



J220K

DIESEL GENSET

MODEL	J220K
Stand-by Power @ 50Hz	176kW / 220 kVA
Prime Power @ 50Hz	160 kW / 200 kVA

Standard Features

General features :

- Engine (JOHN DEERE , 6068HF475)
- Charge alternator 12 V , Governor:Elec
- Alternator (LEROY SOMER , LSA462M5)
- 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	306	176 / 220	160 / 200
400/230	50	3	0.8	318	176 / 220	160 / 200
380/220	50	3	0.8	334	176 / 220	160 / 200
240/120	50	3	0.8	529	176 / 220	160 / 200
230/115	50	3	0.8	552	176 / 220	160 / 200
220/110	50	3	0.8	577	176 / 220	160 / 200
200/115	50	3	0.8	635	176 / 220	160 / 200

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 6068HF475 , 4-cycle, Turbo , Air/Air DC
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	1500 Rpm
Piston Speed	6.35m/s [20.8ft./s]
Max. stand by Power at rated RPM	204kW [273BHP]
Frequency regulation, steady state	+/-0, 5%
BMEP	22bar [319psi]
Governor : type	Elec

Exhaust System

Exhaust gas flow	525L/s [1113cfm]
Exhaust temperature	524°C [975°F]
Max back pressure	750mm CE [30in. WG]

Fuel System

110% (Stand By power)	48.6L/h [12.8gal/hr]
100% (of the Prime Power)	43.5L/h [11.5gal/hr]
75% (of the Prime Power)	32.6L/h [8.6gal/hr]
50% (of the Prime Power)	22.0L/h [5.8gal/hr]
Total fuel flow	82.3L/h [21.7gal/hr]

Oil System

Total oil capacity w/filters	33L [8.7gal]
Oil Pressure low idle	1bar [14.5psi]
Oil Pressure rated RPM	5bar [72.5psi]
Oil consumption 100% load	0.04L/h [0.0gal/hr]
Oil capacity carter	32L [8.5gal]

Thermal balance 100% load

Heat rejection to exhaust	131kW [7449Btu/mn]
Radiated heat to ambient	22kW [1251Btu/mn]
Heat rejection to coolant	N/A

Air intake

Max. intake restriction	625mm CE [25in. WG]
Engine air flow	202L/s [428cfm]

Coolant System

Radiator & engine capacity	30L [7.9gal]
Max water temperature	105°C [221°F]
Outlet water temperature	93°C [199°F]
Fan power	3 kW
Fan air flow	5.1m3/s [10807cfm]
Available restriction on air flow	20mm CE [0.8in. WG]
Type of coolant	Coolelf sx
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 LSA462M5
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	N/A
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)	580

OTHER ALTERNATOR DATA

Continuous nominal rating @ 40°C	250 kVA
Standby rating @ 27°C	273 kVA
Efficiencies @ 4/4 load	92.7 %
Air flow	0.51m ³ /s [1080.62cfm]
Short circuit ratio;50 (Kcc)	0.44
Direct axis synchro reactance unsaturated (Xd)	307 %
Quadra axis synchro reactance unsaturated (Xq)	184 %
Open circuit time constant;50 (T'do)	2050 ms
Direct axis transient reactance saturated (X'd)	15 %
Short circuit transient time constant (T'd)	105 ms
Direct axis subtransient reactance saturated (X''d)	9 %
Subtransient time constant (T''d)	10 ms
Quadra axis subtransient reactance saturated (X''q)	11.2 %
Zero sequence reactance unsaturated (Xo)	0.5 %
Negative sequence reactance saturated (X2)	10.1 %
Armature time constant (Ta)	16 ms
No load excitation current (io)	1.1 A
Full load excitation current (ic)	3.8 A
Full load excitation voltage (uc)	33 V
Recovery time (Delta U = 20% transitoire)	< 500 ms
Motor start (Delta = 20% perm. Or 50% trans.)	610 kVA
Transient dip (4/4 charge) – PF : 1.8 AR	15.6 %
No load losses	4.5 kW
Heat rejection	15.2 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 :

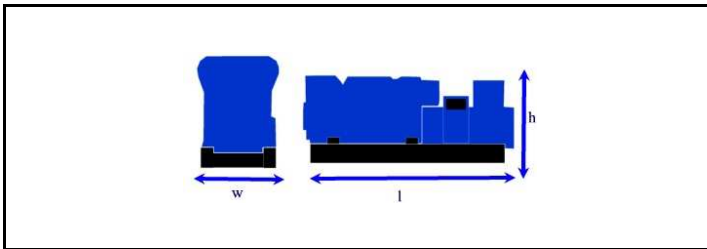
- Frequency meter, Ammeter, Voltmeter
- Alarms and faults Oil pressure, water temperature, No start-up, Overspeed, Min/max alternator, Min/max battery voltage, Low fuel level, Emergency stop
- Engine parameters Hours counter, Oil pressure, Water temperature, Engine speed, Battery voltage, Fuel level

Options

Engine and Radiator	Alternator	Control panel
<ul style="list-style-type: none"> Heat shield protection Oil drain extension Heavy duty air filter Lube oil drain pump Radiator core guard Battery charger Block heater 	<ul style="list-style-type: none"> Anti condensation heater Enforced impregnation Oversized alternator 	<ul style="list-style-type: none"> NFPA 110 level 1 Paralleling system Remote annunciator Oil temperature shutdown Key start panel
	Exhaust	Literature
	<ul style="list-style-type: none"> Residential silencer Critical silencer Flexible exhaust conn. 	<ul style="list-style-type: none"> Parts Maintenance
Fuel	Enclosure	
<ul style="list-style-type: none"> Day tank Subbase fuel tanks UL Water separator fuel filter 	<ul style="list-style-type: none"> M226 Silent 68.6 db @ 7m [23 Ft] (stby) 	

Weight and Dimensions

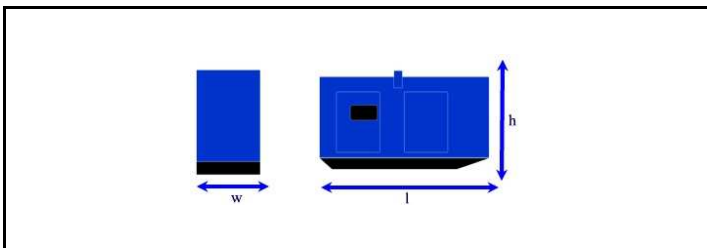
Open Model Excluding option



Overall size l x w x h :
2370mm [93in] x 1114mm [44in] x 1480mm [58in]

Weight :
1790kg [3945lbs] Net 2130kg [4695lbs] Brut

With Optional Enclosure



Overall size l x w x h :
3508mm [138in] x 1200mm [47in] x 1830mm [72in]

Weight :
2364kg [5210lbs] Net 2726kg [6008lbs] Brut