

## J120U

## DIESEL GENSET

MODEL	J120U
Stand-by Power @ 60Hz	117kW / 146 kVA
Prime Power @ 60Hz	106 kW / 133 kVA

### Standard Features

#### General features :

- Engine (JOHN DEERE , 6068TF220 )
- Charge alternator 12 V , Governor:Meca
- Alternator (LEROY SOMER , LSA442S7 )
- 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 ^pCSA Certified (consult us)



### Generator Ratings

Voltage	HZ	Phase	P.F	Standby Amps	Standby Ratings kW/kVA	Prime Ratings kW/kVA
480/277	60	3	0.8	176	117 / 146	106 / 133
440/254	60	3	0.8	192	117 / 146	106 / 133
380/220	60	3	0.8	222	117 / 146	106 / 133
230/115	60	3	0.8	367	117 / 146	106 / 133
220/127	60	3	0.8	383	117 / 146	106 / 133
208/120	60	3	0.8	400	115 / 144	105 / 131
600/347	60	3	0.8	140	117 / 146	106 / 133

**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 6068TF220 , 4-cycle, Turbo , N/A
Cylinder Arrangement	6 X L
Displacement	6.72L [410.1C.I.]
Bore and Stroke	106mm [4.2in.] X 127mm [5.0in.]
Compression ratio	17 : 1
Rated RPM	1800 Rpm
Piston Speed	7.62m/s [25.0ft./s]
Max. stand by Power at rated RPM	127kW [170BHP]
Frequency regulation, steady state	+/-2. 5%
BMEP	12.6bar [183psi]
Governor : type	Meca

### Exhaust System

Exhaust gas flow	N/A
Exhaust temperature	540°C [1004°F]
Max back pressure	750mm CE [30in. WG]

### Fuel System

110% (Stand By power )	34.5L/h [9.1gal/hr]
100% (of the Prime Power)	32L/h [8.5gal/hr]
75% (of the Prime Power)	24L/h [6.3gal/hr]
50% (of the Prime Power)	16L/h [4.2gal/hr]
Total fuel flow	112L/h [29.6gal/hr]

### Oil System

Total oil capacity w/filters	21.5L [5.7gal]
Oil Pressure low idle	1bar [14.5psi]
Oil Pressure rated RPM	5bar [72.5psi]
Oil consumption 100% load	0.032L/h [0.0gal/hr]
Oil capacity carter	20.6L [5.4gal]

### Thermal balance 100% load

Heat rejection to exhaust	110kW [6255Btu/mn]
Radiated heat to ambient	16kW [910Btu/mn]
Heat rejection to coolant	68kW [3866Btu/mn]

### Air intake

Max. intake restriction	625mm CE [25in. WG]
Engine air flow	179L/s [379cfm]

### Coolant System

Radiator & engine capacity	27.3L [7.2gal]
Max water temperature	105°C [221°F]
Outlet water temperature	93°C [199°F]
Fan power	5 kW
Fan air flow	N/A
Available restriction on air flow	20mm CE [0.8in. WG]
Type of coolant	Gencool
Thermostat	82-94 °C

### Emissions

HC	N/A
CO	N/A
Nox	N/A
PM	N/A



## 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

Manufacturer / Type	LEROY SOMER LSA442S7
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)	300

### OTHER ALTERNATOR DATA

Continuous nominal rating @ 40°C	139 kVA
Standby rating @ 27°C	165 kVA
Efficiencies @ 4/4 load	91.7 %
Air flow	0.44m <sup>3</sup> /s [932.30cfm]
Short circuit ratio;50 (Kcc)	0.42
Direct axis synchro reactance unsaturated (Xd)	370 %
Quadra axis synchro reactance unsaturated (Xq)	220 %
Open circuit time constant;50 (T'do)	2734 ms
Direct axis transient reactance saturated (X'd)	13.2 %
Short circuit transient time constant (T'd)	100 ms
Direct axis subtransient reactance saturated (X''d)	7.9 %
Subtransient time constant (T''d)	10 ms
Quadra axis subtransient reactance saturated (X''q)	9.8 %
Zero sequence reactance unsaturated (Xo)	1 %
Negative sequence reactance saturated (X2)	8.9 %
Armature time constant (Ta)	15 ms
No load excitation current (io)	0.5 A
Full load excitation current (ic)	2 A
Full load excitation voltage (uc)	35 V
Recovery time (Delta U = 20% transitoire)	500 ms
Motor start (Delta = 20% perm. Or 50% trans.)	400 kVA
Transient dip (4/4 charge) – PF : 1.8 AR	16.6 %
No load losses	2.96 kW
Heat rejection	10 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, Alr 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
- Key start panel

### Exhaust

- Residential silencer
- Critical silencer
- Flexible exhaust conn.

### Literature

- • Parts
- • Maintenance

### Fuel

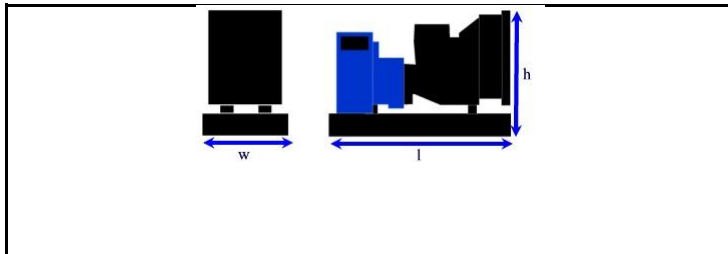
- Day tank
- Subbase fuel tanks UL
- Water separator fuel filter

### Enclosure

- M226
- Silent 70.1 db @ 7m [23 Ft] (stby)

## Weight and Dimensions

### Open Model Excluding option



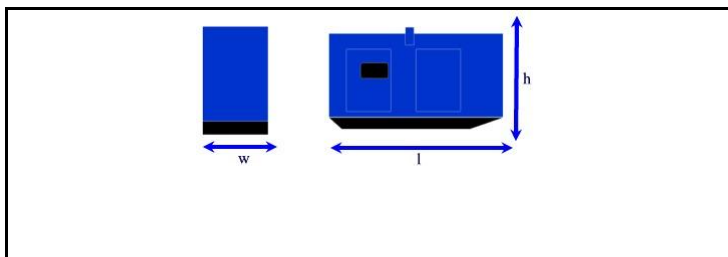
Overall size l x w x h :

2370mm [93in] x 1114mm [44in] x 1480mm [58in]

Weight :

1420kg [3130lbs] Net 1470kg [3240lbs] Brut

### With Optional Enclosure



Overall size l x w x h :

3508mm [138in] x 1200mm [47in] x 1830mm [72in]

Weight :

1940kg [4276lbs] Net 2020kg [4452lbs] Brut