

Omni Bioenergy, LLC

Untreated Wood Fact Sheet – 2019

Process Data:

Type:	Co-Current Fixed Bed – VariTemp and Speed / Active feed
Size:	GEP: 330 kW, Net Energy Output 102 kW
Feed Stock:	Untreated Wood
Moisture Assumed	9.6%
Product:	Syngas
Feed Stock Rate:	21.2 gms/sec: 1.83 MTPD (Metric Tons Per day)
Reactor Conditions:	Pressure (atm): 1 - Temperature (C) – 750
Liquid waste flowrate (from dryer scrubber):	Dependent on Feed Stock Moisture
Biochar Production:	12.3% - 0.23 MTPD
Ash Content:	~1.34%
Design gas output rate:	(scfm): ~65
Operating gas output rate (Nm ³ /kg feed):	57.1 scfm (1.271 m ³ / kg feed)
HHV	321 Btu/scf
LHV	294 Btu/scf
Gas Exit Temp (oC):	750C
Heating value (kJ/m ³):	11.96 MJ/m ³
Heavy metals content:	N/A – Varies with feed stock
Particulate content (g/Nm ³):	MERV 7-8
Tar content (g/Nm ³):	N/A - Feedstock and Temp dependent

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Syngas Content:

Hydrogen	44.3%
CO	44.6%
Carbon dioxide	2.9%
Methane	5.5%
C2+	Trace BDL
Oxygen	0%
Nitrogen	Trace BDL
Chlorine	Trace BDL
Sulfur	Trace BDL
<u>H₂O</u>	<u>2.4%</u>
Total:	100%

Operating Cycle: 24hrs/350 DPY

Utilities:

Electricity per 100kW	Energy required: ~30 kW
Water per 100kW	Minimal TBD
Electrical Connection	240v / 3 Phase / 100amp