

THE WORLD'S LARGEST MANUFACTURER OF PSA OXYGEN SYSTEMS!



**One Solution For
Different Problems:**

This system gives you permanent solution from different problems like actual oxygen cylinder filling capacity, amount of oxygen wastage, sound made during loading & unloading of oxygen cylinders and extra staff need to manage oxygen cylinders.

Enormous Saving:

You will save 65-70% every year on your present hospital oxygen consumption bills. Every year Liquid oxygen & Cylinders cost will keep on rising. This system makes hospital self sufficient on oxygen.

**No Risk Of Supply
Chain Failure :**

Oxygen is directly produced on site.

Safety: No more explosion or fire hazards related to the filling of the cryogenic tanks or with the high pressure cylinders storage.

**Autonomy Produce
Only What You Use :**

Full autonomy for hospitals and health centres regarding their oxygen production.

Consistant Purity:
The oxygen Purity from our PSA meets United State Pharmacopia (93% + -3%) and is monitored in the system, whereas in delivered cylinder oxygen you may need to check the purity.

Compact System :

Does not consume bigger space, our system can be installed on terrace, room or hall.

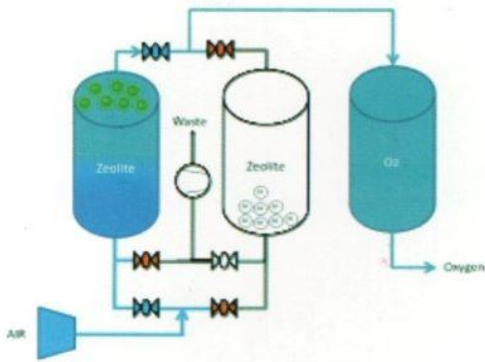
**Reduced
Operating Costs :**

Our customers have recovered their investment within 6 months to 3 years.

**Reliability /
Performance:**

System designed for 24/7 - 365 days continuous use with stable Medical oxygen concentration & a constant pressure with high flow rate. Airsep have systems operating now for 20 years plus.

The Pressure Swing Adsorption (PSA) Oxygen Generating Process



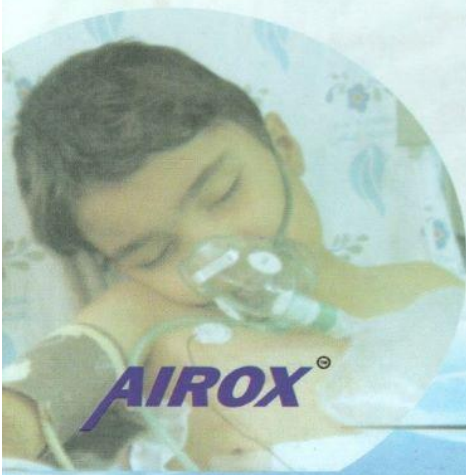
Air contains 21% oxygen, 78% nitrogen, 0.9% argon, and 0.1% other gases. AirSep oxygen Generating Systems separate oxygen from compressed air through a unique Pressure Swing Adsorption (PSA) process. The PSA process uses molecular sieve (a synthetic zeolite), which attracts (adsorbs) nitrogen from air at high pressure and releases (desorbs) it at low pressure. AirSep oxygen Generators use two vessels filled with molecular sieve as adsorbers. As compressed feed air flows through one of the vessels, the molecular sieve adsorbs nitrogen.

The remaining oxygen passes through the vessel and exits as the product gas. Before the adsorber becomes saturated with nitrogen, the feed air is diverted to the second vessel. At the point, the sieve in the first vessel regenerates by desorbing the nitrogen through depressurization and purging it with oxygen from the second vessel. This process is then repeated in the second vessel to complete a cycle that allows the oxygen generator to deliver a constant flow of product oxygen at 90% minimum purity. Under normal operating conditions, the molecular sieve is completely regenerative and will last indefinitely.

