

# Complete Plants & Systems



System	Asset	Manufacturer	Description	Built	Location
Absorber & Gas CleanUp Module	FP311		Syngas and absorber gas cleanup modules - from Syngas quench output. Includes absorber module, solvent recirculation & cooling system and heat exchangers, and Frick refrigeration system. Designed for SynGas flow at 101,940 #/hr and solvent system cools 1.68 MMBTU/hr. This complete system is like new - built in 2009 but only ran 42 days. For a complete list of components & photos of this FP311 module - enter fp311 in the search terms box. For complete methanol system, please enter fp100. Mass balances available.	2009	Soperton, GA
Alcohol Cooling & Separation Module	FP414		Alcohol cooling module and separator vessels. For a list of all components enter fp414 in search terms box. Part of Methanol Plant FP100	2009	Soperton, GA
Biodiesel Plant 10MGY	7220		Biodiesel plant designed for 10 MGY (million gallons per year). Plant started build in 2008, sat idle, then build finished 2012. Produced 3 million gallons of biodiesel B100 in 2013. Currently idle - Key employees, crew, and management have been retained, power on, well maintained - ready to run. EPA and IRS registrations are in place and up to date. RIN management in place. Can be started up immediately. Set to handle clean degummed soybean oil as feedstock, but can handle "dirtier" oil with acid esterification system (to be commissioned). Plant sits on 8 acres, rail siding next door can be leased, truck scale, 2 station truck loading/unloading building, tank farm for feedstock, methanol, glycerin, methylate, and biodiesel (10 tanks). Includes building, offices, lab, Siemens switchgear and MCC, controls with Allen Bradley plc, Panatrol HMI - all automatic. Has (6) 2-stage batch reactors system set up for continuous flow. Methanol and glycerin recovery columns. See flyer for additional details.	2012	Moberly, MO
Biodiesel Plant 15 MGY	7410	Greenline	Biodiesel plant rated for 15 MGY (million gallons per year). Complete plant including land, rail siding, rail & truck loading, 13 tanks. Two separate complete biodiesel trains - a 5 MGY system and a 10MGY system. All electrical, lab, utilities, and auxiliaries. Plant is a Greenline design capable of running multi feedstocks. It ran animal fat during its production. The 10MGY train was added new in 2008 - plant has been Idle since 2009. Can be run in place. If moved, removal is extra. Land size is approx. 240 ft x 650 ft for 3.5 acres. Much more information available in our Virtual Data Room (VDR). Please ask for an invitation.	2007	Missouri

System	Asset	Manufacturer	Description	Built	Location
Biodiesel plant 15MGY	7434		<p>Biodiesel production plant available for sale. Plant can utilized lower cost oils such as poultry fat and brown grease. Initial capacity of 7 MGY using poultry fat as feedstock, has been upgraded to 15 MGY. Management and key employees still there. This plant produced through the end of 2014 and is currently idle. It can be started up again immediately - all licenses and permits are current. Equipment Lists and Process Flow Diagrams available</p> <ul style="list-style-type: none"> <li>- Ongoing operation</li> <li>- Capable of running lower cost oils such as brown grease and poultry fat</li> <li>- Rail siding for 10 cars</li> <li>- Truck loading/unloading</li> <li>- 750,000 gallons storage</li> <li>- Two 800 HP steam boilers</li> <li>- Two Hot Oil Boilers</li> <li>- Full lab including ICP &amp; 2 GLC's. Can run all analyses except Cetane</li> <li>- Bleaching System</li> <li>- Degumming System</li> <li>- Licenses, permits, and fees still current</li> <li>- Chiller/Filtration system for improved cloud point</li> <li>- Methanol Recovery distillation column</li> <li>- Glycerin distillation column produces pure glycerin</li> </ul>		Moundville, AL
Biodiesel Plant 7 MGPY	7121	Bionerg, S.A.	<p>Biodiesel plant - NEW, never used except to run test trials and prove biodiesel production. Rated at 7 Million gallon per year. Built 2009. Produces 6,470 #/hr of B100 + 847 #/hr of concentrated glycerin. Built and designed by Bionerg (ePlus), S.A. Argentina. Biodiesel train skidded - ready to load. Includes Hurst firetube boiler, unload &amp; load systems, Glycerin system. Set up to meet spec ASTM D6751. Price includes all equipment, control system and control logic. Removal and Loading costs not included.</p>	2009	Southeast
Bleach System 150 MTPD	5766	DeSmet	<p>Stainless steel continuous bleaching system, capacity up to 150 MTPD. Includes DeSmet stainless steel 2,000 gallon bleacher with demister pads, (2) LFC Lochem vertical filters with 38 sq m surface area each, 1 pumps. Built in 1985. See the schematic and flyer for more details. Does not include the vacuum system but we can provide a new update vacuum system, and also an updated earth handling system. Approximate area needed: 15 ft x 20 ft for bleaching system &amp; filters plus 10 ft x 10 ft for earth handling. Two floors. Price includes removal and loading on your trucks or containers. Will be available on or after August 2015.</p>	1985	Kingston, Jamaica
Catalytic Conversion System - SynGas	FP41		<p>Catalytic conversion of syngas to alcohols. Includes catalytic converter 41-R-168 designed for 3.9 MMBTU/hr, slipstream system partial, Synloop compressor at 1650 psig at 600HP, interconnecting piping and instruments. Catalytic converter currently loaded with methanol catalyst. Equipment was installed in 2009 - only ran 42 days. Like New. Includes modules 411 Alcohol synthesis, 413 Syngas conditioning, 414 Alcohol cooling &amp; separation, 415 Synloop compression, 416 Slipstream (partial). Part of Methanol Plant asset number fp100</p>	2009	Soperton, GA

