



J24M

DIESEL GENSET

MODEL	J24M
Stand-by Power @ 50Hz	24kW / 24 kVA
Prime Power @ 50Hz	22 kW / 22 kVA

Standard Features

General features :

- Engine (JOHN DEERE , 3029DF120)
- Charge alternator 12 V , Governor:Meca
- 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



Generator Ratings

Voltage	HZ	Phase	P.F	Standby Amps	Standby Ratings kW/kVA	Prime Ratings kW/kVA
240MONO	50	1	1	100	24 / 24	22 / 22
230MONO	50	1	1	104	24 / 24	22 / 22
220MONO	50	1	1	109	24 / 24	22 / 22

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 3029DF120 , 4-cycle, Athmo , N/A
Cylinder Arrangement	3 X L
Displacement	2.9L [177.0C.l.]
Bore and Stroke	106mm [4.2in.] X 110mm [4.3in.]
Compression ratio	17,8 : 1
Rated RPM	1500 Rpm
Piston Speed	5.5m/s [18.0ft./s]
Max. stand by Power at rated RPM	29.7kW [40BHP]
Frequency regulation, steady state	+/-2, 5%
BMEP	7.4bar [107psi]
Governor : type	Meca

Exhaust System

Exhaust gas flow	78L/s [165cfm]
Exhaust temperature	555°C [1031°F]
Max back pressure	625mm CE [25in. WG]

Fuel System

110% (Stand By power)	8.3L/h [2.2gal/hr]
100% (of the Prime Power)	6.8L/h [1.8gal/hr]
75% (of the Prime Power)	5.2L/h [1.4gal/hr]
50% (of the Prime Power)	3.6L/h [1.0gal/hr]
Total fuel flow	111L/h [29.3gal/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	0.007L/h [0.0gal/hr]
Oil capacity carter	5.3L [1.4gal]

Thermal balance 100% load

Heat rejection to exhaust	31kW [1763Btu/mn]
Radiated heat to ambient	6kW [341Btu/mn]
Heat rejection to coolant	18kW [1023Btu/mn]

Air intake

Max. intake restriction	300mm CE [12in. WG]
Engine air flow	28L/s [59cfm]

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	1.5 kW
Fan air flow	1.74m ³ /s [3687cfm]
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

	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 ³ /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 (>60 kVA), Min/max alternator, Low
fuel level, Emergency stop
Engine parameters Hours counter, Engine speed,
Battery voltage, Fuel level, Air preheating

TELYS



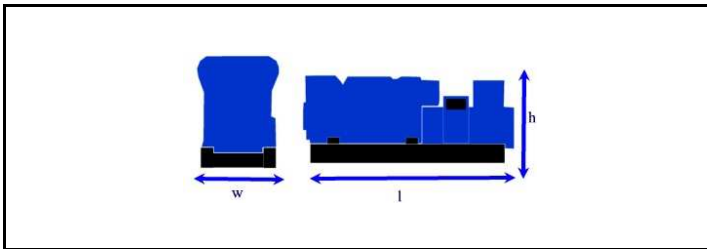
Specifications :
Frequency meter, Ammeter, Voltmeter
Alarms and faults Oil pressure, water temperature, No
start-up, Overspeed, Min/max alternator, Min/max battery
voltage, Low fuel level, Emergency stop
Engine parameters Hours counter, Oil pressure, Water
temperature, Engine speed, Battery voltage, 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"> M127 Silent 68 db @ 7m [23 Ft] (stby) 	

Weight and Dimensions

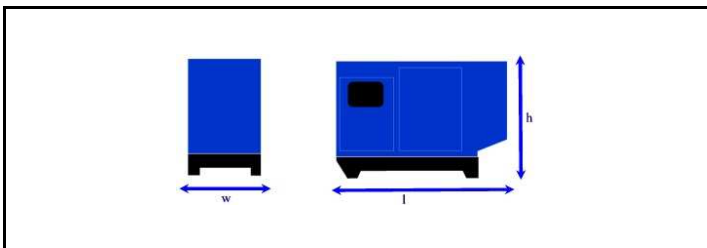
Open Model Excluding option



Overall size l x w x h :
1700mm [67in] x 896mm [35in] x 1221mm [48in]

Weight :
800kg [1763lbs] Net 910kg [2006lbs] Brut

With Optional Enclosure



Overall size l x w x h :
2080mm [82in] x 904mm [36in] x 1415mm [56in]

Weight :
1020kg [2248lbs] Net 1130kg [2491lbs] Brut