

OXYGEN GAS GENERATORS

BASED ON PSA & VPSA TECHNOLOGY



(ISO 9001 : 2008 CERTIFIED COMPANY)

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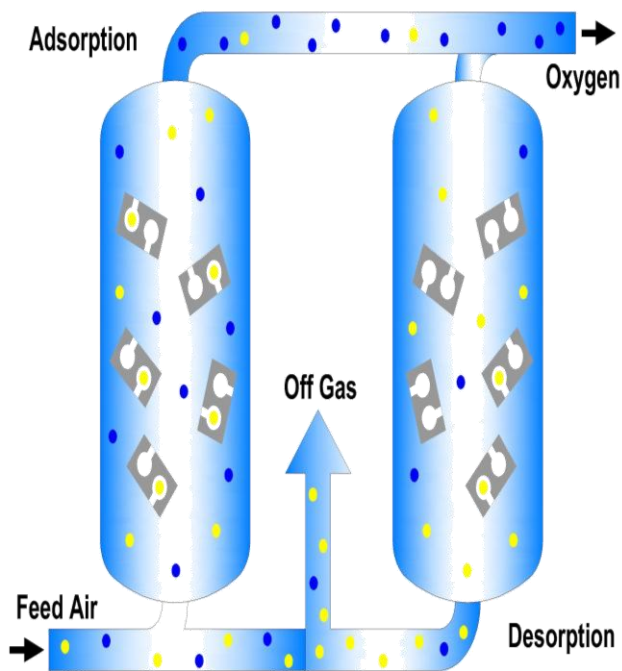
SAM GAS PROJECTS is ISO 9001:2008 certified, Professionally Managed Engineering Organization, Specialized in Design , Manufacture , Supply & commissioning of ‘State of the Art’ Nitrogen, Oxygen, Hydrogen Gas Plants, Ammonia Crackers, Gas Purification Systems, Compressed Air Dryers and Gas storage systems.

SAM GAS PROJECTS has supplied more than **550** Systems, which are working satisfactorily all over India & across the Globe in more than 40 countries.

RANGE OF PRODUCTS

- ✓ **Nitrogen Gas Plants – PSA Based**
- ✓ **Oxygen Gas Plants**
 - PSA Based
 - VPSA Based
- ✓ **Hydrogen Gas Plants**
 - Ammonia Cracker Based
 - Water Electrolysis Based
- ✓ **Ammonia Cracker Units**
 - Electrically Heated Type
 - Gas Fired Type
- ✓ **Compressed Air Dryers**
 - Heat of Compression Type
 - Internally Heat Re-activated type
 - No Purge Loss, Split flow Type
 - Blower Re-activated type
 - Heatless Type
 - Refrigerated Type air dryer
- ✓ **Gas Purifications Systems.**
- ✓ **Ammonia Storage Systems.**
- ✓ **Exo / Endo Gas Generators**

