

# GMS80C/S

## EC Series

### Features:

- Rotate speed governor: Mechanical governor
- Excitation system: Self excited, SHUNT
- A.V.R model: AS440
- Emergency stop switch
- ATS (automatic transfer switch) receptacle
- 2x12V sealed for life maintenance free battery
- Lockable battery isolator switch
- Powder coated canopy (Only for Soundproofed sets)
- 50°C radiator
- Oil pump on the engine
- Steel base frame with fork holes
- Vibration isolators between the engine/alternator and base frame
- Dry type air filter
- Base fuel tank for daily running
- Drain points for fuel tank
- Operation Manual / Specifications



### Output Ratings

Generating Set Model	Prime Power	Standby Power
GMS80C	80kVA/64kW	88kVA/70kW
GMS80CS	80kVA/64kW	88kVA/70kW

Ratings at 0.8 power factor

### Dimensions and Weights

Model	Length (L) mm	Width (W) mm	Height (H) mm	Dry Weight kg
GMS80C	2156	881	1495	1201
GMS80CS	3150	1150	1700	2120

#### Notes:

##### \*Prime Power

Continuous duty operation, under variable load 24/24h-10% over load permissible 1 hour/12 hours;

##### \*\*Standby Power

Standby duty, operation under variable load, without over load;

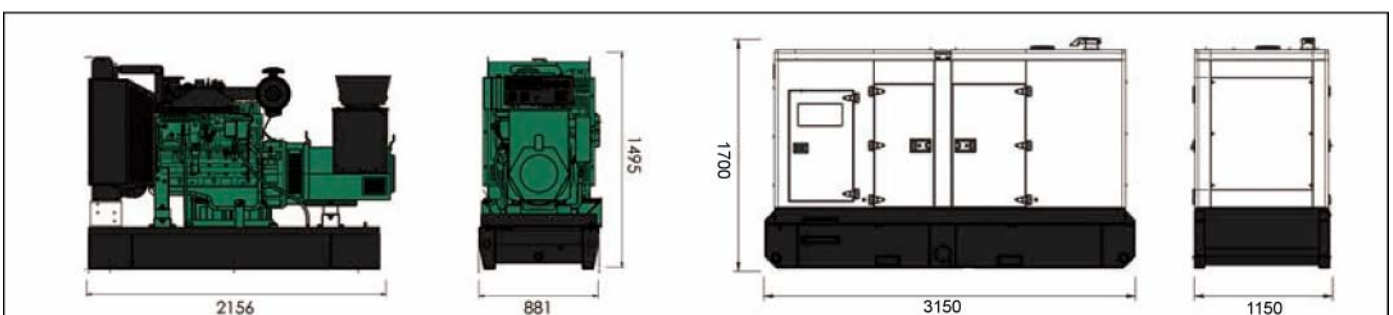
##### Standard Reference Conditions

Note: Standard reference conditions 25°C (77°F) Air Inlet Temp, 100m(328 ft) A.S.L. 30% relative humidity.

Fuel consumption data at full load with diesel fuel with specific gravity of 0.85 and conforming to BS2869: 1998, Class A2.

### Ratings and Performance Data

<b>Engine Make &amp; Model:</b>	Cummins 6BT5.9-G1
<b>Alternator Brand:</b>	Stamford
<b>Alternator Model:</b>	UCI224G
<b>Control System:</b>	Auto Gen / AMF
<b>Circuit Breaker Type:</b>	3 Pole MCCB
<b>Frequency &amp; Phase:</b>	50Hz & 3PH
<b>Engine Speed: RPM</b>	1500
<b>Fuel Tank Capacity: L</b>	
GMS80C	206
GMS80CS	300
<b>Fuel Consumption: l/hr (100% Load)</b>	
- Prime Power	22
- Standby Power	25



### Engine model: 6BT5.9-G1

Engine Technical Data	
No. of Cylinders / Alignment:	6/ In Line
Cycle:	4 Stroke
Bore / Stroke: mm	102X120
Induction:	Turbocharged
Cooling Method:	Water
Governing Type:	Mechanical
Governing Class:	ISO 8528 G2
Compression Ratio:	16.8:1
Displacement: L	5.9
Moment of Inertia:kg.m <sup>2</sup>	0.25
<b>Engine Electrical System:</b>	
- Voltage / Ground	12/Negative
- Battery Charger	63 Amp
<b>Weight: kg</b>	
- Dry	411
- Wet	

