

# 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. Still installed. 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
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 capable of operating independently on different feedstocks - 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 2010. All automatic - Allen Bradley plc control. 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. This plant can be used as a terminal - has 12 rail spots, 2 truck spots, and 1.4 million gallons of storage.	2007	Missouri
Biodiesel Plant 7 MGPY	7121	Bionerg, S.A.	Biodiesel plant - NEW, never used except to run test trials and prove biodiesel production. Rated at 7 Million gallon per year. Built 2009. Designed for degummed soybean oil input. 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 & 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. Can probably be run in place.	2009	Southeast
Bleach System 150 MTPD	5766	DeSmet	Stainless steel continuous bleaching system, capacity up to 150 MTPD. Includes DeSmet stainless steel 2,000 gallon bleacher with demister pads, (1) LFC Lochem vertical filter with 38 sq m surface area, 1 pumps. Built in 1985. See the schematic and flyer for more details. Bleacher Size 5 ft diameter with 3.5" insulation, 14 ft tall. Does not include the vacuum system but we can provide a new updated vacuum system, and also an updated earth handling system as extras. Approximate physical area needed: 15 ft x 20 ft for bleaching system & filters plus 10 ft x 10 ft for earth handling. Idled 2014. Two floors. Price includes removal and loading on your trucks or containers.	1985	Kingston, Jamaica

System	Asset	Manufacturer	Description	Built	Location
Catalytic Conversion System - SynGas	FP41		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 & separation, 415 Synloop compression. Part of Methanol Plant asset number fp100	2009	Soperton, GA
Catalytic Converter Reactor Module	FP411		Reactor - 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
Continuous Hydrogenation System	PK-6050		Continuous hydrogenation system - capacity 20,000 lbs/hr. The continuous reactor is a vertical vessel with top entering multi stage agitator. Uses nickel catalyst and hydrogen to promote reaction. Major items include CHR Reactor 20,000 #/hr (carbon steel), jacketed with cooling water on jacket MAWP shell 13.6 bar /FV at 260 C and jacket 11.4 bar /FV at 182C, deaerator, 2-stage steam ejector barometric vacuum system, 2 filter feed tanks, HydraShock filter, HydraShock surge tank, 2 catalyst supply tanks and system, finished product polish filter, spent catalyst tank, 6 heat exchangers, 9 pumps. Vessels are mounted on two steel structures assembled complete with all pumps, pipework, instrumentation and trucked in to be lifted intact into place. The HydraShock structure is 15 ft x 12 ft x 63 ft tall. The CHR structure is 16 ft x 12 ft x 49 ft tall. See photos. See links for schematic drawings of the system and a component list.	1982	Indiana
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 in 2012. 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.	2009	DeWitt, AR

<b>System</b>	<b>Asset Manufacturer</b>	<b>Description</b>	<b>Built</b>	<b>Location</b>
Crush Plant 110 MTPD	PK-6049 French	<p>This 110 MTPD (metric tons per day) crush plant was purchased New from French in 2008 but has only operated approximately 9 months. There is no wear on the equipment, it is like new, and has been idled in a heated processing building for 10 years. This is a very compact plant on structural steel with a footprint of approx 30 ft x 40 ft.</p> <p>The primary components include a French Press Model Achiever 55, a French 7 deck conditioner Model 7120, and a Westfalia decanter model CA-450. All in excellent shape. It also includes a Law-Marot seed cleaner system and meal bin, all connecting conveyors, heat exchangers, pumps and reduced voltage starters/cabinets for the press and the conditioner. See component list on flyer. Entire Structure is available for additional cost, match marked, clips and attachments added for re-installation as it is here.