Typical Standard Package System consist of a Standard oxygen Generator matched with a dedicated Air Compressor



**Vikhe Patil Medical Foundation
Model AS-G, Installed in 2011**



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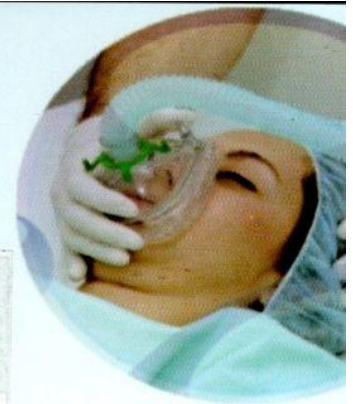
oxygen for Modern Hospital

Our Principals

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Different ranges of oxygen generators to meet every hospital needs

Our standard AS- Series oxygen Generators can produce from 20 to 500 cubic feet of medical oxygen per hour! Once you provide electricity, these dependable machines will provide oxygen for any application.



Sr.No.	Models	LPM (GAS)	SCFH	Equivalent to Liquid Oxygen M3/Day	Equivalent to Liquid Oxygen Litter/Day	Equivalent Cylinders/Day
1	AS-A	12	25	17	21	2.5
2	AS-B	26	55	37	46	5.0
3	AS-D	42	90	60	75	8.5
4	AS-D+	47	100	67	84	10.0
5	AS-E	91	190	131	164	19.0
6	AS-G	149	320	215	269	31.0
7	AS-J 45	210	450	302	378	44.0
8	AS-J 58	280	600	403	505	58.0
9	AS-K 80	350	750	504	631	73.0
10	AS-K 88	420	900	605	758	88.0
11	AS-L105	467	1000	672	842	98.0
12	AS-L125	606	1300	873	1094	125.0
13	AS-N150	700	1500	1008	1263	145.0
14	AS-N175	840	1800	1210	1516	175.0
15	AS-P195	933	2000	1344	1684	195.0
16	AS-P225	1073	2300	1545	1936	225.0
17	AS-Q245	1167	2500	1680	2105	240.0
18	AS-Q275	1306	2800	1881	2357	269.0
19	AS-R295	1400	3000	2016	2526	288.0
20	AS-R365	1726	3700	2486	3114	356.0
21	AS-W	2147	4600	3091	3872	442.0
22	AS-Z	2567	5500	3696	4630	528.0

- Note :** 1. The Actual m3/hour calculation is done at 27 Degree C temprature with 93% purity of Oxygen and 55-65 PSIG pressure at sea level. The production may vary upto 5% depending on external humidity, Temperature, site above sea level and air pollution.
2. The cylinders are considered as D Type Cylinders filled at 150 Bar Pressure with 7 m3 Capacity.

State-of-the-art Manufacturing Facilities!

AirSep is housed in modern facilities with over 120,000 square feet of manufacturing space near the city of Buffalo, in the state of New York. Our facilities are conveniently located near Niagara Falls and the Conadian border, making them ideal for easy transportation of our equipment anywhere in the world.

With state-of-the-art fabricating equipment like TIG/MIG welding machines, dual 20 Ton cranes, over 300 HP of available air compressor power, 7 loading docks, and several motor/generator sets to replicate power requirements from anywhere in the world, CPD is equipped to tackle jobs of any size and shape! Even the largest jobs are fabricated / assembled in our facility to ensure the highest quality standards are employed.



Note : 1. Due to continuous improvement, the specifications are subject to change without prior notice 2. Product images displayed in the brochure are only representative and may not exactly match the actual product

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Our Principals

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Airsep has More than 7000 oxygen Generator Installation in Hospitals Around the World



The First Affiliated Hospital of Jilin University, China
A 1200 Bedded Hospital having equivalent
375 D Type oxygen Cylinder capacity -
AS-L Triplex system running since 2005



Limerick Hospital, Limerick, Ireland
A 400 Bedded Hospital having equivalent
150 D Type oxygen Cylinder capacity -
AS-J Triplex system running since 1997



Shanghai East Hospital (Tongi University) China
A 1500 Bedded Hospital having equivalent
375 D Type oxygen Cylinder capacity -
AS-L Triplex system running since 2008



