

## JM40 THREE PHASE

## DIESEL GENSET

MODEL	JM40 Three Phase
Stand-by Power @ 60Hz	40kW / 50 kVA
Prime Power @ 60Hz	36 kW / 45 kVA

### Standard Features

#### General features :

- Engine (JOHN DEERE , 3029TF270 )
- Engine EPA Carb Charge alternator 12 V , Governor:Meca/Mechanical
- Alternator (MECC ALTE , ECO 32-3S )
- Single bearing alternator IP 21 , 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
480/277	60	3	0.8	60	40 / 50	36 / 45
440/254	60	3	0.8	66	40 / 50	36 / 45
240/120	60	3	0.8	120	40 / 50	36 / 45
230/115	60	3	0.8	100	32 / 40	29 / 36
220/127	60	3	0.8	131	40 / 50	36 / 45
208/120	60	3	0.8	128	37 / 46	33 / 42

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

	MECC ALTE	ECO 32-3S
Manufacturer / Type		
Number of phase		3
Power factor (Cos Phi)		0.8
Altitude		1000
Overspeed		rpm
Pole : number		4
Exciter type		No
Insulation : class, temperature rise		H / H
Voltage regulator		AVR
Sustained short circuit current		
Total harmonics (TGH/THC)		
Wave form : NEMA = TIF – TGH/THC		
Wave form : CEI = FHT – TGH/THC		
Bearing : number		1
Coupling		Direct
Voltage regulation 0 to 100% load		
Recovery time (20% Volt dip) ms		ms
SkVA with 90 % of nominal sustained voltage (at 0.4 PF)		N/A

### OTHER ALTERNATOR DATA

Continuous nominal rating @ 40°C	48 kVA
Standby rating @ 27°C	52.8 kVA
Efficiencies @ 4/4 load	88.8 %
Air flow	14.5m <sup>3</sup> /s [30723.62cfm]
Short circuit ratio;50 (Kcc)	0.8
Direct axis synchro reactance unsaturated (Xd)	190 %
Quadra axis synchro reactance unsaturated (Xq)	98 %
Open circuit time constant;50 (T'do)	1.4 ms
Direct axis transient reactance saturated (X'd)	14.3 %
Short circuit transient time constant (T'd)	61 ms
Direct axis subtransient reactance saturated (X''d)	10 %
Subtransient time constant (T''d)	15 ms
Quadra axis subtransient reactance saturated (X''q)	30.6 %
Zero sequence reactance unsaturated (Xo)	2.7 %
Negative sequence reactance saturated (X2)	21.5 %
Armature time constant (Ta)	31 ms
No load excitation current (io)	A
Full load excitation current (ic)	A
Full load excitation voltage (uc)	V
Recovery time (Delta U = 20% transitoire)	ms
Motor start (Delta = 20% perm. Or 50% trans.)	kVA
Transient dip (4/4 charge) – PF : 1.8 AR	%
No load losses	kW
Heat rejection	kW

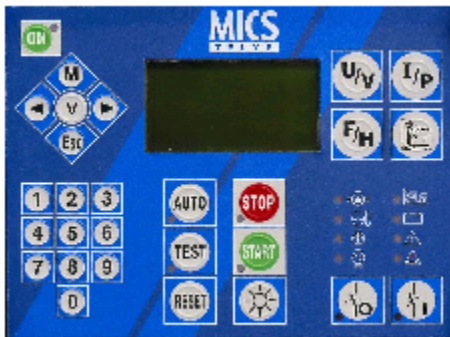
## Control Panels

### 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

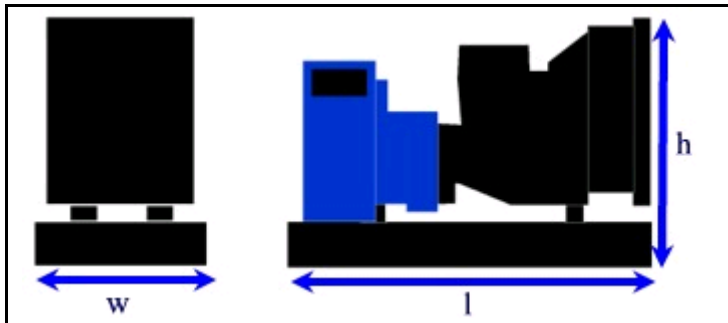
- Day tank
- Subbase fuel tanks UL
- Water separator fuel filter

### Enclosure M107

- Silent 71 db @ 23 Ft (stby)

## Weight and Dimensions

### Open Model



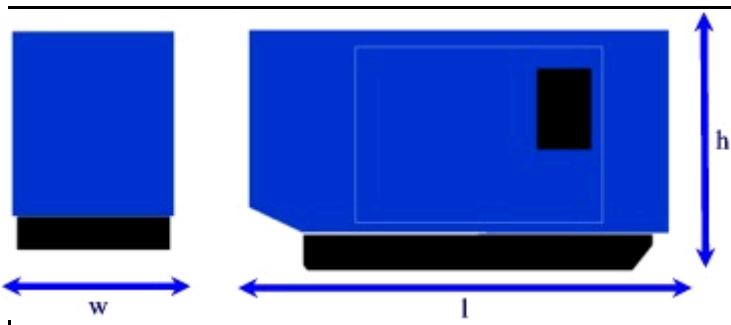
#### Overall size l x w x h :

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 :

1115kg [2457lbs] Net 1225kg [2700lbs] Brut