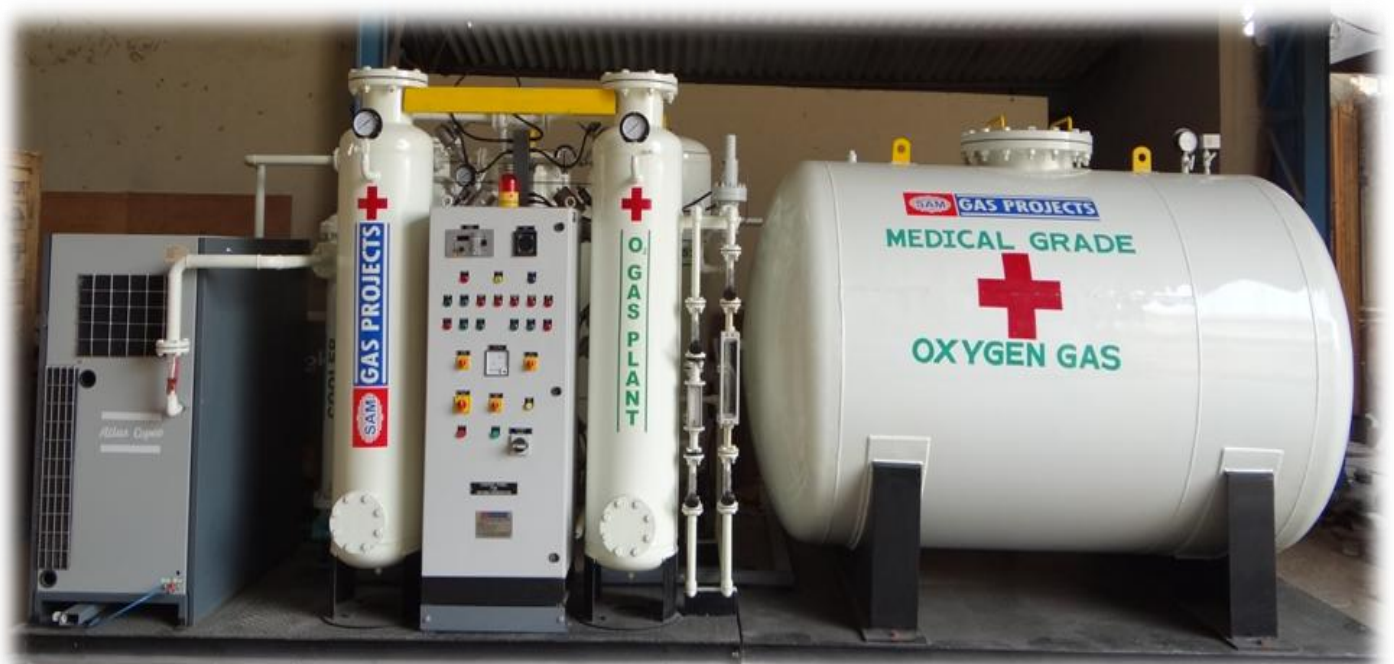
PSA OXYGEN GAS PLANT



PSA (Pressure Swing Adsorption) Oxygen gas Generators are based on well proven technology using, Zeolite Molecular Sieves (ZMS). ZMS is an adsorbent having infinite number of small pores. When ZMS is used in the PSA process, nitrogen Molecules, having a higher diameter than a oxygen Molecule, passes through the pores and are adsorbed. Therefore, the Oxygen is recovered, while Nitrogen is adsorbed. Adsorption of Nitrogen Molecules happens at moderate pressure. During regeneration process PSA tower pressure brought down to atmospheric, Nitrogen molecules comes out of pores of Zeolite molecular sieve.

