

COCCUS® Anaerobic Digester

Continuously-Stirred Tank Reactor (CSTR) Solution for Lower-Solids Feedstocks



Anaerobic Digester

COCCUS® CSTR anaerobic digester is designed to economically process: food waste, biosolids, agricultural waste, liquid manure, energy crops, and more.

This system operates between 8-12% total solids content, and typically processes 6,000 tons/year and up.

COCCUS® tanks are made of reinforced concrete and equipped with large, internal REMEX® paddle mixers.

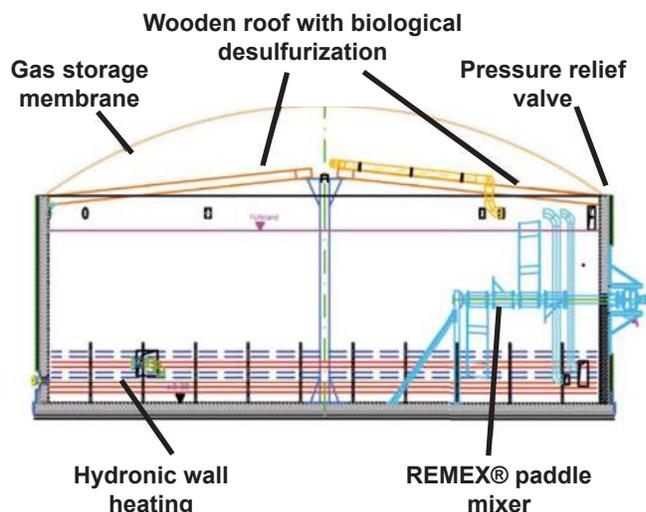
For cost-effective removal of hydrogen sulfide, biological desulfurization is integrated into COCCUS®'s wooden roof structure in the gas storage.

Technical Components

- REMEX® paddle mixers with energy-efficient drive units for optimal mixing and continuous gas production
- Hydronic heating on interior digester tank wall uniformly heats substrate
- Gas space concrete coating reduces maintenance cost
- Integrated biological desulfurization in wooden roof structure
- Dual-membrane roof system provides gas storage at constant pressure
- Robust feeding system
- One building for all technical equipment
- Pressure relief valve is frost-proof and low maintenance

System Advantages

- Low parasitic energy consumption
- Industrial-grade components with low maintenance
- Fully automated operation
- Professional control systems with PLC technology
- Short construction time
- Scalable by tank size and by adding more tanks as needed



About BIOFerm™

Based in Madison, Wisconsin, BIOFerm™ Energy Systems is a North American provider of turnkey gas processing and anaerobic digestion systems.

We additionally offer a spectrum of biogas services, such as: gas marketing, financing, project development, regulatory and financial oversight, power purchase agreement assistance, and consulting engineering.

Our company has experience from the installation of over 900 PSA systems (including ~90 Carbotech PSA gas processing plants) and over 450 anaerobic digestion facilities worldwide.

Applications

COCCUS® Digesters Starting at 85 kW

Nutrient Management

Nutrients are conserved and improved through the COCCUS® digestion process, resulting in a more readily-available form of nitrogen for plants.

Organic nitrogen is converted to ammoniacal nitrogen and organic phosphorous is converted into orthophosphate, making it a superior fertilizer compared to untreated manure. NPK ratios in the effluent is consistent with that of the untreated manure.

Solid and liquid effluent can be separated to concentrated streams of phosphorus and nitrogen and the solids can either be used as high-quality compost, fertilizer, animal bedding, and more.

Energy Independence

Creating renewable natural gas (RNG), electricity, or heat from organic waste helps make an operation energy independent and protects from fluctuating energy prices.

Optional Equipment

- Liquid digestate separator
- Final storage for liquid and solids
- Solids dryer
- Gas upgrading to RNG/CNG/LNG
- Vogelsang QuickMix chopper pump
- Co-substrate (food waste and FOG reception and dosing equipment to boost gas production)

