

# V GRID

## V-GRID BIOENERGY SERVER

### SPECIFICATION SHEET

#### PERFORMANCE: (ELECTRICAL OUTPUT)

Peak power rating	50/100 kW
Biomass Consumption	90 kg/hr
Run-time per Hopper fill	3.2 hr
Operation Time Between PM	8 to 10 hr
Start-up time	20 min

#### PERFORMANCE: (THERMAL ENERGY OUTPUT)

Coolant Flow Rate Gal/min(L/min)	29.4 (111.3)
Energy Transfer to Coolant	25 kW
Coolant Temperature Rise	3.5c Approx.

#### SINGLE ENGINE SPEC:

Type	Natural Gas
Cylinder Count	10
Displacement	6.8 liters
RPM	1800
Value Configuration	SOHC, Roller Valvetrain
Engine Block / Cylinder head	Ford WSG-1068
Ignition	Coil on Plug
Oil capacity	6 Qts
Oil maintenance interval	400 hrs
Coolant capacity	Approx. 6.5 Qts
Starter	12V DC
Charging System System Voltage	Alternator 12V DC
Speed control	ECU
Mixture Control	Automated



#### GASIFIER:

Type	Downdraft
Materials	Stainless and mild steels
Hearth	304SS or Ceramic
Char-ash removal	Auger/Air Lock
Fuel Feed	Auger/Air Lock
Hopper capacity	426 liters
Hopper filling	Open Top
Maximum maintenance cycle	12 hr
Control system	Proprietary computer based

#### GENERATOR:

Type	Mecc Alte ECP32-4L/4 B
AVR	Standard
Available voltage	480
Available Topologies	3 phase Wye
Genset starting	Propane/Syngas
Maximum step-load	100% rated load in one step

#### SHIPPING:

Dimensions Gasifier (Trailer)	H117 × L295 × W101 inches
Dimensions Generator (Skid)	H65 x L130 x W45 inches



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### INPUTS:

Cooling Water Flow	25 GPM
Bio-Feedstock	Less than 5% Moisture
Power	120/480 ac

### OUTPUTS: (Based on 90 kg input)

Biochar	12 kg/hr (+/- 3%)
Condensate	27 kg/hr (+/-5%)
Syngas	46/hr (+/- 10%)

### MAJOR COMPONENTS:

Trailer/Frame/Panels
Gasifier
Feed Auger & Hopper System
Output Condensate System
Output Char Auger System
Hot/Cold Exchangers & Filters
Blower/Airflow Control
Particulate Separator System
Gas Flair Unit