</p> <p>This crush plant was designed for canola seed but can run other seeds or beans with minor modifications. French still supports this equipment. French recently issued a favorable report on this entire crush plant during their inspection in July 2018 and that report is available.</p> <p>Prices do not include removal and loading. We do have those quotes which vary depending on your removal decisions - we can discuss those with you. Available as Crush package. For a list of all components, enter "pkcrush" in the keyword search terms box.</p>	2008	Saskatchewan, Canada
DDGS Loadout System Package	PK-8420 DYNATEK & SLY	<p>Package system: Mass Loadout system - last used for DDGS Rail or Truck Loadout Facilities. Includes 75 ft drag conveyor CON-013 delivering DDGS at 15,000 cfh (240 ton/hr), Dynatek articulated loading arm, two 30' drag conveyors feeding the spout, vertical pedestal structure, and pendant control - includes SLY model XP-12 loading spout. Includes control house inside (asset BL-8422) but not main building. We can include loadout building (see BL-8421) - priced separately. Load out for two rail or trucks spots side by side. We can mix and match components to align with your system needs. For a list of all components in this loadout system, enter "PK8420" into the keyword search box.</p>	2007	Canton, IL
Ethanol Dual Loadout - Package	PK-8219	<p>[PRELIM - Seller may want to keep. Ethanol Liquid Loadout system, TWO station. Designed for 1200 gpm. Has 4 inch load out line with vent, two station loadout with cantilevered platforms &amp; safeties, galvanized stairs, two OPW 4" swivels and loading arms, slide out platform, Ethanol Rail Loadout (2) station. Filter - Krystil Klear Filtration 150 psig @ 300F, (2) Meters, [The flare system is asset FH-8201 valued separately] This is a complete system. Built 2009 but not used - Like NEW. Currently set up on rail but can be used for rail or truck loadout. See link for GA drawing and schematic detailed information</p>	2007	Canton, IL

System	Asset	Manufacturer	Description	Built	Location
Ethanol Plant 38MGY - ALL ASSETS	8405	Lurgi-Fagen	ASSETS ONLY for complete Ethanol Plant - capacity 38 MGY (million gallons per year). [The plant cannot stay in place and be run as an ethanol plant. We will sell complete assets as a package but all must be removed. Price EXCLUDES items too big to move, any item listed as scrap, and infrastructure]. Process is corn dry mix fermentation. Plant is a Lurgi design modified by Fagen Engineering; built in 2008-2009. This plant was tested in 2009, but never produced. Idled in 2009 - assets are clean, empty, and shiny. Almost all of the equipment is still there, and this plant can be reconditioned into a full complete operating plant - much cheaper than starting from scratch with a greenfield location. Some equipment has been removed, and is listed in the removed-gone list attached as a link. Complete list of available major equipment is available on request. Virtual data room (VDR) available for many more details. See marketing deck for more details - attached as a link, Price quoted is for listed assets only - does not include removal. We have 4 lists we can send detailing all equipment for sale.	2009	Canton, IL
Ethanol Plant 55 MGY - Assets	PK-7000	Delta-T	ASSETS ONLY for complete Ethanol Plant - We will sell this plant "intact" in its entirety, or as individual pieces of equipment. See Equipment List in LINKS. Capacity 55 MGY (million gallons per year). The plant cannot stay in place and be run as an ethanol plant. We are selling complete assets as a package and all must be removed. Process is corn dry mix fermentation augmented by grain sorghum and non-cellulosic separated food waste (SFW). Plant design is a Delta-T originally built in 2007 - design modified by Ergon and restarted in 2015. Significant improvements have been made in the plant including a Fluid Quip system. The plant was idled on Sept 2018. It has been professionally