

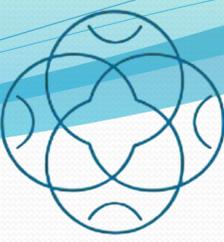


AVALON POWER PVT. LTD.

(AiroxAvalon)

OFFERING MEDICAL OXYGEN GAS SOLUTIONS

PSA OXYGEN GENERATOR PLANTS - 250/ 500/ 1000 LPM



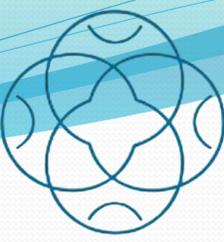
About PSA Technology (Pressure Swing Adsorption)

Most economical solution for oxygen supply

PAN India service throughout the year

Simple design, skid mounted & requires less space

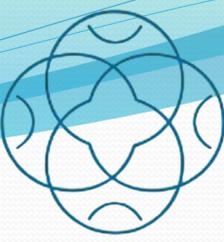
Easy to install, plug & play. Fully automated & minimal monitoring required



Our offer

- We can provide plants of following capacities now + anything specific to customer requirements
- Airox Medox PSA Oxygen Gas Generator are Skid Mounted and Pre-commissioned at our works and are fully Automatic and requires virtually no attention of the Operator.

Model	Plant capacity in LPM	Jumbo cylinders per day (in no.)	Approx. oxygen beds (in no.)	Delivery lead time (in days)
Airox Medox 150	150 LPM	31	30	15
Airox Medox 167	167 LPM	35	33	15
Airox Medox 200	200 LPM	41	40	15
Airox Medox 250	250 LPM	55	50	15
Airox Medox 333	333 LPM	73	67	15
Airox Medox 500	500 LPM	110	100	15
Airox Medox 750	750 LPM	156	150	15
Airox Medox 1000	1000 LPM	220	200	30
Airox Medox 2000	2000 LPM	440	400	30
Airox Medox 3000	3000 LPM	626	600	30



Our differentiators



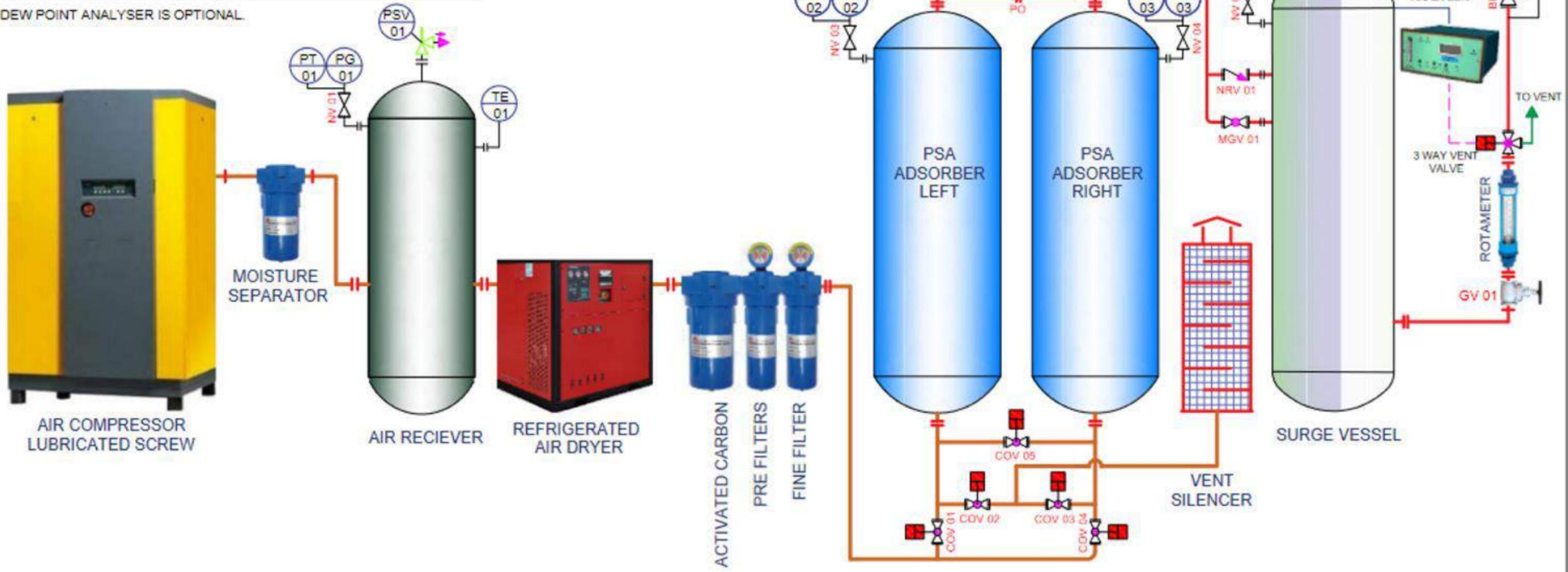
- Skid-Mounted, Pre-Commissioned, Ready to Use Units
- Fully Automatic Plant - Requires no Operator's Attention
- Low Generation Cost - Pay Back Period, Less than a Year
- Negligible Maintenance - No Hassel of changing Cylinders
- Continuous Purity Check - Purity up to 95% Achievable
- Pan India service network

