



J77K

DIESEL GENSET

| MODEL | J77K |
|-----------------------|----------------|
| Stand-by Power @ 50Hz | 62kW / 77 kVA |
| Prime Power @ 50Hz | 56 kW / 70 kVA |

Standard Features

General features :

- Engine (JOHN DEERE , 4045TF120)
- Charge alternator 12 V , Governor:Meca
- Alternator (LEROY SOMER , LSA432L65)
- 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 | 107 | 62 / 77 | 56 / 70 |
| 400/230 | 50 | 3 | 0.8 | 111 | 62 / 77 | 56 / 70 |
| 380/220 | 50 | 3 | 0.8 | 117 | 62 / 77 | 56 / 70 |
| 240/120 | 50 | 3 | 0.8 | 185 | 62 / 77 | 56 / 70 |
| 230/115 | 50 | 3 | 0.8 | 193 | 62 / 77 | 56 / 70 |
| 220/110 | 50 | 3 | 0.8 | 202 | 62 / 77 | 56 / 70 |
| 220/127 | 50 | 3 | 0.8 | 202 | 62 / 77 | 56 / 70 |
| 200/115 | 50 | 3 | 0.8 | 222 | 62 / 77 | 56 / 70 |

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 4045TF120 , 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 | 68kW [91BHP] |
| Frequency regulation, steady state | +/-2. 5% |
| BMEP | 11.2bar [162psi] |
| Governor : type | Meca |

Exhaust System

| | |
|---------------------|---------------------|
| Exhaust gas flow | 176L/s [373cfm] |
| Exhaust temperature | 545°C [1013°F] |
| Max back pressure | 750mm CE [30in. WG] |

Fuel System

| | |
|---------------------------|---------------------|
| 110% (Stand By power) | 17.5L/h [4.6gal/hr] |
| 100% (of the Prime Power) | 16L/h [4.2gal/hr] |
| 75% (of the Prime Power) | 12L/h [3.2gal/hr] |
| 50% (of the Prime Power) | 8.5L/h [2.2gal/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 | 0.016L/h [0.0gal/hr] |
| Oil capacity carter | 12.5L [3.3gal] |

Thermal balance 100% load

| | |
|---------------------------|-------------------|
| Heat rejection to exhaust | 54kW [3070Btu/mn] |
| Radiated heat to ambient | 8kW [455Btu/mn] |
| Heat rejection to coolant | 35kW [1990Btu/mn] |

Air intake

| | |
|-------------------------|---------------------|
| Max. intake restriction | 625mm CE [25in. WG] |
| Engine air flow | 66L/s [140cfm] |

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 kW |
| Fan air flow | 2.53m ³ /s [5361cfm] |
| Available restriction on air flow | 20mm CE [0.8in. WG] |
| Type of coolant | Gencool |
| Thermostat | 82-94 °C |

Emissions

| | |
|-----|-------------------------|
| HC | 150 mg/Nm ³ |
| CO | 190 mg/Nm ³ |
| Nox | 3800 mg/Nm ³ |
| PM | 60 mg/Nm ³ |



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 LSA432L65 |
| 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) | N/A |

OTHER ALTERNATOR DATA

| | |
|---|-----------------------------------|
| Continuous nominal rating @ 40°C | 88 kVA |
| Standby rating @ 27°C | 91 kVA |
| Efficiencies @ 4/4 load | 91.1 % |
| Air flow | 0.32m ³ /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

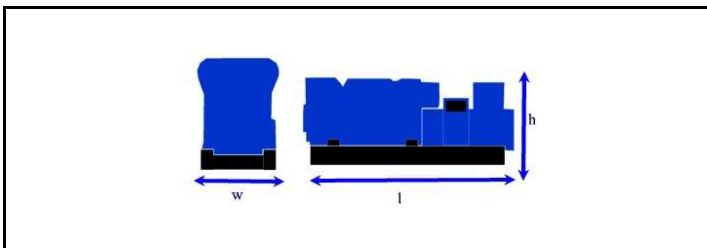
- Day tank
- Subbase fuel tanks UL
- Water separator fuel filter

Enclosure

- M128
- Silent 66 db @ 7m [23 Ft] (stby)

Weight and Dimensions

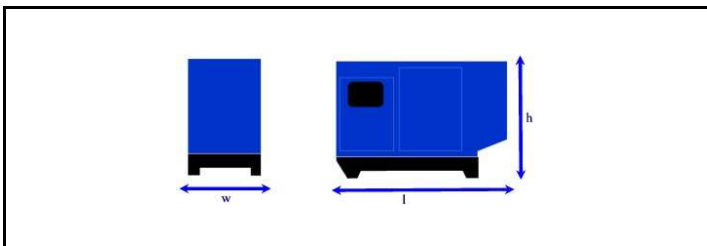
Open Model Excluding option



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