



## JS40 SINGLE PHASE

## DIESEL GENSET

| MODEL                 | JS40 Single Phase |
|-----------------------|-------------------|
| Stand-by Power @ 60Hz | 40kW / 40 kVA     |
| Prime Power @ 60Hz    | 36 kW / 36 kVA    |

### Standard Features

#### General features :

- Engine (JOHN DEERE , 3029TF270 )
- Engine EPA Carb Charge alternator 12 V , Governor:Meca/Mechanical
- Alternator (LEROY SOMER , LSA432M45 )
- 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
- CSA Certified



### Generator Ratings

| Voltage | HZ | Phase | P.F | Standby Amps | Standby Ratings kW/kVA | Prime Ratings kW/kVA |
|---------|----|-------|-----|--------------|------------------------|----------------------|
| 240MONO | 60 | 1     | 1   | 167          | 40 / 40                | 36 / 36              |

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 sale

- We provide a full line of products with high quality recognized engines and alternators.
- Service and parts are available from our distributors as a single source of responsibility.
- Each and every unit is factory tested. All generator sets are also prototype tested.
- Two years limited warranty , please refer to the conditions terms . Five years extended are also available.



## ENGINE DATA

|                                    |   |
|------------------------------------|---|
| Manufacturer / Model               | JOHN DEERE 3029TF270 , 4-cycle, Turbo , N/A |
| Cylinder Arrangement               | 3 X L                                       |
| Displacement                       | 2.9L [177.0C.I.]                            |
| Bore and Stroke                    | 106mm [4.2in.] X 110mm [4.3in.]             |
| Compression ratio                  | 17,8:1                                      |
| Rated RPM                          | 1800 Rpm                                    |
| Piston Speed                       | 6.6m/s [21.7ft./s]                          |
| Max. stand by Power at rated RPM   | 44.5kW [60BHP]                              |
| Frequency regulation, steady state | +/-2, 5%                                    |
| BMEP                               | 11.19bar [162psi]                           |
| Governor : type                    | Meca/Mechanical                             |

### Exhaust System

|                     |                     |
|---------------------|---------------------|
| Exhaust gas flow    | 138L/s [292cfm]     |
| Exhaust temperature | 517°C [963°F]       |
| Max back pressure   | 625mm CE [25in. WG] |

### Fuel System

|                           |                      |
|---------------------------|----------------------|
| 110% (Stand By power )    | 14.93L/h [3.9gal/hr] |
| 100% (of the Prime Power) | 13.11L/h [3.5gal/hr] |
| 75% (of the Prime Power)  | 10.1L/h [2.7gal/hr]  |
| 50% (of the Prime Power)  | 6.91L/h [1.8gal/hr]  |
| Total fuel flow           | 108L/h [28.5gal/hr]  |

### Oil System

|                              |                     |
|------------------------------|---------------------|
| Total oil capacity w/filters | 6L [1.6gal]         |
| Oil Pressure low idle        | 1bar [14.5psi]      |
| Oil Pressure rated RPM       | 5bar [72.5psi]      |
| Oil consumption 100% load    | 0.01L/h [0.0gal/hr] |
| Oil capacity carter          | 5.3L [1.4gal]       |

### Thermal balance 100% load

|                           |                   |
|---------------------------|-------------------|
| Heat rejection to exhaust | 43kW [2445Btu/mn] |
| Radiated heat to ambient  | 5kW [284Btu/mn]   |
| Heat rejection to coolant | 28kW [1592Btu/mn] |

### Air intake

|                         |                     |
|-------------------------|---------------------|
| Max. intake restriction | 300mm CE [12in. WG] |
| Engine air flow         | 48.6L/s [103cfm]    |

### Coolant System

|                                   |                                 |
|-----------------------------------|---------------------------------|
| Radiator & engine capacity        | 16.1L [4.3gal]                  |
| Max water temperature             | 105°C [221°F]                   |
| Outlet water temperature          | 93°C [199°F]                    |
| Fan power                         | 2 kW                            |
| Fan air flow                      | 2.34m <sup>3</sup> /s [4959cfm] |
| Available restriction on air flow | 20mm CE [0.8in. WG]             |
| Type of coolant                   | Gencool                         |
| Thermostat                        | 82-94 °C                        |

