GE DD 160/145

MASTER Silent

REV EV 02.2010

bioWATT CLEAN ENERGY SYSTEMS

Technical Sheet PAG. 1/2

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Dimensions (le x w x h)	cm	300 x 112 x 195
Dry weight	kg	2440

Technical Data

Fuel type		NG	LPG*
ESP Limited-time running power	kVA	160	-
Limited time running power (cosϕ 0,8)	kW	128	-
PRP Prime power	kVA	145	-
Prime power (cosϕ 0,8)	kW	115	-
Speed	rpm	1500	
Voltage standard	V	400/230	
Current (cosϕ 0,8)	A	231	
Max resistive load*	kW	102	

ESP - The standby power rating is applicable for supplying emergency power for the duration of a utility power interruption. No overload is available at this rating.

PRP -The prime power rating is applicable for supplying power at variable load in alternative to utility service.

Noise level

Acoustic power lewel	LWA	90
Acoustic pressure level to 7 mt	DbA	65
Acoustic pressure level to 1 mt	DbA	74

Levels according to the European directive on the noise 2000/14/CE

Fuel consumption

Fuel consumption at 4/4 load	m^3/h	31,8	-
Fuel consumption at 3/4 load	m^3/h	-	-
Fuel consumption at 2/4 load	m^3/h	-	-

General Features

Battery capacity	Ah	1 x 125
Voltage	Vdc	12
Exhaust tube diameter	mm	80
Exhaust gas temperature	°C	540
Exhaust gas flow	m^3/h	990
Intake air flow	m^3/h	-
Fan air flow	m^3/h	-
Heat radiated from engine to ambient	kW_m	-
Emissions	-	-

Standard Equipment

- Soundproofed canopy IP 32
- Bounded base with exit liquids conduct
- Anti-turning forklift pockets and pockets on the short side
- Inspection doors in the 4 sides
- Exit cables anti-mouse
- Internal residential muffler with direction pipe
- Central lifting hook (with door)
- Increased daily tank
- Anti vibrating
- Electric wiring IP 44
- Circuit breaker
- Fuel level gauge
- Emergency stop button
- Exit oil conduct
- Starting battery (pre-charged)
- Oil and antifreeze
- Engine heater

Autimatic panel on board (standard) QPE-B O

The panel QPE-B, with microprocessor logic, manages and controls the generating set in manual or automatic modality.
The engine and alternator alarms of the generating set are visualized by a crystal display.
Manual modality: start up and stop of the generating set through buttons.
Automatic modality (with MPA): start up and stop with clean contact or at main failure, with managing of the transfer from the main to the generating set (connected with the separated transfer panel QC).

Module for automatic (standard) MPA

Inside the QPE, it controls the main and in case of necessity (droop or lack of one or more phases) turns on the generating set commanding the external transfer. When the main returns it transfers on the main and stops the generating set. It contains also the battery charger.

Transfer panel (optional) QC1

The transfer panel QC works together with the QPE on board.
Through the QPE, it manages the power transfer from the main to generating set using contactors or motorized commutator. It has a selector to set up the working status:
forced on mains, forced on generating set, blocked generating set, automatic.
It has also some led signalizing the status or, in case, anomalies.

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Features

• Base frame: Strong bearing structure with side-crossbar, bounded base and internal directing drainage to the liquid hole.
• Canopy: Strong structure made in sheet steel carbon, press-fold and electro-weld fasten to the base frame by appropriate fixings and interposed gaskets.
• Soundproof: Constituted by insulating and soundproof panels made of polyester fibre of thickness 50 mm and suitable density, anti-decayed, anti-oil, washable, fireproof in class 1.
• Aspiration: Aspiration grills obtained in the canopy, conceived with special panels that retain the noise and avoid the atmospheric agent entering inside the electromechanical parts of the generating set.
• Expulsion: Expulsion grills obtained in the canopy, guarantee the retain of the noise and assure the correct get out of the air with a proportion air/soundproof material conveniently calculated.
• Inspection: doors The wide doors opening at 180° allow a comfortable inspection and an easy passage for maintenance operations. The particular door locks with keys have a slam closure ad give a clean line at the doors.
• Residential muffler: Installed inside the canopy, allows -35 dB noise reduction to the exhaust exit. Provided with anti-rain pipe.
• Painting: Performed with a process of de-grease, phosphatising and then paint and dry on oven.
• Movement: The base frame have forklift pockets and a strong central lifting hook that allows an easy movement of the generating set.

Documentation

• Use and maintenance manual
• Electrical drawings
• CE declaration
• Test report

Services

• First start-up
• Periodical maintenance
• Full time assistance

Generating set optional

• Outdoor exhaust kit
• Double soundproof
• Conveyors IP 43
• Vasistas opening door (for narrow places)
• Not approved trailer
• Approved trailer
• Kit differential breaker
• Automatic refuelling system
• Electronic speed governor

Various Optional

• Two channels radio control (start-stop)
• Distance start and stop (20 or 50 m)
• Telegestion for QPE
• UTF counter
• Socket box (on board)
• Terminal box with rapid connections
• Catalytic muffler
• Tank (from 1000 to 30000 lt)
• Oil extraction pump
• Anti-particulate filter

CE FM APPROVED

Engine

Type	-	Doosan Daewoo	
Model	-	GE08TI	
Cooling system	Tipo	liquid/liquid	
Speed	rpm	1500	1800
Nominal power	CV	190	-
Gross engine power	kWm	140	-
Cycle	-	Otto 4 strokes	
Injection	-	direct	
Aspiration	-	turbo	
Number of cylinders	N°	6 in line	
Bore x stroke	mm	111 x 139	
Total displacement	lt	8,071	
Engine oil features	-	Sae 15/40	
Engine oil consumption	%	0,8% fuel consumption	
Speed governor	-	Electronic (GAC)	
Total oil capacity	lt	8,1	
Coolant liquid capacity	lt	18	
Flangiatura	SAE	2/11,5"	

Alternator

Type*	-	Marelli
Poles	N°	4
Phases	N°	3 + N
Standard windings connection	-	star serie
Insulation class	-	H (env. temp. 40°C)
Couple engine	-	elastic disks
Short circuit current	A	>=300% (3In)
Degree of protection	-	IP 23
Cooling system	-	autoventilate
Maximum overspeed	RPM	2250
Waveform distortion	%	< 2
Exciter	-	diode bridge
Voltage regulator	-	AVR +/-0,5%

* It could be vary according to the warehouse availability

Standard operating conditions

Ambient temperature	°C	25
Relative humidity	%	30
Max altitude	mt	1000

Distributor

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