

GENERON

PSA Oxygen Generator



◆ Typical Applications

- Fish farming
- Sewage treatment
- Glass industry
- Food industries
- Pulp and paper industry
- Welding, melting, brazing
- Manufacturing batteries
- Chemical oxidation

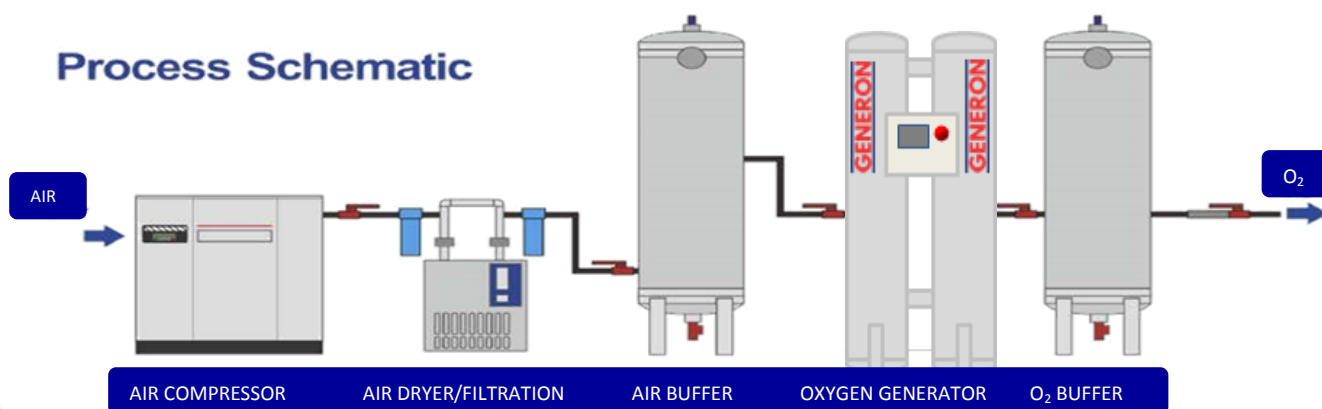
◆ Advantages of GENERON® OXYSWING PSA

- Low operating pressures
- No hazardous storage or connections
- Low gas generating costs
- Fully automatic unattended operation
- High life cycle valves
- Easy to install and maintain
- Low dBA levels

GENERON® Oxygen PSA Generators separate oxygen (O₂) from compressed air utilizing pressure swing adsorption technology. Compressed air, which consists of approximately 21% oxygen and 78% nitrogen, is passed through a bed of zeolite molecular sieve (ZMS). The sieve preferentially adsorbs N₂ and moisture over O₂ allowing the O₂ to pass through as a product gas at pressure. While one of the towers is in the adsorption phase the other tower is regenerated by de-pressurizing, at which time the sieve releases the adsorbed gases to the atmosphere, and the cycle is then repeated.

A solid state programmable controller operates the process valves on an alternating cycle, with built-in logic for automatic stop/start. Oxygen flow and purity remain constant regardless of the peak usage demands. Under normal operating conditions and with correct maintenance the zeolite molecular sieve will have an almost indefinite lifetime.

Process Schematic



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Technical Data

Standard Components:

- ASME adsorber vessels
- High life cycle valves
- Oxygen analyzer (with calibration kit)
- Piping, gauges, and instrumentation
- Pressure Safety valve
- Oxygen flow regulators
- PLC control system
- Carbon Steel skid mounted
- Exhaust silencing muffler

Options:

- Product flow meter
- Inlet filtration package
- Post filtration package
- Auto shut down/startup/standby mode
- Off specification circuit
- HMI Display Screen
- Master controller: PLC driven for multiple unit operation
- Enhanced PLC with telemetry
- Compressed air buffer tank
- Oxygen buffer tank
- Product booster compressor
- Dew point analyzer
- Tanks & generator on a common skid

OXYGEN PURITY / FLOW RATE

PSA	90%		93%		APPROX. WEIGHT AND DIMENSIONS			
	SCFH	NM3/HR	SCFH	NM3/HR	H	W	L	WEIGHT
OS-8-60	73	1.92	65	1.71	86	36	30	720
OS-10-60	111	2.93	100	2.62	87	36	37	780
OS-12-60	164	4.31	147	3.86	87	42	48	1728
OS-14-66	207	5.44	185	4.86	93	42	48	1927
OS-16-75	311	8.19	278	7.32	103	46	48	2630
OS-18-78	414	10.89	371	9.74	106	50	53	4892
OS-20-78	516	13.57	461	12.13	110	52	58	3851
OS-24-75	724	19.03	647	17.02	97	54	60	4592
OS-30-81	1237	32.52	1106	29.10	121	72	72	7576
OS-36-74	1641	43.15	1468	38.60	116	74	88	9370
OS-36-95	2107	55.40	1885	49.56	137	74	88	10882
OS-42-83	2521	66.28	2255	59.29	135	84	112	15238
OS-48-74	2918	76.72	2610	68.63	127	90	112	15602
OS-48-94	3706	97.45	3315	87.18	147	90	112	16699
OS-60-68	4101	107.83	3668	96.46	121	120	156	19988
OS-60-74	4473	117.63	4002	105.23	127	120	156	20791
OS-60-81	5033	132.33	4502	118.38	184	120	156	21774

- The nominal rating of the generators are at 68°F; 0% RH and at 14.5 Psia. Flow and pressure values are averages throughout a cycle with tolerances of ± 4%. Purity values are ± 2%. Performance based on Inlet pressure of 109 PSIG (7.5barg).

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