



EcoGen™ Oxygen VPSA Onsite Generator

CONTROL YOUR OWN DESTINY

Onsite production using your own Adsorptech EcoGen™ VPSA achieves the lowest cost, highest reliability, and most flexible oxygen supply, thereby maximizing your production output and return on investment.

An Adsorptech EcoGen™ VPSA is designed precisely to meet your unique requirements, meaning every dollar spent is put to your use.

Because the oxygen is produced at your site, all the cost & reliability concerns with over the road or pipeline transport interruption risk are eliminated; transport equipment, handling and shipping costs are eliminated; long-term escalation compounding inflation is reduced because operating costs are minimized; and most importantly, your product disruption cost and risk is eliminated when the inevitable oxygen market supply/demand imbalance impacts offsite produced oxygen availability.

THE ECOGEN™ MODEL

EcoGen™ VPSA systems are available in nominal sizes from 70 to 225 SCFM of oxygen product (110 to 355 Nm³/hr.) at pressures up to 15, 43, and 150 psig (1/3/10 barg) as standard designed models. The higher the purity and/or pressure, the higher the unit oxygen cost. Of course, a system can be designed to suit other oxygen specifications when an additional custom design proves affordable.

ECO-EFFICIENT & RELIABLE

In its oxygen capacity range, only Adsorptech's proprietary EcoGen™ technology can offer the unparalleled combination of world's highest power efficiency and reliability in a single package. The EcoGen™ oxygen VPSA system is nearly twice as power efficient as alternative oxygen PSA systems on the market today. The EcoGen™ offers a process design that means when any primary air/vacuum component fails or requires a shutdown for maintenance or repair, the system is capable of operating at about half its design capacity. This unique operating benefit reduces reliance on excessive cost alternative oxygen sources. The EcoGen™ does not require cooling water, seal water, oil removal, or air refrigeration, avoiding all the cost and reliability issues related to the supply of these utilities demanded by competitor systems.

WHO CAN USE ECOGEN™?

EcoGen™ provides a low-cost high-reliability source for any application requiring the oxygen quantity and pressure specified. For pressures above 150 psig, an additional CompreX™ model is available. There are many applications that use EcoGen™ oxygen product including:

- Mine ore processing
- WTE, carbon capture, and gasification
- Ferrous and non-ferrous metals
- Land based fish farms (RAS)
- Glass, ceramics, and cement
- Wastewater treatment
- Oxy-fuel combustion
- Refining

EcoGen™ Oxygen VPSA Standard Models			Capacity at 90% purity, 70 F (21 C), 50% RH, sea level			
	Model	E70	E100	E140	E180	E225
Product Capacity	SCFM/Nm ³ /hr.	69/109	103/162	140/221	180/284	225/355
Power 15/43/150 psig*, 1/3/10 barg	kW/hr.	31/35/44	49/54/68	65/71/87	83/91/113	106/116/138
Foundation Size	Ft.	8 x 26	8 x 26	10 x 36	10 x 39	10 x 39
	M	2.5 x 8	2.5 x 8	3.1 x 11	3.1 x 11.9	3.1 x 11.9
Instrument Air, 80 psig	SCFM/Nm ³ /hr.	5/8	5/8	5/8	5/8	5/8
Power Supply	50 or 60 Hz.	380 to 575 V, 3 Phase				
<small>* Expected power +/-5% at 90% +/- 3% purity product. Able to operate between 85% to 95% purity.</small>						
<small>For larger oxygen sizes, refer to the EcoGenX™ brochure</small>						



EASY INSTALLATION

EcoGen™ VPSA systems have been designed with easy installation in mind – simple foundation and utility connections which include one power and a small instrument air source.



ISP availability is required for remote monitoring and diagnostics.

STANDARD SCOPE OF SUPPLY

Standard scope includes:

- All machinery, electrical, controls and moving parts on a single frame
- Outdoor weather/sound enclosure
- A separate product gas buffer vessel including its interconnecting pipe
- PLC controlled & fully automated, single button startup and shutdown
- Dial a purity functionality with product oxygen analyzer
- Dial a flow functionality to achieve maximum turndown power savings
- Ethernet port for remote access
- Shop tested

STANDARD OPTIONS

Standard options include:

- Extreme cold or hot site protection
- Alternate voltage supply
- National code compliance such as CE Mark



COMPLETE SERVICE PROVIDER

Adsorptech engineers have been designing, building, and operating VPSA systems for over three decades with a combined experience in excess of 100 years. In addition to the supply of the EcoGen™, Adsorptech can provide:

- Remote operations and maintenance service plans
- Turnkey installation or relocation services
- Custom engineering such as storage & compression systems, back-up tanks & vaporizers
- Any gas separations process and design engineering services such as CO₂, CHP, and WTE
- Industrial gas equipment procurement and contract consulting

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