Oxygen PSA - OS-30-81

- **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-30-81 Technical Data - US Standards**

<table>
<thead>
<tr>
<th>Oxygen Production Flow (Nm³/h) / (Scfh)</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>46.6 / 1772</td>
<td>37 / 1407</td>
<td>2083 / 82</td>
<td>2997 / 118</td>
</tr>
<tr>
<td>93 vol.%</td>
<td>42.6 / 1621</td>
<td>37 / 1407</td>
<td>2083 / 82</td>
<td>2997 / 118</td>
</tr>
<tr>
<td>95 vol.%</td>
<td>37 / 1407</td>
<td>2083 / 82</td>
<td>1727 / 68</td>
<td>2346 / 5199</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