Pressure Swing Adsorption Oxygen Generator

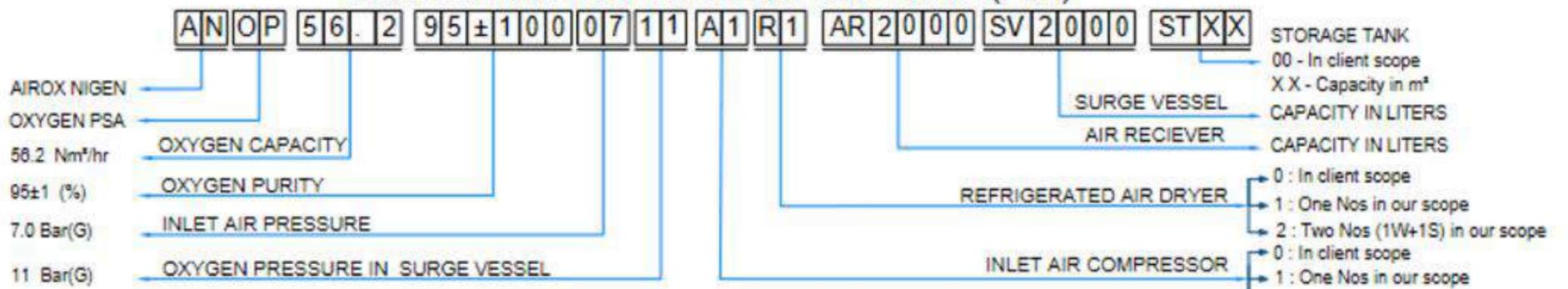


INSTRUMENTS	VALVE	SPECIFICATION
TE TEMPERATURE ELEMENT	PSV PRESSURE SAFETY VALVE	
PG PRESSURE GAUGE	COV SOLENOID VALVE	
PT PRESSURE TRANSDUCER (NON-SMART)	MGV MANUAL GLOBE VALVE	
PSV PRESSURE SAFETY VALVE	NRV NON RETURNING VALVE	
	NV NEEDLE VALVE	
	BPC BACK PRESSURE CONTROL VALVE	

DEW POINT ANALYSER IS OPTIONAL.



MODEL SELECTION GUIDE OXYGEN PLANT (PSA)



