



**J88K**

**DIESEL GENSET**

MODEL	J88K
Stand-by Power @ 50Hz	70kW / 88 kVA
Prime Power @ 50Hz	64 kW / 80 kVA

**Standard Features**

**General features :**

- Engine (JOHN DEERE , 4045TF220 )
- Charge alternator 12 V , Governor:Meca
- Alternator (LEROY SOMER , LSA432L8 )
- Single bearing alternator IP 23 , insulation class H /H
- Radiator 50°C [122°F]°C max. T° air inlet with coolant cap
- Skid and vibration isolators
- Dry type air filter
- Main line circuit breaker
- Microprocessor control panel
- 12 V battery, rack and cable
- Industrial silencer (loose)
- User manual



**Generator Ratings**

Voltage	HZ	Phase	P.F	Standby Amps	Standby Ratings kW/kVA	Prime Ratings kW/kVA
415/240	50	3	0.8	122	70 / 88	64 / 80
400/230	50	3	0.8	127	70 / 88	64 / 80
380/220	50	3	0.8	129	68 / 85	62 / 77
240/120	50	3	0.8	212	70 / 88	64 / 80
230/115	50	3	0.8	221	70 / 88	64 / 80
220/110	50	3	0.8	231	70 / 88	64 / 80
220/127	50	3	0.8	202	62 / 77	56 / 70
200/115	50	3	0.8	254	70 / 88	64 / 80

**PRP :** Prime Power is available for an unlimited number of annual operating hours in variable load applications, in accordance with ISO 8528-1. A 10% overload capability is available for a period of 1 hour within 12-hour period of operation, in accordance with ISO 3046-1

**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.

**Conditions of sale**

- SDMO provides a full line of products with high quality recognized engines and alternators.
- Service and parts are available from SDMO distributors as a single source of responsibility.
- Each and every units is factory tested. All generator sets are also prototype tested.
- Warranty according to our standard conditions. Five years extended also available



## ENGINE DATA

Manufacturer / Model	JOHN DEERE 4045TF220 , 4-cycle, Turbo , N/A
Cylinder Arrangement	4 X L
Displacement	4.48L [273.4C.I.]
Bore and Stroke	106mm [4.2in.] X 127mm [5.0in.]
Compression ratio	17 : 1
Rated RPM	1500 Rpm
Piston Speed	6.35m/s [20.8ft./s]
Max. stand by Power at rated RPM	80kW [107BHP]
Frequency regulation, steady state	+/-2. 5%
BMEP	13.3bar [193psi]
Governor : type	Meca

### Exhaust System

Exhaust gas flow	205L/s [434cfm]
Exhaust temperature	565°C [1049°F]
Max back pressure	750mm CE [30in. WG]

### Fuel System

110% (Stand By power )	21.5L/h [5.7gal/hr]
100% (of the Prime Power)	19.5L/h [5.2gal/hr]
75% (of the Prime Power)	14L/h [3.7gal/hr]
50% (of the Prime Power)	10L/h [2.6gal/hr]
Total fuel flow	108L/h [28.5gal/hr]

### Oil System

Total oil capacity w/filters	13.5L [3.6gal]
Oil Pressure low idle	1bar [14.5psi]
Oil Pressure rated RPM	5bar [72.5psi]
Oil consumption 100% load	0.019L/h [0.0gal/hr]
Oil capacity carter	12.5L [3.3gal]

### Thermal balance 100% load

Heat rejection to exhaust	65kW [3696Btu/mn]
Radiated heat to ambient	9.5kW [540Btu/mn]
Heat rejection to coolant	43kW [2445Btu/mn]

### Air intake

Max. intake restriction	625mm CE [25in. WG]
Engine air flow	93L/s [197cfm]

### Coolant System

Radiator & engine capacity	23.6L [6.2gal]
Max water temperature	105°C [221°F]
Outlet water temperature	93°C [199°F]
Fan power	2.5 kW
Fan air flow	3.37m3/s [7141cfm]
Available restriction on air flow	20mm CE [0.8in. WG]
Type of coolant	Gencool
Thermostat	82-94 °C

### Emissions

HC	34 mg/Nm3
CO	190 mg/Nm3
Nox	3800 mg/Nm3
PM	60 mg/Nm3



## ALTERNATOR SPECIFICATIONS

### GENERAL DATA

- Compliance with NEMA MG21, UTE NF C51.111, VDE 0530, BS 4999, CSA standards.
- Vacuum-impregnated windings with epoxy varnish.
- IP21 drip proof.

