



Global Energy Collaborations

USA" Ph: 212-655-5432 Fax: 212-937-4617 e-mail sales@globalenergycollaborations.com
 India : "Gocool House" , Near Uni. Engg. Hostels, Vallabh Vidyanagar – 388120 (Gujarat)

GloBio Biomass Gasifier : 32KW based

This is a unique system extensively field tested for the 100% producer gas **for the multiple fuels from rice husk to wood**. Many of our systems has clocked over 5000 hours of yearly operation.

System is integrated in such a way to operate continuously for 16-20 hours per day.

Various innovative technological options were adopted for efficient functioning of the system like cooling system, filters and water circulation system.

GloBio 32Kw GASIFIER SYSTEM		
A	GASIFIER GloBio 32 KW system	
A.1	Reactor	
	Foundation diameter	57 inch
	Height of the Unit in feet	15
	Approximate weight of the gasifier unit	2.25 tone
A.2	For Gas cooling system	
	Ventury Pumps (Hp)	1
	Water requirement	300 liter/ min
A.3	For reactor cooling system	
	Ventury Pumps (Hp)	1
	Water requirement	300 liter/ min
A.4	Gas filtration system (numbers)	
	Tar Filter/ moisture absorber	1
	Ash Filter	2
	Fine filter	1
	Cyclone	1
	Blower	1, 1 hp
A.5	Ash removal system	1 hp
A.6	Vibrator (feedstock continuation)	1 hp
A.7	Ladder & stands for filters	
B	Engine : 40kwa, heavy duty 100% producer gas* (specifications given separately)	1
C	Wood Chopper (100kg/hr capacity), designed to consumers need based on the type of raw material used mainly for softwood.	1 hp
D	Control panel	1
E	Others: Area requirement & civil works	



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A. **GloBio 32KW BIOMASS GASIFIER SYSTEM**

Made from heavy duty steel metal to withstand high temperatures and climatic changes.



Complete system in operation



Gasifier under assembling



Rice husk based 100 % producer gas System in operation for last 18 months covered over 7500 hours of operation without any failure



Rice husk Based system for paper making unit in operation for 14 months – duel fuel mode

B. ENGINE & ALTERNATOR: 100% BIOMASS GAS ENGINE

Specifications:

Rated Power KVA (KW)	40 (32)
Rated Current (Amps/Ph)	56
Dimensions L x W x H (cm)	210x80x135
Dry Weight (Kgs.)	1250
Engine	
Power at 1500 RPM (BHP)	56
No. of cylinders	4
Bore x Stroke (mm)	110 x 120
Swept Volume (Lts.)	4561
Aspiration	Turbo Charged
Lub Oil Sump Capacity	10



Engine : water cooled, Spark Ignition, 4-Stroke, 1500 rpm continuous rating, heavy duty, multi-cylinder, Engine, Specially designed and engineered to operate with gases obtained from bio methane plants or gasifiers .A specially designed automatic air and fuel controller and mixing system is provided to take care of efficient, smooth working of engine from no load to full load .

Alternator : highly efficient self Excited, Self Regulated, screen protected, drip proof, suitable for continuous operation ,1 or 3 Phase 230 / 415 Volts, 0.8 pf, 50 Hz, Class F insulation alternator confirming to IS:4722/IS:13364/BS:5000. Provided with IP 21 protection,10 % overloading and capability of starting the motors at 3 times the rated current of alternator.

These are inclusive of,

- 12 V Starter
- Battery Charging Alternator
- Radiator with Fan and water Pump
- Air / gas mixture regulator
- Lub Oil Filter
- Heavy Duty Air Filter
- Flywheel suitable for Genset (Heavy)
- Industrial Silencer

Optional:

- Auto Mains Failure System
- Safty Devices (Alarms/Auto))
- Single Phase Alternators
- Brushless Alternators
- Battery

D. CONTROL PANEL:

A superior Quality control panel of suitable CRC sheet, powder coated for long life and better finish complete with M.C.B./M.C.C.B, Voltmeter , Ammeter, Frequency Meter, Incoming / Outgoing terminals, Phase Indicator Lamps, Hour Meter

E. OTHERS: Area requirement & civil works

E.1	AREA REQUIREMENT (3000 TO 5000 SQ FEET)	Unit
	Gasifier unit with filters (sq feet)	450
	Engine room (sq feet)	250
	Raw material Storage area for 8 days storage (height 15	600



Biomassgasifier.com

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	feet) (sq feet)	
	Office cum storage space for spare parts & lubricants (sq feet)	150
	Wood chopper (sq feet)	250
	Open space and approach road (sq feet)	1000
	Total	2750
	Drying platform for wood (optional) (sq feet)	1500
	Total	4250
E.2	CIVIL WORKS	
	Concrete platform for gasifier (sq feet)	450
	Shed (optional) (sq feet)	450
	Engine room (sq feet)	250
	Office cum storage space (sq feet)	150
	Raw material Storage space (sq feet)	600
	Wood chopper (sq feet)	250
	Water tanks (liters) (cu feet)	500
	Ash disposal pond (cu feet)	500
	Waste water Pond (cu feet)	500

BIOMASS

This system is extensively tested for various types of biomass but especially using of rice husk directly without briquettes

Type of biomass	Quality	Approx quantity/ kWh*
Rice husk (extensively tested and standardized)	As it is, without any processing	1.6-1.8 kg
Other agriculture residues like cotton stalks, mustered stalks, maize stalks and other soft wood available.	Chopped to 15-20 mm in size with moisture <12%	1.3- 1.5 kg
Groundnut shells, soybean husk etc.	15-20 mm <12% moisture content	1.5-1.6 kg
Rice straw, wheat straw, etc	15-20 mm <12% moisture content	1.6-1.8 kg
Hard wood	< 25 mm size, with moisture content not more than 10%	1.2-1.3 kg
*Note: Variation in biomass consumption could occurs due to biomass quality		