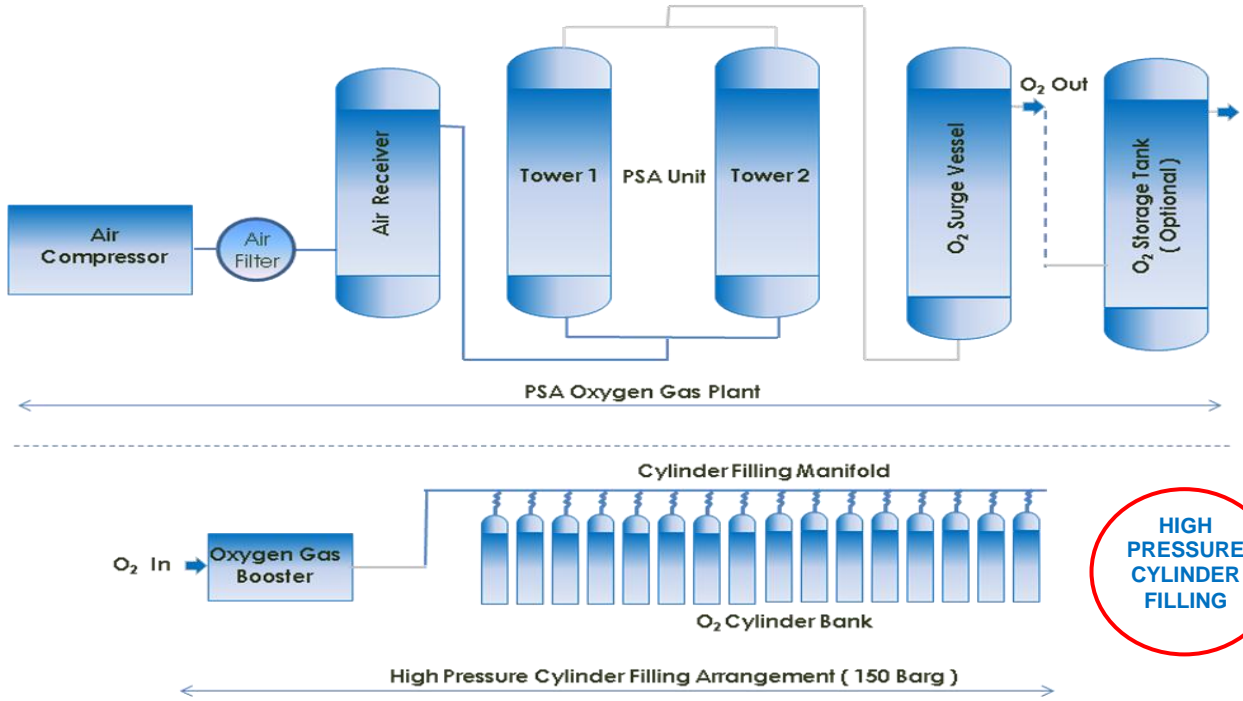
TECHNICAL SPECIFICATIONS

✓ Capacity	:	1 to 200 NM ³ /Hr.
✓ Oxygen	:	93 ± 2%
✓ Dew Point	:	(-) 40°C or Better
✓ Nitrogen & Others	:	Balance
✓ Pressure	:	2.5 Barg or Higher



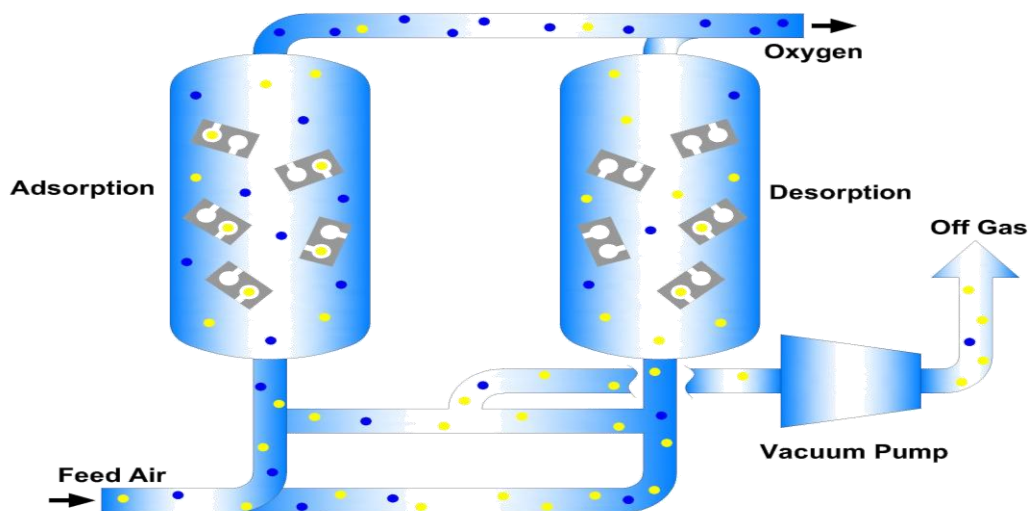
PSA OXYGEN GAS PLANT

PSA OXYGEN GAS PLANT AND CYLINDER FILLING SYSTEM



VPSA OXYGEN GAS PLANT

VPSA (Vacuum pressure Swing Adsorption) Oxygen gas Generators are based on well proven technology using Zeolite Molecular Sieves (ZMS) & Vacuum system for regeneration . When ZMS is used in the VPSA process, nitrogen Molecules, having a higher diameter than a oxygen Molecule, passes through the pores and are adsorbed. Therefore, the Oxygen is recovered, while Nitrogen is adsorbed. Adsorption of Nitrogen Molecules happens at Low pressure, which make it efficient & suitable for higher flow rates. In VPSA based Oxygen gas plants Regeneration process is done with vacuum pumps, which ensures complete regeneration of ZMS.