### ALTERNATOR DATA

	LEROY SOMER LSA432L8
Manufacturer / Type	LEROY SOMER LSA432L8
Number of phase	3
Power factor (Cos Phi)	0.8
Altitude	< 1000 m
Overspeed	2250 rpm
Pole : number	4
Exciter type	Shunt
Insulation : class, temperature rise	H / H
Voltage regulator	R230
Sustained short circuit current	-
Total harmonics (TGH/THC)	< 4%
Wave form : NEMA = TIF – TGH/THC	< 50
Wave form : CEI = FHT – TGH/THC	< 2%
Bearing : number	1
Coupling	Direct
Voltage regulation 0 to 100% load	+/- 1%
Recovery time (20% Volt dip) ms	500 ms
SkVA with 90 % of nominal sustained voltage (at 0.4 PF)	270

### OTHER ALTERNATOR DATA

Continuous nominal rating @ 40°C	88 kVA
Standby rating @ 27°C	107 kVA
Efficiencies @ 4/4 load	91.1 %
Air flow	0.32m <sup>3</sup> /s [678.04cfm]
Short circuit ratio;50 (Kcc)	0.4
Direct axis synchro reactance unsaturated (Xd)	293 %
Quadra axis synchro reactance unsaturated (Xq)	176 %
Open circuit time constant;50 (T'do)	1431 ms
Direct axis transient reactance saturated (X'd)	10.2 %
Short circuit transient time constant (T'd)	50 ms
Direct axis subtransient reactance saturated (X''d)	5.1 %
Subtransient time constant (T''d)	5 ms
Quadra axis subtransient reactance saturated (X''q)	6.3 %
Zero sequence reactance unsaturated (Xo)	0.1 %
Negative sequence reactance saturated (X2)	5.8 %
Armature time constant (Ta)	8 ms
No load excitation current (io)	0.4 A
Full load excitation current (ic)	1.6 A
Full load excitation voltage (uc)	29 V
Recovery time (Delta U = 20% transitoire)	500 ms
Motor start (Delta = 20% perm. Or 50% trans.)	310 kVA
Transient dip (4/4 charge) – PF : 1.8 AR	14 %
No load losses	2.06 kW
Heat rejection	7.57 kW

Control Panels

**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

**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

## Options

### Engine and Radiator

- Heat shield protection
- Oil drain extension
- Heavy duty air filter
- Lube oil drain pump
- Radiator core guard
- Battery charger
- Block heater

### Alternator

- Anti condensation heater
- Enforced impregnation
- Oversized alternator

### Control panel

- NFPA 110 level 1
- Paralleling system
- Remote annunciator
- Oil temperature shutdown

### Exhaust

- Residential silencer
- Critical silencer
- Flexible exhaust conn.

### Literature

- Parts
- Maintenance

### Fuel

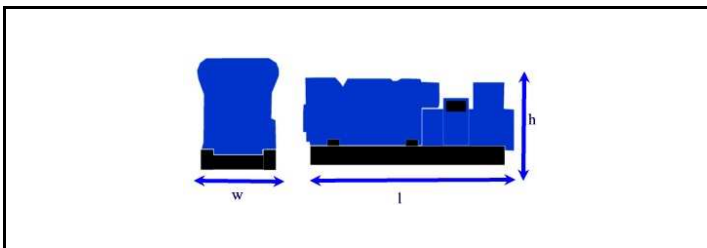
- Day tank
- Subbase fuel tanks UL
- Water separator fuel filter

### Enclosure

- M128
- Silent 70 db @ 7m [23 Ft] (stby)

## Weight and Dimensions

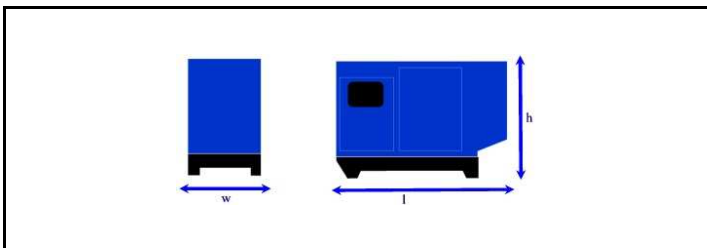
### Open Model Excluding option



Overall size l x w x h :  
1870mm [74in] x 994mm [39in] x 1360mm [54in]

Weight :  
1110kg [2446lbs] Net 1310kg [2887lbs] Brut

### With Optional Enclosure



Overall size l x w x h :  
2300mm [91in] x 1080mm [43in] x 1680mm [66in]

Weight :  
1530kg [3372lbs] Net 1730kg [3813lbs] Brut