Performance	
Engine Speed: RPM	1500
Gross Engine Power: kWm	-
- Prime	86
- Standby	92
BMEP: kPa	
- Prime	
- Standby	

Lubrication System	
Oil Pressure @ Idle Speed kPa	207
@ Rated Speed kPa	345
Maximum Oil Temperature: °C	121
Total Oil Capacity: L	16.4
Oil Type:	API CH4 / 15W-40

Exhaust System	
Silencer Type	Industrial
Silencer Quantity:	1
Silencer Noise Reduction Level:	15-20dBA
Maximum Allowable Back Pressure: mmhg	76
Exhaust Gas Flow: l/s	
- Prime	250
- Standby	280
Exhaust Gas Temperature: °C	
- Prime	526
- Standby	565

Cooling System	
Cooling System Capacity: L	9.9
Maximum coolant Friction Head External to Engine: kPa	28
Maximum Static Head of Coolant Above Engine Crank Centerline : m	14
Standard Thermostat (Modulating) Range: °C	82-95
Minimum Pressure Cap: kPa	69
Maximum Top Tank Temperature for Standby / prime Power: °C	104/100

Designed to operate in ambient conditions up to 50°C (122°F). Contact your local PowerLink Dealer for power ratings at specific site conditions

Fuel System					
Injection System Type: WeiFu A pump with RSV Mechanical governor					
Recommended Fuel Type: Diesel Fuel No.2-D(ASTM D975)					
Fuel Consumption: l/hr					
Prime	110% Load	100% Load	75% Load	50% Load	
GMS80C	25	22	17	11	
GMS80CS	25	22	17	11	

(Based on diesel fuel with a specific gravity of 0.85 and conforming to BS2869, Class A2)

Air Systems	
Air Filter Type:	Dry type replaceable Element
Intake Air Flow: l/s	
- Prime	100
- Standby	108
Max. Air Intake Restriction: mmH <sub>2</sub> O	
-With Dirty Filter Element	635
-With Normal Duty and Clean Filter Element	254
-With Heavy Duty and Clean Filter Element	381

The weights are approximate and without fuel.

### Alternator model: UCI224G

Alternator Physical Data	
Manufactured by:	Stamford
Model:	UCI224G
No. of Bearings:	Single
Insulation Class:	H
Winding Pitch Code:	2/3
Wires:	12
Ingress Protection Rating:	IP23
Excitation System:	Self excited, SHUNT
AVR Model:	AS440

Alternator Operating Data	
Overspeed: rpm	2250rpm
Voltage Regulation: (Steady state)	±1.0%
Wave Form NEMA = TIF:	< 50
Wave Form IEC = THF:	< 2%
Air Flow: m <sup>3</sup> /s	0.216
Altitude: m	≤1000

Alternator Performance Data:	GMS80C	GMS80CS
Time constants/400V:Ms		
T'd	30	30
T''d	8	8
T'do	750	750
Ta	7	7
Short Circuit Capacity** %	1/Xd	1/Xd
Reactances: Per Unit	2.2	2.2
Xd		
X'd	0.17	0.17
X''d	0.12	0.12

Voltage Technical Data GMS80C				
Voltage	Prime:		Standby:	
	kVA	kW	kVA	kW
380/220	75.0	60.0	87.5	70.0
400/230	75.0	60.0	87.5	70.0
415/240	75.0	60.0	87.5	70.0
440/254	67.4	53.9	76.9	61.5

Voltage Technical Data GMS80CS				
Voltage	Prime:		Standby:	
	kVA	kW	kVA	kW
380/220	75.0	60.0	87.5	70.0
400/230	75.0	60.0	87.5	70.0
415/240	75.0	60.0	87.5	70.0
440/254	67.4	53.9	76.9	61.5

# ControlSystem

## PLC-7420 (Optional)

### FEATURES

- Microprocessor control, with high stability and credibility .
- Mains supply and generator operation monitoring.
- Indicating operation status and fault conditions.
- Multiple protections; multiple parameters display, such as pressure, temperature.
- Manual and automatic work mode selectable.
- Real time clock for time and date display, overall runtime display, 99 log entries
- Overall power output display.
- Integral speed/frequency detecting, telling status of start, rated operation, overspeed.
- Communication with PC via RS485 or RS232 interface, using MODBUS protocol.
- Engine ECU is available.
- Common USB cable is usable for parameter configuration.
- Multi-language is available.



