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Global Energy LLC

Capstone Turbine New Surplus Used Microturbine

Structured Data

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   industry, lumber industry, and botanicals processing industry. New propulsion technology development for the electric
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Global Energy buys and sells Capstone Turbine for the used microturbine industry. Shipping container lumber dry kilns since 1990 for the lumber industry. Global also develops new technology in the renewable energy industry, lumber industry, and botanicals processing industry. New propulsion technology development for the electric ship and marine industry.



PDF Version of the webpage

This webpage QR code

Capstone Turbine C1000 2010

Capstone C1000 DM Capstone turbine model 1000R-FD4-BC00. New, less than 27 hours of run time on the engines. Manufactured 2010. Dual mode controller. Located overseas. Missing one engine. Other engines need to be sent back to Capstone for re-warranty work (minimum \$150,000 +). A C1000 has (5) C200 engines. Looking for offers.

Model Number: 1000R-FD4-BC00
C1000, LPNG, DM, INDPKG, CE
526866-100 Controller, Dual Mode, 24VDC

Originally shipped 9/15/2010.

Low Pressure Natural Gas, Dual Mode (Stand Alone).

Engine Test Hours:

Bay A: 27:11:32

Bay B : 27:46:00

Bay C: 26:54:54

Bay D: 26:59:11

Bay E: 27:05:20

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Consulting

We present data in logical, easy to understand format with links for additional research or verification of data.

Minimum contract \$4,999. Up to 10 hours of consulting. Sold as-is and provided on a best efforts basis.

All time is documented and a summary log will be provided when requested.

Unused credit may be used for a period of six months after invoice date.

Consulting is provided via telephone, email, or other media as agreed to in writing (email).

Minimum billing is 30 minutes, so it is recommended to have questions, support, and consulting for at least that period of time. References available.



Vacuum Lumber Dry Kilns

We're working on a small DIY vacuum kiln chamber for artisan and portable sawmill owners.

The technology is migrated from fiberglass and epoxy builders where they do a vacuum bagging process. The same could be used for wood by simply laying over a heavy duty plastic sheet over lumber or logs, then applying a vacuum. This would need to be done over a stable substrate like a concrete floor.

This process could revolutionize the kiln drying industry by bringing down the cost and time of conventional kiln drying and also reducing costs by 90 percent.

Vacuum bagging is already used for a very effective clamp during a glue process, but what about drying ?

We already know you can vacuum dry lumber using an expensive kiln (mainly due to the costly pressure resistant structure). For really small applications the artisan vacuum drying technique can be done in a large diameter pipe which is pressure sealed.



Microturbine Info

Global Energy has compiled a list of useful information regarding the purchase, operation and installation of the Capstone Microturbine, please see the categories below.

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Capstone Turbine C65 Diesel Liquid Fueled Top Mounted CHP Hot Water Recovery

Capstone Turbine C65 New Dual Mode (Grid Connect and Stand Alone) Diesel Fuel Top Mounted CHP (Hot Water Recovery Unit).

8 Units Available.

C65, ICHP, LIQ, DM, INDPKG

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DIY Vacuum Lumber Dry Kiln Using Steel Pipe and Couplings

Global Energy (the inventor of the Container Dry Kiln) is now developing small vacuum dry kilns, using steel pipe and couplings.

This allows the custom portable sawmill processor or custom furniture builder access to quality kiln dried lumber, blocks, poles, or timber frames in about 3 days (versus 30 or more days with a conventional dry kiln).

This format uses standard carbon or stainless steel pipe (12 inch, 24 inch, or 30 inch ID) and standard couplings. The pipe needs to be grooved and requires grooved steel end plates (aluminium works fine) for pass through fittings for electronics and threaded bores for sensors.

Global Energy will provide plans for sale, or vacuum kiln kits.



Capstone Remote Monitoring Software (CRMS) V4.25 and CRMS 551 and CRMS APS for C1000 V220

The Capstone Remote Monitoring Software allows users and maintenance to query the Capstone engine via a serial port interface.

The software is outdated, and available as is. The software is available free of charge with the publications bundle provided below. All sales final and no refunds on the publications purchase.

