Oxygen Generating Systems
Oxygen PSA - OS-36-74

Typical Applications
- Health care
- Fish farming
- Sewage treatment
- Glass industry
- Food industries
- Sewage treatment
- 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
- Low operating cost
- Fully automatic unattended operation
- Two million plus cycle valves
- Easy to install and maintain
- Low dBA levels

GENERON® Oxygen PSA Generators separates 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.
### Oxygen Generating Systems

#### OS-36-74 Technical Data - US Standards

<table>
<thead>
<tr>
<th>Oxygen Production Flow</th>
<th>Length (mm) / (inch)</th>
<th>Width (mm) / (inch)</th>
<th>Height (mm) / (inch)</th>
<th>Weight (kg) / (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>90 vol.%</td>
<td>61.6 / 2346</td>
<td>56.4 / 2145</td>
<td>48.9 / 1863</td>
<td>2235 / 88</td>
</tr>
<tr>
<td>93 vol.%</td>
<td>56.4 / 2145</td>
<td>48.9 / 1863</td>
<td>1880 / 74</td>
<td>1880 / 74</td>
</tr>
<tr>
<td>95 vol.%</td>
<td>48.9 / 1863</td>
<td>2235 / 88</td>
<td>2946 / 116</td>
<td>2946 / 116</td>
</tr>
</tbody>
</table>

*All performance flows are +/- 4%. All flows are shown at 68° F / 20°c.*

#### Standard Components
- ASME adsorber vessels
- Pneumatic/electric valves (two million cycle life)
- Piping, gauges, and instrumentation
- Safety valve
- Oxygen pressure and flow regulators
- PLC control system (Allen Bradley)
- Steel wrap around skid mounted
- Exhaust silencing muffler
- Sound level < 90 dBA

#### Options
- Oxygen analyzer (with calibration kit)
- Product flow meter
- Inlet filtration package
- Post filtration package
- Auto shut down/startup mode (with manual bypass valve capability)
- Auto standby mode
- Off specification circuit
- HMI Display Screen: displays inlet pressure, outlet pressure, system run status, O2 concentration
- CFV activated carbon filter vessel

#### Special Options
- Master controller: PLC (Allen Bradley) driven for multiple unit operation
- Enhanced PLC with telemetry
- Enhanced HMI: Monitor Package (displays feed air, nitrogen product pressures, oxygen concentration, and product flow)
- Compressed air buffer tank
- Oxygen buffer tank
- Product booster compressor
- Dew point analyzer
- Tanks & generator on a common skid
- Custom engineered packages