## PLC-920

### FEATURES

- Parameter configuration via RS-232 serial communication;
- Log last 50 events & alarm information with measured values;
- Statistics records;
- Remote start/stop;
- Speed sensing from alternator voltage or magnetic pickup;
- Configurable 3 inputs and 6 outputs;
- ECU powers, ECU stop, STOP or fuel solenoid selection;
- Automatic transfer switching control and engine control;
- Adjustable start, load and stop timers.



Diesel Generator Sets 6-2250 kVA				
	MODEL	PLC-7420	PLC-920	
General accessory	AIR	●	●	
	Electronic Governing	×	×	
	(Slow plug control	●	●	
	Cycle Cranking	●	●	
	( MODBUS) Networking	●	×	
Operate Interface	Fault History	●	●	
	Manual start/stop	●	●	
	Auto/remote start	●	●	
	Regular Test	●	●	
	Auto operation LED	●	●	
	Manual operation LED	●	●	
	Common Shutdown LED	●	●	
	Common warning LED	●	●	
	Fall to start LED	●	●	
	(Emergency stop/local)	●	●	
Measurement and Instrumentation	Alphanumeric screen	●	●	
	Remote start input active LED	●	×	
	Alarm reset	●	●	
	Engine	Oil pressure	●	●
		Water Temperature	●	●
		Engine Speed	●	●
		Hours Run	●	●
		Number of Starts	●	●
	Alternator	Battery Voltage	●	●
		Coolant Temperature	●	●
3Phase-L Voltage&Frequency		●	●	
3phase Current		●	●	
Frequency		●	●	
kWh		●	●	
Apparent Power		●	●	
Active Power and Reactive Power		●	●	
Power Factor		●	●	
Per PhasekVA, kW		●	●	
Mains Expression	Per Phase kVA	●	●	
	Phase Voltage	●	●	
	Output Power	●	×	
	Grid Line Voltage	●	×	
	Grid Phase Voltage	●	×	
Shutdown Protection and Indication	Grid Frequency	●	×	
	Engine	Low Fuel Level	●	●
		High Fuel Level	○	×
		Low Oil Pressure	●	●
		High Water Temperature	●	●
		Failure to Stop	●	●
	Alternator	Failure to Start	●	●
		Controllable start circles/times	●	×
		Overspeed	●	●
		Under&Over Voltage	●	●
Under&Over Frequency		●	●	
Threshold Warning/Indication	Overcurrent	●	●	
	Earth Leakage	○	○	
	Reverse Power	×	×	
	Reverse kWh	×	×	
	Paralleling Capability	Low Oil Pressure	●	●
		Low Water Temperature	○	○
		High Water Temperature	●	●
		Low Water Level	●	●
		Low/High Battery Voltage	●	●
	Power Transfer Function	Failure to Charge	●	●
Overcurrent		●	●	
Overload		●	●	
Genset Under/Over Voltage		●	●	
Genset Under/Over Frequency		●	●	
under/over Speed		●	●	
High Engine Temperature		●	●	
Earth Leakage		●	○	
Environment		Synchroscope(Independent Bus)	×	×
		Active and Reactive Power Control	×	×
	Synchroscope(Shared Bus)	×	×	
	Synchronization Detector	×	×	
	Peak Logging	×	×	
Monitoring Function	Automatic Transfer	●	○	
	Hard Closed Transition	●	○	
	Soft Closed Transition	×	×	
	Gen/Mains Breaker	●	×	
	Gen/Mains Breaker Status Protection	●	×	
	Speed/Voltage Control	×	×	
	Power Indication	●	×	
	Fuel/Solenoid Valve Control	●	●	
	Stator Control	●	●	
	Preheating	○	○	
Monitoring Function	Mains Transfer Switch (Standard)	●	×	
	Mains Transfer Switch (Emergency)	●	×	
	Operating Temperature (-40℃-70℃)	●	●	
	Ambient Temperature (-25℃-45℃)	●	●	
	Humidity<=80%	●	●	
	Grid Over/Under Voltage Control	●	×	
	Grid Over/Under Frequency Control	●	×	
	Remote Start Output(Load/No-load)	●	●	
	Optional Relay Output	●	●	
	Remote Telecom Control with All Functions	●	×	
Monitoring Function	Engine Instrument Monitoring	●	●	
	Alternator Output Instrument Monitoring	●	●	
	Connection Point with All-around Setting For 6 Users	●	●	
	3 Users Input Connection Point	●	●	
	LCD Light Control of Low Light Operation Environment	●	●	
	Safe PIN Code	●	●	
	RS232/485 Interface	●	×	
	Language Selection	●	●	
	Multi-Language Function	●	●	

