



**MODEL**  
 80 KW/100 kVA  
 Stand-by Power @ 60 Hz

**JS80U**  
 73 kW / 91 kVA  
 Prime Power @ 60 Hz

**Standard Features**

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



**Generator ratings**

Voltage	HZ	Phase	PF	Stand by Amps	Stand by power kW/kVA	Prime power kW/kVA
480/277 V	60 Hz	3	0.8	120	80 / 100	73 / 91
440/254 V	60 Hz	3	0.8	129	78 / 98	71 / 89
240/120 V	60 Hz	3	0.8	224	74 / 93	67 / 84
230/115 V	60 Hz	3	0.8	221	70 / 88	64 / 80
220/127 V	60 Hz	3	0.8	257	78 / 98	71 / 89
208/120 V	60 Hz	3	0.8	258	74 / 93	67 / 84
600/347 V	60 Hz	3	0.8	96	80 / 100	73 / 91

Stand-By ratings are available for the duration of any power outage. No overload capacity is specified at this ratings. Prime ratings are available per BS 5514, DIN 6271, ISO-3046 and IEC 34-1 with 10% overload capacity one hour in twelve hours.

**Conditions of sales**

- SDMO provides a full line of products with high quality recognized engines and alternators.
- Each and every units is factory tested. All generator sets are also prototype tested.
- Service and parts are available from SDMO
- Two years limited warranty , please refer to the conditions

distributors as a single source of terms . Five years extended are also available.  
responsibility.



JS80U  
specifications and design liable to modifications without prior notice

**ENGINE DATA**

Manufacturer / Model	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	1800 Rpm
Piston Speed	7.62m/s [25.0ft./s]
Max. stand by Power at rated RPM	86kW [115BHP]
Frequency regulation, steady state	+/- 2. 5%
BMEP	12.3bar [178psi]
Governor : type	Meca/Mechanical

**Exhaust System**

Exhaust gas flow	280L/s [593cfm]
Exhaust temperature	530°C [986°F]
Max back pressure	750mm CE [30in. WG]

**Fuel System**

110% (Stand By power )	23L/h [6.1gal/hr]
100% (of the Prime Power)	21L/h [5.5gal/hr]
75% (of the Prime Power)	16L/h [4.2gal/hr]
50% (of the Prime Power)	11.5L/h [3.0gal/hr]
Total fuel flow	112L/h [29.6gal/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	0.021L/h [0.0gal/hr]
Oil capacity carter	12.5L [3.3gal]

**Thermal balance 100% load**

Heat rejection to exhaust	69kW [3923Btu/mn]
Radiated heat to ambient	10kW [569Btu/mn]
Heat rejection to coolant	46kW [2616Btu/mn]

**Air intake**

Max. intake restriction	625mm CE [25in. WG]
Engine air flow	115L/s [244cfm]

**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	4.5 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 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 (Kcc)	0.4
Direct axis synchro reactance unsaturated (Xd)	293 %
Quadra axis synchro reactance unsaturated (Xq)	176 %
Open circuit time constant (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

### Standard panel : NEXYS



#### Specifications :

Frequency meter, Ammeter, Voltmeter

**Alarms and faults** Oil pressure, water temperature, Overcrank, Overspeed, Min/max alternator, Low fuel level, Emergency stop

#### Engine parameters :

Hours counter, Engine speed, Battery voltage, Fuel level, Air preheating

### Optional panel : 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

<p><b>Engine and Radiator</b></p> <ul style="list-style-type: none"> <li>▪ Heat shield protection</li> <li>▪ Oil drain extension</li> <li>▪ Heavy duty air filter</li> <li>▪ Lube oil drain pump</li> <li>▪ Radiator core guard</li> <li>▪ Battery charger</li> <li>▪ Block heater</li> </ul>	<p><b>Alternator</b></p> <ul style="list-style-type: none"> <li>▪ Anti condensation heater</li> <li>▪ Enforced impregnation</li> <li>▪ Oversized alternator</li> </ul> <p><b>Exhaust</b></p> <ul style="list-style-type: none"> <li>▪ Residential silencer</li> <li>▪ Critical silencer</li> <li>▪ Flexible exhaust conn.</li> </ul>	<p><b>Control panel</b></p> <ul style="list-style-type: none"> <li>▪ NFPA 110 level 1</li> <li>▪ Paralleling system</li> <li>▪ Remote annunciator</li> <li>▪ Oil temperature shutdown</li> <li>▪ Key start panel</li> </ul>
<p><b>Fuel</b></p> <ul style="list-style-type: none"> <li>▪ Day tank</li> <li>▪ Subbase fuel tanks UL</li> <li>▪ Water separator fuel filter</li> </ul>	<p><b>Enclosure M128</b></p> <ul style="list-style-type: none"> <li>▪ Silent 74 db @ 23 Ft (stby)</li> </ul>	<p><b>Literature</b></p> <ul style="list-style-type: none"> <li>▪ Parts</li> <li>▪ Maintenance</li> </ul>

**Weight and Dimensions**

**Open Model**

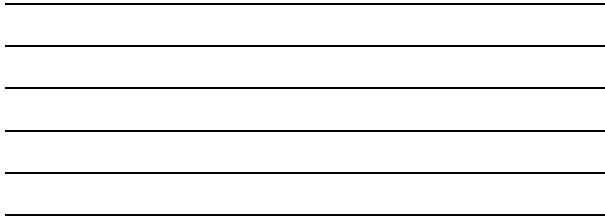
Overall size l x w x h :  
1870mm [74in] x 994mm [39in] x 1360mm [54in]

Weight :  
1060kg [2336lbs] Net 1100kg [2424lbs] Brut

**With Optional Enclosure**

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

Weight :  
1390kg [3064lbs] Net 1420kg [3130lbs] Brut



SDMO industries - Head Office – 12bis, rue de la Villeneuve – CS 92848 - 29228 BREST cedex 2 -  
FRANCE [www.sdmo.com](http://www.sdmo.com)



JS80U  
specifications and design liable to modifications without prior notice