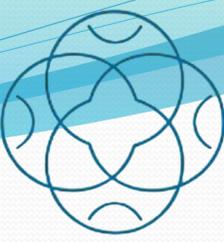
DOC. :- PFD OF OXYGEN PSA SYSTEM



Airox Med-Ox systems

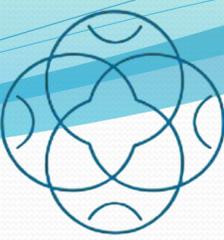
SALIENT FEATURES

- Produces Constant Purity of 94-95% Oxygen Designed for Medical Use.
- Gas Purity Much Above Indian / European / American Pharmacopeia Regulations
- All Airox Med-OX Systems are certified as medical equipment by ISO 13485
- All Airox Med-OX Systems comes with 26 years of existence and experience
- All Airox Med-OX Systems are CE and FDA complied
- Compact Design with Lowest Footprint
- On-line Oxygen Purity Monitoring
- On-line Moisture (Dew Point) Monitoring (Offered as Option)
- Larger Oxygen Vessel for peak back-up
- Complete Piping used is Sterilized Stainless Steel
- We use state of the Art Change Over, which comes with 5 years 100 % replacement Guarantee with no question asked.
- We use 5th Generation Zeolite life which ensures lowest Operating Cost and Maximum Gas Generation and comes with 7 Years of Operating life.
- Our system has Off-Spec Vent valve. If the purity goes below Set Limit system does not permit impure oxygen to go into the system and automatic change over to back up cylinders happen.
- 7 (10 as an Option) Inch HMI Display System with full diagnostic and Operating history lied



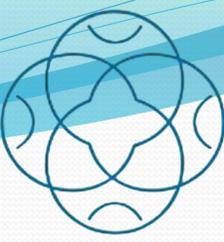
Technical Specifications for PSA Oxygen Gas Generator

Technical Data	AIROX MED-OX 250	AIROX MED-OX 500	AIROX MED-OX 1000
Flow Rate (LPM)	250	500	1000
Flow Rate (Nm3/hr)	15	30	60
Oxygen Purity	93% +/-3% (At Generator Outlet)		
Outlet Pressure	Options of 0.2 Bar G , 1.8 Bar G , 5 Bar G & 7 Bar G Available		
Booster Optional	For Cylinder Filling 200 & 350 Bar G With Boosters Available		
Operating Temperature	-18°C to 49°C	-18°C to 49°C	-18°C to 49°C
Power Supply	380/460/575 VAC +/- 10%, 50/60/60 Hz +/- 3%, 3-Phase		
Power Required	30 KVA	60 KVA	90 KVA
Power Consumption	16 KW @ 4-5 barG	38 KW @ 4-5 barG	70 KW @ 4-5 barG
Outlet Connection	25 NB	40 NB	40 NB
Skid Size L x W X H (Mtrs)	2.5 x 4 x 3	3.5 x 4 x 3	4.5 x 4 x 3



Technical Data	Airox Medox 50	Airox Medox 50	Airox Medox 200	Airox Medox 500
Flow Rate (LPM)	50	100	200	500
Flow Rate (Nm3/hr)	3	6	12	30
Oxygen Purity	93%+/-3% at generator outlet			
Outlet Pressure	Option of 0.2 Bar G, 1.8 Bar G & 7 Bar G available			
Booster Optional	For cylinder filling 200 & 350 Bar G with boosters available			
Operating Temperature	-18°C to 45°C			
Power Supply	380/460/575 VAC +/- 10%		50/60/60 Hz +/-3%	3 Phase
Power Required	15 KVA	20 KVA	30 KVA	60 KVA
Power Consumption	4.6 KW @4-5 Bar G	8.5 KW @4-5 Bar G	16 KW @4-5 Bar G	38 KW @4-5 Bar G
Outlet Connection	15 NB	15 NB	25 NB	40 NB
Skid Size LxWxH (Mtrs)	2.5 X 4 X 3			3.5 X 4 X 3

Technical Data	Airox Medox 1000	Airox Medox 1500	Airox Medox 2000	Airox Medox 3000
Flow Rate (LPM)	1000	1500	2000	3000
Flow Rate (Nm3/hr)	60	90	120	180
Oxygen Purity	93%+/-3% at generator outlet			
Outlet Pressure	Option of 0.2 Bar G, 1.8 Bar G & 7 Bar G available			
Booster Optional	For cylinder filling 200 & 350 Bar G with boosters available			
Operating Temperature	-18°C to 45°C			
Power Supply	380/460/575 VAC +/- 10%		50/60/60 Hz +/-3%	3 Phase
Power Required	90 KVA	130 KVA	200 KVA	450 KVA
Power Consumption	70 KW @4-5 Bar G	105 KW @4-5 Bar G	132 KW @4-5 Bar G	205 KW @4-5 Bar G
Outlet Connection	40 NB	50 NB	80 NB	100 NB
Skid Size LxWxH (Mtrs)	4.5 X 4 X 3	5.5 X 4 X 3	6.5 X 4 X 3	



