

EP Series WPS20

— Generator Set Specification



Your Partner for Power...

WPS20



3-Phase, 50Hz@1500RPM

	Voltage	kW	kVA	Amps
Prime Power	380	16	20	30.4
	400	16	20	28.9
	415	16	20	27.8
	440	16	20	26.2
Standby Power	380	17.8	22.2	33.8
	400	17.8	22.2	32.1
	415	17.8	22.2	30.9
	440	17.8	22.2	29.2
Noise Level at 7 meters (dBA)			91.6	

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"> Excellent cooling system, reliable operation under harshest conditions. PLC-5220 control panel with AMF function. Leroy Somer Alternator, IP 23 class 'H' insulation. 	<ul style="list-style-type: none"> Function stability credibility, service convenience. Low operating cost results in optimal economy. Gets the job done wherever you are. Ease of installation, operation, and maintenance.

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	Craftwork <ul style="list-style-type: none"> ● Steel base frame with AV mounting ● standard 8h fuel tank with flexible rubber fuel tube, fuel level indicator and drainage ● Overall sprayed powder coating ● Whole set documents, including Installation Manual, Operation Manual, Spare Parts Catalog, Circuit Diagram 	
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	Criterion <ul style="list-style-type: none"> ● ISO3046, ISO8528, BS4999, BS5514, ● BS5000PT99、AS1359, IEC34 ● UTE5100, VDE0530 ● ISO9001:2000 	

WPS20

Engine Specification		Alternator Specification	
Brand	Perkins (UK)	Brand	Leroy Somer
Model	404D-22G	Model	LSA42.2S5
No. of Cylinders and Cycle	4L, 4 Stroke	Rated Output (kVA)	20
Induction System	NA	Rated current (A)	28.9
Compression Ratio	23.3: 1	Exciter	Brushless
Displacement (L)	2.2	THF(BS EN60034- 1)	<2%
Bore x Stroke(mm)	84 x 100	Bearing number	Single
Ambient Temp (°C)	25	Windings	100% Copper
Continuous Rated Power (kW)	18.4	Connection Type	Star Connection
Speed (rev/min)	1500	Insulation Class	Class H
Cooling Air Flow (L/min)	40.3	Winding Pitch	2/3
Air Intake Flow (m³/min)	1.45	Amortisseur Winding	Full
Exhaust Gas Flow (m³/min)	3.64	A.V.R. Model	R438
Exhaust Gas Temperature outlet (°C)	445	Voltage Regulation (no load- full load)	± 0.5%
Starting System	E	Underspeed Protection	Standard
Battery Voltage/Capacity	12VDC/40A/100	Protection	IP23
Fuel Consumption (L/h)	110% load	Phase Sequence	A(U), B(V), C(W)
	100% load	TIF (NEMA MG 1-22)	<50
	75% load	Excitation System	Self-excited, PMG optional
	50% load	Ambient Temp (°C)	40
Governor Type	Mechanical	Stator Rated Temp (°C)	125

Cooling System		Fuel System	
Radiator		Type of Injection	Indirect injection
Face Area (m ²)	0.167	Fuel injection pump	Cassette type
Rows and Materials	2 row, Aluminium	Fuel inject	Pintle nozzle
Width of Matrix (mm)	334.2	Nozzle opening pressure (MPa)	14.7
Height of Matrix (mm)	500	Fuel Lift Pump	
Pressure Cap Setting (kPa)	90	Flow/hour (L/h)	63
Fan		Pressure (kPa)	10
Diameter (mm)	320	Governor Type	Mechanical
Drive Ratio	1.15 : 1	Lubricating System	
Number of Blades	7	Lubricating Oil Capacity	
Material	Plastic	Total System (L)	10.6
Type	Pusher	Minimum (L)	8.9
Coolant		Lubricating Oil Pressure	
Total System Capacity	With Radiator (L)	Relief Valve Open(kPa)	352-448
	Without Radiator (L)	Normal Oil Temp (°C)	125

Exhaust System		Electrical System	
Max. Back Pressure (kPa)	10.2	Alternator (A/V)	65/12
Exhaust Outlet Size (mm)	42	Starting Motor (kW/V)	2/12

WPS20

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



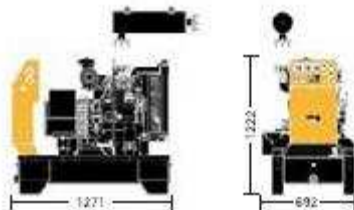
PLC-5220

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



WPS20

Length × Width × Height, (mm) Weight (kg)
1271×692×1222 591

Optional

Engine	Alternator	Generator Set	Fuel System	Canopy
<ul style="list-style-type: none"> • Coolant heater 	<ul style="list-style-type: none"> • Space heater • AVR PMG with regulator • Anti-damp and anti-corrosion treatment • Anti-condensation heater 	<ul style="list-style-type: none"> • Tools with the machine 	<ul style="list-style-type: none"> • Low fuel level alarm • Automatic fuel feeding system 	<ul style="list-style-type: none"> • Canopy
Lubricating System	Exhaust System	Cooling System	Control Panel	Voltages
<ul style="list-style-type: none"> • Oil with the machine 	<ul style="list-style-type: none"> • Protection board from hotness • Low frequency silencer 	<ul style="list-style-type: none"> • Front heat protection • 50°C radiator • Coolant (-30°C) 	<ul style="list-style-type: none"> • Remote control panel • Automatic paralleling control panel • Automatic Transfer Switch (ATS) 	<ul style="list-style-type: none"> • 415/240V • 400/230V • 380/220V • 220/127V • 200-115V



Local Distributor