



MODEL
20 KW/20 kVA
Stand-by Power @ 60 Hz

TM20UCM
18 kW / 18 kVA
Prime Power @ 60 Hz

Standard Features

- Engine (MITSUBISHI , S4Q2.Y262SD)
- Engine EPA Carb Charge alternator 12 V, Governor: Meca/Mechanical
- Alternator (MECC ALTE , ECO28VL)
- Single bearing alternator IP 23 , insulation class H /H
- Radiator 50°C [122°F]°C max. T°air inlet with cool ant cap
- Skid and vibration isolators
- Dry type air filter
- Microprocessor control panel
- Main line circuit breaker
- 12 V battery, rack and cable
- Industrial silencer (loose)
- User manual
CSA Certified (consult us)



Generator ratings

Voltage	HZ	Phase	PF	Stand by Amps	Stand by power kW/kVA	Prime power kW/kVA
240MONO V	60 Hz	1	1	83	20 / 20	18 / 18

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 sales

- 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.
- Two years limited warranty , please refer to the conditions terms . Five years extended are also available.



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ENGINE DATA

Manufacturer / Model	S4Q2.Y262SD , 4-cycle, Athmo , N/A
Cylinder Arrangement	4 X L
Displacement	2.50L [152.6C.I.]
Bore and Stroke	88mm [3.5in.] X 103mm [4.1in.]
Compression ratio	22 : 1
Rated RPM	1800 Rpm
Piston Speed	6.18m/s [20.3ft./s]
Max. stand by Power at rated RPM	28.71kW [38BHP]
Frequency regulation, steady state	+/- 2. 5%
BMEP	6.94bar [101psi]
Governor : type	Meca/Mechanical

Exhaust System

Exhaust gas flow	89L/s [189cfm]
Exhaust temperature	600°C [1112°F]
Max back pressure	680mm CE [27in. WG]

Fuel System

110% (Stand By power)	8.1L/h [2.1gal/hr]
100% (of the Prime Power)	7.4L/h [2.0gal/hr]
75% (of the Prime Power)	5.6L/h [1.5gal/hr]
50% (of the Prime Power)	4.1L/h [1.1gal/hr]
Total fuel flow	36L/h [9.5gal/hr]

Oil System

Total oil capacity w/filters	6.5L [1.7gal]
Oil Pressure low idle	1bar [14.5psi]
Oil Pressure rated RPM	5bar [72.5psi]
Oil consumption 100% load	0.08L/h [0.0gal/hr]
Oil capacity carter	5.5L [1.5gal]

Thermal balance 100% load

Heat rejection to exhaust	25kW [1422Btu/mn]
Radiated heat to ambient	3kW [171Btu/mn]
Heat rejection to coolant	23kW [1308Btu/mn]

Air intake

Max. intake restriction	200mm CE [8in. WG]
Engine air flow	34L/s [72cfm]

Coolant System

Radiator & engine capacity	8.1L [2.1gal]
Max water temperature	111°C [232°F]
Outlet water temperature	93°C [199°F]
Fan power	1.2 kW
Fan air flow	1m3/s [2119cfm]
Available restriction on air flow	10mm CE [0.4in. WG]
Type of coolant	Gencool
Thermostat	76.5-90 °C

Emissions

HC	N/A
CO	N/A
Nox	N/A
PM	N/A



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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	MECC ALTE ECO28VL
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	SR7/2
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	36 kVA
Standby rating @ 27°C	36.3 kVA
Efficiencies @ 4/4 load	86.5 %
Air flow	5.8m ³ /s [12289.45cfm]
Short circuit ratio (Kcc)	0.62
Direct axis synchro reactance unsaturated (Xd)	165 %
Quadra axis synchro reactance unsaturated (Xq)	71 %
Open circuit time constant (T'do)	0.93 ms
Direct axis transient reactance saturated (X'd)	15.4 %
Short circuit transient time constant (T'd)	46 ms
Direct axis subtransient reactance saturated (X''d)	8.8 %
Subtransient time constant (T''d)	12 ms
Quadra axis subtransient reactance saturated (X''q)	19 %
Zero sequence reactance unsaturated (Xo)	2.8 %
Negative sequence reactance saturated (X2)	13.2 %
Armature time constant (Ta)	11 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

Standard panel : 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

Optional panel : 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



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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
Fuel	Exhaust	Literature
<ul style="list-style-type: none"> ▪ Day tank ▪ Subbase fuel tanks UL ▪ Water separator fuel filter 	<ul style="list-style-type: none"> ▪ Residential silencer ▪ Critical silencer ▪ Flexible exhaust conn. 	<ul style="list-style-type: none"> ▪ Parts ▪ Maintenance
	Enclosure M107	
	<ul style="list-style-type: none"> ▪ Silent 67 db @ 23 Ft (stby) 	

Weight and Dimensions

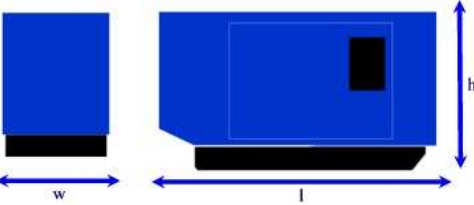
Open Model



Overall size l x w x h :
1400mm [55in] x 780mm [31in] x 1055mm [42in]

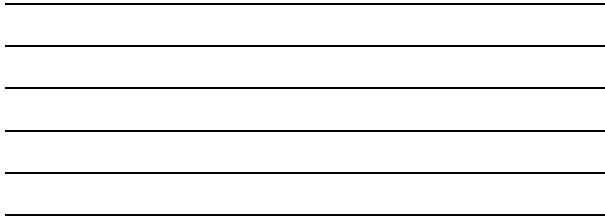
Weight :
500kg [1102lbs] Net 600kg [1322lbs] Brut

With Optional Enclosure



Overall size l x w x h :
2100mm [83in] x 920mm [36in] x 1445mm [57in]

Weight :
905kg [1995lbs] Net 1005kg [2215lbs] Brut



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