This software includes:

C30
C30_Ver_4_93
C30stat_v522
C30statWWV FBRFC-LPNG_v520revF
C60_Ver_3_91
ModelC30SoftwareV4.76
SB0071_C30_v5_03_&_v5_05_Release_Notes
v5_03_Software
C60
ModelC60SoftwareV3.82(zip file)
C65
450123A_SN0033_C65_v5.40_v2.20_Software_Release(pdf file)
C65_v5.31_codeset
C65_v5.31_codeset(zip file)
C65CE_v540(zip file)
ES0325_DPC_User_Maint_Comm_Maint(pdf file)
SB0111A_C200_v1.33_Software_Release(pdf file)
SB0116_C65_v531_v451_Release(pdf file)
C200
C200_v171(zip file)
C200LF_v202A(zip file)
Copeland Training V1.0 2001
Compressors[1].avi
README FIRST.rtf
TRAINING MODULE 1.0
CRMS
CRMS V4.0 Setup
CRMS V4.25 Maint Setup
CRMS V4.25 User Setup
Capstone Remote
CRMS V4.25 User Serial No
DistFile
instmsi
instmsiw
setup
CRMS_551_Maint
CRMS_V4_25_User(zip file)
CRMS_v540revA
CRMS_APSforC1000_MaintV220revA
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About Global Energy LLC

Capstone Microturbine: In the past 20 years Global Energy set up the worldwide secondary market for distributed energy (microturbines) focusing on the Capstone Turbine via this Global Microturbine website. Applications: Primary or backup power. Greenhouse or grow operations. Hurricane power. Forest fire backup power when the grid goes down. Waste heat can be used directly for drying hemp, firewood, and lumber in a container kiln. Cogeneration to produce both heat, hot airflow, and power for drying operations.

Global Energy has been selling renewable energy biomass systems (biomass burners, steam turbines, and steam engines) along with lumber/pallet/firewood container mounted dry kilns for the past 30 years.

Container Kiln: Global Energy invented the container kiln in 1991 for dimension lumber, timber frame, poles, pallets, and a novel market of kiln-dried firewood. When incorporating baskets or a drum drier, it can also be used for drying hemp and other botanicals.



Products

Listing of current products and services offered by Global Energy.

Includes:

- Capstone Turbine C1000
- Capstone Turbine C65 Diesel with ICHP
- Global Energy Container Kiln 5,000 BF Dry Kiln
- Global Energy Container Kiln 15,000 BF Dry Kiln
- Global Energy Container Kiln Hi-Temp Dry Kiln for Firewood and Heat Treating
- GPU Ground Power Unit for 2 kW of Portable Power from Lithium Ion Batteries
- Capstone Turbine CRMS and Engine Software Information
- Capstone Turbine Publications and Information
- Consulting and Strategy Services

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5,000 BF Container Lumber Dry Kiln Plans

The 5,000 BF container kiln consists of one 40 foot high-cube aluminum shipping container. The first kiln built in 1992 was a 15,000 BF size and worked great.

This first container kiln had several innovations, including the use of a direct fired heat pipe (Furnace Type Dry Kiln) and a Conifer sawdust burner.

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15,000 BF Container Lumber Dry Kiln Plans

The 15,000 BF container kiln consists of two 40 foot high-cube aluminum shipping containers side by side, or two refrigerated vans (already insulated). The first kiln built in 1992 was a 15,000 BF size and worked great.

This first container kiln had several innovations, including the use of a direct fired heat pipe (Furnace Type Dry Kiln) and a Conifer sawdust burner.



Using Supercritical CO₂ to Kiln Dry Wood

Conventional kiln drying of wood operates by the evaporation of water at elevated temperature. In the initial stage of drying, mobile water in the wood cell lumen evaporates. More slowly, water bound in the wood cell walls evaporates, requiring the breaking of hydrogen bonds between water molecules and cellulose and hemicellulose polymers in the cell wall. An alternative for wood kiln drying is a patented process for green wood dewatering through the molecular interaction of supercritical carbon dioxide with water of wood cell sap. When the system pressure is reduced to below the critical point, phase change from supercritical fluid to gas occurs with a consequent large change in CO₂ volume. This results in the efficient, rapid, mechanical expulsion of liquid sap from wood.

A potential advantage of applying the green wood dewatering process described above to produce wood material with moisture content at the fibre saturation point and with no resulting distortion, shrinkage, or discolouration is to use the dry wood output from this process as either a finished product in itself (as in the example of eucalypt wood), or as an intermediate towards wood modification or biocide treatment where, as for the triazoles, the modifying agent or biocide is soluble in supercritical carbon dioxide.

The ability to carry out two key steps in the manufacture of dry, durable wood materials and products at a single site, in one factory where the equipment and machinery could be used for both drying and molecular-modifying steps, would potentially eliminate the multiple handling of wood at intermediate conventional processing steps.

