

# EP Series WPS60S

— Generator Set Specification



**Super Quiet, Superior Life!**



# WPS60S



## 3-Phase, 50Hz@1500RPM

	Voltage	kW	kVA	Amps
<b>Prime Power</b>	380	48	60	91.2
	400	48	60	86.6
	415	48	60	83.5
	440	48	60	78.7
<b>Standby Power</b>	380	53.3	66.7	101.3
	400	53.3	66.7	96.2
	415	53.3	66.7	92.7
	440	53.3	66.7	87.5
<b>Noise Level at 7 meters (dBA)</b>			67.8	

### Notes:

- 1) Ambient reference conditions: 1,000 mbar, 27°C, 30% relative humidity;
- 2) Standby Power: the maximum power available under varying loads. Only for standby and emergency use. No overload is permissible. Prime Power: the maximum power available under varying loads for continuous operation. A 10% overload is permissible for 1 hour every 12 hours.

Features	Benefits
<ul style="list-style-type: none"> <li>  Excellent cooling system, reliable operation under harshest conditions.</li> <li>  PLC-5220 control panel with AMF function.</li> <li>  With sound attenuated enclosures available with high protection against water and dust.</li> <li>  Designed with safety in mind earth leakage protection.</li> <li>  Leroy Somer Alternator, IP 23 class 'H' insulation.</li> </ul>	<ul style="list-style-type: none"> <li>  Function stability credibility, service convenience.</li> <li>  Low operating cost results in optimal economy.</li> <li>  Gets the job done wherever you are.</li> <li>  Ease of installation, operation, and maintenance.</li> </ul>

## Performance Specification and Craftwork

Performance Specification		Telephone Interference, Electromagnetism	
Efficiency of Rated Power	96.3%	TIF	≤50
Time needed from start-up to full load (inductive)	125 seconds	THF	≤2%
Time needed from start-up to 50% load (inductive) allowed	8 seconds	Radio interference in compliance with BS800 and VED LEVELS G and N.	
1.1 times overload operation time (hour)	1	<b>Craftwork</b> <ul style="list-style-type: none"> <li>● Steel base frame with AV mounting</li> <li>● standard 8h fuel tank with flexible rubber fuel tube, fuel level indicator and drainage</li> <li>● Overall sprayed powder coating</li> <li>● Whole set documents, including Installation Manual, Operation Manual, Spare Parts Catalog, Circuit Diagram</li> </ul>	
2.0 time overload operation time (minute)	1		
Voltage Regulation, steady state	≤±1%		
Voltage Regulation, transient state	20%-15%		
Voltage Settle Time	≤5 seconds		
Voltage Fluctuation Ratio	0.5%		
Frequency Regulation, steady state	±0.5% adjustable		
Frequency Regulation, transient state	±5%		
Frequency Settle Time	5 seconds		
Frequency Fluctuation Ratio	0.5%		
Recovery Time	0.5 seconds	<b>Criterion</b> <ul style="list-style-type: none"> <li>● ISO3046, ISO8528, BS4999, BS5514,</li> <li>● BS5000PT99、AS1359, IEC34</li> <li>● UTE5100, VDE0530</li> <li>● ISO9001:2000</li> </ul>	

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Engine Specification		Alternator Specification	
<b>Brand</b>	<b>Perkins (UK)</b>	<b>Brand</b>	<b>Leroy Somer</b>
<b>Model</b>	<b>1103A-33TG2</b>	<b>Model</b>	<b>LSA43.2M45</b>
No. of Cylinders and Cycle	3L, 4 Stroke	Rated Output (kVA)	60
Induction System	TC	Rated current (A)	86.6
Compression Ratio	17.25: 1	Exciter	Brushless
Displacement (L)	3.3	THF(BS EN60034- 1)	<2%
Bore x Stroke(mm)	105 x 127	Bearing number	Single
Ambient Temp (°C)	25	Windings	100% Copper
Continuous Rated Power (kW)	53.8	Connection Type	Star Connection
Speed (rev/min)	1500	Insulation Class	Class H
Cooling Air Flow (L/min)	125.5	Winding Pitch	2/3
Air Intake Flow (m³/min)	3.8	Amortisseur Winding	Full
Exhaust Gas Flow (m³/min)	10.1	A.V.R. Model	R438
Starting System	E	Voltage Regulation (no load- full load)	± 0.5%
Battery Voltage/Capacity	12VDC/125A/100	Underspeed Protection	Standard
Fuel Consumption (L/h)		Protection	IP23
110% load		Phase Sequence	A(U), B(V), C(W)
100% load	14.1	TIF (NEMA MG 1-22)	<50
75% load	10.5	Excitation System	Self-excited, PMG optional
50% load	7.3	Ambient Temp (°C)	40
Governor Type	Mechanical	Stator Rated Temp (°C)	125

