

J100UC3

**Engine JOHN DEERE , 4045HFS83, U.S. EPA Tier 3
Alternator LEROY SOMER , LSA442VS45**

100KW GENERATOR

100 KW / 125 KVA DIESEL GENERATOR SET, FULLY PACKAGED:

- JOHN DEERE Heavy duty diesel engine, 4 stroke, 1800rpm, Turbo, EPA
- LEROY SOMER brushless alternator. IP23 protection, Insulation class H
- MERLIN GERIN, Main line circuit breaker, wired, maximum output rated
- EPA Tier 3 compliant engine per U.S. Environmental Protection Agency
- Digital auto-start control panel. CE and UL compliant
- Incorporated metallic fuel tank for day use
- Auto Start control feature included for interoperation with ATS/AMF
- 12V charging alternator and 12V DC electric starter motor
- 12V charged DC starting battery with electrolyte and cables
- Dry type air filter, fuel filter and oil filter elements installed
- Mechanically welded chassis with vibration isolators
- Each unit prototype and individually factory load bank tested
- The generator accepts 100% rated load in one step as per NFPA110 and meets ISO8528-5 class G-3 for transient response
- Compliant with ISO3046, ISO8528, BS4999, BS5514, BS5000PT99, AS1359, IEC34, UTE5100, VDE0530 and ISO9001:2000



AVAILABLE ACCESSORIES AND OPTIONS:

- Steel or Aluminum weather proof, sound attenuated enclosures
- UL142 listed, double wall fuel tanks from 50 to 10,000 Gal
- UL1008 listed, automatic transfer switches from 50 to 3000 Amp
- D.O.T. compliant heavy duty road trailers from 3000 to 30000 Lbs
- Automatic battery chargers, Engine preheaters, Remote annunciators and many more

Voltage	Power ESP kWe/kVA	Power PRP kWe/kVA	Standby Amps	Dimensions – open	Weight – open
480/277	100 / 125	91 / 114	150		
440/254	100 / 125	91 / 114	164	Leng : 1950mm [77in]	1240kg [2734lbs] Net
240/120	100 / 125	91 / 114	301	Widt : 1084mm [43in]	1440kg [3175lbs] Gross
230/115	100 / 125	91 / 114	314	Heig : 1350mm [53in]	
220/127	100 / 125	91 / 114	328		
208/120	100 / 125	91 / 114	347		
600/347	100 / 125	91 / 114	120		

POWER DEFINITION



PRP : Prime Power is available for an unlimited number of annual operating hours in variable load applications, in accordance with ISO 8528-1.

ESP : The standby power rating is applicable for supplying emergency power in variable load applications in accordance with ISO 8528-1. Overload is not allowed.

TERM OF USE

Standard reference conditions ESP/PRP 25 C°/25 C° Air Intlet Temp, 1000 m/1000 m m A.S.L. 60 % relative humidity.

WEATHER / SOUND PROOF ENCLOSURES

Model	dB(A)@1m	dB(A)@7m	Dimensions – enclosed	Weight - enclosed	Tank
 M129-DW	78	68	Leng : 2602mm [102in] Widt : 1150mm [45in] Heig : 1900mm [75in]	2049kg [4517lbs] 2560kg [5644lbs]	505 L 133 Gal
 M129	78	68	Leng : 2554mm [101in] Widt : 1150mm [45in] Heig : 1680mm [66in]	1650kg [3638lbs] 1850kg [4079lbs]	190 L 50 Gal

100KW GENERATOR

GENERAL POWER LIMITED, INC

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ENGINE SPECIFICATIONS

DATA GENERAL DATA	Engine model	JOHN DEERE 4045HFS83 , 4-temps, TURBO , AIR/AIR 4 X
	Cylinder arrangement	L
	Displacement (C.I.)	4.48
	Bore (mm) X Stroke (mm)	106 X 127
	Compression ratio	19 : 1
	Speed (RPM)	1800
	Pistons speed (m/s)	7.62
	Maximum stand-by power at rated RPM (kW)	118
	Frequency regulation (%)	0.5
	BMEP (bar)	15.9
	Governor type	ELECTRONIC
EXHAUST SYSTEM	Exhaust gas temperature (°C)	580
	Exhaust gas flow (L/s)	380
	Max. exhaust back pressure (mm CE)	750
FUEL SYSTEM	Fuel consumption 110% load (gal/hr)	8.2
	Fuel consumption 100% load (gal/hr)	7.5
	Fuel consumption 75% (gal/hr)	6.5
	Fuel consumption 50% (gal/hr)	4.7
	Maximum fuel pump flow (gal/hr)	19.7
OIL	Oil capacity (L)	13
	Min. oil pressure (bar)	1.05
	Max. oil pressure (bar)	3
	Oil consumption 100% load (L/h)	0.08
	Carter oil capacity (L)	12
THERMAL BALANCE	Heat rejection to exhaust (kW)	111.15
	Radiated heat to ambient (kW)	14.39
	Heat rejection to coolant (kW)	62.3+19.8
AIR INTAKE	AIR INTAKE_entree_max%	375
	Intake air flow (L/s)	136
COOLANT SYSTEM	Radiator & Engine capacity (L)	20.2
	Max water temperature (°C)	110
	Outlet water temperature (°C)	93
	Fan power (kW)	6.49
	Fan air flow w/o restriction (m3/s)	4
	Available restriction on air flow (mm CE)	20
	Type of coolant	GENCOOL
	Thermostat (°C)	82-95
EMISSIONS	Emissions PM (g/kWh)	0.25
	Emission CO (g/kW.h)	1.47
	Emissions HCNOx (g/kWh)	3.43
	Emission HC (g/kW.h)	0.14