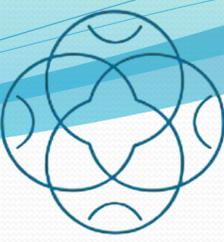
Safety Features and Audio-Visual Alarms

- The Oxygen Gas Generator are Skid Mounted and Pre-commissioned at our works and are fully Automatic and requires virtually no attention of the Operator. Once started it can be left-unattended. All operations take place automatically and oxygen Purity remains very consistent.
- In case of any abnormality the gas Generator would trip automatically with Audio Visual Alarms for Necessary action.
- Pressure vessels are designed as per ASME code and standards.
- Use of quality proven change over Valves.
- All plants are designed for Indian ambient temperature conditions for trouble free operation; also increased quantity of ZMS ensures a constant purity and composition of product gas.



Scope of supply and list of equipments in each module

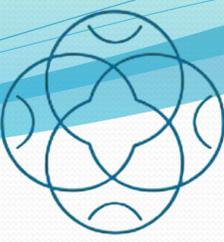
1. Lubricated Screw Air Compressors
2. Refrigerated type Air Dryer
3. Air Receiver with auto Drain Trap
4. Activated Carbon Filter
5. 4-Stage Filters for oil removal
6. Twin tower packaged PSA Unit with first charge of Zeolite Molecular Sieves with automatic change over valves and sequence programmer.
7. Oxygen Surge Vessel to stabilize purity & flow
8. 3-way vent valve
9. Pressure Holding Valve after PSA Unit
10. Control panel shall be HMI & MIMIC based with audio-visual alarm. The PSA sequence programmer (PLC) with 7 inch touch screen panel
11. All interconnected piping and fittings of SS 304
12. Installation & Commissioning of the gas plant at your site.
13. We shall provide 2-Coat of Primer and 2-Coat of Epoxy paint on all fabricated items.
14. All Control cabling shall be in our scope of supply.
15. Change Over Panel to Manifold
16. Erection, commissioning and training to your plant personnel for operation of plant.
17. Storage tank- 2000 Liters
18. Online percentage Oxygen Analyzer



Booster system for oxygen plants

We offer two types of booster systems:

1. Pneumatic Type (Screw compressor + Pneumatic Mechanism)
 2. Reciprocating Compressor Type (Reciprocating Type Compressor)
- Both the types are equally suitable for the cylinder filling application
 - Supply of type is dependent on the delivery time requested by the customer. Pneumatic Type - delivery 30 days, Reciprocating Type - delivery 60 days