mothballed. All of the equipment is still there, and this plant can be relocated into a full complete operating plant - much cheaper than starting from scratch with a greenfield location. Includes GEA Barr Rosin ring dryer, Nestec RTO, (2) Superior 2200 HP boiler, Bliss 300HP hammermills, DDE with mole sieve, fermentation and in-process tanks. DCS and plc controls, FF&E, Distillation & Evap, cooling tower, 2766 ton chiller, (3) Alfa-Laval decanter centrifuges CHNX-706B, (3) other centrifuge/decanter associated with the Fluid-Quip process, (3) Atlas-Copco air compressors, electrical MCC's and switchgear. Complete list of equipment, specs, and drawings are available on request in our Virtual Data Room (VDR).	2007	Vicksburg, MS
Evap System	PK-6045	Unitech Titanium	Evaporator system rated at 45,000 lbs/hr. Unitech Titanium falling film evaporator manufactured in 1993 but unused until 2008 then operated for approximately 9 months. Includes Incoloy 825 vapor body, 15,862 SqFt heat transfer section with 872 Grade 2 Titanium 2 inch OD tubes x 36 ft long; and MVR compressor driven by a 500HP motor. Design train capacity is 92 GPM, distillate flow 83.95 gpm. This converts to 44,457 lbs/hr water evaporation. Price includes manual valves and selected ss304 and ss316 piping manifolds, and structural foundation for evap vessel and deaerator. Ladders, grating, and access steel also available.	1993	Saskatchewan, Canada

System	Asset	Manufacturer	Description	Built	Location
Fire System	6041		Fire System including Diesel pump with controls, electric pump with controls, and foam tank filled with 3-M foam. Diesel pump motor is a Cummins Model 6BTA5.9F1 - 182 HP, 1750 RPM. Diesel pump is an Aurora split case Model 6-481-18b - 125 HP, 1750 RPM, 1500 GPM, 125 psi. Diesel pump controls are Firetrol FTA1100-JL12N-120 volts, 20 amps, 300 max psi. Electric pump motor is a baldor H2554T-4-125 HP, 3550 RPM, 60 Hz, 3 phase. Electric pump is a Paco split ase model 29-10126-3G-31-194-3550 RPM, 150 GPM, 9.45 impeller, 149 head, 166 psi shut-in. Electric pump controls are Master Control system model pmc-1-3-46-1-type ge-syl. Foam system is Arrow Tank and Eng Co. Model ccs-6-404/6va air foam proportioner and 3M light water ATC hydrocarbon fuels polar solvent model 98-0211-6635-4 - code fc-600f		Kansas
Flare Package - Ethanol Truck Loadout	FH-8210	John Zink	Flare package by John Zink Company. Flare includes Knock-out Pot capacity 70 gallons size 24" x 36" , Knockout Tank pump driven by 1.5 HP motor, flare stack 20" x 25", and flare blower Pennbarry DRM-DD-12 with a 1 HP 3500 rpm motor. Local controls. For drawing and data, see links. Used as Ethanol truck loadout flare.	2007	Canton, IL
Fluid Bed Cooler & Baghouse	PK-FBS	GEA Barr Rosin	GEA Barr Rosin static fluid bed cooler package for ring dryer. Size 7 ft W x 19 ft L x 18 ft OAH. Includes fluid bed cooler, baghouse filter and ducting. (See also asset # FBAG-31) Sized for 22,100 cfm. Weight 15,800 pounds. Part of ring dryer DR-5210, not sold separately at this time. For a list of components and their photos & description enter dr5201 in search box on web site		Vicksburg, MS
Fluid Bed Cooling Pkg - Dryer System	PK-5430	Barr-Rosin	[PRELIM - Seller may want to keep. Make OFFER]. Barr-Rosin Flash Dryer Cooler Package. Includes fluid bed cooler, dust collector baghouse, blower, and ducting. Cooler designed for product rate from dryers at 29,701 lb/hr. at 10% moisture. Product temp 210F, dryer exhaust volume 18,000 AF. Based on 74 degree underbed temperature, the fluid bed cooler will achieve a 1-2% evaporative cooling. Material of DDGS based on 10 lb/cf. Barr-Rosin Flash Dryer Cooler Package. Includes fluid bed cooler, dust collector baghouse, blower, and ducting. Cooler designed for product rate from dryers at 29,701 lb/hr. at 10% moisture. Product temp 210F, dryer exhaust volume 18,000 AF. Based on 74 degree underbed temperature, the fluid bed cooler will achieve a 1-2% evaporative cooling. Material of DDGS based on 10 lb/cf. . Part of dryer package. This is the fluid bed cooler package. Includes fluid bed cooler and filter baghouse. For a complete list of these components, enter PK5430 in search box.	2007	Canton, IL
