available with any competitor. Our Process of PSA is unique and cannot be duplicated.

Due to this process, zeolite & our robust after sales service we can guaranty 20 years of life for our system. This product is highly dependent on external environment like temperature, humidity & above sea level installation. Ours is only PSA system which is successful working in Indian atmospheric condition.

Does the quality of Airsep Oxygen Generator differ from cryogenic & cylinder oxygen, if so elaborate the same?

Airsep Oxygen Generator use molecular sieves as adsorbent to separate oxygen from air. Like Magnets Molecular sieves strongly attract certain type of molecules such as those of nitrogen, CO₂, CO, Hydrocarbons, water etc. have positive and negative electrical poles.

These polar molecules are strongly attracted to our unique Molecular Sieves. For this reason the CO₂ in the PSA generated cannot exceed 60 PPM (Cryogenic oxygen generally has 300 PPM), Carbon Monoxide cannot exceed 0.5 PPM (Cryogenic oxygen generally has 5 PPM). Oil content is less than 0.015 mg/m³ (Cryogenic oxygen generally has 0.1 mg/m³ oil content). As harmful

gases like CO, CO₂, oil & hydrocarbons are far lower in PSA oxygen generator compare to cryogenic process gives us edge over oxygen quality.

It is known that Airsep Oxygen Generator differs from liquid oxygen, can you emphasize on the same?

Beside better quality as mentioned above, our system has other advantages over liquid oxygen-

- Cost saving: Saves 40 to 70% cost on oxygen.
- Safety: System is much safer than liquid oxygen.
- Saves Space: Can be installed on terrace or any other convenient location acceptable to hospital.
- No Losses: Liquid oxygen is at -180 Degree C which is given to patient on room temperature which leads in huge heating transmission, evaporation & leakage losses. Our system makes oxygen in Gaseous form at room temperature.

What do you predict about the future scenario of the developments in the fields of medical equipment & devices?

The Medical equipment & devices future will be highly driven by technology. The newer technology will

increase workflow, quality & its effectivity. Technologies can range from tools for basic survival, such as a treadle pump and basic filtration technologies, to more advanced innovations, such as methods of collecting and utilizing data in health informatics and novel building materials with real-time environmental sensing capabilities.

What according to you are the future plans and growth strategies that lie ahead in the pipeline of Airox Technologies Pvt. Ltd.? Where do you see Airox Technologies Pvt. Ltd. in the next decade?

We are promoting our product as "Oxygen for Modern Hospitals". We want all major hospitals in India to use our system for oxygen. With present installation and infrastructure in place, we are growing in that direction. We will be adding on our sales & service infrastructure to achieve our goal.

We are also venturing in VPSA system to meet bigger industrial oxygen demand.

In next decade we see ourselves as leading oxygen supplier through our system in India. We see ourselves to touch 100 Cr turn over in next 5 years. +

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