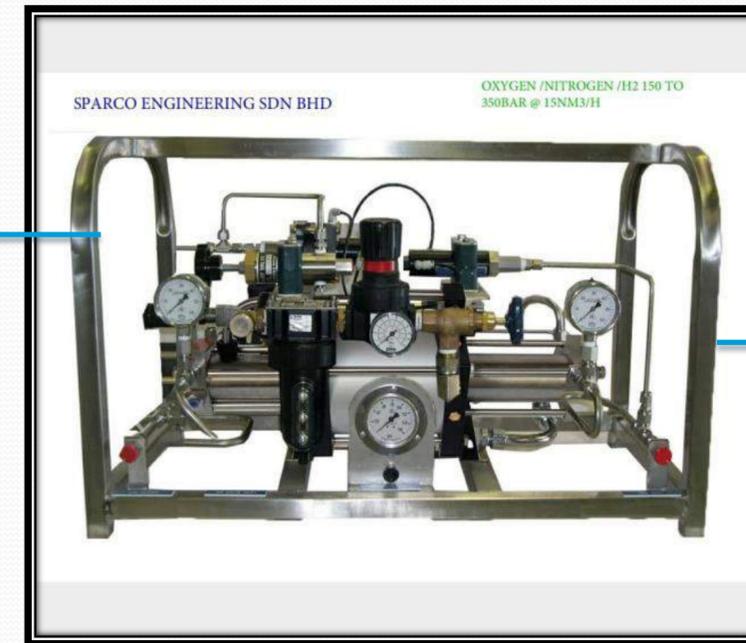


Pneumatic Type

Models	Specification
Boost-P15	<ol style="list-style-type: none">1. Input pressure 4 to 5 bar2. Effectively produce volume: 15 nm³/hr3. Discharge pressure: 150 bar4. Screw Compressor 18Kw5. Noise ≤80 Db6. Temp. input/discharge 45°C7. Cylinder manifold8. Continuous running time - 3 hrs. Rest time 0.5 hrs
Boost-P30	<ol style="list-style-type: none">1. Input pressure 4 to 5 bar2. Effectively produce volume: 30 nm³/hr3. Discharge pressure: 150 bar4. Screw Compressor 37.5 Kw5. Noise ≤80 Db6. Temp. input/discharge 45°C7. Cylinder manifold8. Continuous running time - 3 hrs. Rest time 0.5 hrs



AIR COMPRESSOR & DRYER SYTEM

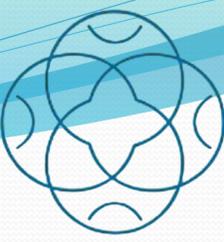


Boosting Unit
(varies depending on models and capacity)

