



High solids Organic waste Recycling System with Electrical output
AD 25 Series Portable and Modular Bioenergy System
960 – 6,700 lbs. per week (440 – 3,050 kg per week) for
Food, Paper, Grass, Liquids Recycling

DIVERT WASTE. GENERATE ENERGY.



Trailer Configuration



Container Configuration

The Impact 25 Series Bioenergy Systems are designed to scale down the size and cost of anaerobic digestion (AD). This system provides on-site generation of energy from food waste and similar organic materials. This can reduce the environmental footprint of even a single cafeteria or restaurant by offsetting trucking offsite to distant facilities, while also offsetting less sustainable forms of energy with self-generated renewable energy. The 25 Series also produces valuable soil co-products. This means local soil resources are conserved, reducing the need for agrichemicals and providing the local community with a post-consumer food lifecycle. Recycled organic matter can return to the soil as sequestered carbon as close to home as possible. This is a completely new innovation in organics conversion by developing a local, community based, farm-to table- and back to farm, life cycle. We call this closed loop operating system:

CSB (Community Supported Biocycling)

Food to Renewable Energy to Fertilizer & Soil Improvement to Food Again.

We consider the handling of all organic materials from a resource-based perspective, rather than a disposal perspective. We use life cycle thinking to reduce waste, lower energy consumption, reduce traffic intensity and transport, and retain employment and the dollars associated with commercial transactions inside each community.

Leadership in Engineering

The 25 Series has broken down the complexity and cost barriers seen in other anaerobic digestion systems through the use of our proprietary design, and sourcing the manufacturing and engineering in North America. Our base of manufacturing and support is in the Pacific Northwest. The systems are delivered complete and ready for use. The system comes with a 12 volt backup system to manage biogas production without the need for auxiliary power. Our technology is designed to accommodate the wide variations and calorific strength of source-separated food and fiber better than other systems. The breakthrough that Impact has developed involves a 2-phase anaerobic digestion process coupled with very low energy inputs. It also allows for methane recovery and 120 volt power generation with

breakers and simple plug in receptacles. The organic matter output can be recovered and directed to the highest and best use locally. This is a robust and simple AD design, featuring minimal labor and expenses, and a small footprint.

Achieve Real Sustainability and Economic Performance Simultaneously

The energy production is designed for 15,000 – 105,000 BTU/hour continuously. Organic feedstock input is designed for 960 – 6,700 lbs. per week (440 – 3,050 kg per week) which produces 100 – 730 gallons per week (400 – 2,800 liters per week) of liquid organic fertilizer. Gas storage is included to allow daily energy production to match peak demand patterns. Feedstock preparation, power generation, output recovery are integrated into the design. The system is designed to be completely enclosed so there will be no odor associated with food waste, biogas, or digested organic matter.

The HORSE empowers our customers and partners to achieve energy sovereignty and utilize their food and energy resources to the fullest potential. We can help configure both the energy output and the organic matter output to maximize economic, environmental, and social value. Electrical power with auxiliary radiant heat and lighting is standard but it can also be modified for optional prime power, heat, or hot water. Organic matter as a liquid emulsion is standard but it can also be modified for optional compost, fertilizer, and dried pellets.

The Impact Bioenergy Advantages

- An ability to reduce disposal, recycling, and energy costs simultaneously
- Minimal space requirements using onsite or local community based systems
- Quick modular deployment to replace diesel/petroleum gen sets and easily expandable
- High Performance Visual and Environmental Performance – especially on odor
- Onsite electricity and heat generation, or other forms of energy (lighting, hot water, etc.)
- HORSE & Carriage option with pedal-electric cargo vehicle for transportation/material logistics



We understand that communities and organizations are seeking more sustainable and affordable sources of energy and methods of waste diversion. The best solutions are located at the source, yielding the greatest economic and environmental impact. Our systems are ideally suited to small to mid-size communities, campuses, and commercial generators of organic waste. The 25 Series offers continuous distributed, off-grid energy, reducing reliance on power transmission across the landscape, and providing energy independence and security.

EASY TO DEPLOY AND SCALE UP

The 25 Series prefabricated bioenergy units drive down capital costs and allow delivery and installation quickly. Expansion is simple with minimal space and connection requirements. The 25 Series can convert kitchen trim, post-consumer dining room food scraps, meat, grease, oil, all edible liquids, seafood, dairy products, starch, sugar, fruit, vegetable, small bones, soiled paper products, napkins, tissue, paper towels, waxed paper, grass clippings, leaves, fats, fryer oil, grease trap waste, beverages, alcohol, soup, condiments, eggshells, glycerin, etc.

SYSTEM DETAILS – BASE AD 25 MODULE

- 160 square feet ground space required
- 0.36MMBTU maximum per day gross energy output (360,000 BTU/day)
- 4.0 kW per hour electric output
- 175 cubic feet of gas storage (expanded storage is available as an option)
- 135 lbs. per day input rate (960 lbs. per week)
- 12 volt surplus gas burner safety system
- AD 25-2 module has 7 x input and output



HORSE | High-solids Organic-waste Recycling System with Electrical Output



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