System	Asset	Manufacturer	Description	Built	Location
Catalytic Converter Module	FP411		Alcohol synthesis and HP steam system - Syngas catalytic converter module with converter, steam drum, structural steel, and all instruments. Loaded with conventional methanol catalyst currently. Includes structure, all piping, all auxiliary instruments attached to module. Still installed - price does not include removal. For a list of all components enter fp411 in search terms box.		Soperton, GA
Crush Extraction Plant 240 TPD	7421	Bionerg - Argentina	Mechanical extraction plant built to crush soybean. The crush plant was finished in 2008, ran 1,000,000 bushels of soybean in 2009 and was then idled. It is designed by Bionerg to run 9,000 kg/hr (~240 tons per day) soybeans with 2% impurities maximum. The designed output is 14% degummed oil and 82% high fat soybean meal. Includes a degumming system which produces the oil suitable for biodiesel production. The meal has residual fat of 6-8% which makes it ideal to sell to nearby chicken farms as feed. There is no issue getting beans to run in the plant and the owner states they could easily sell all the meal they made. There are three 125,000 bushel grain bins and one meal bin for storage. The plant also includes a very nice office building, truck scale, meal loadout, GSI vertical grain dryer, oil tank farm (with six 25,000 gallon tanks), oil loadout, all electrical & controls, air compressor, and boiler. There are 3 production lines, each with 2 IMDB EX 1605 extruders and 1 MACOEX PTE 30 press. The programming and the plant are still supported. Ideal to purchase with land to run in place. Co-located with 7 MGY biodiesel plant - can be purchased as a package.	2009	DeWitt, AR
Crush System 250 MTPD High Oil Content	7430		<p>250 MTPD Crush System - High Oil Content</p> <p>This includes a combination of new and rebuilt equipment.</p> <ul style="list-style-type: none"> <li>-Three (3) New Clipper Series Titan model 44 two decks design seed cleaners with vibratory feeder and high static centrifugal blower including 15 Hp motor each.</li> <li>-Two (2) New Ferrell Ross Series Industrial model 12x52 single HI cracking mills with roll feeder and 75 Hp motor each.</li> <li>-Five (5) Rebuilt Anderson Steam Jacketed Vessels model 36x12 horizontal cooker/dryers with screw feeder and main agitator shaft with 10 Hp motor each.</li> <li>-Five (5) New Anderson 8" Dox-Hivex Expanders completes with screw feeder, 33" long drainage cage and 200 Hp motor each.</li> <li>-Five (5) Rebuilt Anderson 55" Duo Expeller Presses completes with screw feeder, 15 Hp vertical gearhead motor, 75 Hp main horizontal motor, integral main worm shaft and 55" long drainage cage.</li> <li>-One (1) New Anderson N°20 Special Oil Screening Tank complete with wedge wire screen, drag conveyor with plates and product oil pump.</li> <li>-Two (2) Rebuilt Industrial model "D" Series 60-4-16 Pressure Leaf Filters with all Stainless Steel 5-Ply filter elements, hydraulic power-pack, controls, A-frame and beams.</li> <li>-Two (2) Rebuilt Rosedale model model 16" vertical polishing filter 2-bag design with 1 micron filter media.</li> <li>-One (1) Rebuilt Geelen model VK24x24KM Counterflow Cake Cooler complete with 40 Hp motor fan and process cyclone with rotary airlock valve.</li> <li>-One (1) Rebuilt Champion model 38x32 Hammer mill complete with 125 Hp motor, balanced rotor suspended over heavy duty roller bearings and new hammers/screens.</li> <li>-One (1) New Williams &amp; Davis Firetube Steam Boiler for 100 BHP @ 150 PSIG with nat-gas fueled burner.</li> <li>-Delivery: 24-28 weeks.</li> </ul>		Ft. Worth, TX

