

Complete Power Generating System Solutions



Ettes Power is one of the leading generator-set assemblers and suppliers in China. Ettes gas genset can be driven by world top engines of Cummins, Lovol, MAN, MWM-Deutz, CNPC 190 and Low Speed 300 series, coupled with Stamford, Leroy Somer or Siemens alternators, ranging from 20kW upto 4500kW. The applicable fuel can be methane base gases such as natural gas, biogas, marsh gas, coalbed gas, coal mine gas, shale gas, landfill gas and low BTU gas such as syngas-biomass, coking oven gas etc. By assimilating advanced gas engine control technology from Europe, Ettes gas genset can work at reliable performance, easy for maintenance and longer life-span. Furthermore, special requirements for CHP System, ATS, Soundproof Container and Parallel & Synchronization are available. Ettes Power gas generators enjoy hot ready markets in more than 70 countries all over the world including regions of Latin America, Europe, Middle East, Africa and Southeast Asia etc.



Main Technical Data of Lovol Biogas Generators (30kW~80kW)

Genset	Genset Model	EL-30B	EL-50B	EL-80B
	COP (kW/kVA)	30/38	50/63	80/100
Rated Current (A)	54	90	144	
Manufacturer	ETTES POWER			
Gas Engine	Engine Maker	LOVOL (ex-Perkins)		
	Gas Engine Model	1004NG	1006NG	1006-G6TAG
	Cylinder numbers and Type	4 in Line	6 in Line	6 in Line
	Displacement (L)	3.99	5.98	5.98
	Borex Stock (mm)	100*127	100*127	100*127
	Type	Four Stroke, Water Cooling, Spare Ignition, 12/24V DC Starting		
	Air Intake Way	Naturally Aspirated	Naturally Aspirated	Turbocharged
	Rated Speed (r/min)	1500 (50Hz)/1800(60Hz)		
	Compression Ratio	10.5:1		
	Gas Train	Ball Valve, Solenoid Valve, Pressure Regulator Valve and Gas Filter etc.		
	Fuel	Special gas including Biogas, Landfill Gas, Sewage Gas etc.		
	Intake Gas Pressure (kPa)	3~100		
	Gas Consumption (m ³ /kW.h)	≤0.5		
Oil Consumption (g/kW.h)	≤0.6			
Alternator	Frequency (Hz)	50/60		
	Rated Voltage (V)	400/230(50Hz), 480/270(60Hz)		
	Excitation Method	Self-excited, Brushless, AVR		
	Phase/Connection	3 Phase 4 Wire, Y-connection, 0.8 Power Factor (Cosφ)		
	Protection Level/Insulation Class	IP23/H		
Control System	The standard control panel is with functions including manual keys, alarms, protections, auto start and shut down, showing running parameters in LCD Display by Deepsea or Smartgen Controller. Auto parallel control(optional), Auto Synchronization system (optional), Remote PC Monitor (optional)			
Options	Soundproof Container, ATS, Parallel & Synchronization Control, CHP (Heat Recovery System), Biogas Pre-treatment Machinery			
Dimension (for Open Genset, mm)	1850*800*1430		2150*800*1430	
Weight (kgs)	950		1100	

Remarks:

- Special voltages are available.
- Special requirements for Soundproof Container, ATS, Parallel & Synchronization Control, CHP and Biogas Pre-treatment Machinery are optional.
- The technical data are based on a gas mixture of 60% methane and 40% carbon dioxide with a calorific value of 6.0kWh/Nm³ and methane No. >100.
- The technical data is measured in standard conditions: Absolute atmospheric pressure: 100kPa, Ambient temperature: 25°C, Relative air humidity: 30%.
- The data herein can vary depending on individual production requirements or due to improved technology.

General Requirements for Biogas Quality

Composition	Abbreviate	Limits	Remarks
Methane number	MN	>100	For Lower value please consult ETTES POWER
Calorific value	Hμ, N	>6.0 kWh / Nm ³	
Chlorine	Cl	<80 mg / Nm ³ CH ₄	
Fluoride	F	<40 mg / Nm ³ CH ₄	
Total-chlorine fluoride	Σ(Cl,F)	<80 mg / Nm ³ CH ₄	
Dust <5μm		<10 mg / Nm ³ CH ₄	
Oil vapor		<400 mg / Nm ³ CH ₄	No condensation may occur in the mixture
Silicon element	Si	<2 mg / Nm ³ CH ₄	For higher value please consult ETTES POWER
Sulphur	S	<200 mg / Nm ³	
Hydrogen sulphide	H ₂ S	<150 ppm	For higher value please consult ETTES POWER
Ammonia	NH ₃	<40 ppm or <30 mg / Nm ³	
Max. gas temperature		40°C	
Relative humidity		≤60%	