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ALTERNATOR SPECIFICATIONS

DATA GENERAL DATA	Alternator brand	LEROY SOMER	
	Alternator	LSA442VS45	
	Number of phase	3	
	Power factor (Cos Phi)	0.8	
	Altitude (m)	<1000	
	Overspeed (rpm)	2250	
	Number of pole	4	
	Excitation system	SHUNT	
	Insulation class / Temperature class	H / H	
	Regulation	R230	
	Total harmonics TGH/THC	<2	
	Wave form : NEMA=TIF-TGH/THC	<50	
	Wave form : CEI=FHT-TGH/THC	<2	
	Number of bearing	1	
	Coupling	DIRECT	
	Voltage regulation 0 to 100%	0.5%	
	Recovery time (Delta U = 20% transitoire) (ms)	500	
	OTHER DATA	Continuous Nominal Rating 40°C (kVA)	131
		Standby Rating 27°C (kVA)	144
Efficiencies 4/4 load (%)		91	
Air flow (cfm)		0.44	
Short circuit ratio (Kcc)		0.33	
Direct axis synchro reactance unsaturated (Xd) (%)		377	
Quadra axis synchro reactance unsaturated (Xq) (%)		226	
Open circuit time constant (T'do) (ms)		2555	
Direct axis transient reactance saturated (X'd) (%)		15	
Short circuit transient time constant (T'd) (ms)		100	
Direct axis subtransient reactance saturated (X''d) (%)		9	
Subtransient time constant (T''d) (ms)		10	
Quadra axis subtransient reactance saturated (X''q) (%)		10.8	
Zero sequence reactance unsaturated (Xo) (%)		0.9	
Negative sequence reactance saturated (X2) (%)		9.9	
Armature time constant (Ta) (ms)		15	
No load excitation current (io) (ms)		0.5	
Full load excitation current (ic) (A)		2.1	
Full load excitation voltage (uc) (A)		38	
Recovery time (Delta U = 20% transitoire) (ms)		500	
Motor start (Delta U = 20% perm. or 50% trans.) (ms)		238	
Transient dip (4/4 charge) - PF : 0,8 AR (%)		17.8	
No load losses (kW)	2.72		
Heat rejection (kW)	10.25		

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CONTROL PANELS

Standard



NEXYS

NEXYS

Specifications : Frequency meter, Ammeter, Voltmeter
 Alarms and faults : Oil pressure, water temperature, Overcrank, Overspeed (>60 kVA), Min/max alternator, Low fuel level, Emergency stop
 Engine parameters : Hours counter, Engine speed, Battery voltage, Fuel level, Air preheating

Option



TELYS 2

TELYS

Specifications : Frequency meter, Ammeter, Voltmeter
 Alarms and faults : Oil pressure, water temperature, No start-up, Overspeed, Min/max alternator, Min/max battery voltage, Low fuel level, Emergency stop
 Engine parameters : Hours counter, Oil pressure, Water temperature, Engine speed, Battery voltage, Fuel level, Remote monitoring and control

ACCESSORIES AND OPTIONS

Option

50 to 3000 AMP Automatic Transfer Switches, UL1008 listed



With a Series 300 transfer switch, you get a product backed by ASCO Power Technologies, the industry leader

- True double-throw operation: single solenoid design is inherently interlocked & prevents contacts from stopping between sources
- Easy-to-read flush-mounted control and display panel provides LED indicators for switch position and source availability
- Standard engine exerciser for weekly automatic testing with or without load
- UL 1008 listed for Transfer Equipment and CSA C22.2 listed
- NFPA 110 for Emergency & Standby Power & the National Electrical (NEC) Articles 700, 701 and 702

Option

50 to 10000 GAL fuel tanks, UL142 listed



- UL listed. Secondary containment tank meeting UL 142 tank requirements
- NFPA compliant. Designed to comply with the installation standards of NFPA 30 and NFPA 37
- Emergency pressure relief vents. Meets UL requirements; ensures adequate venting of inner and outer tank under extreme pressure and/or emergency conditions
- Electrical stub-up area with removable end channel
- Normal vent • Inner tank emergency vent sized to UL 142 specs
- Direct reading mechanical fuel gauge • Fuel in basin switch
- Satin black paint finish

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M129

Weather / Soundproof Enclosure

STANDARD FEATURES

- They protect stationary and mobile generator against the bad weather, against the theft and enables the reduction of the noise level.
- Enclosures are of 12 gauge steel. Steel sheet are electro zinc coated before painting (inside and outside) with a polyester powder rust inhibiting coat .
- High corrosion resistance: stainless covered with zinc and made in dichromate, bolts and rivets, anodized aluminium alloy hinges flexible seals between body sections.
- Soundfoam between 20 and 50 mm (1 to 2 in) acoustical sound treatment
- Lifting eye(s) on top of the enclosure fixed to the skid
- Large doors allow easy access to the generator set for service and monitoring purposes
- Window in "securit" glass mounted on enclosure door for control viewing .
- A critical silencer is mounted inside the enclosure
- Emergency stop button is accessible from outside enclosure.



Model	dB(A)@1m	Sound level dB(A)@7m	LWA	Dimensions (mm)	Weight (kgs)	Tank (l)
J100UC3	78	68	N/A	2554 x 1150 x 1680	1650	190

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