Trimethyl borate and some boratranes (tricyclic borate esters) are also soluble in supercritical carbon dioxide, making these potential compounds for the modification of dewatered wood using supercritical carbon dioxide as the biocide delivery solvent for the manufacture of biologically durable, quality wood products.

Dewatering green sapwood derived from plantation-grown radiata pine and several other softwood and hardwood timber species, using carbon dioxide cycled between the supercritical fluid and gas phase, has proven to be an efficient process for rapidly reducing wood moisture content from as much as 200 percent (based on dry weight) to 40 percent (or below, depending on the anatomical structure of the wood). Dewatering has the added benefit of zero volatile emission compared to kiln drying, with all of the sap chemicals being captured in the exudate, which in turn provides a source of numerous chemicals with potential high value to be obtained from them. While the dewatering process has merit for producing dry timber as an industrial product per se, a significant benefit for wood product manufacture may be the ability to sequentially dewater green wood and then undertake wood material modification. For example, biocide molecules dissolved in supercritical carbon dioxide could be introduced in situ, to impart wood product bio-durability without the need to physically handle the wood material.



Infinity Turbine GTL Module \$150,000 Experimenters Platform

Infinity is now offering an experimenters platform for those who wish to develop liquid or gas CO₂ to plastics and alcohol fuels. Inputs: CO₂, H₂O, DC electricity, and Nafion or other membrane catalysts.

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Producing Alcohol from Liquid CO2

Infinity has already built lots of closed-loop supercritical CO2 systems, and experimented with CO2 cavitation to make a one-moving-part liquid CO2 pump.

Infinity currently sells a cart-mounted portable on-demand supercritical CO2 phase change system for \$150,000 which can be used for the experiments listed below, along with many others. It is a cart which was designed to fit through any standard door, hallway, or elevator and has heavy duty casters for mobility.

We are currently looking for funding to develop the following:

1. On-Demand CO2 to Alcohol: Using our closed-loop liquid CO2 phase change system, adding Nafion in the process to make alcohol. Inputs: Liquid CO2, water, and electricity. About 3-4 kW to make a liter of alcohol (from lab experiments).
2. CO2 to Alcohol with In-Situ Power Generation: Using our closed-loop supercritical CO2 phase change system, produce the power via miniature CO2 turbine generator or static electricity generator (SEG) to power the conversion via Nafion.
3. Spin-To-Liquid (STL): A novel one-step approach to producing alcohol from liquid CO2 using a cavitation device with Nafion. This is a one-moving-part device employing sonochemistry with inputs of water and liquid CO2. Electricity is produced in-situ. Shaft rotation is required to spin the device (this can be done via a electric motor, pressure expanding turbine, or other shaft rotation such as a wind turbine).

You can further our efforts by buying our \$150,000 systems (which we build - and have four in stock) or by considering an investment to fund our development.

Teaser: Why was Nikola Tesla so fascinated with static electricity and spinning discs ? Our guess is that he had already found the worlds best battery - water. The Tesla turbine (while a fascinating pump) was actually a static electricity generator originally designed to charge water. All of his Colorado Springs experiments revolved around static electricity. Power generation and (wireless) transportation was via static electricity.



Xprize

\$100 MILLION Prize Purse: XPRIZE Carbon Removal is aimed at tackling the biggest threat facing humanity - fighting climate change and rebalancing Earth's carbon cycle. Funded by Elon Musk and the Musk Foundation, this \$100M competition is the largest incentive prize in history, an extraordinary milestone. Any carbon negative solution is eligible: nature-based, direct air capture, oceans, mineralization, or anything else that achieves net negative emissions, sequesters CO2 durably, and show a sustainable path to achieving low cost at gigatonne scale.

Our Strategy: Harvest CO2 from the most plentiful source, the sea (where CO2 is most concentrated). This is done by a new gas leverage turbine called the Sea Merlin Engine.

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News and Updates for Global Energy

Need to find a Capstone or other micorturbine ? We offer professional vetting services to find you the right system for your project. We can also provide you with an analysis of a used system so you can make an educated purchase decision.

Global Energy provides consulting, Capstone analysis services, and we also buy and sell microturbines.

We have recently revamped our website and have moved it over from WordPress to our own database FileMaker Web Engine, to provide the resources to deliver large amounts of data and information.

Global Energy is also becoming more active in renewable energy and solar powered electric ships. The next moves for Tesla will be aviation and marine applications, so we're taking our knowledge and porting that to the marine transportation industry.

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Database Using FileMaker Software

Global Energy exclusively uses FileMaker database software to organize and deploy massive amounts of turbine data, images, and information.

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