### Emissions

|     |                |
|-----|----------------|
| HC  | 49.98 gr/bhp/h |
| CO  | 11.19 gr/bhp/h |
| Nox | 49.98 gr/bhp/h |
| PM  | 11.94 gr/bhp/h |



## 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 LSA432M45 |
|---|-----------------------|
| Manufacturer / Type                                     | LEROY SOMER LSA432M45 |
| 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                    | 65 kVA               |
| Standby rating @ 27°C                               | 78 kVA               |
| Efficiencies @ 4/4 load                             | 89.8 %               |
| Air flow  | 0.32m3/s [678.04cfm] |
| Short circuit ratio;50 (Kcc)                        | 0.39                 |
| Direct axis synchro reactance unsaturated (Xd)      | 300 %                |
| Quadra axis synchro reactance unsaturated (Xq)      | 180 %                |
| Open circuit time constant;50 (T'do)                | 1270 ms              |
| Direct axis transient reactance saturated (X'd)     | 11.8 %               |
| Short circuit transient time constant (T'd)         | 50 ms                |
| Direct axis subtransient reactance saturated (X''d) | 5.9 %                |
| Subtransient time constant (T''d)                   | 5 ms                 |
| Quadra axis subtransient reactance saturated (X''q) | 7.3 %                |
| Zero sequence reactance unsaturated (Xo)            | 0.5 %                |
| Negative sequence reactance saturated (X2)          | 6.6 %                |
| 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.)       | 225 kVA              |
| Transient dip (4/4 charge) – PF : 1.8 AR            | 15.3 %               |
| No load losses                                      | 1.64 kW              |
| Heat rejection                                      | 6.42 kW              |



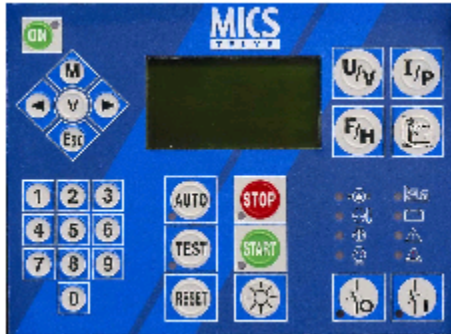
Control Panels

**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

**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

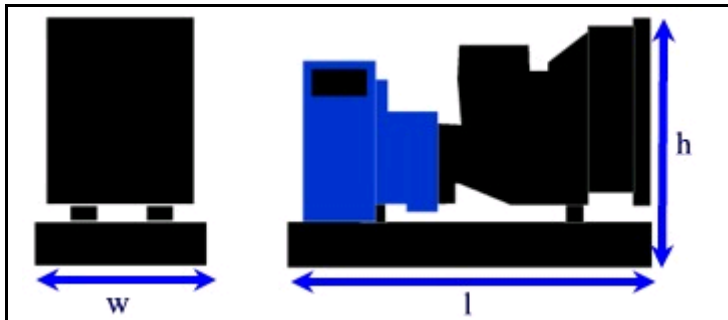
- Day tank
- Subbase fuel tanks UL
- Water separator fuel filter

### Enclosure M107

- Silent 0 db @ 23 Ft (stby)

## Weight and Dimensions

### Open Model



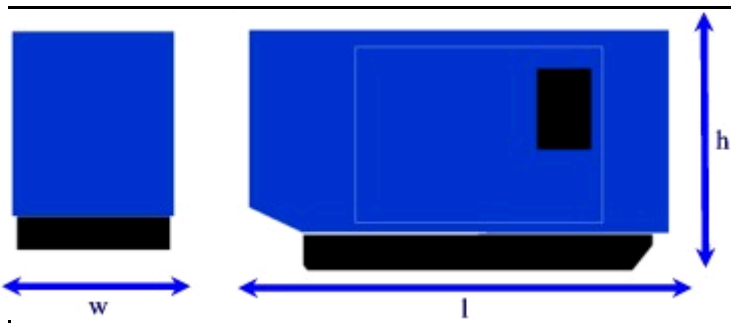
#### Overall size l x w x h :

1520mm [60in] x 780mm [31in] x 1180mm [46in]

#### Weight :

780kg [1719lbs] Net 890kg [1962lbs] Brut

### With Optional Enclosure



#### Overall size l x w x h :

2100mm [83in] x 920mm [36in] x 1445mm [57in]

#### Weight :

1100kg [2424lbs] Net 1200kg [2645lbs] Brut