



BIOMASS Gas Power Plants



Containerized Anaerobic Treatment System



- | | | |
|-----------------------------|----------------------------|---------------------------|
| 1 Waste Shredder | 2 Anaerobic Reactor | 3 Console |
| 4 Biogas Storage Gas | 5 Biogas Stove | 6 Biogas Generator |

NEEDS ANALYSIS & DESIGN DEVELOPMENT

- Reformer Design,
- Fueling Design,
- Fuel Storage and Delivery Systems,
- Heating System Design,
- Fuel Cell Systems,
- Engines Systems,
- Safety System Design,
- Monitoring Design,
- Operation and Maintenance Planning.

DESIGNED FOR
2020 & BEYOND

The 20GP Container System Ready for Export



Authorized Representative



Website

<https://www.secure.supplies/biomass-biogas-gas-cogeneration-usa>





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ADVANTAGES OF BIOGAS

- Green Technology
- Energy and Cost Saving
- Renewable Electricity Generation in any Weather
- Use of Locally Available Raw Materials and Waste

BIOGAS TANK SYSTEMS

Technical parameters:

Digester model		20GP	40GP
Digester volume (m3)		12	25
Fermentation temperature (° C)		35-65	35-65
Max biogas production (m3/d)		30	62.5
Waste treating capacity	Food waste (kg/day)	375	780
	Human manure (kg/day)	500	1040
	Pig manure (kg/day)	667	1389
	Cow manure (kg/day)	900	1875
	Chicken manure (kg/day)	400	834
	Vegetable waste (kg/day)	975	2030



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BIOGAS TANK SYSTEM APPLICATION

This Product is Designed for Restaurants, Supermarkets, Hotels & Residential apartments *to treat food wastes or sewage sludge*; and for Livestock Farm *to treat manure and agriculture wastes*.

Features:

- ✓ **Quick & Easy Installation:**
The main equipment is pre-assembled in the Container prior to Shipment.
- ✓ **Highly Efficient:**
the system has all the functions for fast anaerobic reaction such as 55°C or 35°C high and constant reacting temperature keeping, and automatic mixing.
- ✓ **Environmental Friendly:**
 - ❖ **Odorless** - All the gas produced is collected, cleaned and burned. The residue due to full fermentation has no smell.
 - ❖ **No Greenhouse Gas** – All (biogas) discharge: all the biogas is collected, cleaned and burned as fuel.
 - ❖ **No Waste Discharge** – the residue can be used for green or organic vegetable cultivation directly.

NEW !

Secure Supplies has *increased* the size of the **210kW** Portable BIOGAS Digester's Fermentation Volume to **260m³**, with **Double Gas Storage Volume**, for our latest **20FT Container Anaerobic Treatment System**.

0.75 kW

3 kW

12 kW

22.5 kW

75 kW

210 kW



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Sustainable Energy with Secure Supplies

BIOGAS is considered one of the *most successful* Renewable Energy Sources. **Secure Supplies BIOGAS** Systems Produce “**Pure Green Electricity**”, using Domestic Energy Sources such as **BIOGASES**, derived from the fermentation process (anaerobic digestion) in natural biodegradable materials (wet or dry digestion); from the bacterial decomposition process of organic material contained in landfills (LFG); or from the fermentation and incineration process of sewage sludge at wastewater treatment plants.

With the use of **Secure Supplies BIOGAS** units, customers **save up to 70% in energy costs and reduce their CO2 emissions by up to 50%**.

Secure Supplies CHPs adjust to your **BIOGAS** composition, by adjusting our system to your **BIOGAS** composition by offering integrated, *Advanced gas treatment* components.

The inlet gas is first dehumidified by passing it through the dryer & cooler for dehumidification and afterwards moves into the carbon filter. It is then cooled initially with a passage through an advanced counter flow heat exchanger, and an air-cooled liquid chiller that further reduces its temperature. A gas pre-heating system (thermal after-treatment technology) elevates the temperature to ideal combustion condition.

BIOGAS Secure Supplies filter systems are used to reduce the content of Hydrogen Sulfide in raw **BIOGAS**. This provides a **cleaner and less corrosive gas** for engine combustion. Regenerated carbon filter systems also help to reduce certain Siloxane content.

➤ **BIOGAS** Carbon Filter System to reduce H₂S (Hydrogen Sulfide) & VSC (Volatile Siloxane Compounds)

➤ **BIOGAS** Dryer & Cooling Systems for dehumidification.

IT IS POSSIBLE TO JOIN OUR 1MW **BIOGAS** FRACK GAS REFORMERS TO THEESE TO MAKE PURE H₂ for Fuel Cells or Sale.



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