Cooling System		Fuel System	
<b>Radiator</b>		Type of Injection	Direct
Face Area (m²)	0.276	Fuel injection pump	Rotary
Rows and Materials	Single row, Aluminium	Fuel inject	Multi-hole
Width of Matrix (mm)	526	Nozzle opening pressure (MPa)	29
Height of Matrix (mm)	524	<b>Fuel Lift Pump</b>	
Pressure Cap Setting (kPa)	107	120-150	120-150
		Pressure (kPa)	30-75
<b>Fan</b>		Governor Type	E / M
Diameter (mm)	457		
Drive Ratio	1.25 : 1	<b>Lubricating System</b>	
Number of Blades	7	<b>Lubricating Oil Capacity</b>	
Material	Composite	Total System (L)	8.3
Type	Pusher	Minimum (L)	6.2
<b>Coolant</b>		<b>Lubricating Oil Pressure</b>	
Total System Capacity (L)	With Radiator (L)	Relief Valve Open(kPa)	415-470
	Without Radiator (L)	Max continuous normal Oil temp (°C)	125

Exhaust System		Electrical System	
Max. Back Pressure (kPa)	10	Alternator (A/V)	65/12
Exhaust Outlet Size (mm)	56	Starting Motor (kW/V)	3/12

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## Control System

### PLC-702

DSE-702 key manual start module is a manual engine control module designed to control the engine via a key switch and push buttons on the front panel. The module is used to start and stop the engine and indicate fault conditions, automatically shutting down the engine and giving a true first up fault condition of an engine failure.

#### Standard Control Function

- Manual Engine Control Module
- Low Oil Pressure
- High Engine Temperature
- Auxiliary Shutdown
- Overspeed Protection
- Protection hold-off timer
- Charge Failure warning



### PLC-5220

DSE-5220 control panel is applied

- | Microprocessor control, with high stability and credibility
- | Mains supply and generator operation monitoring
- | Indicating operation status and fault conditions
- | Multiple protections; multiple parameters display, like pressure, temp.
- | 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.



## Dimension and Weight



### WPS60S

Length × Width × Height, (mm)      Weight (kg)  
2738×1050×1587                      1505

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## Optional

Engine	Alternator	Generator Set	Fuel System	Canopy
<ul style="list-style-type: none"> <li>• Coolant heater</li> </ul>	<ul style="list-style-type: none"> <li>• Space heater</li> <li>• AVR PMG with regulator</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 feeding system</li> </ul>	<ul style="list-style-type: none"> <li>• Trailer</li> </ul>
Lubricating System	Exhaust System	Cooling System	Control Panel	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> <li>• Low frequency silencer</li> </ul>	<ul style="list-style-type: none"> <li>• Front heat protection</li> <li>• 50°C radiator</li> <li>• Coolant (-30°C)</li> </ul>	<ul style="list-style-type: none"> <li>• Remote control panel</li> <li>• Automatic paralleling control panel</li> <li>• Automatic Transfer Switch (ATS)</li> </ul>	<ul style="list-style-type: none"> <li>• 415/240V</li> <li>• 400/230V</li> <li>• 380/220V</li> <li>• 220/127V</li> <li>• 200-115V</li> </ul>



Local Distributor