PSB INDUSTRIES

BIOGAS DEOXYGENATION AND DRYING

Applications

- Meet pipeline O_2 and H_2O specifications for RNG injection
- Protect downstream CO_2 removal (amine)
- Prevent flammable O_2 enriched recycle streams
- Reduce wellhead tuning demand from air ingress

System Benefits

- Deoxo and TSA dehydration on a single integrated skid
- Standardized design shortens leadtimes and reduces cost
- Air or water-cooled heat exchanger options
- UL-508A control panel, Class I Div 2
- ASME Sec. VIII Div. 1, NB registered, CRN available

c UL us

ASME

CRN

MADE IN U.S.A.

BIO-DEOX-TSA

Standardized Oxygen & Moisture Removal Skids

PSB Industries Inc. is a recognized market leader in the design, engineering, and manufacturing of skid-mounted Deoxygenation (Deox) and Temperature Swing Adsorption (TSA) based dehydration systems. Our solutions cater to landfill gas, biogas and wastewater treatment plant applications having stringent oxygen and moisture removal applications. Due to the wide variation in impurities, each market and RNG source requires a tailored design approach. PSB Industries has successfully adapted to these evolving requirements, reinforcing its position as a market leader in the supply of oxygen and moisture removal systems.

Biogas applications requiring oxygen removal often face economic challenges due to low gas volumes, extensive digestate treatment requirements, and high digester capital expenditure. To address these constraints and improve project viability, PSB Industries has developed standardized skid-mounted Deox-TSA systems featuring an optimized design, reduced lead times, and cost-effective deployment.

Built on decades of catalytic deoxygenation and temperature swing adsorption experience, each standardized model is pre-engineered for the most common biogas duty and backed by PSB's in-house engineering, fabrication, and aftermarket support, all under one roof in Erie, PA USA.

Performance Specifications

Inlet O_2:	0.1 – 0.5 mol%
Inlet H_2O:	Up to Saturation
Max H_2S at Inlet:	4 ppmv
Operating Pressure:	140 – 270 PSIG
Power Supply:	460 VAC / 3 Ph / 60 Hz
Area Classification:	Class I, Div 2, Group C & D

GUARANTEED OUTLET PURITY

O_2: < 5 ppmv

H_2O: < 7 lb/MMSCF

(typically < 4 lb/MMSCF)

Three Standard Sizes. Flexibility Without Custom Engineering.

Model	Flow (SCFM)	Pressure (psig)	Dimensions (L × W × H)	Approx. Weight (lbs)
BIO-DEOX-TSA-S	100 - 150	100 – 270	8' × 15' × 11'	15,000
BIO-DEOX-TSA-M	150 - 550	140 – 270	9' × 17' × 11'	20,000
BIO-DEOX-TSA-L	550 - 1300	100 - 270	12' × 30' × 12'	35,000

Why PSB Industries

SCAN TO LEARN MORE

Engineering & Manufacturing

- 350,000 ft² facility in Erie, PA — USA
- In-house ASME code welders and vessel fabrication
- ASME SECTION VIII "U" & "R" stamps
- UL-508A control panel shop

Reliability & Support

- Decades of catalytic Deoxo and TSA experience
- Field service and commissioning teams
- Aftermarket media, catalyst, and spare parts program
- CRN, CE/PED Options

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