

GENERON®

PSA Oxygen Generator



Typical Applications:

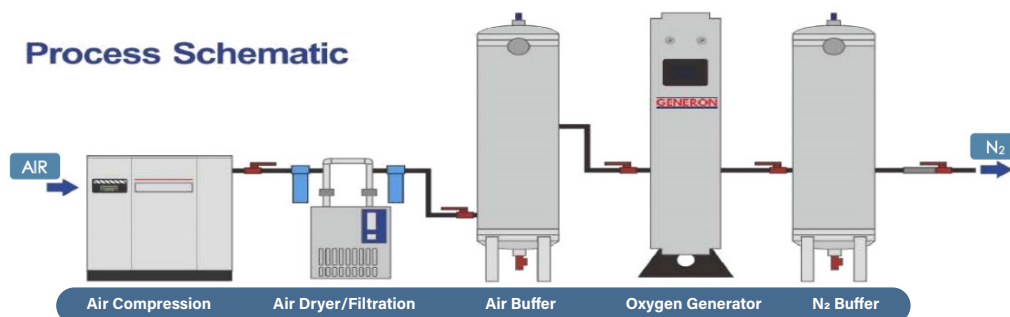
- Fish Farming
- Sewage Treatment
- Glass Industry
- Food Industry
- Welding, Melting, Brazing
- Manufacturing Batteries
- Chemical Oxidation

Advantages of GENERON OXYSWING PSA:

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

GENERON® Oxygen PSA Generators separate oxygen (O₂) from compressed air utilizing pressure swing adsorption technology. Compressed air, consisting of approximately 21% oxygen and 78% nitrogen, is passed through 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 the 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.



PSA Oxygen Generator: 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
- Product booster compressor
- Dew point analyzer
- Tanks & generator on a common skid

OXYGEN PURITY/FLOW RATE

PSA MODEL	90%		93%		NOMINAL WEIGHT AND DIMENSIONS			
	SCFH	NM ³ /HR	SCFH	NM ³ /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	1,728
OS-14-66	207	5.44	185	4.86	93	42	48	1,927
OS-16-66	311	8.19	278	7.32	103	46	48	2,630
OS-18-78	414	10.89	371	9.74	106	50	53	4,892
OS-20-78	516	13.57	461	12.13	110	52	58	3,851
OS-24-75	724	19.03	647	17.02	97	54	60	4,592
OS-30-81	1,237	32.52	1,106	29.10	121	72	72	7,576
OS-36-74	1,641	43.15	1,468	38.60	116	74	88	9,370
OS-36-95	2,107	55.40	1,885	49.56	137	74	88	10,882
OS-42-83	2,521	66.28	2,255	59.29	135	84	112	15,238
OS-48-74	2,918	76.72	2,610	68.63	127	90	112	15,602
OS-48-94	3,706	97.45	3,315	87.18	147	90	112	16,699
OS-60-68	4,101	107.83	3,668	96.46	121	120	156	19,988
OS-60-74	4,473	117.63	4,002	105.23	127	120	156	20,791
OS-60-81	5,033	132.33	4,502	118.38	184	120	156	21,774

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 110PSIG (7.5barg).