Jinzhou the first people's hospital, CHINA
A 800 Bedded Hospital having equivalent
350 D Type oxygen Cylinder capacity -
AS-N Duplex system running since 2003



The Nairobi Hospital, Kenya
A 350 Bedded Hospital having equivalent
125 D Type oxygen Cylinder capacity -
AS-L system running since 2005



Shenzhen futian District people's hospital, china
With 1250 Bedded, A 24 floors Hospital having equivalent
375 D Type oxygen Cylinder capacity -
AS-L Triplex system running since 2003

We have 375+ Installations in India, Few Testimonials

Adani Group of Medical Sciences Hospital, Gujarat (Model AS-K) 300 Bedded, Installed in 2016



We firmly believe in Automation, adopting new technologies which gives better quality and cost reduction. Airox oxygen generator AS-K model has helped us to deliver better quality of oxygen and reduced our oxygen bills. We are extremely happy with the performance of the system.

Aditya Birla Hospital, Jaipur (Model AS-K) 250+ Bedded, Installed in 2016



Our Hospital is leading hospital with 250+ bed, we have installed Airsep oxygen generator AS-K at our hospital. Our ventilators and anesthesia machines are working well on this system. We are completely satisfied with the performance of the system as it is working trouble free.

Meenakshi Mission Hospital, Madurai (Model AS-P) 1200 Bedded Installed in 2018



We have 1200 bedded hospital, we have completely shifted from Liquid oxygen to Airox oxygen generator. We are extremely happy with the system since it has helped to reduce our billing headache, measuring of liquid oxygen ,heat evaporation losses & most importantly space which occupied by liquid oxygen is free now. We strongly recommend this system to bigger hospitals.

Meenakshi Hospital, Thanjavur (Model AS-L) 600 Bedded Installed in 2018



We have installed Airox oxygen generator on Terrace. Since installation it is running fine. We are also satisfied with Airox after sales service. We will strongly recommend this product to the hospitals

Escort Goyal Heart Center, Jodhpur (Model AS-J) 250 Bedded, Installed In 2012



We have 16 ventilators & 4 O.T. complexes, Since Airsep oxygen Generator installation all our hospital is running on it. Our hospital oxygen cost came down by almost 80%.The product quality & after sales service of team Airox is fantastic. I strongly recommend hospitals to go for this system.

Narayana Hospital, Raipur (Model AS-L) 600 Bedded, Installed in 2015



The installation of oxygen generator made the big difference to the hospital as we were first using cylinders which was a big headache. Previously we have to always check the oxygen quality and availability of the cylinders but now after installing Airox AS-L system, we are extremely satisfied the system has helped us to save time, money and we dont need to worry about cylinder stock.

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We have 375+ Installations in India, Few Testimonials

Vivekanad Hospital, Lucknow (Model AS-N) 500 Bedded, Installed in 2017



All our headache of availability of Oxygen Cylinders, checking % volume to check capacity, managing bills, employing extra staff to manage the continuous oxygen low & availability of oxygen in emergency have vanished after installation of Airsep oxygen generation AS- N we strongly recommend hospital to go with it.

Shree Balaji Institute of Medical Sciences Pvt Ltd, Raipur. (Model AS-L) 450 Bedded, Installed in 2012



We had more than 100 jumbo cylinders per day consumption & now we are using Airsep oxygen Generator AS-L from 2012. The system is running extremely well from last 4 years without any trouble. We are extremely happy with its performance

Owaisi Group of Hospitals, Hyderabad (Model AS-L) 400 Bedded, Installed in 2015



We have shifted from liquid oxygen to Airsep oxygen generator AS-L Model and we are very happy with the system. Now we don't have to worry about regular supply of oxygen & oxygen filling tankers. It has also reduced our oxygen consumption bills and saved prime space on ground floor since we installed this system on the terrace.

Chest and T. B. Hospital, Jaipur (Model AS-J) 400 Bedded, Installed in 2014



Ours is a Government Hospital, we have installed Airsep AS-J system in 2014. System is running trouble free and saved huge oxygen cost. We are very much satisfied with the performance of the system.