Fluid Quip BOS	FQ-BOS	Fluid Quip	Fluid Quip Brix Oil Separation (BOS) system designed to recover raw corn oil from the liquefaction slurry prior to fermentation. Designed to recover 1.0 lb of corn oil per bushel. Includes (2) clarifiers, (1) Triton centrifuge, (1) polishing centrifuge Alfa Laval NX4451-11G, (10) pumps, (1) paddle screener, (8) tanks. See Listing in link and separate spreadsheet for assets involved	2015	Vicksburg, MS
Fluid Quip SGT	FQ-SGT	Fluid Quip	Fluid Quip SGT system prepares the mash and helps release oil from the germ. Includes (2) Grind Mills, (6) pumps, (6) paddle screens, (3) tanks. See listing in link. The SGT CC equipment and process is designed to grind wet slurry in conjunction with liquefaction to release more starch during liquefaction. The process is based on selectively grinding to reduce particle size and present a narrow distribution of particle sizes so that more starch may become hydrated and broken down to sugars during liquefaction. See flyer and separate spreadsheet for assets involved		Vicksburg, MS

System	Asset	Manufacturer	Description	Built	Location
Gas Compressor Module Stage 1 & 2	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. NOTE: This compressor has now been removed. The main photos show the compressor AS IT WAS installed, we have added more showing it de-installed in 2016. We have paid for removal so now price includes loading on your truck.		Soperton, GA
Gas Compressor Module Stage 3 & 4	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. NOTE: This compressor has now been removed. The main photos show the compressor AS IT WAS installed, we have added more showing it de-installed in 2016. We have paid for removal so now price includes loading on your truck.		Soperton, GA
Gas Compressor Syngas Loop Module	FP415		Syngas synloop compressor - compressor is Superior White W62 frame driven by a 600HP motor 4160v. Assembled and tested by Toromont. The compressor module has been removed and is stored in a protected area. MAWP module rated at 1650 psig at 275F. Includes compressor, skid and all accessories, 600HP motor 41260v. All includes separators (module fp414) and heat exchangers (module fp413). For a list of all components enter fp415 in search terms box. Price includes removal and loading on your truck. NOTE: This compressor has now been removed. The main photos show the compressor AS IT WAS installed, we have added more showing it de-installed in 2016. We have paid for removal so now price includes loading on your truck.	2009	Soperton, GA
GenSet Package 4 MW (5000 KVA)	PK-9109	Murray Turbine	[PRELIM - Seller may want to KEEP - Make OFFER]. Gen-Set Package (Includes Murray Turbine, Ideal Generator, Lube system, and control panel). Output is 5000 KVA at 12.4 KV 60 Hz 3 phase. - Guaranteed at 4,012 KW. Steam turbine and generator skidded together, LO skid separate. Length of unit approx 26'-7" x Width of unit approx 10'-1". System integrated by Murray Turbine. See drawings in links. For a list of all components, enter "PK9109" into keyword search box. Used as CoGen.	2007	Canton, IL



System	Asset	Manufacturer	Description	Built	Location
Hammermill System 300HP	PK-1631	Bliss	Hammermill system including (2) Bliss 300HP hammermills, (2) Baghouses and blowers + interconnecting ductwork, (2) rotary valves, (2) ceramic plate magnets, (2) discharge screw conveyor 10 HP Thomas and hopper under hammermills, all structural steel & platforms. See the following asset number listings for more details and more photos of each piece in this system. Hammermills 300HP, Bliss Industries, model 3848-TF with 300HP motors + 2HP rotary feeder and ceramic magnet (Asset HM-1631), Baghouse filters and 25HP blowers (Asset DC-1631 & DC-1632), integral hopper and 10HP screw discharge conveyor (Asset Y-1631). Capacity of each hammermill system is 42,000 PPH (1500 bu/hr). We can furnish weigh scale and conveyors/legs as an additional option. See flyer and links. Qty (2) systems - priced separately		Vicksburg, MS
