

BIOFERM DRY FERMMENTATION TECHNOLOGY



About BIOFerm Energy Systems

Based in Madison, Wisconsin, BIOFerm Energy Systems has expertise in renewable energy systems including anaerobic digestion, gas upgrading, and solar energy.

From project conception through commissioning, and continuing after adjusting the final bolts, BIOFerm handles every aspect of the entire process. BIOFerm works with landfills, communities, wastewater treatment plants, food processors, agricultural operations and more – our range of biogas solutions allows seamless integration at varied operations. BIOFerm is committed to providing successful renewable energy projects to our clients – our company ensures our technologies will produce the output agreed upon and offers the industry's most thorough Performance Guarantee & Warranty.



System Overview

BIOFerm Dry Fermentation is a batch-style, high-solids anaerobic digester. The process operates at a solids content of >25% and typically takes around 30 days per batch cycle. This system has no internal moving parts which allows for ease of processing:

- >Contaminated food waste
- >Yard waste
- >Solid agricultural waste



Key Advantages

- >Ideal for contaminated waste streams
- >Batch process and stationary system allows precise control over substrate removal for maximum energy yield
- >Liquid from digestion is recirculated
- >Virtually no pre-treatment or sorting of feedstock required prior to system loading which saves time and money for system operators
- >Low system maintenance and repair costs
- >Low parasitic energy consumption of 5-10%



Technical Components

- >Gas-tight concrete fermentation chambers with hydronic floor heating
- >COCCUS® percolate storage tank with hydronic floor and wall heating
- >Percolate distribution system with adjustable spray nozzles, percolate pump, & macerator
- >Dual-membrane flexible gas storage container with gas dehumidification and desulfurization
- >Enclosed mixing lobby with feedstock storage space
- >Biofilter to eliminate pollutants and odors from escaping into the atmosphere



Dry Fermentation Process

Input material is piled into airtight, garage-like fermenters, feedstock remains stationary while percolate is sprayed over the pile to jump-start digestion. After that 30 day batch cycle, the material is taken out and replaced with a mix of new and old material. Then the 30 day process begins again.