United Ciigma Institute Of Medical Sciences Pvt. Ltd., Aurangabad (Model AS-J) 150 Bedded, Installed In 2013



Ours is modern hospital specialized in cardiac, gastro, neuro & paediatric stream with all high end machineries. We have 18 dragger ventilators, 3 cardiac, 2 neuro, 3 general O.T.'s with total 150 bedded hospital. Since Airsep AS-J oxygen generator installation system is running extremely well without any trouble. All our ventilators & anesthesia machines are running well. We are also satisfied with their after sales service. We decided not to go with liquid oxygen because every year liquid oxygen rates keep on rising, 20% oxygen we lose as heat transmission loss. At end of the day we have saved sufficient amount by installing this system.

Seven Star Hospital, Nagpur (Model AS-L) 300 Bedded, Installed in 2017



We are having Airox modal AS-L with 125 cylinders / das. since installation system is running very well without any trouble we are extremely happy with its performance. we are also satisfied with Airox after sales service.

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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 93/42/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 13485:2012

Our system oxygen complies with,

- USP93XXII (United States Pharmacopeia)
- EUROPIAN Pharmacopoeia
- Indian Pharmacopeia
- HTM 2022
- HTM 02-01
- ISO 7396-1 & EN 737-3
- ISO/DIS 10083 (International Organization for Standardization)



USP93XXII (United States Pharmacopoeia)

Oxygen 93 Percent

Oxygen 93 Percent is Oxygen produced from air by the molecular sieve process. It contains not less than 90.0 percent and not more than 96.0 percent, by volume, of O₂, the remainder consisting mostly of argon and nitrogen.

EUROPEAN PHARMACOPOEIA COMMISSION

GROUP 9G
(MEDICINAL GASES / GAZ MEDICINAUX)

Oxygen (93 per cent)

Oxygène à 93 pour cent
Monograph N°: 2455

Airox Technologies Pvt. Ltd. is the only company in India whose oxygen Generator Plants are approved by **Indian FDA**.



FDA
FOOD AND DRUG
ADMINISTRATION

Running with 375+ Indian Satisfied Customers

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HIGHEST MEDICAL GRADE oxygen QUALITY

Parameters		ISO 10083	United States USP XXII oxygen 93%	European Pharmacopeia oxygen 93%	Indian Pharmacopeia oxygen 93%	AIROX Technologies
oxygen	O ₂	>90%	90% - 96%	90% - 96%	90% - 96%	Airox 93% ±3
Carbon dioxide	CO ₂	< 300 ppm	<0.03%	< 300 ppm	< 300 ppm	< 50 ppm (0.005%)
Carbon monoxide	CO	< 5 ppm	<0.001%	< 5 ppm	< 5 ppm	< 0.5 ppm (0.00005%)
Nitrogen oxide	NO _x	-	-	< 2 ppm	-	0 ppm
Sulfure dioxide	SO ₂	-	-	< 1 ppm	-	0 ppm
Oil	-	<0.1 mg/m ³	<0.1 mg/m ³	<0.1 mg/m ³	<0.1 mg/m ³	<0.025 mg/m ³
Water	H ₂ O	< 67 ppm (-50°C)	-	< 67 ppm (-50°C)	< 67 ppm (-50°C)	< 1.5 ppm (-50°C)

Why Airsep PSA Medical oxygen quality is better than Cylinders and Liquid oxygen?

Airsep oxygen Generator use molecular sieves as adsorbent to separate oxygen from air. Like magnets, molecular sieves strongly attracts certain type of molecules which have positive and negative electrical poles. These polar molecules are strongly attracted to molecular sieves. In contrast, non polar molecules such as oxygen are not attracted. So when a mixture of all these gases passes over molecular sieves, Nitrogen, CO, CO₂, Hydrocarbons, Hydrogen Sulfide, Dimethyl Sulfide, other light hydrocarbons & water is adsorbed and only oxygen & Argon passes through. For this reason, the CO₂ & CO in our PSA generator can not exceed 100PPM and 2 PPM respectively which is far less than 300 CO₂ and 5 PPM CO that is found in Cryogenic oxygen.