HRSG & Coal Combustor System	PK-9140	Rentch & EPI	System designed to generate high pressure steam through a Heat Recovery Steam Generator (HRSG) process. Includes dry storage for coal and limestone, an EPI coal combustor, Rentech HRSG, economizer, FD and ID fans and stainless steel stack, fly ash handling systems including filter baghouses and silo. Combustor delivers heat with incoming flue gas of 273,700 #/hr at 1700F. And the HRSG delivers 130,000 #/hr superheated steam at 650 psig. Steam can be used for process - in this case, it produced super heated steam for a 4 MW turbine Gen Set (sold separately - see asset PK-9109). The entire system is available, however, we can sell each piece individually. See Simplified Flow Chart in Links for a pictorial of each piece in this system. For a list of all components, enter PK9140 in the search box.		Canton, IL
Hydrogen Gas Plant 25,000 scfh	5350	Hydro Chem	Hydro Chem hydrogen generating gas plant, pressure swing adsorption type. Capacity is 25,000 SCFH. Reformer designed with 8 tubes (6 installed and 2 available) and a ground mounted waste heat boiler. There are 4 psa columns. The waste heat boiler provides approximately 1 ton/hr of steam export at 230 psig. The high pressure gas compressor is a 60HP Gardner Denver. System is still installed. System includes controls, Siemens plc and panel, valves, pipes. Nitrogen is still on system. Built 1977 - Plant idled in 2015.	1977	Mexico
Hydrogen Gas Plant 50,000 scfh	1717	Hydrochem	Hydrogen gas plant by Hydrochem designed to generate at 50,000 scfh (1.2 MMSCFD) at 99.9% purity. Has waste heat boiler, natural gas compressor, 4 psa units, FD fan & ID fan on reformer with space for 12 tubes - 8 reformer tubes installed - 4 spare tubes. Built 1994, rebuilt 2005, shut down 2018. Has been mothballed - nitrogen purged and nitrogen blanket still on. Catalyst is still in vessels & tubes. We have P&ID, PFD, GA, and equipment drawings.	1994	Southeast US
Hydrogen Gas Plant 83,000 scfh	8407	Howe Baker	Howe Baker hydrogen gas generating plant. Capacity 83,000 scfh (2 million scfd). PSA system with 4 psa columns, Includes reformer, waste gas steam generator boiler, vent gas tank, natural gas compressor, gas train, desulfurizer and shift converters, all heat exchangers, pumps, instruments. SPARES: complete set of psa system valves for reconditioning, brand new downcomer and ring, 13 reformer tubes, ID fan, assorted smaller spares. Controls were Bailey DCS and are not furnished however, the complete ladder logic and Modicon plc's and gas plant I/O cabinet will be made available. The plant had 3 main modules that were housed in building 40 ft x 45 ft - the PSA, reformer, waste boiler, vent gas drum outside. Complete plant footprint approx 90 feet x 72 feet. Built 1992 - was well maintained while operating, now idle. Catalyst and mole sieve has been drummed out and go with the sale. See flyer, General Arrangement, and PFD drawings in links for equipment list.	1992	Decatur, IN

System	Asset	Manufacturer	Description	Built	Location
Hydrogen Gas Plant 90,000 scfh (Partial)	6530	Hydro-Chem	Partial 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 is missing small natural gas compressor, heat exchangers, and pumps. 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
Hydrogen Generation Plant (15,000 scfh)	PK-6999	Cotting	An excellent condition, small-scale modularized H2 generation plant. This H2 plant was new in 2016 and was only operated for 2-years by owner - idled and mothballed under nitrogen blanket. Capacity is 15,000 scfh (395 Nm3h). Purity 99.999% with product at 200 psig. Includes fully automatic process control system with workstation. Waste heat boiler exports 600 #/hr steam at 240 psig; gas train and monitoring controls included. Modular - easy to move on 2 trucks. It is ready to install - without need for refurbishment or rebuild. This small H2 plant is a well-proven, Steam Methane Reformer (SMR) type design that produces very low-cost, high-purity Hydrogen. The H2 plant is constructed to ASME, ANSI, NFPA codes. Physical size: approx 46 feet x 13 feet in two (2) modules x 47.8 ft tall assembled. Natural gas compressor, hydrogen compressor if a higher pressure is required, and spare parts kit are available as options. Specifications, drawings and details are in our Virtual Data Room (VDR) available on request. We can offer full turnkey relocation if desired.	2016	Kansas