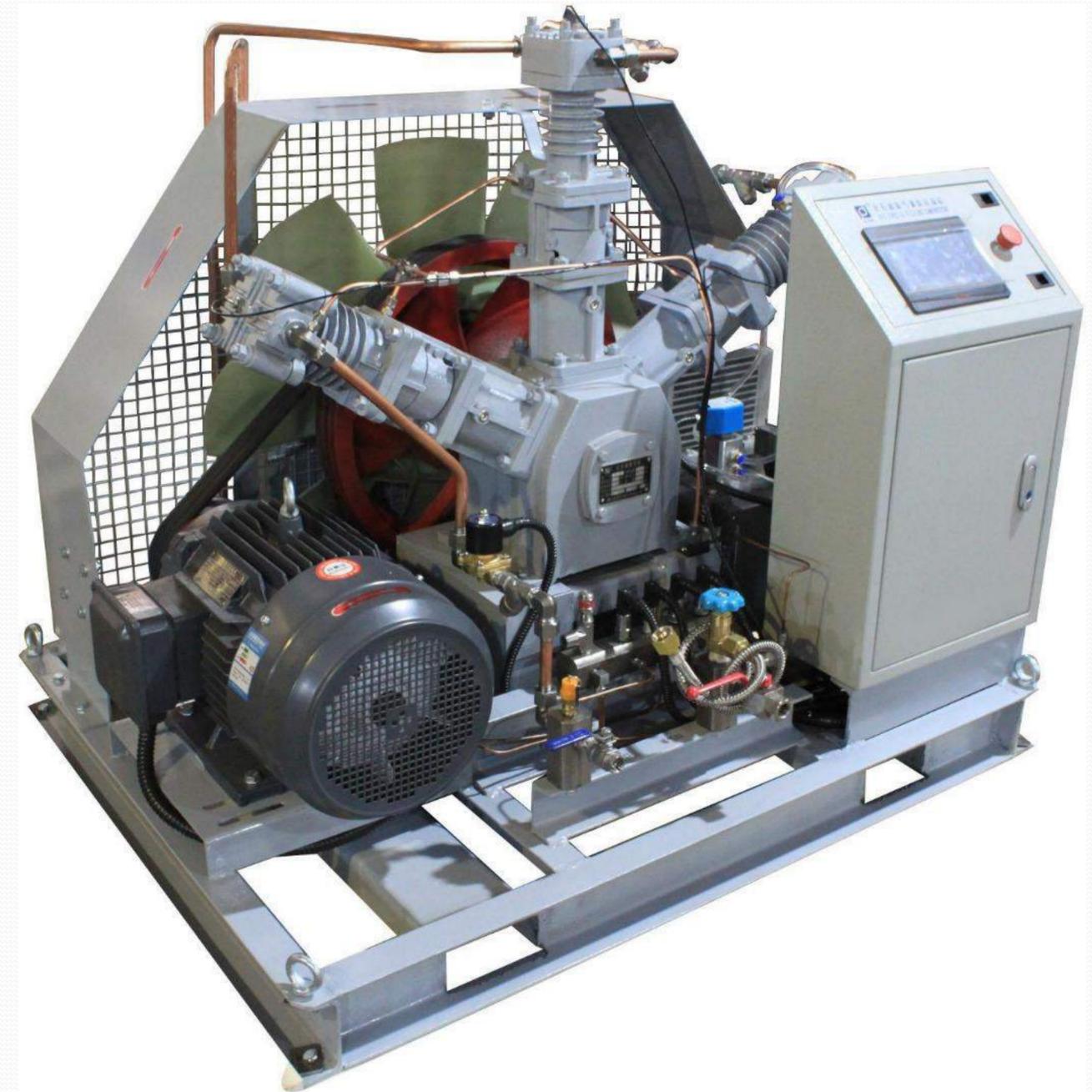


Cylinder filling manifold

Reciprocating Type



Models	Specification
Boost-R15	<ol style="list-style-type: none"> 1. Input pressure 4 to 5 bar 2: Effectively produce volume: 15nm³/hr 3: Discharge pressure: 150 bar 4: cooling type: Air cooled& water cooled type 5: Minimum electric motor power 7.5 kw 6: Voice ≤80 Db 7: Temp. input/discharge 45°C 8:compression level 3 stages 9: Structure type: 100% oil- free 10: Cylinder manifold
Boost-R30	<ol style="list-style-type: none"> 1: Input pressure 4 to 5 bar 2. Effectively produce volume: 30nm³/hr 3: Discharge pressure: 150 bar 4: cooling type: Air cooled& water cooled type 5: Minimum electric motor power 7.5 kw 6: Voice ≤80 Db 7: Temp. input/discharge 45°C 8: compression level 3 stages 9: Structure type: 100% oil- free 10: Cylinder Manifold





Certifications of Avalon Power Pvt. Ltd.

QUALITY CERTIFICATE



Certificate of Registration
This is to Certify that
The Quality Management System of Medical Device of
AVALON POWER PRIVATE LIMITED
OFFICE ADDRESS- D-403, AYODHYA PARK, KAVALA NAKA, KOLHAPUR, INDIA
WORKS ADDRESS - A 31/2, MIDC, SHIROLI, KOLHAPUR, INDIA

has been independently assessed and found to be in compliance with the requirement of the standard
ISO 13485:2016
For the following Scope :
DESIGN, MANUFACTURING AND SUPPLY OF PSA/VPSA OXYGEN PLANT, OXYGEN BOOSTERS (RECIPROCATING AND PNEUMATIC TYPE), CYLINDER FILLING MANIFOLD, LIQUID OXYGEN PLANTS

Certificate No : UKAAB/SNFFI2003X
Issued Date : 12/06/2021 1st Surveillance : 11/06/2022
Expire Date : 11/06/2024 2nd Surveillance : 11/06/2023




Authorised Signatory

Accredited by:
UK Accreditation and Certification Board Limited
Address: 2nd Floor, College House, 17 King Edwards Road, Ruislip, London, United Kingdom, HA4 7AE (UK)
Registered with the Registrar of Companies for England and Wales (UK), Registration No. 12593811, www.ukacab.org.uk
MIR Certification (Private Limited)
Corporate Address: C-217/1, 1st Floor, New Ansh Nagar, New Delhi-110006, INDIA
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This certificate is the intellectual property of MIR Certification Private Limited and can be reprinted through surveillance and renewal audits, and shall be returned immediately upon request. The approval is subject to the company maintaining its system to the required standard, which will be monitored by MIR Certification Private Limited. Any change in the scope of certification or any other information that may affect the application of the standard. Validity of this certificate can be verified at www.mircertification.com