System	Asset	Manufacturer	Description	Built	Location
Deodorizer System 150 MTPD	7178	Girdler	Deodorizer system manufactured by Girdler. These are the main parts only - not a complete system. Includes Girdler 6-tray deodorizing system with cs shell/ss trays and drop valves, stainless steel scrubber with integral heat exchanger for free fatty acid capture mfg by Elliott, a 2-stage Kinema steam ejector system (new), and a 4MMBTU Dowtherm vaporizer. Deodorizer was originally rated for 13,250 #/hr but can be upgraded to 20,000 #/hr approx by adding more steam ejectors. System is removed and ready to load. For components, enter cpdeod in search box	1986	Vernon, CA
Feedstock Refinery 230 MTPD	7420		Oil & Fats feedstock refinery - for cleaning up lower cost oils such as UCO, animal fat, poultry fat for use as a low cost feedstock to the biodiesel industry or animal feed industry. Built 2011, produced in 2012 - now idle. Total nameplate capacity is 230 MTPD (21,000 pounds/hr); Produces 191 MT/day of clean oil (low in ffa, moisture, phosphatides, solids) and 4.5 MT/day of free fatty acids (ffa). Complete plant is available for purchase - sits on 5 acres of a 20 acre plot. All 20 acres are for sale. Has truck loading spots, separate truck unloading spots, and 2 rail sidings. Includes all utilities, tank farm, 2 boilers, buildings, complete auto control with Allen Bradley RS Logix plc system. Positioned in the Southeast and can inexpensively provide feedstock for plants in that area.	2011	Selma, AL
Filling Line Margarine	4560	Margarine Filling	Complete margarine packaging line designed to fill bag in box sizes from 10 pounds to 50 pounds. Includes case erector, bag inserter, dual head load cell filler and controller, case sealer, metal detector, Kronas Cartina labeler, Marsh case code dater and all interconnecting stainless steel case conveyor. NOTE: Detailed Descriptions of each of these are listed separately.	1985	Mexico
Gas Cleanup & Compression - SynGas	FP31		Syngas Absorber, cleanup, and compression after Quench. Includes absorber column item 31-C-196, two 1750HP compressors to compress up to 1650 psig, rich solvent and lean solvent handling systems, refrigeration skid with 140T Frick. And interconnecting piping and instruments. Equipment was installed in 2009 - only ran 42 days. Like New. Includes modules 311 Gas Cleanup, 314 Booster Compression 1-2, 315 Booster Compression 3-4. Part of Methanol Plant asset number fp100	2009	Soperton, GA
Gas Compressor Module 1750 HP	FP315	Toromont White Superior	Gas Compressor module - 2 stage White Superior reciprocating compressor, 2 cylinder. Rated 2500 MAWP psig at 300F, 1750HP motor, dampener bottles, and all accessories included on skid. Includes Reliance rebuilt motor Frame 9240, Volts 4160, Type P, RPM 895, HP 1750. Plus 3 heat exchangers, separator vessels, coalescing filters, and more. Rebuilt and tested in 2009 - ran 42 days - like new. Complete skid packaged by Toromont. Last used as SynGas compressor at 14,475 #/hr at 1650 psig. See asset ID 31-K-216 for compressor description, For a list of all components enter fp315 in search terms box.		Soperton, GA
Gas Compressor Module 1750HP	FP314	Toromont White Superior	Gas Compressor module - 2 stage White Superior reciprocating compressor, 2 cylinder. Rated 300 psig at 300F, 1750HP motor, dampener bottles, and all accessories included on skid. 1st & 2nd stage. Plus 3 heat exchangers, separator vessels, coalescing filters, and more. Last used as SynGas compressor at 14,475 #/hr at 425 MAWP. See asset ID 31-K-120 for compressor description, For a list of all components enter fp314 in search terms box.		Soperton, GA