Methanol Mixed Alcohols System	fp100		Mixed Alcohols and/or Crude Methanol Production - NOW SELLING individual modules and pieces of equipment. Click the links for listing of all equipment. Partial Plant & System: Fischer-Tropsch process. LIKE NEW - only ran 42 partial days. Surplus to the ongoing operation. Produced Mixed Alcohols. Catalytic Conversion of Organic Alcohols. Originally 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, and reformer system are not part of this sale. However, most Fischer-Tropsch process equipment and systems downstream are included: 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 structure and instruments, but does not include removal. We can remove and load for you if desired as an option. See flyer for complete arrangement and details. We will break up into separate pieces of equipment. PLEASE NOTE: Many pieces have now been removed although the photos still show installed. Compressors will have to be reconditioned. We can walk you through this - all pieces are still there.	2009	Soperton, GA



System	Asset	Manufacturer	Description	Built	Location
Refinery-Bleach-Deodorizer 20MTPD	7018	DeSmet Rosedowns	Complete Refinery - NEW, never used - built in 2002. Capacity 20-40 MTPD Batch System (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 Donlee 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. Horizontal pressure leaf filter 303 sq ft reconditioned Model 48-3-22, 9. One "Lot" of structures, platforms and supports included, 10. All drawings, manuals and related information included, 11. The PFD drawing shows in red the minor items that are missing that will have to be replaced. Pumps are included (motors missing). SEE LINKS for PFD drawings and Inspection Assessment. We have inspected this refinery in Belize before it was removed - and after - and can engineer a PFD and P&ID for you - including general arrangements. Removed, ready for loading. Loading fee will apply. Load will be approx (2) 40 ft containers and (2) flat racks..	2002	Texas
Ring Dryer	DR-520	Barr Rosin	Ring Dryer, GEA Barr-Rosin. Used for drying wet cake DDGS but can be used to dry almost anything – such as hemp or other grains. Dries material from 65% moisture to 11% moisture, evap rate 66,463 #/hr. This dryer was designed to handle 112,861 wet infeed at 65% moisture and 440,000 #/hr dry recycle material. This design lends itself well for varying flows and moistures, and precludes clogging or clumping. Comes with Lo-Nox main burner natural gas fired 83 MMBTU, a 1200HP main fan, 2 combustion/exhaust fans 150HP, Fluid Bed Cooler and Baghouse, (2) paddle mixers, (9) drag and screw conveyors, (4) rotary valves, (4) cyclones, disintegrator. Designed for 67,109 #/hr wet grain + 45,752 #/hr syrup IN = 46,398 #/hr OUT Evap rate 66,463 #/hr Fan: 189,339 scfm 1300HP. Burner heat 83.1 MMBTU. See data sheet, P&ID, and GA in Links. For list of components and their photos & description enter dr5201 in search box on web site	2007	Vicksburg, MS
Rotary Steam Tube Dryer System #1	PK-5410	Davenport	[PRELIM - Seller may want to keep. Make OFFER]. Complete rotary steam tube dryer system #1. Drum size is 11.75 ft dia x 70 ft long. Model RSTD. Ser num 33007. Designed for evap capacity 29,397 #/hr. Material 304L. Driven by 100HP motor. For dryer details and photos see Asset DR-5410. All ancillary equipment for the steam tube rotary dryer system. Includes single shaft paddle mixer, ss drag conveyors, screw conveyors, cyclones and rotary valves, main fan, ss stack. For a list of all these components, enter PK5410 in search box.	2007	Canton, IL