QUALITY CERTIFICATE



Certificate of Registration
This is to Certify that
The Occupational Health and Safety Management Systems of
AVALON POWER PRIVATE LIMITED
OFFICE ADDRESS- D-403, AYODHYA PARK, KAVALA NAKA, KOLHAPUR, INDIA
WORKS ADDRESS - A 31/2, MIDC, SHIROLI, KOLHAPUR, INDIA

has been independently assessed and found to be in compliance with the requirement of the standard
ISO 45001:2018
For the following Scope :
DESIGN, MANUFACTURING AND SUPPLY OF PSA/VPSA OXYGEN PLANT, OXYGEN BOOSTERS (RECIPROCATING AND PNEUMATIC TYPE), CYLINDER FILLING MANIFOLD, LIQUID OXYGEN PLANTS

Certificate No : UKAAB/ECMBQ9424Q
Issued Date : 12/06/2021 1st Surveillance : 11/06/2022
Expire Date : 11/06/2024 2nd Surveillance : 11/06/2023




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Certificate of Registration
(Quality Management System)
QFS MANAGEMENT SYSTEMS LLP
This is to Certify that the Quality Management System of
AVALON POWER PVT. LTD.
D-403, AYODHYA PARK, KAVALA NAKA, KOLHAPUR-416006, MAHARASHTRA (INDIA)
A 31/2, MIDC, SHIROLI, KOLHAPUR-416122, MAHARASHTRA (INDIA)

Has been found to be of the Quality Management System Standard
ISO 9001:2015
This certificate is valid for the following product or service range
DESIGN, MANUFACTURING AND SUPPLY OF PSA/VPSA OXYGEN PLANT, OXYGEN BOOSTERS (RECIPROCATING AND PNEUMATIC TYPE), CYLINDER FILLING MANIFOLD, LIQUID OXYGEN PLANTS

Certificate Number: IS/2106AO/3074 1st Surv. Due on: 14.05.2022
Initial Date of Certification: 15.06.2021 2nd Surv. Due on: 14.05.2023
Date of Certificate: 15.06.2021
Date of Expiry: 14.06.2024

Director:  Date: 15.06.2021




The validity of certificate is subject to regular surveillance audit on or before above mentioned dates and its only valid after successful surveillance with continuation letter issued by QFS. It is issued subject to the continued availability of access at any time and without notice to the above named organization's premises for the purpose of assessment and surveillance regarding the standard named above and QFS terms and conditions.

QFS MANAGEMENT SYSTEMS LLP
A-27/1, Sector-10, Noida-201301, U.P., India
www.qfscert.com
email: info@qfscert.com
This Certificate remains the property of QFS

UKcert
Certification & Inspection

Certificate of Compliance
CE

We hereby declare that the technical file of product complied with the requirement of directives 2006/42/EC Machinery Directive, Medical Devices 90/269/EEC as Amended 2007/45/EC & directives 2014/53/EU Electromagnetic Compatibility Directive.

Certificate No.: CE-2021061240

Manufacturer
Name : AVALON POWER PVT. LTD.
Address : OFFICE ADDRESS- D-403, AYODHYA PARK, KAVALA NAKA, KOLHAPUR, INDIA WORKS ADDRESS - A 31/2, MIDC, SHIROLI, KOLHAPUR, INDIA
Products : Psa/Vpsa Oxygen Plant, Oxygen Boosters (Reciprocating And Pneumatic Type), Liquid Oxygen Plants

Complies with the requirements applicable to it:
The manufacturer is declared responsible as required for Medical Council according to the directive 2006/42/EC Machinery Directive, Medical Devices 90/269/EEC as Amended 2007/45/EC & directives 2014/53/EU Electromagnetic Compatibility Directive. Any significant changes in the design or construction of the product, not agreed upon by us, this declaration will lose its validity.
This certificate is issued under the following conditions:

- It applies only to the quality system maintained in the manufacture of above referenced models and it does not substitute the design or type examination procedures, if required.
- The certificate remains valid until the manufacturing conditions or the quality system are not changed.
- The certificate validity is conditioned by positive results of surveillance audits.