System	Asset	Manufacturer	Description	Built	Location
Hydrogen Gas Plant 55,000 scfh	6529	Glitsch Technologies	Hydrogen generating plant engineered by Glitsch Technologies and installed by McAbee Construction in 1995. Design capacity is 1.3 MM scfd (55,000 scfh). Includes waste heat boiler for steam export. Plant is now shut down, and proper shutdown procedures were followed. Built to US standards and measurements. Purity to 99.99% H2. Mothballed in 2006, boiler dry packed and plant under nitrogen. Reformer holds 10 tubes - currently has 8 installed. Voltage 575V 60 Hz.	1995	Ontario
Hydrogen Gas Plant 90,000 scfh	6530	Hydro-Chem	Hydrogen generating plant engineered by Hydro-Chem built in 1980. Design capacity is 90,000 scfh at 200 psig with a purity of 99.99% pure hydrogen - was running on 10 of its 20 tubes for 45,000 scfh capacity. Reformer can be fired on natural gas or propane - same burner. Waste heat boiler generating 3,000 to 5,000 #/hr export steam at 250 psig. PSA plant (4 psa vessels replaced in 1998) with Jamesbury valves kept up to date, Quench pot design. Plant completely intact except for small natural gas compressor. Has new tubes, new reformer and shift converter catalyst. Five (5) spare tubes available. Plant has just recently shut down in mid 2012, and proper shutdown procedures were followed - still under nitrogen blanket. Reformer tubes are 6.625" OD, 5.25" ID, 30.825" long and made of alloy HP50 (also known as 25/35).	1980	Nebraska
Lecithin Degumming 10 TPD (partial)	7094		Lecithin & Degumming System (partial). Capacity 10 tons per day (TPD). Available immediately - we have two "trains" or packages (systems) containing the major pieces for a lecithin/degumming system. Package includes thin film dryer set Cherry Burrell with vacuum system, lecithin cooler Votator 6x72 scraped wall exchanger, oil vacuum dryer with 2 stage vacuum system, Industrial Filter 60-4-24 600sf with stainless leaves, and 4 pumps. See the schematic PFD. There are 2 of these systems - priced separately. For a detailed list of all components in both sets enter "degum" in the search box.	1988	Ft Worth, TX
Methanol Mixed Alcohols Plant	fp100		Mixed Alcohols and/or Crude Methanol Production: Partial Plant & System: LIKE NEW - only ran 42 days. Surplus to the ongoing operation. Produced Mixed Alcohols. Catalytic Conversion of Organic Alcohols. Designed for 125 TPD woody biomass input, for 5 MGY (million gallons per year) methanol output. Plant was designed to convert biomass gas into organic alcohols using the Fischer-Tropsch Process. It is a pentane based batch azeotrope separation system. The wood yard & gasifier system are not part of this sale. However, most Fischer-Tropsch process equipment and systems downstream are included: Metso feeder system, Quench, Gas Cleanup, Compression (2 sets), Catalytic Converter, Alcohol cooling/compression. Equipment was purchased in 2009 and installed in 2009/2010. Manuals, drawings available. Price includes all interconnecting piping, structure, and instruments, but does not include removal. We can remove and load for you if desired. See flyer for complete arrangement and details.	2009	Soperton, GA