Rotary Steam Tube Dryer System #2	PK-5420	Davenport Barr-Rosin	[PRELIM - Seller may want to keep. Make OFFER]. Davenport Rotary Steam Tube Dryer No. 2 Size 11.75 ft dia x 70 ft. Model RSTD. Designed for evap capacity 29,397 #/hr. Material 304L. Driven by 75HP motor,. For dryer details and photos see Asset DR-5420. All ancillary equipment for the #2 steam tube rotary dryer system. Includes pre-mixer, double shaft paddle mixer, ss drag conveyors, screw conveyors, cyclones and rotary valves, main fan, For a list of all these components, enter PK5420 in search box.		Canton, IL

System	Asset	Manufacturer	Description	Built	Location
RTO	Z-5201	Nestec	Regenerative Thermal Oxidizer, Nestec 2 chambers, 4 media beds. Designed for 122,740 acfm at 26.5" wc sp, induced draft fan is 700HP 4160v 1785 rpm TEFC frame 5811. Fan mfg Garden City. Arrgt 8, SWSI, CW rotation, top horizontal discharge. Has See spec sheet for process stream data. Burner is ultra Lo-NOx, includes Maxxon gas train. Max output 9 MMBTU with turn down ratio 10:1. Control panel with Allen Bradley SLC 5/05 plc and PanelView 1000. Overall pad size 65 ft x 50' 3". Total oxidizer weight EACH = 281,840 pounds (less stack, less fan). Used for the destruction of VOC at 1500F from DDGS dryer exhaust. For a list of major components, enter z5201 in search box.		Vicksburg, MS
Scrubber System CO2 & Vent Gas	PK-3201	SpecFab	CO2 Scrubber System. CO2 scrubber size: 60" ID x 31'-11" s/s tall, Vent gas scrubber size 48" OD x 31'-11" s/s tall. stack. Material ss304. Includes structural towers for both columns, Goulds 3196 size 1.5x3-6 PC-3201 centrifugal pump, Kice 15HP blower BL-3202, knock out pots, and all instrumentation and valves associated with this system. For a list of components, enter pk3201 in search on web site.		Vicksburg, MS
Scrubber System Package	PK-3501		[PRELIM - Seller may want to keep. Make OFFER]. Package: CO2 and Process Scrubber System and vent. Includes columns, pumps, blowers. Manufacturer's Performance guarantees: CO2 scrubber - will remove more than 99.9% of alcohols, greater than 30% of the acetaldehyde, and all the formaldehyde. For Process Scrubber, will remove more than 99.9% of alcohols and greater than 45% of the acetaldehyde. For combined scrubbers for the combined effluent, the exhausting VOC from the two will be less than 2.5 lb/hr. Each part of this package is listed separately as well. Enter keyword "PK3501" in search box for a list of all components.	2007	Canton, IL
Soybean Refinery	PK-3000	Westfalia	Westfalia Soybean Refinery Has 4 primary and 2 ww centrifuges, caustic soda metering, and 3 Westfalia shearing centrifugal pumps, 2 heat exchangers, old controls.		Mexico
Syngas Loop 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
Syngas Loop Cooling & Separation Module	FP414		Alcohol cooling module and separator vessels. Includes three separator vessels. For a list of all components enter fp414 in search terms box.	2009	Soperton, GA
Syngas Quench Module	FP217		Quench system for biogas syngas system. Includes scrubber, separator, heat exchangers & condensers. Does not include structure but can be added for an option. Still installed. For complete list, enter fp217 in key word list	2009	Soperton, GA
Syrup Loadout System	ME-510	Carbis OPW	Platform and loadout system set up for truck top loading but can be used for rail car also. Has a Sam Carbis pneumatic cantilever platform and safety cage, 45 degree stairway, OPW Eng Systems arm with swivels. Control filing with simple keystrokes using the included FMC Fuel-Facs+ control system. Includes 3" piping manifold and mass flow meter FIT 41220, a 3" Smith Meter Model MOD215 3" butterfly control valve FV-51220, centrifugal pump PC-5107 Goulds 3196 rated at 300 gpm at 135 TDH., and local controls		Vicksburg, MS

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

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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.