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GENERAL F.A.Q.

Why better than Liquid oxygen?

- **Cost Saving:** Saves 50 to 60% cost on oxygen.
- **Safety:** System is much safer than Liquid oxygen.
- **No need of N.O.C. from** Chief Controller of Explosive, Nagpur.
- **Saves Space:** Our System is compact .It can be installed on terrace, room or hall.
- **No Losses:** Does not have heating transmission, evaporation & leakage losses like Liquid oxygen.

Why better than oxygen Cylinders ?

- **Cost Saving:** Saves 60 to 80% cost on oxygen.
- **Safety:** System is safer than cylinder oxygen.
- **Purity:** One can not assure purity of oxygen in cylinder, from being unorganized suppliers
- **Filled Capacity:** One can never be assured of filling capacity of cylinder.
- **Prevents Losses:** 10% is always a loss before change over of cylinder.
- **Less Manpower:** Cylinder system needs 3 person in 8 hours shift to change cylinder banks.
- **Reduces Overheads:** Stock maintenance, billing etc. involves cost.

What is the life of molecular sieve?

The molecular sieve is innovated by core Airsep Team. We use our own patented Z-15 Zeolite molecular sieve which has highest quality standard in the world.

Our Zeolite last more than 18 years if system is maintained properly. We have systems across the Globe which are working from last 25 years.

What is the function of Auto – Switchover System?

This is an optional system that can be provided with the generator.

In case of any emergency backup, this system will transfer automatically from generator line to oxygen cylinder line from manifold which avoids emergency manpower requirement.

This system helps uninterrupted oxygen supply to the hospital.

What is function of oxygen Analyzer ?

This is a standard system given with the generator. This system monitors oxygen Purity online and gives exact oxygen purity in the system and line.

About Airox

Airox Technologies Pvt. Ltd. is a highly skilled team of professionals serving hospital & medical industry since in 2011. Airox is associated with Airsep Corporation (Chart Industries, U.S.A) to promote PSA Oxygen generator, Hortig (Germany) for Pneumatic Tube system & Baroxhbo hyperbaric chambers

AIROX is un-challengingly market leader in India with 88% market share of Oxygen Generator in private hospital segment with 375+ Indian satisfied customers. We have installation in every state of India. Airox has expert team for sales and service comprising of 100 employees & their strong 18 distributors across the India.

Our objective is to provide best in quality but economical services to patients & improve hospital economy by giving effective alternative for expensive services."

AIROX achievements & awards



1) Fastest Growing Indian Company Excellence Award – 2014

Airox Technologies Pvt. Ltd., a leading provider of oxygen Generators, today had received the Fastest Growing Indian Company Excellence Award – 2014 on the occasion of 6th International Achievers Summit on Global Corporate Achievements & Social Responsibilities, Bangkok - Thailand. The award was presented to Airox Technologies Pvt. Ltd. By Former Deputy Prime Minister of Thailand H.E. Mr. Korn, Former Chief Justice & Governor, O.P. Verma.

2) Best Health Care Enterprise of the Year 2015

Airox is been awarded Best Health Care Enterprise of the Year at Six Sigma Healthcare Excellence Award-2015 - "Oscars of Indian Healthcare" New Delhi

3) Best Performance Silver SME Excellence Award at Make in India - 2016

Airox is been awarded Best Performance Silver SME Excellence Award at Make in India - Global opportunities held at Grand Hyatt Mumbai.

About AirSep

AirSep products deliver the oxygen where you need it, when you need it !

AirSep was founded on January 9, 1987. With over 300 employees worldwide and an expansive distribution network in over 100 countries, we are a truly global organization. AirSep is part of Chart Industries, which is Rs. 7,000 Crore turnover company.

The PSA oxygen Generator is from AirSep Corporation, NY, USA, AirSep is the World's largest manufacturer of PSA oxygen System. Airsep has more than 7500 hospitals in nearly 54 countries are currently using AirSep PSA Medical oxygen System to meet their central pipeline and other oxygen needs. This system saves almost 65% on your present hospital oxygen consumption bill.

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