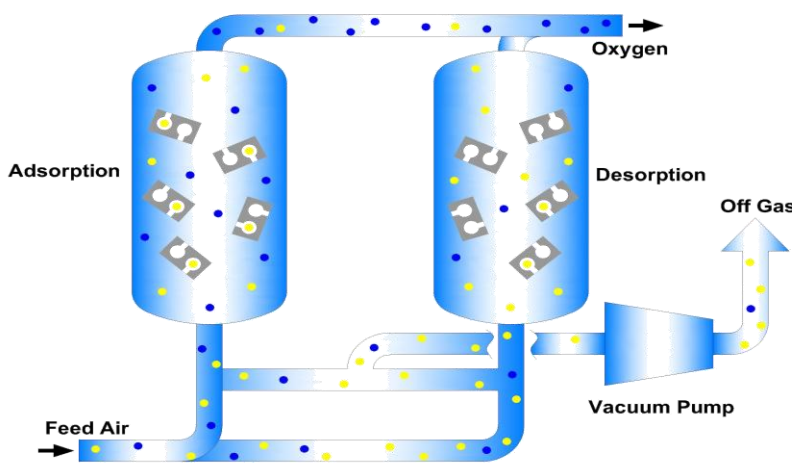
VPSA - TECHNICAL SPECIFICATIONS

✓	Capacity	: 200 to 5000 NM ³ /Hr.
✓	Oxygen	: 93 ± 2%
✓	Dew Point	: (-) 40°C or Better
✓	Nitrogen & Others	: Balance
✓	Pressure	: 0.3 Barg or Higher



VPSA OXYGEN GAS PLANT

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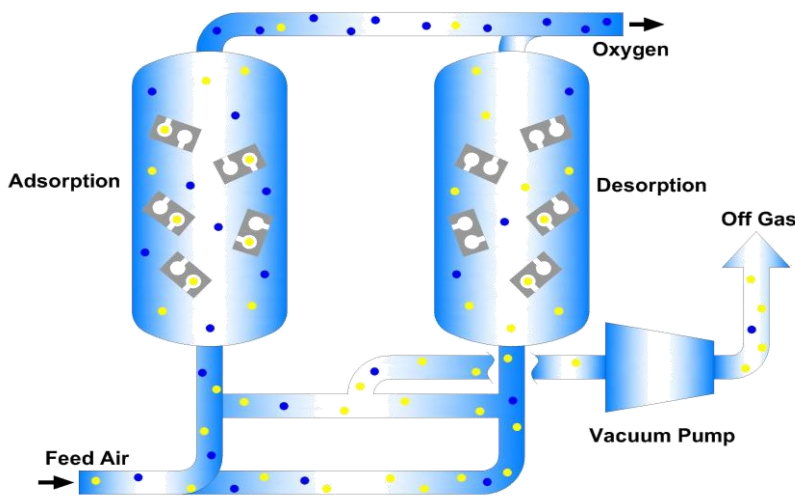
VPSA - TECHNICAL SPECIFICATIONS

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✓ Oxygen	: 93 ± 2%
✓ Dew Point	: (-) 40°C or Better
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✓ Pressure	: 0.3 Barg or Higher



VPSA OXYGEN GAS PLANT

VPSA (Vacuum pressure Swing Adsorption) Oxygen gas Generators are based on well proven technology using Zeolite Molecular Sieves (ZMS) & Vacuum system for regeneration . When ZMS is used in the VPSA process, nitrogen Molecules, having a higher diameter than a oxygen Molecule, passes through the pores and are adsorbed. Therefore, the Oxygen is recovered, while Nitrogen is adsorbed. Adsorption of Nitrogen Molecules happens at Low pressure, which make it efficient & suitable for higher flow rates. In VPSA based Oxygen gas plants Regeneration process is done with vacuum pumps, which ensures complete regeneration of ZMS.



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APPLICATIONS :

- Paper & Pulp Industry
- Glass Industry
- Metallurgical Industries
- Chemical Industry
- Water treatment Plants
- Fish farming
- Gas Cylinder filling
- Lamp Industry
- Hospitals / Medical Applications.
- Ozone Gas Generation Systems
- TV Picture tubes
- Tea Gardens
- Brazing Applications
- Ampoule manufacturing



SALIENT FEATURES OF OXYGEN GAS PLANTS :

- ✓ On Site Oxygen Gas Generation and full control on quality of oxygen.
- ✓ Easy to Operate & Maintain .and almost unattended operation.
- ✓ Quick to start , Low Space requirements and highly reliable.
- ✓ No hassles of handling high pressure cylinders .
- ✓ No logistical overheads and administrative cost involved.
- ✓ No special conditions / requirements for installation.
- ✓ Savings upto 70% in comparison to cost of oxygen gas from Cylinders.
- ✓ No dependency on external agencies for supply of gas / cylinders.
- ✓ Generation of Oxygen as per requirements, which make it further cost effective.

OUR GLOBAL PRESENCE



LODHA HOSPITAL



AVENUE HOSPITAL



ASHWINI HOSPITAL



DEEPAK HOSPITAL



PATAN HOSPITAL



SAM GAS PROJECTS PVT. LTD.
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