System	Asset	Manufacturer	Description	Built	Location
Refinery-Bleach-Deodorizer 20MTPD	7018	DeSmet Rosedowns	Complete Refinery - NEW. Capacity 20-40 MTPD (Can be modified to get 40-80 MTPD). This plant was installed in 2002-2003 but was never started up. Manufactured by DeSmet Rosedowns. Includes neutralizing, bleaching, deodorizing plus steam boiler 300HP. This is a batch type system. Includes the following: 1. Batch Bleacher / Neutralizer Vessel, 2. Batch Deodorizing Unit, 3. Steam Generator 300HP Reconditioned York Shipley Firetube Boiler (natural gas for US firing), 4. Crude Oil Heel Tank, 5. Bleaching Earth Hopper, 6. Vacuum Tank DeSmet 841-A, 7. Soap stock storage tank, 8. Lot of structures, platforms and supports included, 9. All drawings, manuals and related information included, 10. The PFD drawing shows in red the minor items that are missing that will have to be replaced. Pumps are included (motors missing). Cost includes removal. Ready to ship - Loading fee will apply.	2002	Ft Worth, TX
Regenerative Thermal Oxidizer (RTO)	7292	Anguil Environmental System	Anguil Environmental System Model 400 Regenerative Thermal Oxidizer 42,000 SCFM. 480VAC/3PH/60HZ. Natural gas fired - usage 11,000 CFH Natural Gas 10 CFM @ 80 PSI Compressed Air. Built 2007 - still installed	2007	Upstate, NY
Regenerative Thermal Oxidizer (RTO)	K-675	CECO	Regenerative Thermal Oxidizer (RTO) built by CECO in 2006. Stainless steel chambers. Originally designed for 83,070 scfm - this partial RTO has 3 chambers left and can handle approx 40,000 scfm. System is offered with 3 ss chambers, MCC's, VFD, ducting. Includes main process induced draft fan 400HP 1185 rpm 480 V 60 Hz with VFD, and Inlet & outlet manifold. Converts noxious fumes containing organic solvents, hydrocarbons, and odors to water vapor and carbon dioxide through thermal oxidation. Designed for 1 second of retention time at 1500F to completely oxidize any VOC. Physical size of RTO is approx 14 ft wide x 35.5 ft long x 34 ft tall. Will need control panel, dampers, gas train & burners, and stack for a complete system. Note - this RTO is a partial system and can be reconditioned & retrofitted to your design by the same people who designed it originally. Price is right. Call us and we can conference to tailor to your needs.	2006	Hastings, NE
Syngas Conditioning Module	FP413		Syngas conditioning module with 3 heat exchangers. For a list of all components enter fp413 in search terms box. Part of Methanol Plant FP100.	2009	Soperton, GA
Synloop Compression Module	FP415		Synloop compressor module rated at 1650 psig at 275F 600HP motor. Includes skid and all accessories. For a list of all components enter fp415 in search terms box. Part of Methanol Plant FP100	2009	Soperton, GA
Thin Film Evaporator Dryer Package	7122	Cherry Burrell	Thin film dryer package (wiped film evaporator). Cherry Burrell Thin film dryer 36-144. Scraped surface area 106 sq ft. Model 36-144. All contact surfaces are 304 stainless steel. Has 2 sections, designed for steam in jacket. Driven by 40 HP motor 1182/260 rpm. Physical size 36" dia x 144" tall for 252 inches OAH. Weight of dryer only empty 13,200 pounds. Includes 2 stage Nash-Kinema steam ejector vacuum system, a Viking LL4124A 7.5HP feed pump, and a Viking LL4124A 5HP discharge pump. Equipment has been removed and is ready to load on your truck - price includes removal & loading. There are two packages being offered - priced separately	1984	Ft Worth, TX

**System****Asset Manufacturer****Description****Built Location**

---

Terms: All equipment is sold As Is Where Is, Subject to prior sale and availability. The equipment could be withdrawn from the market at any time with no prior notice. All quotes are in US Dollars unless specifically noted otherwise. Quotes are good for 30 days. Description of the equipment - especially those relating to capacity, size, or condition - are stated as clearly as possible for information to the buyer or observer. The descriptions and representations cannot be taken as accurate. The buyer has the sole responsibility to determine size, capacity, capability, suitability, condition, or any other attribute pertaining to the piece of equipment represented or purchased. The assets are sold "As Is", "Where Is" and "with all faults" and except as explicitly stated in the Bill of Sale. All warranties, including, without limitation, the warranties of merchantability, quality, and fitness for a particular purpose are hereby expressly excluded. Seller makes no representations or warranties as to design, condition, capacity, performance, or any other aspect of the asset.