The CE mark as shown above can be used, under the responsibility of the manufacturer, after completion of CE Declaration of conformity and compliance with all relevant CE Directives. The statement is based on a single evaluation of one sample of above mentioned product. It does not imply an assessment of the whole production.

Validity of this certificate can be verified at www.ukcertifications.org.uk/verify

Date of Certification : 12th June 2020
1st Surveillance Audit Due : 11th June 2021
2nd Surveillance Audit Due : 11th June 2022
Certificate Expiry (subject to the company maintaining its system to the required standard) : 11th June 2023


Authorised Signatory

This certificate is the property of UK Certification & Inspection Limited and shall be returned immediately on request.
1175 Redden Street, Cross Green, Leicestershire, LE12 7JG, United Kingdom
Website: www.ukcertifications.org.uk Email: info@ukcertifications.org.uk
Company No: 11847851

QFS

Certificate of Registration
(Environmental Management System)
QFS MANAGEMENT SYSTEMS LLP
This is to Certify that the Environmental Management System of
AVALON POWER PVT. LTD.
D-403, AYODHYA PARK, KAVALA NAKA, KOLHAPUR-416006, MAHARASHTRA (INDIA)
A 31/2, MIDC, SHIROLI, KOLHAPUR-416122, MAHARASHTRA (INDIA)

is in accordance with the requirement of the Management System Standard detailed below
ISO 14001:2015
This certificate is valid for the following product or service range
DESIGN, MANUFACTURING AND SUPPLY OF PSA/VPSA OXYGEN PLANT, OXYGEN BOOSTERS (RECIPROCATING AND PNEUMATIC TYPE), CYLINDER FILLING MANIFOLD, LIQUID OXYGEN PLANTS

Certificate Number: IS/2106AO/3075 1st Surv. Due on: 14.05.2022
Initial Date of Certification: 15.06.2021 2nd Surv. Due on: 14.05.2023
Date of Certificate: 15.06.2021
Date of Expiry: 14.06.2024

Director:  Date: 15.06.2021




The validity of certificate is subject to regular surveillance audit on or before above mentioned dates and its only valid after successful surveillance with continuation letter issued by QFS. It is issued subject to the continued availability of access at any time and without notice to the above named organization's premises for the purpose of assessment and surveillance regarding the standard named above and QFS terms and conditions.

QFS MANAGEMENT SYSTEMS LLP
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email: info@qfscert.com
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UKcert
Certification & Inspection

Certificate of Compliance
Certificate Number: UQ- 2021061241

This is to certify that
AVALON POWER PVT. LTD
At
Office Address- D-403, Ayodhya Park, Kavala Naka, Kolhapur, India
Works Address - A 31/2, MIDC, Shirol, Kolhapur, India

has been assessed and found to be conforming the requirements of the
FDA

Scope: -Design, manufacturing and supply of PSA/VPSA/VPSPA oxygen plant, oxygen boosters (Reciprocating and Pneumatic Type), Liquid Oxygen Plants

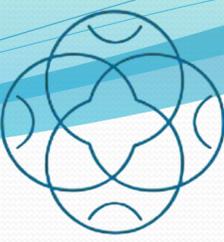
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1175 Redden Street, Cross Green, Leicestershire, LE12 7JG, United Kingdom
Website: www.ukcertifications.org.uk Email: info@ukcertifications.org.uk
Company No: 11847851



About Us

Avalon Power Pvt. Ltd. / AiroxAvalon

is part of the Jain Group, Kolhapur. This group has foundry, machining, fabrication, and power generation setups. They have a strong manufacturing setup.

AVALON POWER PVT. LTD. aims to eliminate the oxygen hunger of this country and the world by mass manufacturing Oxygen PSA plants.



AVALON POWER PVT. LTD.

www.avalonpower.com

Rohan Jain, Director, Avalon Power Pvt. Ltd.

9518933659; sales@airoxavalon.com