● Standard ○ Optional × Impossible

## EC Series

## Optional

Engine	Alternator	Generator Set	Fuel System	Canopy
<ul style="list-style-type: none"> <li>Water Jacket Preheater</li> <li>Oil Preheater</li> </ul>	<ul style="list-style-type: none"> <li>Winding Temperature</li> <li>Measuring Instrument</li> <li>Alternator Preheater</li> <li>PMG</li> <li>Anti-damp and anti-corrosion treatment</li> <li>Anti-condensation heater</li> </ul>	<ul style="list-style-type: none"> <li>Tools with the machine</li> </ul>	<ul style="list-style-type: none"> <li>Low fuel level alarm</li> <li>Automatic fuel feedingsystem</li> <li>Fuel T-valves</li> </ul>	<ul style="list-style-type: none"> <li>Trailer</li> </ul>

Lubricating System	Exhaust System	Cooling System	Control System	Voltages
<ul style="list-style-type: none"> <li>Oil with the machine</li> </ul>	<ul style="list-style-type: none"> <li>Protection board from hotness</li> </ul>	<ul style="list-style-type: none"> <li>Front heat protection</li> <li>Coolant (-30°C)</li> </ul>	<ul style="list-style-type: none"> <li>Remote control panel</li> <li>PLC-7420</li> <li>ATS</li> </ul>	<ul style="list-style-type: none"> <li>415/240V</li> <li>400/230V</li> <li>380/220</li> <li>220/127V</li> <li>200-115V</li> </ul>

The following lists are optional by the needs of customers.

6B Series 1000 Hour Maintaining List				
No.	Part Name	Part No.	Qty	Remark
1	CARTRIDGE,LUB	1012N-010(3937743)	5	
2	FILTER,FUEL	C3931063	5	
3	WATER FUEL SEPERATOR	C3930942	5	
4	CLEANER,AIR	6BT-6BTA(KW1833)	3	
5	CLEANER,AIR	6BTAA(KW2140)	3	
6	BELT,V RIBBED	3288790	2	
7	FRON OIL SEAL	C4991305	1	
8	REAR OIL SEAL	C4982415	1	
9	BEARING,CRANKSHAFT THRUS	A3906230	1	
10	BEARING,MAIN, UPPER	C3929016	6	
11	BEARING,MAIN, BOTTOM	C3929021	7	
12	BEARING,CONNECTING ROD	A3901170	12	
13	AIR RING, PISTON	C3918315	6	
14	MID RING, PISTON	C3904531	6	
15	OIL RING, PISTON	C3932520	6	
16	GASKET,VALVE COVER	A3902666	12	
17	SOLENOID, FUEL PUMP	C4942879	1	
18	NOZZLE TIP	P277	6	

# GMS80C/S

EC Series



If you have any question or inquiry, please contact  
PowerLink sales organization. Or contact by:  
[info@powerlinkworld.com](mailto:info@powerlinkworld.com)

*Specification may change without prior notice.  
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Local Distributor